As confidentially submitted to the Securities and Exchange Commission on October 19, 2021

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

HILLEVAX, INC.
(Exact name of registrant as specified in its charter)

Delaware	2836	85-0545060
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

75 State Street, Suite 100 - #9995
Boston, Massachusetts 02109
(617) 213-5054
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Rob Hershberg, M.D., Ph.D.
Chairman, President and Chief Executive Officer
HilleVax, Inc.
75 State Street, Suite 100 - #9995
Boston, Massachusetts 02109
(617) 213-5054
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Cheston J. Larson **Matthew T. Bush** **Wesley C. Holmes** **Jeffrey T. Woodley** **Latham & Watkins LLP** **200 Clarendon Street** **Boston, Massachusetts 02116** **(617) 948-6000**	**Paul Bavier** **General Counsel and Chief Administrative Officer** **HilleVax, Inc.** **75 State Street, Suite 100 - #9995** **Boston, Massachusetts 02109** **(617) 213-5054**	**Alan F. Denenberg** **Emily Roberts** **Davis Polk & Wardwell LLP** **1600 El Camino Real** **Menlo Park, California 94025** **(650) 752-2000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)
Common Stock, $0.0001 par value per share	$	$

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes shares of common stock that the underwriters have the option to purchase.
(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED , 2021

Preliminary Prospectus

shares

HILLEVAX

Common stock

This is the initial public offering of shares of common stock by HilleVax, Inc. We are selling shares of our common stock. The initial public offering price is expected to be between $ and $ per share.

Prior to this offering, there has been no public market for our common stock. We have applied to list our common stock on the Nasdaq Global Market under the symbol "HLVX."

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements.

	Per share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds to HilleVax, Inc., before expenses	$	$

(1) See "Underwriting" for a description of the compensation payable to the underwriters.

We have granted the underwriters an option for a period of 30 days to purchase up to additional shares of our common stock.

Investing in our common stock involves a high degree of risk. See "Risk factors" beginning on page 14.

Neither the Securities and Exchange Commission nor any other state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock to purchasers on , 2021.

J.P. Morgan **SVB Leerink** **Stifel** **Guggenheim Securities**

, 2021

Table of contents

Through and including , 2021 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

Neither we nor the underwriters have authorized anyone to provide you with information other than that contained in this prospectus or any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell, and seeking offers to buy, common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus or any free writing prospectus is accurate only as of its date, regardless of its time of delivery or of any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside of the United States: we have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

Prospectus summary

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the sections titled "Risk factors" and "Management's discussion and analysis of financial condition and results of operations" and our combined financial statements and related notes included elsewhere in this prospectus, before making an investment decision. As used in this prospectus, unless the context otherwise requires, references to "we," "us," "our," "the Company" and "HilleVax" refer to HilleVax, Inc., its subsidiary, and North Bridge V, Inc. and YamadaCo III, Inc. prior to the Merger.

Our founders and inspirations

We are founded on the legacies of leading vaccine developers who inspire us to build a company to benefit human health on a global scale. Our late co-founder, Dr. Tadataka "Tachi" Yamada, championed vaccines as a powerful means to address health inequities and equalize opportunity for people around the world. As the former Chief Medical and Scientific Officer at Takeda Pharmaceutical Company Limited (Takeda Pharmaceuticals), Tachi helped establish Takeda Pharmaceuticals' vaccine pipeline, which included the most advanced norovirus vaccine candidate in clinical development. Through his most recent role as a venture partner at Frazier Healthcare Partners (Frazier), he helped Frazier and Takeda Pharmaceuticals launch their third collaboration, HilleVax, to continue the development of this novel norovirus vaccine candidate, HIL-214 (formerly TAK-214). At HilleVax, we aim to continue Tachi's mission of improving global health with a sense of urgency by always putting patients first.

Our work, and company name itself, is also inspired by Dr. Maurice Hilleman. Dr. Hilleman is considered by many to be the father of modern vaccines. He developed many of the vaccines that are routinely recommended for children today. By the end of his career, Dr. Hilleman had played a key role in developing more than forty vaccines, including those for the flu, chickenpox, hepatitis A, hepatitis B, pneumococcus, meningococcus, measles, mumps, rubella, and other diseases. These vaccines are estimated to save millions of lives every year. We are honored that his daughter, Jeri Hilleman, serves on our Board of Directors.

We aim to have a global impact on human health and believe the best way to achieve this goal is by developing novel vaccines for severe and life-threatening diseases. HIL-214 is our foundational vaccine candidate from which we are building our company. We are honored to continue Dr. Yamada's and Dr. Hilleman's legacies through the further development of HIL-214 and other potential vaccine candidates.

Overview

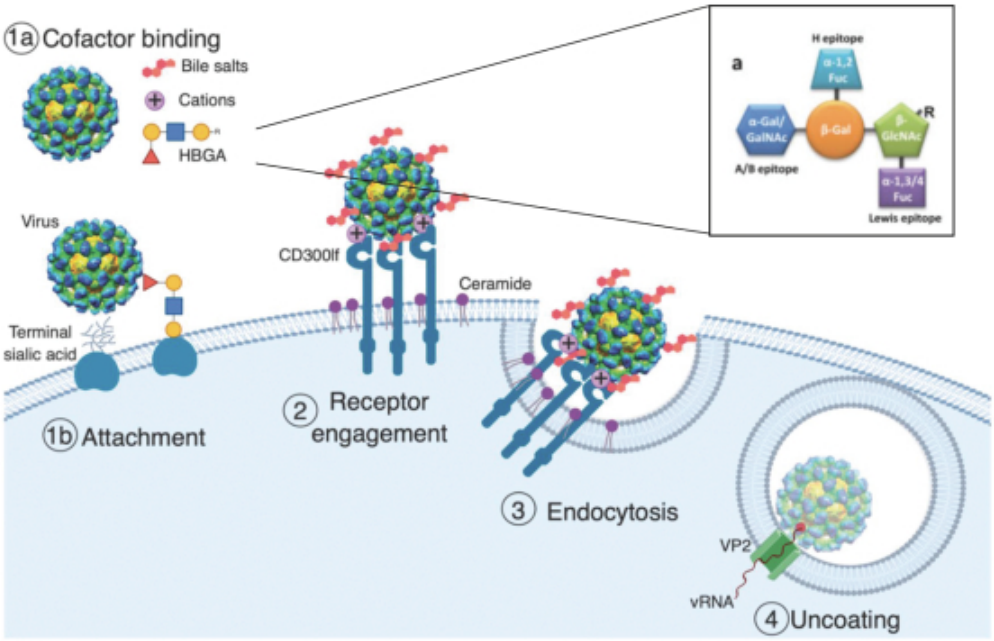
We are a clinical-stage biopharmaceutical company focused on developing and commercializing novel vaccines. Our initial program, HIL-214, is a virus-like particle (VLP) based vaccine candidate for the prevention of moderate-to-severe acute gastroenteritis (AGE) caused by norovirus infection. It is estimated that norovirus causes nearly 700 million cases of illness and more than 200,000 deaths worldwide per year, as well as significant additional economic and social burden. To date, HIL-214 has been studied in nine clinical trials, which collectively generated safety and immunogenicity data from more than 4,500 and 2,200 subjects, respectively, including both safety and immunogenicity data from more than 800 pediatric subjects. A randomized, placebo-controlled Phase 2b field efficacy trial enrolled 4,712 adult subjects, and HIL-214 was well tolerated and demonstrated clinical proof of concept in preventing moderate-to-severe cases of AGE from norovirus infection. We plan to initiate a Phase 2b clinical trial in to evaluate the safety, immunogenicity, and efficacy of HIL-214 in infants. We expect to report safety and immunogenicity data from this trial for the first 200 subjects in and top-line data in . We believe HIL-214 has the

potential to be the first ever vaccine approved for norovirus-related illnesses and that it will help grow HilleVax into a leading global vaccines company.

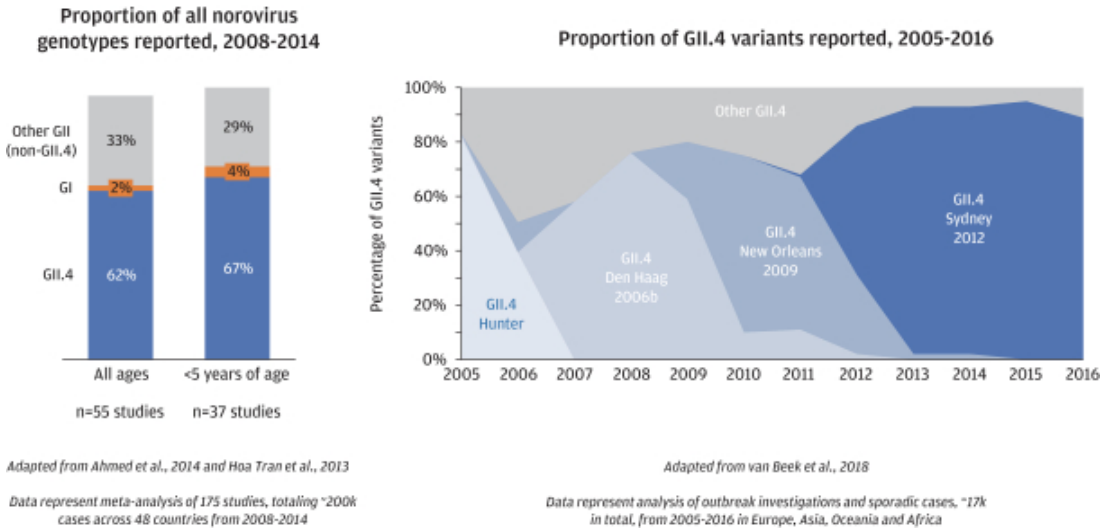
Norovirus overview

Noroviruses are a group of small, non-enveloped viruses belonging to the *Caliciviridae* family. Noroviruses contain a single-stranded positive-sense RNA genome that codes for seven nonstructural and two structural proteins. The first structural protein, VP1, encodes the major capsid protein. VP1 is further subdivided into the N-terminal, shell, and protruding domains. The protruding domain of VP1 is present on the surface of viral particles and is necessary for binding to histo-blood group antigens (HBGAs) on epithelial cells in the human gastrointestinal tract.

Norovirus infects the gut epithelia through interaction with HBGAs



Noroviruses are classified into ten genetic groups called genogroups. These genogroups, GI through GX, are based on amino acid diversity in the major capsid protein VP1. Genogroups GI and GII are responsible for the majority of human infections, with GII accounting for an estimated 96% of global prevalence. Norovirus genogroups are further subdivided into at least 48 genotypes: 9 genotypes in GI, 26 genotypes in GII, and 13 genotypes in GIII through GX. A single genotype, GII.4, is estimated to be responsible for nearly two-thirds of norovirus outbreaks in both developed and developing countries. GII.4 has been the dominant genotype in circulation for the last two decades, and of the GII.4 strains, GII.4 Sydney 2012 has been the predominant variant detected worldwide since 2012. In addition to causing the majority of norovirus infections, hospitalizations and deaths were more likely in outbreaks associated with GII.4 viruses.



Adapted from Ahmed et al., 2014 and Hoa Tran et al., 2013

Data represent meta-analysis of 175 studies, totaling ~200k cases across 48 countries from 2008-2014

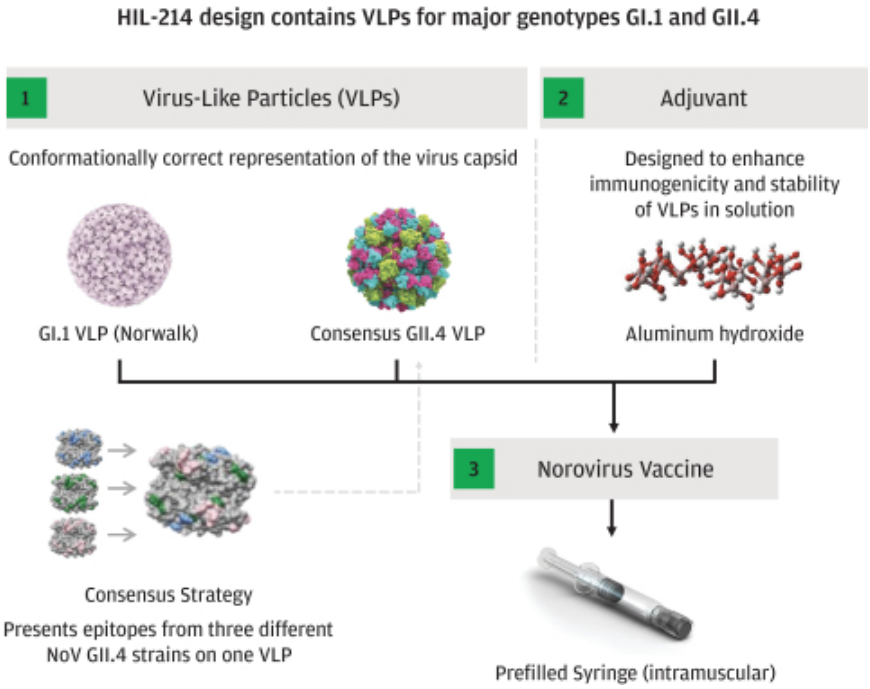
Adapted from van Beek et al., 2018

Data represent analysis of outbreak investigations and sporadic cases, ~17k in total, from 2005-2016 in Europe, Asia, Oceania and Africa

Norovirus is the most common cause of viral AGE worldwide and is characterized by diarrhea, vomiting, abdominal pain, nausea, and, sometimes, fever that may, together, lead to clinically significant dehydration. The global cost of norovirus-caused AGE is estimated to be over $4 billion in direct health system costs and approximately $60 billion in societal costs per year. In the United States alone, norovirus-caused AGE is estimated to result in $2 billion in direct medical costs and $10 billion in societal costs per year. While norovirus can cause illness in any age group, the majority of deaths and illnesses due to norovirus are borne by young children and older adults. In children younger than four years of age, norovirus is estimated to cause 95,000 deaths and 450 million illnesses globally each year. Up to 80% of children will experience a norovirus infection within one year of birth, with the majority of cases occurring between six months and two years of age. Almost all children will experience at least one norovirus infection by the age of five. In the United States, this results in approximately 627,000 outpatient visits, 281,000 emergency room visits and 14,000 hospitalizations each year for children under the age of five. Older adults are also vulnerable to severe norovirus infection given their higher rate of comorbidities, especially if they live in settings conducive to outbreaks, such as assisted living facilities. For adults older than 55 years of age, norovirus is estimated to cause 78,000 deaths and 81 million illnesses globally each year. In the United States, older adults are estimated to account for 17% of illnesses due to norovirus yet comprise 52% of hospitalizations and 94% of deaths. There are currently no approved vaccines or antiviral therapies for either the prevention or treatment of norovirus-related illness.

Our solution: HIL-214

HIL-214 is a bivalent vaccine candidate in development for the prevention of moderate-to-severe AGE caused by norovirus infection. HIL-214 consists of VLPs which are designed to mimic the structure of norovirus and are co-formulated with an alum adjuvant to enhance immunogenicity and stability of the VLPs in solution. VLPs are self-assembling structures that mimic the unique and repetitive geometric features that characterize the surface of a live virus. HIL-214 comprises VLPs for the two major genotypes of norovirus: GI.1 and GII.4. VLPs can be produced in a wide range of expression systems and can be readily manufactured at large scale. Importantly, VLPs lack a viral genome and can therefore neither replicate nor cause infection, which may present an important safety advantage over live vaccines. VLP-based vaccines are well-characterized and include currently marketed vaccines, such as Gardasil, Cervarix, and Sci-B-Vac, and have been administered to millions of patients worldwide.



HIL-214 clinical data and development plan

HIL-214 has been extensively evaluated in nine Phase 1 and 2 clinical trials. Safety data generated across more than 4,500 subjects in these trials indicated that HIL-214 was well tolerated across all age groups and had an adverse event profile similar to that of other approved alum-adjuvanted vaccines. In addition, immunogenicity data has been collected in over 2,200 subjects. HIL-214 was found to induce antibody responses greater than eight-fold above baseline at least 28 days post vaccination against norovirus in all age groups. An extensive set of clinical dose finding and formulation studies were conducted to evaluate the immune response across age groups and between the two VLPs contained in HIL-214. In a clinical trial of military recruits, in which 4,712 subjects were administered HIL-214 or placebo, HIL-214 demonstrated an estimated 80% efficacy in preventing AGE caused by norovirus strains represented in our vaccine candidate and 62% efficacy for AGE caused by any norovirus strain (including those not represented in HIL-214) in the first 45 days post vaccination. We believe this trial demonstrated clinical proof of concept and protection against strains not included in the vaccine (i.e., heterotypic or cross-protection).

Completed HIL-214 Clinical Trials

Sponsor	Trial no.	Phase	Safety	Immuno	Dose/ regimen	Efficacy	Trial pop.	HIL-214 safety (n)	HIL-214 immuno (n)
LigoCyte	LV01-103	1/2	☑	☑		☑ Challenge	18 – 50 yrs	N/A[1]	N/A[1]
	LV03-104	1	☑	☑	☑		18 – 85 yrs	66	66
	LV03-105	1/2	☑	☑		☑ Challenge	18 – 50 yrs	67	67
Takeda	NOR-210	2	*Generation of serum controls for assay validation*				18 – 49 yrs	50	50
	NOR-107	2	☑	☑			18 – 64 yrs	418	418
	NOR-201	2	☑	☑			18 – 49 yrs	425	425
	NOR-204	2	☑	☑	☑		18 – >85 yrs	311	311
	NOR-211	2b	☑	☑		☑ Field study	18 – 49 yrs	2,355	97
	NOR-202	2	☑	☑	☑		6 wks – 9 yrs	839	839
							TOTAL:	**4,531**	**2,273**

1. Intranasal formulation of vaccine, not included in HIL-214 safety and immunogenicity subject numbers

Our near-term clinical development plan is focused on infants, a population in which norovirus is routinely circulating and infections are common. We plan to initiate a Phase 2b clinical trial in to evaluate the safety, immunogenicity, and efficacy of HIL-214 in infants. We expect to report a safety and immunogenicity analysis from this trial for the first 200 subjects in and top-line data in . After conclusion of the Phase 2b trial in infants, we plan to proceed to a pivotal Phase 3 efficacy trial in infants. We believe that successful completion of these Phase 2b and Phase 3 trials, together with existing clinical data and additional co-administration trials with other common pediatric vaccines and lot-to-lot consistency trials, will support regulatory submissions for marketing approval in the United States, Europe, Japan and other key markets. We also expect these data to be evaluated by the Advisory Committee on Immunization Practices (ACIP), an advisory body of the Centers for Disease Control and Prevention (CDC) which develops vaccine recommendations for children and adults in the United States. New pediatric vaccines that receive a preferred recommendation from ACIP are nearly universally adopted in the United States, with many reaching national immunization rates of over 90%. In addition, depending upon the results from our Phase 2b trial in infants, we also plan to initiate a series of trials to support the potential approval of HIL-214 for older children, adults, and older adults.

Commercial opportunity

The global vaccine market is estimated to be over $50 billion in 2020 and is expected to exceed $100 billion by 2027. While there are currently no approved vaccines for the prevention of norovirus-related illness, we believe there are market analogues that we can use to estimate the size of the commercial opportunity for HIL-214. In the pediatric market, we believe that rotavirus vaccines are the closest analogue to HIL-214. Rotavirus was the leading cause of pediatric viral AGE before the introduction of the rotavirus vaccines, Rotarix and RotaTeq. These vaccines, approved only in infants, are now widely adopted worldwide, with many countries achieving vaccination rates above 80% among one-year-olds. Rotavirus vaccines generated more than $1.6 billion in global sales in 2020. In the older adult market, we believe that Shingrix, a vaccine developed by GlaxoSmithKline to prevent shingles, is an analogue for HIL-214. Shingrix generated $2.7 billion in sales in 2020. Furthermore, we believe that there is a commercial opportunity in other groups at high risk for norovirus infection, such as healthcare workers, immunocompromised individuals, military personnel, food handlers, and travelers, including cruise ship passengers.

Our team and investors

Our company was founded by Frazier and Takeda Pharmaceuticals with the goal of developing and commercializing the first vaccine for norovirus-related illnesses. Our late co-founder, Tachi Yamada, M.D., was the former Chief Medical and Scientific Officer at Takeda Pharmaceuticals. Since our founding, we have assembled a distinguished group of executives, directors, and advisors with extensive experience in vaccine development, clinical trial operations, manufacturing, and commercialization, including prior experience developing HIL-214 at Takeda Pharmaceuticals. Our President, Chief Executive Officer, and Chairman, Rob Hershberg, M.D., Ph.D., was previously Executive Vice President and Chief Scientific Officer of Celgene and was subsequently Executive Vice President and Head of Business Development & Global Alliances and served as a member of the Executive Committee until the acquisition of Celgene by Bristol-Myers Squibb in 2019. David Socks, our Chief Financial Officer and Chief Business Officer, co-founded Arcutis, Cadence Pharmaceuticals, Incline Therapeutics, Passage Bio, and Phathom Pharmaceuticals, where he was the Chief Executive Officer through the company's initial public offering in 2019 and later served as interim Chief Financial Officer. Aditya Kohli, Ph.D., our Chief Operating Officer, co-founded Scout Bio, Passage Bio, and Phathom Pharmaceuticals and currently serves as the Chief Business Officer at Phathom and on the board of Scout Bio. Astrid Borkowski, M.D., Ph.D., our Chief Medical Officer, is the former VP, Head of Clinical Development at Takeda Pharmaceuticals' Vaccine Business Unit, where she oversaw the clinical development of all vaccine assets, including HIL-214. Paul Bavier, our General Counsel, Secretary, and Chief Administrative Officer, is the former General Counsel at VelosBio, Avedro, and Biodel.

Since our inception, we have raised over $135 million in capital from leading investors, including Frazier Healthcare Partners, RA Capital Management, Deerfield Management Company, Abingworth, Lightspeed Venture Partners, Perceptive Advisors, Franklin Templeton, Catalys Pacific, Samsara BioCapital, BVF Partners LP, Qiming Venture Partners USA, Greenspring Associates, Richard King Mellon Foundation, and Sahsen Ventures.

Our strategy

Our goal is to be a leader in the development and commercialization of novel vaccines. Our strategy is initially focused on the development and commercialization of HIL-214 as the first potential vaccine for the prevention of AGE caused by norovirus infection. Key elements of this strategy include:

- Advancing the clinical development of HIL-214 for the prevention of norovirus-caused AGE in infants.
- Expanding the development of HIL-214 to older populations and other high-risk groups.
- Commercializing HIL-214 in the United States.
- Seeking commercial partnerships to maximize the HIL-214 opportunity outside of the United States.
- Pursuing expansion strategies for HIL-214.
- In-licensing or acquiring additional products or technology platforms relevant to the prevention of other infectious diseases.

Summary of risks related to our business

Our ability to execute our business strategy is subject to numerous risks, as more fully described in "Risk factors" immediately following this Prospectus Summary. These risks include, among others:

- We have a limited operating history, have incurred significant operating losses since our inception and expect to incur significant losses for the foreseeable future. We may never generate any revenue or become profitable or, if we achieve profitability, we may not be able to sustain it.
- We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our development programs, commercialization efforts or other operations.
- Our management, as of December 31, 2020, and our independent registered public accounting firm, in their report on our audited combined financial statements as of and for the year ended December 31, 2020, have concluded that there is substantial doubt as to our ability to continue as a going concern.
- We currently depend entirely on the success of HIL-214, which is our only vaccine candidate. If we are unable to advance HIL-214 in clinical development, obtain regulatory approval and ultimately commercialize HIL-214, or experience significant delays in doing so, our business will be materially harmed.
- Clinical and preclinical development involves a lengthy and expensive process with an uncertain outcome, and the results of prior clinical trials and studies of HIL-214 are not necessarily predictive of our future results. We have not completed clinical trials for HIL-214 and we may not have favorable results in our clinical trials, or receive regulatory approval on a timely basis, if at all.
- Any difficulties or delays in the commencement or completion, or the termination or suspension, of our planned clinical trials could result in increased costs to us, delay or limit our ability to generate revenue and adversely affect our commercial prospects.
- We rely heavily on the Takeda License to provide us intellectual property rights to develop and commercialize HIL-214. If the Takeda License is terminated, we would lose our rights to develop and commercialize HIL-214.
- We rely on third parties to conduct clinical trials and preclinical studies. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements or meet expected deadlines, our development programs and our ability to seek or obtain regulatory approval for or commercialize HIL-214 and any future vaccine candidates may be delayed.
- We currently rely on third parties for the manufacture of HIL-214 for clinical development and expect to continue to rely on third parties for the foreseeable future. This reliance on third parties increases the risk that we will not have sufficient quantities of HIL-214 or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.
- We face significant competition, and if our competitors develop technologies or vaccine candidates more rapidly than we do or their technologies are more effective, our business and our ability to develop and successfully commercialize products may be adversely affected.
- Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.
- Our business is subject to risks arising from the COVID-19 pandemic and other epidemic diseases.

- If we are unable to obtain, maintain and enforce patent protection for HIL-214 or any future vaccine candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize HIL-214 or any future vaccine candidates may be adversely affected.

Corporate information

We were originally founded as a Delaware corporation on March 25, 2020 under the name MokshaCo, Inc. On February 8, 2021, we changed our name to HilleVax, Inc. and merged with North Bridge V, Inc. and YamadaCo III, Inc., each of which were Delaware corporations, with HilleVax, Inc. as the surviving entity (the Merger). References throughout this registration statement to HilleVax, Inc. include North Bridge V, Inc. and YamadaCo III, Inc. prior to the Merger. Our principal executive offices are located at 75 State Street, Suite 100 - #9995, Boston, Massachusetts 02109, and our telephone number is (617) 213-5054. Our website address is www.hillevax.com. The information contained in, or accessible through, our website does not constitute a part of this prospectus. We have included our website address as an inactive textual reference only. See Note 1 to our audited combined financial statements included elsewhere in this prospectus for further information on our organization and the basis of presentation of our combined financial statements.

We use our trademarks in this prospectus as well as trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, trademarks and tradenames referred to in this prospectus appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or that the applicable owner will not assert its rights, to these trademarks and tradenames.

Implications of being an emerging growth company and a smaller reporting company

We qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). As an emerging growth company, we may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced “Management’s discussion and analysis of financial condition and results of operations” disclosure;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the Sarbanes-Oxley Act);
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements, unless the SEC determines the new rules are necessary for protecting the public;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the closing of this offering, which such fifth anniversary will occur in 2026. However, if certain events occur prior to the end of such five-year period, including if we become a “large accelerated filer” as defined in

Rule 12b-2 under the Securities Exchange Act of 1934 (the Exchange Act), our annual gross revenues exceed $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus and in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information in this prospectus and that we provide to our stockholders in the future may be different than what you might receive from other public reporting companies in which you hold equity interests.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have elected to avail ourselves of this exemption and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates. We intend to rely on other exemptions provided by the JOBS Act, including without limitation, not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act.

We are also a smaller reporting company as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than $100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

The offering

Common stock offered by us	shares.
Option to purchase additional shares	The underwriters have been granted an option to purchase up to additional shares of common stock from us at any time within 30 days from the date of this prospectus.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise their option to purchase additional shares in full).
Use of proceeds	We estimate that the net proceeds to us from this offering will be approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares in full) from the sale of the shares of common stock offered by us in this offering, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds of this offering, together with our existing cash, to fund the clinical development of HIL-214, including certain manufacturing activities, and for working capital and general corporate purposes. See the section titled “Use of proceeds.”
Risk factors	See the section titled “Risk factors” and other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	“HLVX”

The number of shares of our common stock to be outstanding after this offering is based on 5,488,000 shares of our common stock outstanding as of September 30, 2021, including 1,626,870 shares subject to forfeiture or our right of repurchase, and gives effect to the automatic conversion of $139.5 million of aggregate principal amount, plus accrued interest thereon, of convertible promissory notes we issued in August 2021 (the August 2021 Notes), into an aggregate of shares of our common stock immediately prior to the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and assuming the conversion occurs on , 2021), and excludes:

- 3,500,000 shares of common stock issuable to Takeda Vaccines, Inc. (Takeda) upon the exercise of an outstanding warrant (the Takeda Warrant), as of September 30, 2021, at an exercise price of $0.0001 per share;
- shares of common stock reserved for future issuance under our 2022 Incentive Award Plan (the 2022 Plan), which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the 2022 Plan); and

- shares of common stock reserved for future issuance under our 2022 Employee Stock Purchase Plan (the ESPP), which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

Unless otherwise indicated, all information contained in this prospectus assumes or gives effect to:

- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the closing of this offering;
- the issuance of shares of common stock upon the automatic conversion of the August 2021 Notes immediately prior to the closing of this offering (based on the assumed initial public price of $ per share, the midpoint of the price range set forth on the cover of this prospectus, and assuming the conversion occurs on , 2021);
- the expiration of the right granted to Takeda to receive an additional common stock warrant (the Takeda Warrant Right) upon the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover of this prospectus, as further described below in the section titled “Management’s discussion and analysis of financial condition and results of operations—Overview—License agreement with Takeda”);
- a 943.8776-for-1 forward stock split of our common stock effected on February 8, 2021;
- a subsequent -for- forward stock split of our common stock to be effected before the closing of this offering;
- no exercise of the outstanding warrants described above; and
- no exercise by the underwriters of their option to purchase additional shares of our common stock.

Each $1.00 increase in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would decrease the number of shares of our common stock issued upon conversion of the August 2021 Notes by shares. Each $1.00 decrease in the assumed initial public offering price of $ per share would increase the number of shares of our common stock issued upon conversion of the August 2021 Notes by shares.

Summary combined financial data

The following tables set forth a summary of our historical combined financial data as of, and for the periods ended on, the dates indicated. The combined financial statements include the accounts of our company, North Bridge V and YamadaCo III, all of which were entities under common control prior to the Merger, and our subsidiary. We have derived the summary combined statements of operations data for the period from January 8, 2019 (inception) through December 31, 2019 and the year ended December 31, 2020 from our audited combined financial statements included elsewhere in this prospectus. We have derived the summary combined statements of operations data for the nine months ended September 30, 2020 and 2021 and the summary combined balance sheet data as of September 30, 2021 from our unaudited combined financial statements included elsewhere in this prospectus. The unaudited combined financial statements have been prepared on a basis consistent with our audited combined financial statements included in this prospectus and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, necessary to fairly state the financial information in those statements. You should read these data together with our combined financial statements and related notes included elsewhere in this prospectus and the section titled “Management’s discussion and analysis of financial condition and results of operations.” Our historical results for any prior period are not necessarily indicative of our future results.

(in thousands, except share and per share data)	Period from January 8, 2019 (inception) to December 31, 2019	Year ended December 31, 2020	Nine months ended September 30, 2020	Nine months ended September 30, 2021
				(unaudited)
Statements of operations data:				
Operating expenses:				
General and administrative (includes related party amounts of $424, $467, $ and $, respectively)	$ 633	$ 1,295	$	$
Total operating expenses	633	1,295		
Loss from operations	(633)	(1,295)		
Other income (expense):				
Interest expense (includes related party amounts of $(9), $(29), $ and $, respectively)	(9)	(29)		
Change in fair value of convertible promissory notes (includes related party amounts of $(31) and $(779), $ and $, respectively)	(31)	(779)		
Total other income (expense)	(40)	(808)		
Net loss	$ (673)	$ (2,103)		$
Net loss per share, basic and diluted(1)	$ (0.55)	$ (0.81)	$	$
Weighted-average shares of common stock outstanding, basic and diluted(1)	1,223,006	2,598,266		
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)(2)		$		$
Pro forma weighted-average common shares outstanding, basic and diluted (unaudited)(2)				

(1) See Note 1 to our audited combined financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the basic and diluted net loss per share and the number of shares used in the computation of the per share amounts.

(2) See the section titled "Management's discussion and analysis of financial condition and results of operations—Unaudited pro forma net loss per share" for an explanation of the method used to calculate the pro forma net loss per share attributable to common stockholders, basic and diluted, and the number of shares used in the computation of the per share amounts.

	As of September 30, 2021		
(in thousands)	**Actual**	**Pro forma(1)**	**Pro forma as adjusted(2) (3)**
	(unaudited)	**(unaudited)**	**(unaudited)**
Balance sheet data:			
Cash	$	$	$
Working capital(4)			
Total assets			
Convertible promissory notes payable at fair value (including accrued interest)			
Warrant liabilities			
Accumulated deficit			
Total stockholders' equity (deficit)			

(1) Gives effect to (i) the automatic conversion of the August 2021 Notes into an aggregate of shares of our common stock immediately prior to the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, assuming the conversion occurs on , 2021), and (ii) the reclassification of the Takeda Warrant to stockholders' equity (deficit).

(2) Gives effect to (i) the pro forma adjustments set forth in footnote (1) above and (ii) our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3) Pro forma as adjusted balance sheet data is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) pro forma as adjusted cash, working capital, total assets and total stockholders' equity (deficit) by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. A one million share increase (decrease) in the number of shares offered by us would increase or decrease pro forma as adjusted cash, working capital, total assets and total stockholders' equity (deficit) by approximately $ million, assuming that the assumed initial offering price to the public remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(4) We define working capital as current assets less current liabilities. See our combined financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

Risk factors

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this prospectus, including our financial statements and related notes included elsewhere in this prospectus and the section titled "Management's discussion and analysis of financial condition and results of operations" before making an investment decision. If any of the following risks are realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the trading price of our common stock could decline and you could lose part or all of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations. This prospectus also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a number of factors, including the risks described below. See "Special note regarding forward-looking statements."

Risks related to our limited operating history, financial position and capital requirements

We have a limited operating history and have no products approved for commercial sale, which may make it difficult for you to evaluate our current business and predict our future success and viability.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. We are a clinical-stage biopharmaceutical company with a limited operating history upon which you can evaluate our business and prospects. We commenced operations in 2019, and we have no products approved for clinical commercial sale. To date, we have focused primarily on organizing and staffing our company, business planning, raising capital, in-licensing intellectual property related to our initial vaccine candidate, HIL-214, and preparing for our planned clinical trials of HIL-214. We have not yet completed any clinical trials, manufactured a commercial-scale product or arranged for a third party to do so on our behalf, obtained regulatory approvals, or conducted sales and marketing activities necessary for successful product commercialization. Consequently, any predictions made about our future success or viability may not be as accurate as they would be if we had a history of successfully developing and commercializing vaccines.

In addition, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors and risks frequently experienced by clinical-stage biopharmaceutical companies in rapidly evolving fields. If our planned clinical trials are successful, we will also need to transition from a company with a research focus to a company capable of successfully executing drug development activities and supporting commercial operations. If we do not adequately address these risks and difficulties or successfully make such a transition, our business, financial condition, results of operations and prospects will be significantly harmed.

We have incurred significant operating losses since our inception and expect to incur significant losses for the foreseeable future. We may never generate any revenue or become profitable or, if we achieve profitability, we may not be able to sustain it.

We have incurred significant operating losses since our inception. We do not have any products approved for sale and have not generated any revenue since our inception. If HIL-214 is not successfully developed, approved and commercialized, we may never generate any revenue. Our net losses were $0.7 million and $2.1 million for the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, respectively, and $ million for the nine months ended September 30, 2021. We have financed our operations to date through the issuance of convertible promissory notes. Substantially all of our losses have resulted from expenses incurred in connection with in-licensing intellectual property related to, and developing, HIL-214 and from general and administrative costs associated with our operations. HIL-214 and any future vaccine candidates will require substantial additional

development time and resources before we would be able to apply for or receive regulatory approvals and begin generating revenue from product sales. We expect to continue to incur losses for the foreseeable future, and we anticipate these losses will increase substantially as we continue our development of, seek regulatory approval for and potentially commercialize HIL-214 and seek to identify, assess, acquire, in-license intellectual property related to or develop additional vaccine candidates.

To become and remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of HIL-214 and any future vaccine candidates, obtaining regulatory approval for these vaccine candidates, and manufacturing, marketing and selling any products for which we may obtain regulatory approval. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenue that is significant enough to achieve profitability. In addition, we have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical industry. Because of the numerous risks and uncertainties associated with biopharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when or if, we will be able to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable may have an adverse effect on the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our vaccine candidates or even continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our development programs, commercialization efforts or other operations.

The development of vaccine candidates is capital-intensive. We expect our expenses to increase in connection with our ongoing activities, particularly as we conduct our planned clinical trials for HIL-214 and potentially seek regulatory approval for HIL-214 and any future vaccine candidates we may develop. In addition, if we are able to progress HIL-214 through development and commercialization, we will be required to make milestone and royalty payments to Takeda, from whom we have in-licensed certain patents and know-how related to HIL-214 globally, other than in Japan, pursuant to the license agreement we entered into with Takeda on July 2, 2021 (the Takeda License). If we obtain regulatory approval for HIL-214 or any future vaccine candidates, we also expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution. Because the outcome of any preclinical study or clinical trial is highly uncertain, we cannot reliably estimate the actual amounts necessary to successfully complete the development and commercialization of HIL-214 or any future vaccine candidates. Furthermore, following the completion of this offering, we expect to incur additional costs associated with operating as a public company. We do not have any committed external source of funds.

As of September 30, 2021, we had cash of $. Based on our current operating plan, we believe that the net proceeds from this offering, together with our existing cash, will enable us to fund our operations through at least . We have based these estimates on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect and need to seek additional funds sooner than planned. The net proceeds of this offering, together with our existing cash and restricted cash, will not be sufficient to complete development of HIL-214, or any future vaccine candidate, and after this offering, we will require substantial capital in order to advance HIL-214 and any future vaccine candidates through clinical trials, regulatory approval and commercialization. Accordingly, we will need to obtain substantial additional funding

in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts.

We expect to finance our cash needs through public or private equity or debt financings or other capital sources, including potential collaborations, licenses, non-dilutive sources of financing, such as grants, and other similar arrangements. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop HIL-214 and any future vaccine candidates.

Our future capital requirements will depend on many factors, including, but not limited to:

- the initiation, type, number, scope, results, costs and timing of, our planned clinical trials of HIL-214 and preclinical studies or clinical trials of other potential vaccine candidates we may choose to pursue in the future, including any modifications to clinical development plans based on feedback that we may receive from regulatory authorities;
- the costs and timing of manufacturing for HIL-214, or any future vaccine candidates, and placebo to be used in our trials, as well as commercial scale manufacturing, if any vaccine candidate is approved;
- the costs, timing and outcome of regulatory meetings and reviews of HIL-214 or any future vaccine candidates;
- any delays and cost increases that may result from the COVID-19 pandemic;
- the costs of obtaining, maintaining, enforcing and protecting our patents and other intellectual property and proprietary rights;
- our efforts to enhance operational systems and hire additional personnel to satisfy our obligations as a public company, including enhanced internal controls over financial reporting;
- the costs associated with hiring additional personnel and consultants as our business grows, including additional executive officers and clinical development and commercial personnel;
- the terms and timing of establishing and maintaining collaborations, license agreements and other similar arrangements;
- the timing and amount of the milestone, royalty or other payments we must make to Takeda and any future licensors;
- the costs and timing of establishing or securing sales and marketing capabilities if HIL-214 or future vaccine candidates are approved;
- our ability to receive recommendations from the ACIP, or other foreign national immunization technical advisory groups (NITAGs), and achieve sufficient market acceptance, coverage and adequate reimbursement from third-party payors and adequate market share and revenue for any approved products;
- vaccine recipients' willingness to pay out-of-pocket for any approved products in the absence of coverage and/or adequate reimbursement from third-party payors; and
- costs associated with any products or technologies that we may in-license or acquire.

Conducting preclinical studies and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and commercialize HIL-214 and any future vaccine candidates. If approved, HIL-214 and any future vaccine candidates may not achieve commercial success. Our commercial revenue, if any, will initially be derived from sales of HIL-214, which we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

Raising additional capital may cause dilution to our stockholders, including purchasers of common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or vaccine candidates.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through equity offerings, debt financings, or other capital sources, including potential collaborations, license agreements and other similar arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest may be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. Such restrictions could adversely impact our ability to conduct our operations and execute our business plan.

If we raise additional funds through future collaborations, license agreements and other similar arrangements, we may be required to relinquish valuable rights to our future revenue streams, research programs, vaccine candidates, intellectual property or proprietary technology, or grant licenses on terms that may not be favorable to us and/or that may reduce the value of our common stock. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed or on terms acceptable to us, we would be required to delay, limit, reduce, or terminate our product development or future commercialization efforts or grant rights to develop and market vaccine candidates that we might otherwise prefer to develop and market ourselves.

Our management, as of December 31, 2020, and our independent registered public accounting firm, in their report on our audited combined financial statements as of and for the year ended December 31, 2020, have concluded that there is substantial doubt as to our ability to continue as a going concern.

Our audited combined financial statements for the year ended December 31, 2020 were prepared assuming that we will continue as a going concern. The going concern basis of presentation assumes that we will continue in operation for the foreseeable future and will be able to realize our assets and satisfy our liabilities in the normal course of business and do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or amounts and classification of liabilities that may result from our inability to continue as a going concern. As of December 31, 2020, our management concluded that, based on our expected operating losses, negative cash flows and maturities of outstanding convertible promissory notes, there is substantial doubt about our ability to continue as a going concern for the twelve months after the date the combined financial statements were issued. Our ability to continue as a going concern is subject to our ability to obtain sufficient financing. If we cannot continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our combined financial statements, and it is likely that our stockholders may lose some or all of their investment in us.

After this offering, we may not raise the funding we require such that substantial doubt about our ability to continue as a going concern continues. If we seek additional financing to fund our business activities in the

future and there remains substantial doubt about our ability to continue as a going concern, investors or other financing sources may be unwilling to provide additional funding on commercially reasonable terms or at all.

Risks related to the development and regulatory approval of our vaccine candidates

We currently depend entirely on the success of HIL-214, which is our only vaccine candidate. If we are unable to advance HIL-214 in clinical development, obtain regulatory approval and ultimately commercialize HIL-214, or experience significant delays in doing so, our business will be materially harmed.

We currently only have one vaccine candidate, HIL-214, the intellectual property for which we have in-licensed from Takeda and which is in Phase 2 clinical development. Our business presently depends entirely on our ability to successfully develop, obtain regulatory approval for, and commercialize HIL-214 in a timely manner. This may make an investment in our company riskier than similar companies that have multiple vaccine candidates in active development that may be able to better sustain the delay or failure of a lead vaccine candidate. In addition, our assumptions about HIL-214's development potential are based in large part on the data generated from preclinical studies and clinical trials conducted by Takeda and Ligocyte Pharmaceuticals, Inc. (Ligocyte) and we may observe materially and adversely different results as we conduct our planned clinical trials. The success of HIL-214 will depend on several factors, including the following:

- acceptance by the FDA, the European Medicines Agency (EMA) or other comparable foreign regulatory authorities of our proposed design of our planned clinical trials of HIL-214, as well as our proposed immunobridging strategy to additional subject populations;
- successful initiation and enrollment of clinical trials and completion of clinical trials with favorable results;
- successful completion of preclinical studies with favorable results, including toxicology and other studies designed to be compliant with good laboratory practices (GLP);
- successful development and qualification of a number of clinical assays to support the determination of our primary and secondary endpoints and the performance of such clinical assays in such trials;
- demonstrating the safety, purity, potency, immunogenicity and efficacy of HIL-214 to the satisfaction of applicable regulatory authorities;
- making arrangements with third-party manufacturers for, or establishing, manufacturing capabilities for the clinical and, if approved, commercial supply of HIL-214;
- receipt of marketing approvals from applicable regulatory authorities, including approvals of biologics license applications (BLAs) or supplements from the FDA and similar marketing authorization applications (MAAs) from the EMA, and maintaining such approvals;
- establishing sales, marketing and distribution capabilities and launching commercial sales of HIL-214, if and when approved, whether alone or in collaboration with others;
- obtaining, establishing and maintaining patent and trade secret protection or regulatory exclusivity for HIL-214;
- maintaining an acceptable safety profile of HIL-214 following regulatory approval, if any;
- maintaining and growing an organization of people who can develop and, if approved, commercialize, market and sell HIL-214; and
- acceptance of our products, if approved, by patients, the medical community and third-party payors.

In addition, our development plan for HIL-214 initially targets the prevention of moderate to severe AGE caused by norovirus in infants. Depending on the feedback we receive from regulatory agencies, we may decide to further limit our initial target population to a subset of infants, such as infants with certain underlying health conditions common within this age range, or we may materially modify our current plans to use immunobridging studies based on a serology surrogate endpoint and or the criteria proposed to seek subsequent regulatory authorizations in older children, adults and older adults. Limiting our target patient population may negatively impact our ability to complete clinical trials or studies within our planned timeline and could limit the commercial potential of HIL-214. If we are unable to develop, receive marketing approval for and successfully commercialize HIL-214 in our targeted patient populations, or if we experience delays as a result of any of the above factors or otherwise, our business would be significantly harmed.

Clinical and preclinical development involves a lengthy and expensive process with an uncertain outcome, and the results of prior clinical trials and studies of HIL-214 are not necessarily predictive of our future results. We have not completed clinical trials for HIL-214 and we may not have favorable results in our clinical trials, or receive regulatory approval on a timely basis, if at all.

Clinical and preclinical development is expensive and can take many years to complete, and its outcome is inherently uncertain. We cannot guarantee that any preclinical studies or clinical trials will be conducted as planned or completed on schedule, if at all, and failure can occur at any time during the trial or study process. Despite promising preclinical or clinical results, any vaccine candidate can unexpectedly fail at any stage of preclinical or clinical development. The historical failure rate for vaccine candidates in our industry is high, particularly in the early stages of development.

The results from preclinical studies or clinical trials of a vaccine candidate or a competitor's vaccine candidate in the same class may not predict the results of later clinical trials of such vaccine candidate, and interim, topline, or preliminary results of a clinical trial are not necessarily indicative of final results. Vaccine candidates in later stages of clinical trials may fail to show the desired safety and efficacy characteristics despite having progressed through preclinical studies and initial clinical trials. In particular, while HIL-214 has been studied by Takeda in an extensive clinical program that included nine clinical trials, we do not know how HIL-214 will perform in our planned clinical trials, whether due to design differences, subject population or otherwise, including our use of a different manufacturing process to produce clinical material than that used in these prior trials. For these reasons and others, it is not uncommon to observe results in clinical trials that are unexpected based on preclinical studies and early clinical trials. Many vaccine candidates fail in clinical trials despite very promising early results, and a number of companies in the biopharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier preclinical studies and clinical trials. Based upon negative or inconclusive results, we or any future collaborator may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials, which would cause us to incur additional operating expenses. Further, since there are no reliable animal models to norovirus infection, we may have to complete additional human challenge studies, which have been used to understand viral activity and possible immune correlates that prevent infection, making trials costlier than animal-based studies.

In addition, under the Takeda License, Takeda, a third party over which we have no control, has the right to develop and commercialize HIL-214 in Japan. If Takeda conducts any clinical trials of HIL-214 or if such trials generate negative results or results that conflict with the results of our clinical trials, the FDA, EMA, or other regulatory authorities may delay, limit, or deny approval of HIL-214, require us to conduct additional clinical trials as a condition to marketing approval, or withdraw their approval of HIL-214 or otherwise restrict our ability to market and sell HIL-214, if approved.

As a result, we cannot be certain that our planned preclinical studies and clinical trials will be successful. Any safety concerns observed in any one of our clinical trials in our targeted indications could limit the prospects for regulatory approval of HIL-214 in those and other indications, which could have a material adverse effect on our business, financial condition and results of operations.

Any difficulties or delays in the commencement or completion, or the termination or suspension, of our planned clinical trials could result in increased costs to us, delay or limit our ability to generate revenue or adversely affect our commercial prospects.

Before obtaining marketing approval from regulatory authorities for the sale of HIL-214 or any future vaccine candidates, we must conduct extensive clinical trials to demonstrate the safety, purity, potency, immunogenicity and efficacy of the vaccine candidates in humans. Before we can initiate clinical trials for HIL-214 or any future vaccine candidates, we must submit the results of preclinical studies to the FDA or comparable foreign regulatory authorities along with other information, including information about vaccine candidate chemistry, manufacturing and controls and our proposed clinical trial protocol, to maintain our open investigational new drug application (IND) with the FDA or as part of any similar regulatory submission required for allowance to proceed with clinical development. The FDA, EMA or comparable foreign regulatory authorities may require us to conduct additional preclinical studies, or added clinical evaluation under any IND, clinical trial authorization or similar regulatory submission, which may lead to delays and increase the costs of our clinical development program. Moreover, even if we commence clinical trials, issues may arise that could cause regulatory authorities to suspend or terminate such clinical trials. Any such delays in the commencement or completion of our ongoing and planned clinical trials for HIL-214 and any future vaccine candidates could significantly affect our product development timelines and product development costs.

We do not know whether our planned clinical trials will begin on time or be completed on schedule, if at all. The commencement and completion of clinical trials can be delayed for a number of reasons, including delays related to:

- inability to generate sufficient preclinical, toxicology, or other *in vivo or in vitro data to support the initiation or continuation of clinical trials;*
- obtaining regulatory authorizations to commence a trial or reaching a consensus with regulatory authorities on trial design;
- the FDA, EMA or comparable foreign regulatory authorities disagreeing as to the implementation of our clinical trials;
- any failure or delay in reaching an agreement with contract research organizations (CROs) and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- delays in identifying, recruiting and training suitable clinical investigators;
- obtaining approval from one or more institutional review boards (IRBs) or ethics committees at clinical trial sites;
- IRBs refusing to approve, suspending or terminating the trial at an investigational site, precluding enrollment of additional subjects, or withdrawing their approval of the trial;
- major changes or amendments to the clinical trial protocol;
- clinical sites deviating from the trial protocol or dropping out of a trial;

- failure by our CROs to perform in accordance with good clinical practice (GCP) requirements or applicable regulatory guidelines in other countries;
- manufacturing sufficient quantities of HIL-214 and placebo for use in clinical trials, which could be materially impacted by the COVID-19 pandemic;
- Expiration of the shelf life of clinical material for use in clinical trials prior to the enrollment of any of our clinical trials;
- subjects failing to enroll or remain in our trials at the rate we expect, or failing to return for post-treatment follow-up, including subjects failing to remain in our trials due to movement restrictions, heath reasons or otherwise resulting from the COVID-19 pandemic;
- insufficient incidence of norovirus infection to allow us to evaluate the endpoints in our clinical trials of HIL-214, including lower incidence due to social changes resulting from the COVID-19 pandemic;
- individuals choosing an alternative product for the indication for which we are developing HIL-214 or any future vaccine candidates, or participating in competing clinical trials;
- lack of adequate funding to continue the clinical trial;
- subjects experiencing severe or serious unexpected vaccine-related adverse effects;
- occurrence of vaccine-related serious adverse events in trials of other protein-based vaccine candidates conducted by other companies that could be considered similar to HIL-214 or any future vaccine candidates;
- selection of clinical endpoints that require prolonged periods of clinical observation or extended analysis of the resulting data;
- transfer of manufacturing processes to larger-scale facilities operated by a contract manufacturing organization (CMO), delays or failure by our CMOs or us to make any necessary changes to such manufacturing process, or failure of our CMOs to produce clinical trial materials in accordance with current good manufacturing practice (cGMP) regulations or other applicable requirements; and
- third parties being unwilling or unable to satisfy their contractual obligations to us in a timely manner.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by a Data Safety Monitoring Board for such trial or by the FDA or comparable foreign regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or comparable foreign regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a vaccine, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. In addition, changes in regulatory requirements and policies may occur, and we may need to amend clinical trial protocols to comply with these changes. Amendments may require us to resubmit our clinical trial protocols to IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical trial.

Further, conducting clinical trials in foreign countries, as we plan to do for HIL-214 and may do for future vaccine candidates, presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled subjects in foreign countries to adhere to clinical protocols as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, and political and economic risks relevant to such foreign countries.

In addition, many of the factors that cause, or lead to, the termination or suspension of, or a delay in the commencement or completion of, clinical trials may also ultimately lead to the denial of regulatory approval of a vaccine candidate. We may make formulation or manufacturing changes to HIL-214 or any future vaccine candidates, in which case we may need to conduct additional preclinical studies to bridge our modified vaccine candidates to earlier versions. Any resulting delays to our clinical trials could shorten any period during which we may have the exclusive right to commercialize our vaccine candidates. In such cases, our competitors may be able to bring products to market before we do, and the commercial viability of HIL-214 or any future vaccine candidates could be significantly reduced. Any of these occurrences may harm our business, financial condition and prospects.

We may find it difficult to enroll subjects in our clinical trials. If we encounter difficulties enrolling subjects in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

Successful and timely completion of clinical trials will require that we identify and enroll a specified number of subjects for each of our clinical trials. We may not be able to initiate or continue clinical trials for HIL-214 or any future vaccine candidates if we are unable to identify and enroll a sufficient number of eligible subjects to participate in these trials as required by the FDA or similar regulatory authorities outside the United States.

Subject enrollment, a significant factor in the timing of clinical trials, is affected by many factors, including the size and nature of the subject population, the severity of the disease under investigation, the proximity of subjects to clinical sites, the eligibility and exclusion criteria for the trial, the design of the clinical trial, the ability to obtain and maintain informed consents, the risk that enrolled subjects will not complete a clinical trial, our ability to recruit clinical trial investigators with the appropriate competencies and experience, and competing clinical trials and clinicians' and subjects' perceptions as to the potential advantages and risks of the vaccine candidate being studied in relation to other available vaccines or therapies, including any new products that may be approved for the indications we are investigating as well as any vaccine candidates under development.

In addition, the process of finding and recruiting subjects may prove costly. The timing of our clinical trials depends, in part, on the speed at which we can recruit subjects to participate in our trials, as well as completion of required follow-up periods. The eligibility criteria of our clinical trials, once established, may further limit the pool of available trial participants. If subjects are unwilling or unable to participate in our trials for any reason, including the existence of concurrent clinical trials for similar target populations, negative perceptions of vaccines generally or of any of our vaccine candidates in particular, the availability of approved or authorized therapies, the effects of the COVID-19 pandemic, or the fact that enrolling in our trials may prevent subjects from taking a different product, or we otherwise have difficulty enrolling a sufficient number of subjects, the timeline for recruiting subjects, conducting trials and obtaining regulatory approval of our vaccine candidates may be delayed. Our inability to enroll a specified number of subjects for any of our future clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether. In addition, we rely on, and will continue to rely on, CROs and clinical trial sites to ensure proper and timely conduct of our preclinical studies and clinical trials. Though we have entered into agreements governing their services, we will have limited influence over their actual performance.

We cannot assure you that our assumptions used in determining expected clinical trial timelines are correct or that we will not experience delays in enrollment, which would result in the delay of completion of such trials beyond our expected timelines.

As an organization, we have never completed any clinical trials, and may be unable to do so for HIL-214 or any future vaccine candidates.

We will need to successfully complete our planned clinical trials in order to seek FDA, EMA or comparable foreign regulatory approval to market HIL-214 or any future vaccine candidates. Carrying out clinical trials and the submission of a successful BLA or MAA is a complicated process. We plan to initiate a Phase 2b clinical trial of HIL-214 in infants in the first quarter of 2022. While Takeda previously conducted both Phase 1 and 2 clinical trials of HIL-214, we have not previously completed any clinical trials and have not previously submitted a BLA, MAA or other comparable foreign regulatory submission. Consequently, we may be unable to successfully and efficiently execute and complete necessary clinical trials in a way that enables us to seek and maintain approval of HIL-214 or any future vaccine candidates. We may require more time and incur greater costs than Takeda required, or than our competitors require, and may not succeed in obtaining regulatory approvals of vaccine candidates that we develop. Failure to commence or complete, or delays in, our planned clinical trials, could prevent us from or delay us in submitting BLAs or MAAs for and potentially commercializing HIL-214 or any future vaccine candidates.

Use of HIL-214 or any future vaccine candidates could be associated with adverse side effects, adverse events or other safety risks, which could delay or preclude approval, cause us to suspend or discontinue clinical trials, abandon a vaccine candidate, limit the commercial profile of an approved label or result in other significant negative consequences that could severely harm our business, prospects, operating results and financial condition.

As is the case with biopharmaceuticals generally, it is likely that there may be adverse side effects associated with HIL-214 or any future vaccine candidates' use. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of expected or unexpected side effects. Vaccine-related side effects could affect subject recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. Undesirable side effects caused by our vaccine candidates when used alone or in combination with approved drugs, biologics or vaccines could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or lead to the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. Any of these occurrences could severely harm our business, prospectus, operating results and financial condition.

Moreover, if HIL-214 or any future vaccine candidates are associated with undesirable side effects in clinical trials or demonstrate characteristics that are unexpected, we may elect to abandon their development or limit their development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective, which may limit the commercial expectations for the vaccine candidate if approved. We may also be required to modify our development and clinical trial plans based on findings after we commence clinical trials. Many compounds that initially showed promise in early-stage testing have later been found to cause side effects that prevented further development of the compounds. In addition, regulatory authorities may draw different conclusions or require additional testing to confirm these determinations.

In addition to our planned Phase 2b clinical trial in infants and Phase 3 clinical trials, we will need to conduct co-administration trials with other vaccines as required to fit into a pediatric vaccination schedule, as well as other required pediatric trials. It is possible that as we test HIL-214 or any future vaccine candidates in larger, longer and more extensive clinical trials, or if the use of these vaccine candidates becomes more widespread following regulatory approval, more illnesses, injuries, discomforts and other adverse events than were observed in earlier trials, as well as new conditions that did not occur or went undetected, may be discovered. If such side effects become known later in development or upon approval, if any, such findings may harm our

business, financial condition and prospects significantly. Further, if a serious safety issue is identified in connection with use of HIL-214 in any trials that may be conducted by Takeda, such issues may adversely affect the development potential of HIL-214 or result in regulatory authorities restricting our ability to develop HIL-214.

In addition, if HIL-214 or any future vaccine candidate receives marketing approval, and we or others later identify undesirable side effects caused by such vaccine, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw, suspend or limit approvals of such vaccine or seek an injunction against its manufacture or distribution;
- we may be required to recall a vaccine or change the way such vaccine is administered to individuals;
- regulatory authorities may require additional warnings on the label, such as a “black box” warning or a contraindication;
- we may be required to implement a Risk Evaluation and Mitigation Strategy (REMS) or create a medication guide outlining the risks of such side effects for distribution to individuals;
- we may be required to change the way a vaccine is distributed or administered, conduct additional clinical trials or change the labeling of a vaccine or be required to conduct additional post-marketing studies or surveillance;
- we could be sued and held liable for harm caused to vaccine recipients;
- sales of the vaccine may decrease significantly or the vaccine could become less competitive; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular vaccine candidate, if approved, and could significantly harm our business, results of operations and prospects.

Vaccine candidates are subject to extensive regulation and compliance, which is costly and time consuming, and such regulation and compliance may cause unanticipated delays or prevent the receipt of the required approvals and licenses to commercialize HIL-214 and any future vaccine candidates.

The clinical development, manufacturing, labeling, packaging, storage, record-keeping, advertising, promotion, import, export, marketing, distribution and adverse event reporting, including the submission of safety and other information, of vaccine candidates are subject to extensive regulation by the FDA in the United States, the EMA in the European Union and by comparable foreign regulatory authorities in other foreign markets. In the United States, we are not permitted to market our vaccine candidates until we receive regulatory approval from the FDA in the United States, which is referred to as licensure. The process of obtaining regulatory approval is expensive, often takes many years following the commencement of clinical trials and can vary substantially based upon the type, complexity and novelty of the vaccine candidates involved, as well as the target indications and populations. Approval policies or regulations may change, and the FDA and the EMA have substantial discretion in the vaccine approval process, including the ability to delay, limit or deny approval of a vaccine candidate for many reasons. Despite the time and expense invested in clinical development of vaccine candidates, regulatory approval is never guaranteed. We are not permitted to market any of our vaccine candidates until we receive approval of a BLA from the FDA in the United States or a MAA by the EMA in Europe.

Prior to obtaining approval to commercialize a vaccine candidate in the United States or abroad, we or our collaborators must demonstrate with substantial evidence from adequate and well-controlled clinical trials, and to the satisfaction of the FDA, EMA or other comparable foreign regulatory authorities, that such vaccine candidates are safe, pure and potent and effective for their intended uses. Results from preclinical studies and clinical trials can be interpreted in different ways. Even if we believe the preclinical or clinical data for our vaccine candidates are promising, such data may not be sufficient to support approval by the FDA, EMA or comparable foreign regulatory authorities. The FDA, EMA or other comparable foreign regulatory authorities, as the case may be, may also require us to conduct additional preclinical studies or clinical trials for HIL-214 or any future vaccine candidates either prior to approval or post-approval, or may object to elements of our clinical development program.

The FDA, EMA or other comparable foreign regulatory authorities can delay, limit or deny approval of a vaccine candidate for many reasons, including:

- such authorities may disagree with the design or implementation of our clinical trials;
- negative or ambiguous results from our clinical trials, or results may not otherwise meet the level of statistical significance required by the FDA, EMA or other comparable foreign regulatory agencies for approval;
- serious and unexpected vaccine-related side effects may be experienced by participants in our clinical trials or by individuals using vaccines similar to our vaccine candidates;
- such authorities may not accept clinical data from trials that are conducted at clinical facilities or in countries where the standard of care is potentially different from those of their respective home countries;
- we may be unable to demonstrate that a vaccine candidate is safe and effective, and that such vaccine candidate's clinical and other benefits outweigh its safety risks;
- such authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- such authorities may not agree that the data collected from clinical trials of our vaccine candidates are acceptable or sufficient to support the submission of a BLA, MAA or other marketing application, and such authorities may impose requirements for additional preclinical studies or clinical trials;
- such authorities may disagree regarding the formulation, labeling and/or the specifications of HIL-214 or any future vaccine candidates;
- approval may be granted only for indications that are significantly more limited than what we apply for and/or be subject to other significant restrictions on distribution and use;
- such authorities may find deficiencies in the manufacturing processes, approval policies or facilities of Takeda and any other third-party manufacturers with which we contract for clinical and commercial supplies;
- regulations of such authorities may significantly change in a manner rendering our or any of our potential future collaborators' clinical data insufficient for approval; or
- such authorities may not accept a submission due to, among other reasons, the content of or presentation of the data in the submission.

Of the large number of vaccines and biologics in development, only a small percentage successfully complete the FDA or foreign regulatory approval processes and are commercialized. The lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to

market HIL-214 and any future vaccine candidates, which would significantly harm our business, results of operations and prospects.

With respect to foreign markets, approval procedures vary among countries and, in addition to the foregoing risks, may involve additional product testing, administrative review periods and agreements with pricing authorities. In addition, events raising questions about the safety of certain marketed biopharmaceuticals may result in increased cautiousness by the FDA, EMA and other comparable foreign regulatory authorities in reviewing new drugs based on safety, efficacy or other regulatory considerations and may result in significant delays in obtaining regulatory approvals.

Any delay in obtaining, or inability to obtain, applicable regulatory approvals would prevent us from commercializing HIL-214 or any future vaccine candidates.

We may not be successful in our efforts to investigate HIL-214 in additional age groups or in additional indications and formulations. We may expend our limited resources to pursue a particular indication or formulation for HIL-214 and fail to capitalize on vaccine candidates, indications or formulations that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on specific vaccine candidates, development programs and indications. We plan to focus our initial development efforts on evaluating HIL-214 for the prevention of moderate-to-severe acute gastroenteritis caused by norovirus in infants. We then plan to pursue an immunobridging strategy to expand the development of HIL-214 to older children, adults, older adults and other high-risk groups. Immunobridging studies aim to demonstrate non-inferiority of immune response against a pre-specified criteria between a reference age group (i.e., infants) and target age groups in specific clinical trials. These studies require an appropriate and acceptable serological surrogate and assay and are designed to support supplemental or additional marketing authorization for other age groups without the need for an efficacy trial. However, we may not be able to confirm an appropriate serological surrogate in our infant efficacy trials and even if we do, the FDA, EMA or other comparable foreign regulatory authority may not support our proposed immunobridging criteria or strategy. If either of these events occur, we would be required to conduct additional efficacy clinical trials in adults, which would lead to significant delays and would materially increase the costs of our clinical development program for HIL-214 in these additional age groups. In addition, immunobridging to older adults may be particularly challenging given the incidence rate seen in this population. We may also evaluate alternative formulations or combinations of HIL-214, including through the addition of new norovirus strains to cover relevant or emerging genotypes. As a result of our decision to pursue a given age group, formulation or indication, we may forgo or delay pursuit of opportunities with other vaccine candidates that could have had greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and vaccine candidates for specific indications may not yield any commercially viable vaccine candidates. If we do not accurately evaluate the commercial potential or target market for a particular vaccine candidate, we may relinquish valuable rights to that vaccine candidate through collaborations, license agreements and other similar arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such vaccine candidate.

If the incidence rates of infection for the specific pathogens we are targeting are smaller than we believe they are, our clinical development may be adversely affected, and our business may suffer.

Our projections of both the number of people who have a norovirus infection, as well as the subset of people with genotypes who have the potential to benefit from treatment with HIL-214 and any future vaccine candidates, are based on our estimates. These estimates have been derived from a variety of sources, including

scientific literature, epidemiologic surveys, and market research based on healthcare databases, and may prove to be incorrect or imprecise. In addition, precise incidence for the noroviruses we aim to address with HIL-214 and any future vaccine candidates may vary from season to season. Further, new trials or information may change the estimated incidence of these diseases. Our planned clinical trial sizes are based on our current estimates for rates of infection for the specific norovirus targeted by HIL-214, and such rates and estimates may be affected by the COVID-19 pandemic. For example, measures taken that may limit social interaction or prevent reopening of high-transmission settings may reduce incidence rates. If our estimates are incorrect, this may impact the number of subjects that need to be recruited for our clinical trials, the time required to evaluate trial endpoints in these subjects and the overall time to complete the trial, may result in us having to repeat a clinical trial, or could impact the likelihood of success of our clinical development.

Interim, topline and preliminary data from our preclinical studies and clinical trials that we announce or publish from time to time may change as more subject data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose preliminary or topline data from our preclinical studies and clinical trials, which is based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline or preliminary results that we report may differ from future results of the same studies or trials, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline and preliminary data also remain subject to audit and verification procedures that may result in the final data being materially different from the topline or preliminary data we previously published. As a result, topline and preliminary data should be viewed with caution until the final data are available.

From time to time, we may also disclose interim data from our preclinical studies and clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between interim data and final data could significantly harm our business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the price of our common stock.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular vaccine candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure. . If the interim, topline, or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, HIL-214 and any future vaccine candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

Changes in methods of vaccine candidate manufacturing or formulation may result in additional costs or delay.

As vaccine candidates progress through clinical trials to marketing approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize safety, efficacy, yield and manufacturing batch size, minimize costs and achieve consistent quality and results. Such changes carry the risk that they will not achieve these

intended objectives. For example, the manufacturing process being used to produce clinical material for our planned clinical trials is different than that used in prior trials of HIL-214. These changes and any future changes we may make to HIL-214 or any future vaccine candidates may cause such candidates to perform differently and affect the results of future clinical trials conducted with the altered materials. We plan to review and report safety and immunogenicity data from the first approximately 200 subjects in our planned Phase 2b clinical trial to assess HIL-214 manufactured using this new process. Such changes or negative trial results could delay initiation or completion of clinical trials, require the conduct of bridging studies or clinical trials or the repetition of one or more studies or clinical trials, increase development costs, delay potential marketing approval and jeopardize our ability to commercialize HIL-214 or any future vaccine candidates, if approved, and generate revenue.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA and other government agencies to review and approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory and policy changes, a government agency's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the government agency's ability to perform routine functions. Average review times at the FDA and other government agencies have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new biologics or modifications to approved biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including for 35 days beginning on December 22, 2018, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical employees and stop critical activities.

Separately, in response to the COVID-19 pandemic, on March 10, 2020, the FDA announced its intention to postpone most inspections of foreign manufacturing facilities and products. Subsequently, on March 18, 2020 the FDA temporarily postponed routine surveillance inspections of domestic manufacturing facilities. Subsequently, on July 10, 2020, the FDA announced its intention to resume certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. The FDA intends to use this risk-based assessment system to identify the categories of regulatory activity that can occur within a given geographic area, ranging from mission critical inspections to resumption of all regulatory activities. Additionally, on April 15, 2021, the FDA issued a guidance document in which the FDA described its plans to conduct voluntary remote interactive evaluations of certain drug manufacturing facilities and clinical research sites. According to the guidance, the FDA intends to request such remote interactive evaluations in situations where an in-person inspection would not be prioritized or deemed mission-critical, or where direct inspection is otherwise limited by travel restrictions, but where the FDA determines that remote evaluation would be appropriate. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. In addition, regulatory agencies such as the FDA and EMA slowed down the review of non-COVID vaccine-related efforts since 2020 in order to handle the workload and priority needed for review of COVID-related vaccines. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Risks related to our reliance on third parties

We heavily rely on the Takeda License to provide us with intellectual property rights to develop and commercialize HIL-214. If the Takeda License is terminated, we would lose our rights to develop and commercialize HIL-214.

Pursuant to the Takeda License, we have, among other things, secured an exclusive license from Takeda under certain patents and know-how relating to HIL-214 to commercialize HIL-214 globally, with the exception of Japan. The Takeda License expires on a country-by-country basis and product-by-product basis upon the expiration of the applicable royalty term with respect to each product in each country, as applicable, or in its entirety upon the expiration of the royalty term with respect to the last product commercialized in the last country, unless terminated earlier. We may terminate the Takeda License in its entirety without cause upon six months' prior written notice. We and Takeda may terminate the Takeda License in the case of the other party's insolvency, or upon prior written notice within a specified time period for the other party's material uncured breach. Takeda may terminate the Takeda License in its entirety if we challenge the licensed patents, or if we assist any third party in challenging such patents. In addition, if any of the regulatory milestones or other cash payments become due under the terms of the Takeda License, we may not have sufficient funds available to meet our obligations, Takeda has the right to terminate the Takeda License upon our uncured failure to pay Takeda. If the Takeda License is terminated, we would lose our rights to develop and commercialize HIL-214, which in turn would have a material adverse effect on our business, operating results and prospects. For additional information on the Takeda License, see "Business—License agreement with Takeda."

We rely on third parties to conduct preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements or meet expected deadlines, our development programs and our ability to seek or obtain regulatory approval for or commercialize HIL-214 and any future vaccine candidates may be delayed.

We depend on third parties to conduct our preclinical studies and clinical trials for HIL-214 and any future vaccine candidates. Specifically, we rely on, and will continue to rely on, medical institutions, clinical investigators, CROs and consultants to conduct preclinical studies and clinical trials, in each case in accordance with our clinical protocols and regulatory requirements. These CROs, investigators and other third parties play a significant role in the conduct and timing of these trials and subsequent collection and analysis of data. Though we expect to carefully manage our relationships with our CROs, investigators and other third parties, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects. Further, while we will have agreements governing the activities of our third-party contractors, we have limited influence over their actual performance. Nevertheless, we are responsible for ensuring that each of our preclinical studies and clinical trials are conducted in accordance with the applicable protocol and legal, regulatory and scientific standards and requirements, and our reliance on our CROs and other third parties does not relieve us of our regulatory responsibilities. In addition, we and our CROs are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA, EMA and comparable foreign regulatory authorities for HIL-214 and any future vaccine candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our CROs or trial sites fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable, and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. Furthermore, our clinical trials must be conducted with vaccine candidates produced under cGMP regulations. Failure to comply with these regulations may require us to repeat clinical trials or recall batches of our vaccine candidate, which would delay the regulatory approval process.

There is no guarantee that any of our CROs, investigators or other third parties will devote adequate time and resources to our preclinical studies or clinical trials or perform as contractually required. If any of these third parties fails to meet expected deadlines, adhere to our clinical protocols or meet regulatory requirements, or otherwise performs in a substandard manner, our clinical trials may be extended, delayed or terminated. In addition, many of the third parties with whom we contract may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting preclinical studies, clinical trials or other development activities that could harm our competitive position.

If any of our relationships with these third parties terminate, we may not be able to enter into arrangements with alternative third parties on commercially reasonable terms or at all. Switching or adding additional CROs, investigators and other third parties involves additional cost and requires our management's time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we work to carefully manage our relationships with our CROs, investigators and other third parties, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

We currently rely on third parties for the manufacture of HIL-214 for clinical development and expect to continue to rely on third parties for the foreseeable future. This reliance on third parties increases the risk that we will not have sufficient quantities of HIL-214 or such quantities at an acceptable cost, which could delay, prevent or impair our development or potential commercialization efforts.

We do not own or operate manufacturing facilities and have no plans to develop our own clinical or commercial-scale manufacturing capabilities. Pursuant to the Takeda License, we entered into a clinical manufacturing and supply agreement with Takeda for the supply of HIL-214 for our planned Phase 2b clinical trial in infants. In addition, we are exploring options for clinical supply of HIL-214 from additional third-party contract manufacturers for future clinical trials. As a result, we currently rely, and expect to continue to rely, on third parties for the manufacture of HIL-214 and related raw materials for clinical development, as well as for commercial manufacture if HIL-214 or any future vaccine candidates receives marketing approval. The facilities used by third-party manufacturers to manufacture HIL-214 must be approved by the FDA and any comparable foreign regulatory authority pursuant to inspections that will be conducted after we submit a BLA to the FDA or any comparable submission to a foreign regulatory authority. We do not control the manufacturing process of, and are completely dependent on, third-party manufacturers for compliance with cGMP requirements for manufacture of products. In addition, we have no control over the ability of third-party manufacturers to maintain adequate quality control, quality assurance and qualified personnel. Furthermore, the process of manufacturing biologics is complex and highly susceptible to product loss due to contamination, equipment failure, improper installation or operation of equipment, vendor or operator error, inconsistency in yields, variability in product characteristics and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects, other supply disruptions and higher costs. If microbial, viral or other contaminations are discovered at the facilities of our third-party manufacturers, such facilities may need to be closed for an extended period of time to investigate and remedy the contamination, which could delay clinical trials, result in higher costs of drug product and adversely affect our business. Further, our clinical supply of HIL-214 for use in future clinical trials has a shelf life that may expire prior to the full enrollment of our planned clinical trials causing similar delays or other supply disruptions. Any performance failure on the part of our third-party manufacturers could delay clinical development or marketing approval of HIL-214, and may adversely affect our future profit margins and our ability to commercialize any vaccines that receive marketing approval on a timely and competitive basis.

In addition, we do not have any long-term commitments or supply agreements with any third-party manufacturers. We may be unable to establish any supply agreements with additional third-party manufacturers or to do so on acceptable terms, which increases the risk of failing to timely obtain sufficient quantities of HIL-214 or such quantities at an acceptable cost. Even if we are able to establish long-term agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- failure of third-party manufacturers to comply with regulatory requirements and maintain quality assurance;
- breach of the manufacturing agreement by the third party;
- failure to manufacture our product according to our specifications, our schedule, or at all;
- infringement, misappropriation or other violation of our intellectual property and proprietary information, including our trade secrets and know-how; and
- termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us.

There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing for us, and HIL-214 and any future vaccine candidates that we may develop may compete with other vaccine candidates and products for access to such manufacturers and manufacturing facilities. In addition, the COVID-19 pandemic has reduced manufacturing capacity worldwide and limited access to materials needed to manufacture key components of HIL-214. Increased competition amongst developers to access manufacturers and materials could increase the costs of, or otherwise limit our ability to, manufacture HIL-214 or any future vaccine candidates.

If materials manufactured by our third-party manufacturers do not conform to our specifications or the regulatory requirements necessary for use in clinical trials, we may experience delays in our development efforts or may need to find alternative manufacturing facilities, which would significantly impact our ability to obtain regulatory approval for or commercialize our vaccine candidates, if approved.

Our third-party manufacturers may be unable to successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or any comparable foreign regulatory authority. In order for us to use the material manufactured by third-party manufacturers, their manufacturing facilities in which our materials are produced must comply with applicable laws and regulations governing the manufacture of biologic product candidates, and upon a request for marketing authorization, these facilities must be authorized for the manufacture of HIL-214 and any future vaccine candidates in connection with any approval of a marketing application we submit. If the FDA or any comparable foreign regulatory authority determines that such facilities are noncompliant or does not authorize these facilities to manufacture our vaccine candidates or if it withdraws any such authorization in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our vaccine candidates, if approved. For example, in June 2020, the FDA issued a warning letter to Takeda following a routine inspection of aseptic (sterile) drug product manufacturing at Takeda's manufacturing facility located in Hikari, Yamaguchi (the Hikari Facility). Takeda also manufactures HIL-214, an aseptic product, at the Hikari Facility. The warning letter stated that the FDA was not satisfied with Takeda's response to an FDA Form 483 issued to Takeda following the inspection and cited significant violations of cGMP for finished aseptic pharmaceuticals. We have not experienced any clinical supply constraints to date as a result of these issues and the issues relating to the Hikari Facility were closed by the FDA in October 2021. We currently do not expect that the issues relating to the Hikari Facility will have an effect on our ongoing or future clinical trials. While we are seeking to identify and secure additional third-party contract manufacturers, we

may be unable to do so at an acceptable cost, or at all, which could significantly impact our ability to obtain regulatory approval for or commercialize HIL-214, if approved. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, seizures or recalls of vaccine candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products. Additionally, our third-party manufacturers may rely on single source suppliers for certain of the raw materials for our preclinical and clinical product supplies. If current or future suppliers are delayed or unable to supply sufficient raw materials to manufacture product for our preclinical studies and clinical trials, we may experience delays in our development efforts as materials are obtained or we locate and qualify new raw material manufacturers.

Our or a third party's failure to execute on our manufacturing requirements on commercially reasonable terms and in compliance with cGMP or other regulatory requirements could adversely affect our business in a number of ways, including:

- an inability to initiate clinical trials of HIL-214 or any future vaccine candidates;
- delay in submitting regulatory applications, or receiving marketing approvals, for HIL-214 or any future vaccine candidates;
- subjecting third-party manufacturing facilities or our potential future manufacturing facilities to additional inspections by regulatory authorities;
- requirements to cease development or to recall batches of HIL-214 or any future vaccine candidates; and
- in the event of approval to market and commercialize HIL-214 or any future vaccine candidates, an inability to meet commercial demands for such vaccines.

Any performance failure on the part of Takeda or other future manufacturers could delay clinical development or marketing approval, and any related remedial measures may be costly or time consuming to implement. In addition, our current and anticipated future dependence upon others for the manufacture of HIL-214 and any future vaccine candidates may adversely affect our future profit margins and our ability to commercialize any vaccines that receive marketing approval on a timely and competitive basis.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor or other third party will discover them or that our trade secrets will be misappropriated or disclosed.

Because we currently rely on Takeda to manufacture HIL-214 and to perform quality testing, we must, at times, share our proprietary technology and confidential information, including trade secrets, with them. We seek to protect our proprietary technology, in part, by entering into confidentiality agreements, and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with our collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors or other third parties, are intentionally or inadvertently incorporated into the technology of others or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets and despite our efforts to protect our trade secrets, a competitor's or other third party's discovery of our proprietary technology and confidential information or other unauthorized use or disclosure of such technology

or information would impair our competitive position and may have a material adverse effect on our business, financial condition, results of operations and prospects.

We may seek to enter into collaborations, license agreements and other similar arrangements and may not be successful in doing so, and even if we are, we may relinquish valuable rights and may not realize the benefits of such relationships.

We may seek to enter into collaborations, joint ventures, license agreements and other similar arrangements for the development or commercialization of HIL-214 and any future vaccine candidates, due to capital costs required to develop or commercialize the vaccine candidate or manufacturing constraints. We may not be successful in our efforts to establish or maintain such collaborations because our research and development pipeline may be insufficient, HIL-214 or any future vaccine candidates may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view such vaccine candidates as having the requisite potential to demonstrate safety, immunogenicity and efficacy or significant commercial opportunity. In addition, we face significant competition in seeking appropriate strategic partners, and the negotiation process can be time-consuming and complex.

Even if we are successful in our efforts to establish such collaborations, the terms that we agree upon may not be favorable to us. For example, we may need to relinquish valuable rights to our future revenue streams, research programs, intellectual property or vaccine candidates, or grant licenses on terms that may not be favorable to us, as part of any such arrangement, and such arrangements may restrict us from entering into additional agreements with other potential collaborators. In addition, if we enter into such collaborations, we will have limited control over the amount and timing of resources that our collaborators will dedicate to the development or commercialization of our vaccine candidates. Our ability to generate revenue from these arrangements will depend on any future collaborators' abilities to successfully perform the functions assigned to them in these arrangements. We cannot be certain that, following a collaboration, license or strategic transaction, we will achieve an economic benefit that justifies such transaction. Furthermore, we may not be able to maintain such collaborations if, for example, the development or approval of a vaccine candidate is delayed, the safety of a vaccine candidate is questioned or the sales of an approved vaccine candidate are unsatisfactory.

Collaborations involving HIL-214 or any future vaccine candidates would pose significant risks to us, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected;
- we could grant exclusive rights to our collaborators that would prevent us from collaborating with others;
- collaborators may not pursue development and commercialization of any vaccine candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a vaccine candidate, repeat or conduct new clinical trials or require a new formulation of a vaccine candidate for clinical testing;

- collaborators could independently develop, or develop with third parties, vaccines that compete directly or indirectly with our vaccine candidates if the collaborators believe that competitive vaccines are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- vaccine candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own vaccine candidates or drugs, which may cause collaborators to cease to devote resources to the commercialization of our vaccine candidates;
- a collaborator with marketing and distribution rights to any vaccine candidate that achieves regulatory approval may not commit sufficient resources to the marketing and distribution of such vaccines;
- a collaborator's sales and marketing activities or other operations may not be in compliance with applicable laws, resulting in civil or criminal proceedings;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays in or termination of the research, development or commercialization of vaccine candidates, might lead to additional responsibilities for us with respect to vaccine candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly enforce, maintain or defend our or their intellectual property rights or may use our or their proprietary information in such a way as to invite litigation that could jeopardize or invalidate such intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe, misappropriate or otherwise violate the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- collaborators may not provide us with timely and accurate information regarding development, regulatory or commercialization status or results, which could adversely impact our ability to manage our own development efforts, accurately forecast financial results or provide timely information to our stockholders regarding our out-licensed vaccine candidates;
- we may be required to invest resources and attention into such collaboration, which could distract from other business objectives;
- disputes may arise between the collaborators and us regarding ownership of or other rights in the intellectual property generated in the course of the collaborations;
- collaboration agreements may not lead to development or commercialization of vaccine candidates in the most efficient manner or at all;
- if a collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program could be delayed, diminished or terminated; and
- collaborations may be terminated, including for the convenience of the collaborator, prior to or upon the expiration of the agreed upon terms and, if terminated, we may find it more difficult to enter into future collaborations or be required to raise additional capital to pursue further development or commercialization of the applicable vaccine candidates.

Any termination of collaborations we enter into in the future, or any delay in entering into collaborations related to HIL-214 or any future vaccine candidates, could delay the development and commercialization of such vaccine candidates and reduce their competitiveness if they reach the market, which could have a material adverse effect on our business, financial condition and results of operations.

Risks related to commercialization of HIL-214 and any future vaccine candidates

Even if we receive regulatory approval for HIL-214 and any future vaccine candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, HIL-214 and any future vaccine candidates, if approved, could be subject to labeling and other restrictions on marketing or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our vaccine candidates, when and if any of them are approved.

Any regulatory approvals that we may receive for HIL-214 or any future vaccine candidates will require the submission of reports to regulatory authorities, subject us to surveillance to monitor the safety and efficacy of the product, may contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, and may include burdensome post-approval study or risk management requirements. For example, the FDA may require a REMS as a condition of approval of HIL-214 or any future vaccine candidates, which could include requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves HIL-214 or any future vaccine candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our products will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCP requirements for any clinical trials that we conduct post-approval. Failure to comply with regulatory requirements or later discovery of previously unknown problems with our products, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, may result in, among other things:

- restrictions on the marketing or manufacturing of our products, withdrawal of the product from the market or voluntary or mandatory product recalls;
- restrictions on product distribution or use, or requirements to conduct post-marketing studies or clinical trials;
- restrictions on our ability to conduct clinical trials, including full or partial clinical holds on ongoing or planned trials;
- fines, restitutions, disgorgement of profits or revenue, warning letters, untitled letters, adverse publicity requirements or holds on clinical trials;
- refusal by the FDA or other regulatory authorities to approve pending applications or supplements to approved applications submitted by us or suspension or revocation of approvals;
- product seizure or detention, or refusal to permit the import or export of our products; and
- injunctions or the imposition of civil or criminal penalties.

The occurrence of any event or penalty described above may inhibit our ability to commercialize HIL-214 or any future vaccine candidates and generate revenue and could require us to expend significant time and resources in response and could generate negative publicity.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be promulgated that could prevent, limit or delay marketing authorization of any vaccine candidates we develop. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or

policies, or if we are not able to maintain regulatory compliance, we may be subject to enforcement action and we may not achieve or sustain profitability.

HIL-214 and any future vaccine candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (the ACA), includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 (BPCIA), which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a highly similar or "biosimilar" product may not be submitted to the FDA until four years following the date that the reference product was first approved by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first approved. During this 12-year period of exclusivity, the FDA may approve a full BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. We believe that HIL-214 or any future vaccine candidates approved as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our vaccine candidates to be reference products for competing products, potentially creating the opportunity for competition sooner than anticipated.

The commercial success of HIL-214 or any future vaccine candidates will depend upon the degree of market acceptance of such vaccine candidates by healthcare providers, vaccine recipients, healthcare payors and others in the medical community.

HIL-214 and any future vaccine candidates may not be commercially successful. Even if HIL-214 or any future vaccine candidates receive regulatory approval, they may not gain market acceptance among healthcare providers, individuals within our target population, healthcare payors, NITAGs or the medical community. The commercial success of any of HIL-214 or any future vaccine candidates will depend significantly on the broad adoption and use of the resulting product by these individuals and organizations for approved indications. The degree of market acceptance of our products will depend on a number of factors, including:

- demonstration of clinical efficacy and safety;
- the indications for which our vaccine candidates are approved;
- any anti-vaccine sentiments within our targeted patient population;
- the limitation of our targeted population and other limitations or warnings contained in any FDA-approved labeling;
- acceptance of a competing vaccine for the relevant indication by healthcare providers and their patients;
- acceptance of, and preference for, a therapeutic that treats the condition our vaccine targets, by healthcare providers and their patients;
- the pricing and cost-effectiveness of our products, as well as the cost of treatment with our products in relation to alternative treatments and therapies;

- our ability to obtain and maintain sufficient third-party coverage and adequate reimbursement from government healthcare programs, including Medicare and Medicaid, private health insurers and other third-party payors;
- receiving recommendations from the ACIP or other foreign NITAGs for use, as well as placement of our vaccine candidates on national immunization programs, which may impact the likelihood of third-party coverage and extent of healthcare provider acceptance;
- the willingness of pediatricians and healthcare professionals generally to recommend that patients receive our vaccine;
- the willingness of vaccine recipients to pay all, or a portion of, out-of-pocket costs associated with our products in the absence of sufficient third-party coverage and adequate reimbursement;
- any restrictions on the use of our products, and the prevalence and severity of any adverse effects;
- potential product liability claims;
- the timing of market introduction of our products as well as competitive drugs;
- the effectiveness of our sales and marketing strategies; and
- unfavorable publicity relating to the product.

In the United States, the ACIP develops vaccine recommendations, and there are similar NITAG agencies in other jurisdictions around the world that develop vaccine recommendations. To develop its recommendations, the ACIP forms working groups that gather, analyze and prepare scientific information. The ACIP also considers many of the factors above, as well as myriad additional factors such as the value of vaccination for the target population regarding the outcomes, health economic data and implementation issues. The ACIP recommendations are also made within categories, such as in an age group or a specified risk group and vaccines that receive a preferred ACIP recommendation are generally widely adopted in the United States. Following completion of our Phase 2b and 3 clinical trials of HIL-214 in infants, if achieved, ACIP may decline to recommend our vaccine. In addition, the failure of any other developer of norovirus vaccine candidates to secure such an ACIP recommendation, or any limitations of any ACIP recommendations secured by any other developers, may limit the market opportunity of HIL-214 or any future vaccine candidates. If HIL-214 or any future vaccine candidate is approved but does not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors or patients, we may not generate sufficient revenue from that product and may not become or remain profitable.

The FDA and other regulatory agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. If we are found or alleged to have improperly promoted off-label uses, we may become subject to significant liability.

The FDA and other regulatory agencies strictly regulate the promotional claims that may be made about biologics. These regulations include standards and restrictions for direct-to-consumer advertising, industry-sponsored scientific and educational activities, promotional activities involving the internet and off-label promotion.

Any regulatory approval that the FDA grants is limited to those indications and patient populations for which a biologic product is deemed to be safe, pure and potent by the FDA. While physicians in the United States may choose, and are generally permitted, to prescribe products for uses that are not described in the product's labeling and for uses that differ from those tested in clinical trials and approved by the FDA, our ability to promote HIL-214 and any future vaccine candidates, if approved, will be narrowly limited to those indications

and populations that are specifically approved by the FDA, and if we are found to have promoted such off-label uses, we may become subject to significant liability. For example, the federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. The government has also required companies to enter into consent decrees or imposed permanent injunctions under which specified promotional conduct is changed or curtailed. If we cannot successfully manage the promotion of HIL-214 or any future vaccine candidates, if approved, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

The successful commercialization of HIL-214 or any future vaccine candidates, if approved, will depend in part on the extent to which governmental authorities and health insurers establish coverage, adequate reimbursement levels and favorable pricing policies. Failure to obtain or maintain coverage and adequate reimbursement for our products could limit our ability to market those products and decrease our ability to generate revenue.

The availability of coverage and the adequacy of reimbursement by governmental healthcare programs such as Medicare and Medicaid, private health insurers and other third-party payors are essential for most vaccine recipients to be able to afford prescription medications such as HIL-214 and any future vaccine candidates, if approved. Our ability to achieve coverage and acceptable levels of reimbursement for our products by third-party payors will have an effect on our ability to successfully commercialize those products. Accordingly, we will need to successfully implement a coverage and reimbursement strategy for any approved vaccine candidate. Even if we obtain coverage for a given product by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require copayments that vaccine recipients find unacceptably high. We cannot be sure that coverage and reimbursement in the United States, the European Union or elsewhere will be available, or at an acceptable level, for any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

There is significant uncertainty related to third-party payor coverage and reimbursement of newly approved products. In the United States, third-party payors, including private and governmental payors, such as the Medicare and Medicaid programs, play an important role in determining the extent to which new vaccines will be covered. Some third-party payors may require pre-approval of coverage for new or innovative products before they will reimburse healthcare providers who use such products. It is difficult to predict at this time what third-party payors will decide with respect to the coverage and reimbursement for HIL-214 and any future vaccine candidates. In addition, certain ACA marketplace and other private payor plans are required to include coverage for certain preventative services, including vaccinations recommended by the ACIP and on the CDC's National Immunization Program, without cost share obligations (i.e., co-payments, deductibles or co-insurance) for plan members. Children up to 18 years of age without other health insurance coverage may be eligible to receive such vaccinations free-of-charge through the CDC's Vaccines for Children program. For Medicare beneficiaries, vaccines may be covered for reimbursement under either Medicare Part B or Part D depending on several criteria, including the type of vaccine and the beneficiary's coverage eligibility. If HIL-214 or any future vaccine candidates, if approved, are reimbursed only under the Part D program, healthcare providers may be less willing to use our products because of the claims adjudication costs and time related to the claims adjudication process and collection of co-payment associated with the Part D program.

Obtaining and maintaining reimbursement status is time-consuming, costly and uncertain. The Medicare and Medicaid programs increasingly are used as models for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs. However, no uniform policy for coverage and reimbursement for products exists among third-party payors in the United States. Therefore, coverage and

reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Furthermore, rules and regulations regarding reimbursement change frequently and, in some cases, at short notice, and we believe that changes in these rules and regulations are likely.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe and other countries has and will continue to put pressure on the pricing and usage of our products. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. Other countries allow companies to fix their own prices for medical products but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our products. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

Moreover, increasing efforts by governmental and third-party payors in the United States and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for our products. We expect to experience pricing pressures in connection with the sale of any of our products due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, and prescription drugs, surgical procedures and other treatments in particular, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products.

We face significant competition, and if our competitors develop technologies or vaccine candidates more rapidly than we do or their technologies are more effective, our business and our ability to develop and successfully commercialize products may be adversely affected.

Our industry is characterized by rapid advancing technologies, intense competition and a strong emphasis on proprietary and novel products. The current vaccine market is concentrated among a few global biopharmaceutical companies including BioNTech, CSL Bering, GlaxoSmithKline, Merck, Moderna, Pfizer, Sanofi, and Takeda, which together account for the majority of global vaccine sales. Other pharmaceutical and biotechnology companies, academic institutions, governmental agencies, and public and private research institutions are also active in the vaccine market given the continuing global need for both existing and new vaccines. We also compete with these organizations to recruit management, scientists and clinical development personnel, which could negatively affect our level of expertise and our ability to execute our business plan. Any vaccine candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. We will also face competition in establishing clinical trial sites, enrolling subjects for clinical trials and in identifying and in-licensing intellectual property related to new vaccine candidates. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

There are currently no approved vaccines for the prevention of norovirus-related illness. While we are not aware of all of our competitors' efforts, based on public statements, we believe that several companies are in various stages of developing a vaccine for norovirus including China National Biotec, Chongqing Zhifei Biological, Icon Genetics and Vaxart.

Many of our competitors have significantly greater financial, technical, manufacturing, marketing, sales and supply resources or experience than we do. If we successfully obtain approval for HIL-214 or any future vaccine candidate, we will face competition based on many different factors, including the safety and effectiveness of our products, the ease with which our products can be administered, the extent to which vaccine recipients accept relatively new vaccines, the timing and scope of regulatory approvals for these products, the availability and cost of manufacturing, marketing and sales capabilities, price, reimbursement coverage and patent position. Competing products could present superior treatment alternatives, including by being more effective, safer, more convenient, less expensive or marketed and sold more effectively than any products we may develop. Competing products may render HIL-214 or any future vaccine candidates we develop obsolete or noncompetitive before we recover the expense of developing and commercializing such vaccine candidate. If we are unable to compete effectively, our opportunity to generate revenue from the sale of our products we may develop, if approved, could be adversely affected.

We currently have no marketing and sales organization and have no experience as a company in commercializing products, and we may need to invest significant resources to develop these capabilities. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our products, we may not be able to generate product revenue.

We have no internal sales, marketing or distribution capabilities, nor have we commercialized a product. If HIL-214 or any future vaccine candidates ultimately receives regulatory approval, we must build a marketing and sales organization with technical expertise and supporting distribution capabilities to commercialize each such product in major markets, which will be expensive and time-consuming. Alternatively, we may need to collaborate with third parties that have direct sales forces and established distribution systems, in lieu of or to augment our own sales force and distribution systems. We plan to independently commercialize HIL-214, if approved, in the United States by building a highly-targeted sales force to support the adoption of HIL-214 and we plan to seek one or more partners with existing commercial infrastructure and expertise in markets outside the United States. We have no prior experience as a company with the marketing, sale or distribution of biopharmaceutical products and there are significant risks involved in the building and managing of a sales organization, including our ability to hire, retain and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel and effectively manage a geographically dispersed sales and marketing team. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of these products. We may not be able to enter into collaborations or hire consultants or external service providers to assist us in sales, marketing and distribution functions on acceptable financial terms, or at all. In addition, our product revenue and our profitability, if any, may be lower if we rely on third parties for these functions than if we were to market, sell and distribute any products that we develop ourselves. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we are not successful in commercializing our products, either on our own or through arrangements with one or more third parties, we may not be able to generate any future product revenue and we would incur significant additional losses.

Our future growth may depend, in part, on our ability to operate in foreign markets, where we would be subject to additional regulatory burdens and other risks and uncertainties.

Our future growth may depend, in part, on our ability to develop and commercialize HIL-214 and any future vaccine candidates in foreign markets, particularly Europe. We are not permitted to market or promote any vaccine candidate before we receive regulatory approval from applicable regulatory authorities in foreign markets, and we may never receive such regulatory approvals for HIL-214 or any future vaccine candidates. To

obtain separate regulatory approval in many other countries we must comply with numerous and varying regulatory requirements regarding safety and efficacy and governing, among other things, clinical trials, commercial sales, pricing and distribution of HIL-214 and any future vaccine candidates. Approval procedures may be more onerous than those in the United States and may require that we conduct additional preclinical studies or clinical trials. If we obtain regulatory approval of vaccine candidates and ultimately commercialize our products in foreign markets, we would be subject to additional risks and uncertainties, including:

- different regulatory requirements for approval of drugs in foreign countries;
- reduced protection for intellectual property rights;
- the existence of additional third-party patent rights of potential relevance to our business;
- pricing pressure from vaccine procurement organizations;
- determinations by NITAGs not to include our vaccine products in immunization schedules for our target patient populations;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- compliance with export control and import laws and regulations;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- foreign reimbursement, pricing and insurance regimes;
- workforce uncertainty in countries where labor unrest is common;
- differing regulatory requirements with respect to manufacturing of vaccine products;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires; and
- disruptions resulting from the impact of public health pandemics or epidemics (including, for example, the ongoing COVID-19 pandemic).

Risks related to our business operations and industry

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.

Our quarterly and annual operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control, including, but not limited to:

- the timing and cost of, and level of investment in, research, development, regulatory approval and commercialization activities relating to HIL-214 or any future vaccine candidates, which may change from time to time;

- the timing and success or failure of preclinical studies or clinical trials for HIL-214 or any future vaccine candidates or competing vaccine candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners;
- coverage and reimbursement policies with respect to HIL-214 or any future vaccine candidates, if approved, and potential future drugs that compete with our products;
- the cost of manufacturing HIL-214 or any future vaccine candidates, which may vary depending on the quantity of production and the terms of our agreements with Takeda and any future third-party manufacturers;
- the timing and amount of the milestone, royalty or other payments we will be required to pay to Takeda pursuant to the Takeda License;
- expenditures that we may incur to acquire, develop or commercialize additional vaccine candidates and technologies;
- the level of demand for any approved products, which may vary significantly;
- future accounting pronouncements or changes in our accounting policies; and
- changes in general market and economic conditions.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue or earnings guidance we may provide.

We are dependent on the services of our management and other clinical and scientific personnel, and if we are not able to retain these individuals or recruit additional management or clinical and scientific personnel, our business will suffer.

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel. We are highly dependent upon our senior management, as well as our senior scientists and other members of our management team. The loss of services of any of these individuals could delay or prevent the successful development of our product pipeline, initiation or completion of our preclinical studies and clinical trials or the commercialization of our vaccine candidates. Although we have executed employment agreements or offer letters with each member of our senior management team, these agreements are terminable at will with or without notice and, therefore, we may not be able to retain their services as expected. We do not currently maintain “key person” life insurance on the lives of our executives or any of our employees. This lack of insurance means that we may not have adequate compensation for the loss of the services of these individuals.

We will need to expand and effectively manage our managerial, operational, financial and other resources in order to successfully pursue our clinical development and commercialization efforts. We may not be successful in maintaining our unique company culture and continuing to attract or retain qualified management and

scientific and clinical personnel in the future due to the intense competition for qualified personnel among biopharmaceutical, biotechnology and other businesses. Our industry has experienced a high rate of turnover of management personnel in recent years. If we are not able to attract, integrate, retain and motivate necessary personnel to accomplish our business objectives, we may experience constraints that will significantly impede the achievement of our development objectives, our ability to raise additional capital and our ability to implement our business strategy.

We may encounter difficulties in managing our growth and expanding our operations successfully.

As of September 30, 2021, we had 13 full-time employees, including 7 employees engaged in research and development. As we continue development and pursue the potential commercialization of HIL-214 and any future vaccine candidates, as well as transition to functioning as a public company, we will need to expand our financial, development, regulatory, manufacturing, marketing and sales capabilities or contract with third parties to provide these capabilities for us. As our operations expand, we expect that we will need to manage additional relationships with various strategic partners, suppliers and other third parties. In addition, we may need to expand our facilities, including laboratory operations, and may be unable to do so on commercially reasonable terms, or at all. Our future financial performance and our ability to develop and commercialize HIL-214 and any future vaccine candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively.

We are subject to various U.S. federal, state and foreign healthcare laws and regulations, which could increase compliance costs, and our failure to comply with these laws and regulations could harm our results of operations and financial condition.

Our business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers expose us to broadly applicable foreign, federal and state fraud and abuse and other healthcare laws and regulations. These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute any products for which we obtain marketing approval. Such laws include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or providing any remuneration (including any kickback, bribe or certain rebates), directly or indirectly, overtly or covertly, in cash or in kind, in return for, either the referral of an individual or the purchase, lease, or order, or arranging for or recommending the purchase, lease, or order of any good, facility, item or service, for which payment may be made, in whole or in part, under a federal healthcare program such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation;
- the federal false claims laws, including the civil False Claims Act, and civil monetary penalties laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, to the federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making or causing to be made a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;

- the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the federal Physician Payments Sunshine Act, which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the Centers for Medicare & Medicaid Services (CMS), information related to payments and other "transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), teaching hospitals and other healthcare providers, as well as ownership and investment interests held by such healthcare professionals and their immediate family members. Beginning in 2022, applicable manufacturers also will be required to report such information regarding payments and transfers of value provided, as well as ownership and investment interests held, during the previous year to physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiology assistants and certified nurse-midwives; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; some state laws require biotechnology companies to comply with the biotechnology industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; some state laws that require biotechnology companies to report information on the pricing of certain drug products; and some state and local laws that require the registration or pharmaceutical sales representatives.

Efforts to ensure that our current and future business arrangements with third parties will comply with applicable healthcare and privacy laws and regulations will involve ongoing substantial costs. It is possible that governmental authorities will conclude that our business practices, including consulting agreements with certain physicians who are paid in the form of stock or stock options as compensation for services provided to us, may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government-funded healthcare programs, such as Medicare and Medicaid, integrity oversight and reporting obligations, contractual damages, reputational harm, diminished profits and future earnings and the curtailment or restructuring of our operations. Defending against any such actions can be costly and time-consuming and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired. Further, if any of the physicians or other healthcare providers or entities with whom we expect to do business are found not to be in compliance with applicable laws or regulations, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government-funded healthcare programs.

Recently enacted legislation, future legislation and healthcare reform measures may increase the difficulty and cost for us to obtain marketing approval for and commercialize HIL-214 and any future vaccine candidates and may affect the prices we may set.

In the United States and some foreign jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes to the healthcare system, including cost-containment measures that may reduce or limit coverage and reimbursement for newly approved drugs and affect our ability to profitably sell HIL-214 and any future vaccine candidates for which we obtain marketing approval. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare.

For example, in March 2010, the ACA was enacted in the United States. The ACA established an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents; extended manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations; expanded eligibility criteria for Medicaid programs; expanded the entities eligible for discounts under the Public Health program; increased the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program; created a new Medicare Part D coverage gap discount program; established a new Patient- Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research, along with funding for such research; and established a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending.

Since its enactment, there have been executive, judicial and Congressional challenges to certain aspects of the ACA, and on June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden had issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how the healthcare reform measures of the Biden administration, or other efforts to challenge the ACA, if any, will impact the ACA or our business.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011 was signed into law, which, among other things, resulted in reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through December 31, 2021, unless additional Congressional action is taken. In addition, on January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Further, there has been heightened governmental scrutiny in the United States of pharmaceutical pricing practices in light of the rising cost of prescription drugs. Such scrutiny has resulted in several recent congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient assistance programs, and reform government program reimbursement methodologies for products. At the federal level, the former Trump administration used several means to propose or implement drug pricing reform, including through federal budget proposals, executive orders and policy initiatives. It is unclear

whether the Biden administration will work to reverse these measures or pursue similar policy initiatives. Further, it is possible that additional governmental action is taken in response to the COVID-19 pandemic.

At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for HIL-214 and any future vaccine candidates, if approved, or put pressure on our product pricing, which could negatively affect our business, results of operations, financial condition and prospects.

We expect that the ACA, these new laws and other healthcare reform measures that may be adopted in the future may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new payment methodologies and additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize HIL-214 and any future vaccine candidates, if approved.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our products.

We face an inherent risk of product liability as a result of the planned clinical trials of HIL-214 and any future vaccine candidates and will face an even greater risk if we commercialize such vaccine candidates. For example, we may be sued if HIL-214 or any future vaccine candidates allegedly cause injury or are found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the vaccine candidate, negligence, strict liability and a breach of warranties. Claims may be brought against us by clinical trial participants, vaccine recipients or others using, administering or selling products that may be approved in the future. Claims could also be asserted under state consumer protection acts.

If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit or cease the commercialization of our products. Even a successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our products;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- a diversion of our management’s time and our resources;
- substantial monetary awards to trial participants or vaccine recipients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- significant negative financial impact;

- the inability to commercialize HIL-214 or any future vaccine candidates; and
- a decline in our stock price.

We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of HIL-214 or any future vaccine candidates. Insurance coverage is increasingly expensive. Our inability to obtain and retain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of HIL-214 or any future vaccine candidates. Although we will maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. Our insurance policies will also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts.

Our insurance policies are expensive and only protect us from some business risks, which will leave us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include property, general liability, workers' compensation, clinical trials, and directors' and officers', employment practices and fiduciary liability insurance. We do not know, however, if we will be able to maintain insurance with adequate levels of coverage. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our financial position and results of operations.

We and any of our potential future collaborators will be required to report to regulatory authorities if any of our approved products cause or contribute to adverse medical events, and any failure to do so would result in sanctions that would materially harm our business.

If we or any of our potential future collaborators are successful in commercializing our products, the FDA and foreign regulatory authorities would require that we and such collaborators report certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of our obligation to report would be triggered by the date we become aware of the adverse event as well as the nature of the event. We and any of our potential future collaborators or CROs may fail to report adverse events within the prescribed timeframe. If we or any of our current or potential future collaborators or CROs fail to comply with such reporting obligations, the FDA or a foreign regulatory authority could take action, including criminal prosecution, the imposition of civil monetary penalties, seizure of our products or delay in approval or clearance of future products.

We and our service providers may be subject to a variety of privacy and data security laws and contractual obligations, which could increase compliance costs, and our actual or perceived failure to comply with such laws and obligations could subject us to potentially significant liability, fines or penalties and otherwise harm our business.

We and our service providers maintain and will maintain a large quantity of sensitive information, including confidential business and patient health information, in connection with our preclinical studies and planned clinical trials, and are subject to laws and regulations governing the privacy and security of such information. The global data protection landscape is rapidly evolving, and we and our service providers may be affected by or subject to new, amended or existing laws and regulations in the future, including as our operations continue to expand or if we operate in foreign jurisdictions. These laws and regulations may be subject to differing interpretations, which adds to the complexity of processing personal data. Guidance on implementation and

compliance practices are often updated or otherwise revised. This may create uncertainty in our business, affect our ability to operate in certain jurisdictions or to collect, store, transfer, use, share and otherwise process personal information, necessitate the acceptance of more onerous obligations in our contracts, result in liability or impose additional costs on us. The cost of compliance with these laws, regulations and standards is high and is likely to increase in the future. Any failure or perceived failure by us to comply with federal, state or foreign laws or regulation, our internal policies and procedures or our contracts governing our processing of personal information could result in negative publicity, government investigations and enforcement actions, claims by third parties and damage to our reputation, any of which could have a material adverse effect on our operations, financial performance and business.

As our operations and business grow, we may become subject to or affected by new or additional data protection laws and regulations and face increased scrutiny or attention from regulatory authorities. In the United States, numerous federal and state laws and regulations, including health information privacy laws, data breach notification laws and consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act), that govern the collection, use, storage, transfer, disclosure, protection and other processing of health-related and other personal information could apply to our operations or the operations of our collaborators and third-party providers. In addition, we may obtain health information from third parties (including research institutions from which we obtain clinical trial data) that are subject to privacy and security requirements under HIPAA. Depending on the facts and circumstances, we could be subject to significant penalties if we violate HIPAA.

In addition, certain state laws govern the privacy and security of health and other personal information in certain circumstances. These laws are evolving rapidly and may differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. By way of example, the California Consumer Privacy Act (CCPA), which went into effect on January 1, 2020, gives California residents individual privacy rights to access and delete their personal information, opt out of certain personal information sharing, and receive detailed information about how their personal information is used. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability and many similar laws have been proposed at the federal level and in other states. Further, the California Privacy Rights Act (CPRA) recently passed in California. The CPRA will impose additional data protection obligations on covered businesses, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data, and opt outs for certain uses of sensitive data. It will also create a new California data protection agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. The majority of the provisions of the CPRA will go into effect on January 1, 2023, and additional compliance investment and potential business process changes may be required. Other states are exploring their own laws, which may or may not be similar to the CCPA or the CPRA. In the event that we are subject to or affected by HIPAA, the CCPA, the CPRA or other domestic privacy and data protection laws, any liability from failure to comply with the requirements of these laws could adversely affect our financial condition.

There also are a wide variety of privacy laws in other countries that may impact our operations, now or in the future. For example, in Europe, the General Data Protection Regulation (GDPR) imposes stringent requirements regarding the collection, use, disclosure, storage, transfer or other processing of personal data of individuals within the European Economic Area (EEA). Companies that must comply with the GDPR face increased compliance obligations and risk, including more robust regulatory enforcement of data protection requirements and potential fines for noncompliance of up to €20 million or 4% of the annual global revenue of the noncompliant company, whichever is greater. The GDPR also confers a private right of action in some circumstances on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies and obtain compensation for damages resulting from violations of the GDPR. Among

other things, the GDPR requires the establishment of a lawful basis for the processing of data, imposes requirements relating to the consent of the individuals to whom the personal data relates, including detailed notices for clinical trial subjects and investigators, as well as requirements regarding the security of personal data and notification of data processing obligations to the competent national data processing authorities. In addition, the GDPR increases the scrutiny of transfers of personal data from the EEA to the United States and other jurisdictions that the European Commission does not recognize as having "adequate" data protection laws. Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States. For example, on July 16, 2020, the Court of Justice of the European Union (CJEU) invalidated the EU-US Privacy Shield Framework (Privacy Shield) under which personal data could be transferred from the EEA to United States entities that had self-certified under the Privacy Shield scheme. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on the standard contractual clauses alone may not necessarily be sufficient in all circumstances. Use of the standard contractual clauses must now be assessed on a case-by-case basis taking into account the legal regime applicable in the destination country, in particular applicable surveillance laws and rights of individuals, and additional measures and/or contractual provisions may need to be put in place, however, the nature of these additional measures is currently uncertain. The European Commission issued revised standard contractual clauses on June 4, 2021 to account for the decision of the CJEU and recommendations made by the European Data Protection Board. The revised standard contractual clauses must be used for relevant new data transfers beginning on September 27, 2021 and existing standard contractual clauses arrangements must be migrated to the revised clauses by December 27, 2022. There is some uncertainty around whether the revised clauses can be used for all types of data transfers, particularly whether they can be relied on for data transfers to non-EEA entities subject to the GDPR. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

Further, following the withdrawal of the United Kingdom from the European Union and the EEA and the end of the transition period, from January 1, 2021, we have to comply with the GDPR and separately the GDPR as implemented in the United Kingdom, which, together with the amended UK Data Protection Act 2018, retains the GDPR in UK national law. The UK GDPR mirrors the fines under the GDPR and has the ability to fine up to the greater of €20 million/£17 million or 4% of global turnover. The relationship between the United Kingdom and the European Union and the EEA in relation to certain aspects of data protection law remains unclear, and it is unclear how United Kingdom data protection laws and regulations will develop in the medium to longer term. The European Commission has adopted an adequacy decision in favor of the United Kingdom, enabling data transfers from EU member states to the United Kingdom without additional safeguards. However, the UK adequacy decision will automatically expire in June 2025 unless the European Commission re-assesses and renews or extends that decision.

In many jurisdictions, enforcement actions and consequences for noncompliance are rising. In the United States, these include enforcement actions in response to rules and regulations promulgated under the authority of federal agencies and state attorneys general and legislatures and consumer protection agencies. In addition, privacy advocates and industry groups have regularly proposed, and may propose in the future, self-regulatory standards that may legally or contractually apply to us. If we fail to follow these security standards, even if no personal information is compromised, we may incur significant fines or experience a significant increase in

costs. Many state legislatures have adopted legislation that regulates how businesses operate online, including measures relating to privacy, data security and data breaches. Laws in all U.S. states require businesses to provide notice to customers whose personally identifiable information has been disclosed as a result of a data breach. The laws are not consistent, and compliance in the event of a widespread data breach is costly.

Compliance with U.S. and international data protection laws and regulations could require us to take on more onerous obligations in our contracts, restrict our ability to collect, store, use, transfer, disclose and otherwise process data, update our data privacy and security policies and procedures, or in some cases, impact our ability to operate in certain jurisdictions. Failure by us or our collaborators and our service providers to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include civil or criminal penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects about whom we or our potential collaborators obtain information, as well as the providers who share this information with us, may contractually limit our ability to use and disclose such information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend, could result in adverse publicity and adversely affect our business, financial condition, results of operations and prospects. Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Our internal information technology systems, or those of any of our service providers, may fail or suffer security breaches, loss or leakage of data and other disruptions, which could result in a material disruption of our product development programs, compromise sensitive information related to our business or prevent us from accessing critical information, potentially exposing us to liability or otherwise adversely affecting our business.

We are increasingly dependent upon information technology systems, infrastructure and data to operate our business. In the ordinary course of business, we collect, store and transmit confidential information (including but not limited to intellectual property, proprietary business information and personal information). It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information.

Attacks upon information technology systems are increasing in their frequency, levels of persistence, sophistication and intensity, and are being conducted by sophisticated and organized groups and individuals with a wide range of motives and expertise. These attacks can present meaningful risks to our operations, data and commercial information. As a result of the COVID-19 pandemic, we may also face increased cybersecurity risks due to our reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities. Furthermore, because the techniques used to obtain unauthorized access to, or to sabotage, systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period. Any security breach or other incident, whether actual or perceived, could impact our reputation and/or operations, cause us to incur significant costs, including legal expenses, harm customer confidence, hurt our expansion into new markets, cause us to incur remediation costs, or cause us to lose existing customers. For example, the loss of clinical trial data from clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. We also rely on third parties to manufacture HIL-214, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any actual or perceived disruption or security breach affects our systems (or those of our third-party collaborators, service providers, contractors or consultants) or were to result in a loss of or accidental, unlawful or unauthorized access to, use of, release of, or

other processing of personally identifiable information, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, the further development and commercialization of HIL-214 or any future vaccine candidate could be delayed, and we could be subject to significant fines, penalties or liabilities for any noncompliance to certain privacy and security laws.

Further, despite the implementation of security measures, our internal technology systems (including infrastructure) and those of our current and any future CROs and other contractors, consultants and collaborators are vulnerable to breakdown or other damage or interruption from service interruptions, system malfunction, computer viruses, cybersecurity threats (such as ransomware attacks, denial-of-service attacks, cyber-attacks or cyber-intrusions over the Internet, hacking, phishing and other social engineering attacks), unauthorized access or use, natural disasters, terrorism, war and telecommunication and electrical failures. Such information technology systems are additionally vulnerable to security incidents from inadvertent or intentional actions by our employees, contractors, consultants or other third parties. If such an event were to occur and cause interruptions in our operations or result in the unauthorized disclosure of or access to personally identifiable information or individually identifiable health information, it could result in a material disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other similar disruptions. We do not currently hold cybersecurity insurance, and the costs related to significant security breaches or disruptions could be material and cause us to incur significant expenses.

We have also outsourced elements of our information technology infrastructure, and as a result a number of third-party vendors may or could have access to our confidential information. If our third-party vendors fail to protect their information technology systems and our confidential and proprietary information, we may be vulnerable to disruptions in service and unauthorized access to our confidential or proprietary information and we could incur liability and reputational damage. If the information technology systems of our third-party vendors and other contractors and consultants become subject to disruptions or security breaches, we may have insufficient recourse against such third parties and we may have to expend significant resources to mitigate the impact of such an event, and to develop and implement protections to prevent future events of this nature from occurring. Some of the federal, state and foreign government requirements include obligations of companies to notify individuals of security breaches involving particular categories of personally identifiable information, which could result from breaches experienced by us or by our vendors, contractors, or organizations with which we have formed strategic relationships.

Our business is subject to risks arising from the COVID-19 pandemic and other epidemic diseases.

The COVID-19 worldwide pandemic has presented substantial public health and economic challenges and is affecting our employees, clinical trial subjects, physicians and other healthcare providers, communities and business operations, as well as the U.S. and global economies and financial markets. International and U.S. governmental authorities in impacted regions have taken, and are continuing to take, actions in an effort to slow the spread of COVID-19 and variants of the virus, including issuing varying forms of “stay-at-home” orders, and restricting business functions outside of one’s home. In response, our administrative employees have worked remotely and we have limited the number of staff in our research and development laboratories. To date we have not experienced material disruptions in our business operations. However, while it is not possible at this time to estimate the impact that COVID-19 could have on our business in the future, particularly as we advance HIL-214 through clinical development, the continued spread of COVID-19 and the measures taken by the governmental authorities, and any future epidemic disease outbreaks, could disrupt the supply chain and the manufacture or shipment of drug substances and finished drug products for HIL-214 for use in our clinical trials and research and preclinical studies and, delay, limit or prevent our employees and CROs from continuing research and development activities, impede our clinical trial initiation and recruitment and the ability of subjects to continue in clinical trials, result in a decrease in the incidence of norovirus infection among trial

subjects delaying any evaluation of the endpoints in our clinical trials of HIL-214 and the ultimate completion of such trials, including due to measures taken that may limit social interaction or prevent reopening of high-transmission settings, impede testing, monitoring, data collection and analysis and other related activities, any of which could delay our preclinical studies and clinical trials and increase our development costs, and have a material adverse effect on our business, financial condition and results of operations. The COVID-19 pandemic and any future epidemic disease outbreak could also potentially further affect the business of the FDA or other regulatory authorities, which could result in delays in meetings related to our planned clinical trials. The COVID-19 pandemic and mitigation measures have had and may continue to have, and any future epidemic disease outbreak may have, an adverse impact on global economic conditions which could have an adverse effect on our business and financial condition, including impairing our ability to raise capital when needed. The extent to which the COVID-19 pandemic impacts our results will depend on future developments that are highly uncertain and cannot be predicted, including new information that may emerge concerning the severity of the virus, including the identification of new variants, and the actions to contain its impact.

Our business could be affected by litigation, government investigations and enforcement actions.

We currently operate in a number of jurisdictions in a highly regulated industry and we could be subject to litigation, government investigation and enforcement actions on a variety of matters in the United States. or foreign jurisdictions, including, without limitation, intellectual property, regulatory, product liability, environmental, whistleblower, false claims, privacy, anti-kickback, anti-bribery, securities, commercial, employment and other claims and legal proceedings which may arise from conducting our business. Any determination that our operations or activities are not in compliance with existing laws or regulations could result in the imposition of fines, civil and criminal penalties, equitable remedies, including disgorgement, injunctive relief and/or other sanctions against us, and remediation of any such findings could have an adverse effect on our business operations.

Legal proceedings, government investigations and enforcement actions can be expensive and time-consuming. An adverse outcome resulting from any such proceeding, investigations or enforcement actions could result in significant damages awards, fines, penalties, exclusion from the federal healthcare programs, healthcare debarment, injunctive relief, product recalls, reputational damage and modifications of our business practices, which could have a material adverse effect on our business and results of operations.

Our employees and independent contractors, including principal investigators, CROs, consultants and vendors, may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk that our employees and independent contractors, including principal investigators, CROs, consultants and vendors, may engage in misconduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violate: (i) the laws and regulations of the FDA and other similar regulatory requirements, including those laws that require the reporting of true, complete and accurate information to such authorities, (ii) manufacturing standards, including cGMP requirements, (iii) federal and state data privacy, security, fraud and abuse and other healthcare laws and regulations in the United States and abroad or (iv) laws that require the true, complete and accurate reporting of financial information or data. Activities subject to these laws also involve the improper use or misrepresentation of information obtained in the course of clinical trials, the creation of fraudulent data in our preclinical studies or clinical trials or illegal misappropriation of drug product, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and

prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. In addition, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and financial results, including, without limitation, the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgements, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, imprisonment, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

We may engage in strategic transactions that could impact our liquidity, increase our expenses and present significant distractions to our management.

From time to time, we may consider strategic transactions, such as acquisitions of companies, asset purchases and out-licensing or in-licensing of intellectual property, products or technologies. Additional potential transactions that we may consider in the future include a variety of business arrangements, including spin-offs, strategic partnerships, joint ventures, restructurings, divestitures, business combinations and investments. Any future transactions could increase our near and long-term expenditures, result in potentially dilutive issuances of our equity securities, including our common stock, or the incurrence of debt, contingent liabilities, amortization expenses or acquired in-process research and development expenses, any of which could affect our financial condition, liquidity and results of operations. Future acquisitions may also require us to obtain additional financing, which may not be available on favorable terms or at all. These transactions may never be successful and may require significant time and attention of our management. In addition, the integration of any business that we may acquire in the future may disrupt our existing business and may be a complex, risky and costly endeavor for which we may never realize the full benefits. Accordingly, although there can be no assurance that we will undertake or successfully complete any additional transactions of the nature described above, any additional transactions that we do complete could have a material adverse effect on our business, results of operations, financial condition and prospects.

Risks related to our intellectual property

If we are unable to obtain, maintain and enforce patent protection for HIL-214 or any future vaccine candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors or other third parties could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize HIL-214 or any future vaccine candidates may be adversely affected.

Our success depends in large part on our ability to obtain, maintain and enforce patent protection in the United States and other countries with respect to our vaccine candidates and other proprietary technologies we may develop. We seek to protect our proprietary position, in part, by exclusively licensing patents and patent applications in the United States and abroad relating to our vaccine candidates, manufacturing processes, and methods of use. If we or our principal licensor, Takeda, are unable to obtain, maintain or enforce patent protection, our business, financial condition, results of operations and prospects could be materially harmed.

Changes in either the patent laws or their interpretation in the United States and other jurisdictions may diminish our or our licensors' ability to protect our intellectual property, obtain, maintain and enforce our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our protection. We cannot predict whether the patent applications we currently or may in the

future pursue or in-license will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient protection against competitors or other third parties.

The patent prosecution process is expensive, time-consuming, and complex, and we or our licensors may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output in time to obtain patent protection. Although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, third party collaborators, CROs, contract manufacturers, consultants, advisors and other third parties, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing our or our licensors' ability to seek patent protection. Consequently, we may not be able to prevent any third party from using any of our technology that is in the public domain to compete with our vaccine candidates and technologies. In addition, our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our inventions and the prior art allow our inventions to be patentable in light of the prior art. Furthermore, publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that our licensors were the first to invent the inventions claimed in any of our licensed patents or pending patent applications or patents or pending patent applications we may own in the future, or that we or our licensors were the first to make the inventions claimed in those patents or pending patent applications, or were the first to file for patent protection of such inventions. If a third party can establish that we or our licensors were not the first to make or the first to file for patent protection of such inventions, our owned or licensed patents and patent applications may not issue as patents and even if issued, may be challenged and invalidated or rendered unenforceable.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has been the subject of much litigation in recent years. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our owned and in-licensed patent applications or patent applications we may own in the future may not result in patents being issued which protect our vaccine candidates or proprietary technologies we may develop or which effectively prevent others from commercializing competitive technologies and products. In fact, patent applications may not issue as patents at all.

Moreover, the claim coverage in a patent application can be significantly reduced before the corresponding patent is granted. Even if our in-licensed patent applications or patent applications we may own in the future issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us or otherwise provide us with any competitive advantage. Any patents issuing from our in-licensed patent applications may be challenged, narrowed, circumvented or invalidated by third parties. Our competitors or other third parties may avail themselves of safe harbors under the Drug Price Competition and Patent Term Restoration Act of 1984 (Hatch-Waxman Amendments) to conduct research and clinical trials. Consequently, we do not know whether our vaccine development programs and other proprietary technology will be protectable or remain protected by valid and enforceable patents. Even if a patent is granted, our competitors or other third parties may be able to circumvent the patent by developing similar or alternative technologies or products in a non-infringing manner which could materially adversely affect our business, financial condition, results of operations and prospects. In addition, given the amount of time required for the development, testing and regulatory review of our vaccine candidates, patents protecting the vaccine candidates might expire before or shortly after such vaccine candidates are commercialized. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

The issuance of a patent is not conclusive as to its inventorship, scope, validity, or enforceability and our patent rights may be challenged in the courts or patent offices in the United States and abroad. We may be subject to a third-party pre-issuance submission of prior art to the United States Patent and Trademark Office (USPTO) challenging the validity of one or more claims of our in-licensed patents or patents we may own in the future. Such submissions may also be made prior to a patent's issuance, precluding the granting of a patent based on one of our owned or licensed pending patent applications. A third party may also claim that our patent rights are invalid or unenforceable in a litigation. The outcome following legal assertions of invalidity and unenforceability is unpredictable. In addition, we may become involved in opposition, derivation, revocation, reexamination, post-grant and inter partes review or interference proceedings and other similar proceedings in foreign jurisdictions challenging the validity, priority or other features of patentability of our patent rights. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate or render unenforceable, our patent rights, allow third parties to commercialize our vaccine candidates and other proprietary technologies we may develop and compete directly with us, without payment to us, or result in our inability to commercialize products without infringing third-party patent rights. Such adverse determinations may also require us to cease using the related technology or to attempt to license rights from the prevailing party. Such proceedings also may result in substantial cost and require significant time from our scientists and management, even if the eventual outcome is favorable to us. Any of the foregoing, could have a material adverse effect on our business, financial condition, results of operations and prospects.

Moreover, some of our patent rights may in the future be co-owned with third parties. If we are unable to obtain an exclusive license to any such third-party co-owners' interest in such patent rights, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we may need the cooperation of any such co-owners of such patent rights in order to enforce such patent rights against third parties, and such cooperation may not be provided to us. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

We do not own any issued patents or patent applications and we completely depend on intellectual property licensed from third parties, including under the Takeda License, and our licensors may not always act in our best interest. If we fail to comply with our obligations under our intellectual property licenses, if the licenses are terminated or if disputes regarding these licenses arise, we could lose significant rights that are important to our business.

We do not own any issued patents or patent applications. Our vaccine candidate is completely dependent on patents, know-how and proprietary technology licensed from Takeda under the Takeda License. As a result, any termination of the Takeda License would result in the loss of significant rights and could harm our ability to commercialize HIL-214. The Takeda License imposes, and we expect that any future license agreements where we in-license intellectual property will impose on us, various development, regulatory and/or commercial diligence obligations, payment of milestones and/or royalties and other obligations. If we fail to comply with our obligations under the Takeda License or future license agreements, or we are subject to bankruptcy-related proceedings, the licensor may have the right to terminate the license, in which event we would not be able to develop or market the products covered by the license, including our HIL-214 vaccine candidate. In addition, we may need to obtain additional licenses from our existing licensors and others to advance our research or allow commercialization of vaccine candidates we may develop. It is possible that we may be unable to obtain any additional licenses at a reasonable cost or on reasonable terms, if at all. In either event, we may be required to expend significant time and resources to redesign our technology, vaccine candidates, or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. If we are unable to do so, we may be unable to develop or commercialize the

affected technology or vaccine candidates. Even if we are able to obtain such additional licenses, they may be non-exclusive thereby giving our competitors and other third parties access to the same technology licensed to us.

If we or our licensors fail to adequately maintain, enforce and protect our licensed intellectual property, our ability to commercialize HIL-214 or any future vaccine candidates could suffer. We do not have complete control over the maintenance, enforcement, prosecution and litigation of our in-licensed patents and patent applications and may have limited control over future intellectual property that may be in-licensed. Therefore, such in-licensed patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. For example, we cannot be certain that activities such as the maintenance and prosecution by our licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights. It is possible that our licensors' infringement proceedings or defense activities may be less vigorous than had we conducted them ourselves, or may not be conducted in accordance with our best interests. Furthermore, there are certain limitations to our right to enforce certain exclusively licensed patents, including, for example, the requirement that we obtain the licensor's consent prior to settling lawsuits related to such patents. If our licensors fail to maintain such patents or patent applications, or lose rights to those patents or patent applications, the rights we have licensed may be reduced or eliminated, and our right to develop and commercialize any of our vaccine candidates that are the subject of such licensed rights and our right to exclude third parties from commercializing competing products could be adversely affected. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, the Takeda License is, and any future agreements under which we license intellectual property or technology from third parties may be, complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant patents, know-how and proprietary technology, or increase what we believe to be our financial or other obligations under the relevant agreement. In spite of our efforts, our current and future licensors might conclude that we have materially breached our obligations under our license agreements and might therefore terminate such license agreements, thereby removing or limiting our ability to develop and commercialize products and technology covered by these license agreements. Disputes that may arise between us and our licensors regarding intellectual property subject to a license agreement could include disputes regarding:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- our financial and other obligations under the license agreement;
- whether and the extent to which our technology and processes infringe, misappropriate or violate intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our vaccine candidates and what activities satisfy those diligence obligations;
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us; and
- the priority of invention of patented technology.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on reasonable terms, we may be unable to successfully develop and commercialize the affected technology or vaccine candidates. As a result, any termination of or disputes over our intellectual property licenses could result in the loss of our ability to develop and commercialize HIL-214 or any future vaccine candidates, or we could lose other significant rights, experience significant delays in the development and commercialization of our vaccine candidates, or incur liability for damages, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects. In addition, we may seek to obtain additional licenses from our licensors and, in connection with obtaining such licenses, we may agree to amend our existing licenses in a manner that may be more favorable to the licensors, including by agreeing to terms that could enable third parties, including our competitors, to receive licenses to a portion of the intellectual property that is subject to our existing licenses and to compete with our vaccine candidates.

If our licenses are terminated, or if the underlying patents fail to provide the intended exclusivity, competitors or other third parties would have the freedom to seek regulatory approval of, and to market, products identical or competitive to ours and we may be required to cease our development and commercialization of certain of our vaccine candidates. Moreover, if disputes over intellectual property that we license prevent or impair our ability to maintain other licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected vaccine candidates.

In addition, certain of our agreements may not be assignable by us without the consent of the respective licensor, which may limit or delay our ability to consummate certain transactions, may impact the value of those transactions, or may limit our ability to pursue certain activities. For example, if we choose to sublicense or assign to any third parties our rights under the Takeda License with respect to any licensed product, we may be required to wait for a certain period or until the occurrence of certain funding or development milestones. For additional information on the Takeda License, see “Business—License agreement with Takeda.”

We may not be able to protect our intellectual property and proprietary rights throughout the world.

Filing, prosecuting and defending patents on HIL-214 and any future vaccine candidates in all countries throughout the world would be prohibitively expensive, and the laws of foreign countries may not protect our intellectual property rights to the same extent as the laws of the United States. Consequently, we may not be able to prevent third parties from practicing our or our licensors’ inventions in all countries outside the United States, or from selling or importing products made using our or our licensors’ intellectual property in and into the United States or other jurisdictions. Competitors may use our intellectual property in jurisdictions where we and our licensors have not pursued and obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but enforcement is not as strong as that in the United States. These products may compete with our products, and our owned and in-licensed patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our in-licensed patents, if pursued and obtained, or marketing of competing products in violation of our intellectual property and proprietary rights generally. In addition, some jurisdictions, such as Europe and China, may have a higher standard for patentability than in the United States, including, for example, the requirement of claims having literal support in the original patent filing and the limitation on using supporting data that is not in the original patent filing. Under those heightened patentability requirements, we may not be able to obtain sufficient patent protection in certain jurisdictions even though the same or similar patent protection can be secured in the United States and other jurisdictions.

Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our in-licensed patents or patents we may own in the future at risk of being invalidated or interpreted narrowly, could put our in-licensed patent applications or patent applications we may own in the future at risk of not issuing and could provoke third parties to assert claims against us. We or our licensors may not prevail in any lawsuits that we or our licensors initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various non-U.S. government agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. In some circumstances, we are dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. For example, periodic maintenance fees, renewal fees, annuity fees, and various other government fees on patents and applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our licensed patents and applications or any patents and applications we may own in the future. In certain circumstances, we rely on our licensors to pay these fees due to U.S. and non-U.S. patent agencies. The USPTO and various non-U.S. patent agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. We are also dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. In some cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in a partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

The USPTO and various non-U.S. government agencies require compliance with certain foreign filing requirements during the patent application process. For example, in some countries, including the United States, China, India and some European countries, a foreign filing license is required before certain patent applications are filed. The foreign filing license requirements vary by country and depend on various factors, including where the inventive activity occurred, citizenship status of the inventors, the residency of the inventors and the invention owner, the place of business for the invention owner and the nature of the subject matter to be disclosed (e.g., items related to national security or national defense). In some cases, a foreign filing license may be obtained retroactively in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment of a pending patent application or can be

grounds for revoking or invalidating an issued patent, resulting in the loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the relevant markets with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations, and prospects. We are also dependent on our licensors to take the necessary actions to comply with these requirements with respect to our licensed intellectual property.

The COVID-19 pandemic may impair our and our licensors' ability to comply with these procedural, document submission, fee payment, and other requirements imposed by government patent agencies, which may materially and adversely affect our ability to obtain or maintain patent protection for our vaccine candidates.

Changes in patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. Assuming that other requirements for patentability are met, prior to March 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. After March 2013, under the Leahy-Smith America Invents Act (the America Invents Act) enacted in September 2011, the United States transitioned to a first inventor to file system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. A third party that files a patent application in the USPTO after March 2013, but before us or our licensors could therefore be awarded a patent covering an invention of ours or our licensors even if we had made the invention before it was made by such third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to our vaccine candidates and other proprietary technologies we may develop or (ii) invent any of the inventions claimed in our patents or patent applications.

The America Invents Act also includes a number of significant changes that affect the way patent applications will be prosecuted and also may affect patent litigation. These include allowing third party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, inter partes review and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action.

Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. Therefore, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our in-licensed patent applications or patent applications we may own in the future and the enforcement or defense of patents issuing from those patent applications, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, the patent positions of companies in the development and commercialization of biologics and pharmaceuticals are particularly uncertain. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain

situations. We cannot predict how decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patent rights. This combination of events has created uncertainty with respect to the validity and enforceability of patents, once obtained. Depending on future actions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could have a material adverse effect on our existing patent portfolio and our ability to protect and enforce our intellectual property in the future.

Issued patents covering our vaccine candidates could be found invalid or unenforceable if challenged in court or before administrative bodies in the United States or abroad.

Our patent rights may be subject to priority, validity, inventorship and enforceability disputes. If we or our licensors are unsuccessful in any of these proceedings, such patents and patent applications may be narrowed, invalidated or held unenforceable, we may be required to obtain licenses from third parties, which may not be available on commercially reasonable terms or at all, or we may be required to cease the development, manufacture and commercialization of HIL-214 or one or future vaccine candidates. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we or our licensors' initiated legal proceedings against a third party to enforce a patent covering our vaccine candidates, the defendant could counterclaim that such patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could include an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, non-enablement, lack of sufficient written description, failure to claim patent-eligible subject matter or obviousness-type double patenting. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third parties may raise claims challenging the validity or enforceability of a patent before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post-grant review, inter partes review, interference proceedings, derivation proceedings, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in the revocation of, cancellation of or amendment to our patent rights in such a way that they no longer cover our vaccine candidates or prevent third parties from competing with our vaccine candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we or our licensing partners and the patent examiner were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our vaccine candidates. Such a loss of patent protection would have a material adverse impact on our business, financial condition, results of operations and prospects.

Patent terms may be inadequate to protect the competitive position of our vaccine candidates for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional or international patent application filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our vaccine candidates are obtained, once the patent has expired, we may be vulnerable to competition from competitive products, including generics or biosimilars. Given the amount of time required for the development, testing and regulatory review of new vaccine candidates, patents protecting such vaccine candidates might expire before or shortly after such vaccine candidates are

commercialized. As a result, our in-licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. For additional information on the anticipated expiration dates of our licensed patents, see “Business—Intellectual Property.”

If we do not obtain patent term extension and equivalent extensions outside of the United States for our vaccine candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of any FDA marketing approval of HIL-214 or any future vaccine candidate we may develop, one or more of our in-licensed issued U.S. patents or issued U.S. patents we may own in the future may be eligible for limited patent term extension under the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent term extension (PTE) of up to five years as compensation for patent term lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent may be extended, and only those claims covering the approved drug, a method for using it or a method for manufacturing it may be extended. Similar patent term restoration provisions to compensate for commercialization delay caused by regulatory review are also available in certain foreign jurisdictions, such as in Europe under Supplemental Protection Certificate (SPC). However, we may not be granted an extension for various reasons, including failing to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents, or failing to satisfy other applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. In addition, to the extent we wish to pursue patent term extension based on a patent that we in-license from a third party, we may need the cooperation of that third party. If we are unable to obtain patent term extension, or the foreign equivalent, or if the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our business, financial condition, results of operations and prospects could be materially harmed. For additional information on the anticipated expiration dates of our licensed patents, see “Business—Intellectual Property.”

We may be subject to claims challenging the inventorship of our patents and other intellectual property.

We or our licensors may be subject to claims that former employees, collaborators or other third parties have an interest in our patent rights, trade secrets, or other intellectual property as an inventor or co-inventor. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our vaccine candidates and other proprietary technologies we may develop. Litigation may be necessary to defend against these and other claims challenging inventorship or our patent rights, trade secrets or other intellectual property. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property that is important to our vaccine candidates and other proprietary technologies we may develop. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our management and other employees. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent protection for our vaccine candidates and proprietary technologies, we also rely on trade secret protection and confidentiality agreements to protect our unpatented know-how, technology, and other proprietary information and to maintain our competitive position. We seek to protect these trade secrets and other proprietary technology, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, third-party collaborators, CROs,

contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Trade secrets and know-how can be difficult to protect. We cannot guarantee that we have entered into applicable agreements with each party that may have or have had access to our trade secrets or proprietary technology and processes. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed or misappropriated, or if any such information were to be independently developed by a competitor or other third party, our competitive position would be materially and adversely harmed.

We may be subject to claims that third parties have an ownership interest in our trade secrets. For example, we may have disputes arise from conflicting obligations of our employees, consultants or others who are involved in developing our vaccine candidate. Litigation may be necessary to defend against these and other claims challenging ownership of our trade secrets. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable trade secret rights, such as exclusive ownership of, or right to use, trade secrets that are important to our vaccine candidates and other proprietary technologies we may develop. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our management and other employees. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might adversely affect our ability to develop and market our products and vaccine candidates.

We cannot guarantee that any of our or our licensors' patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we or our licensors have identified each and every third-party patent and pending patent application in the United States and abroad that is relevant to or necessary for the commercialization of our current and future products and vaccine candidates in any jurisdiction. Patent applications in the United States and elsewhere are not published until approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our vaccine candidates could have been filed by others without our knowledge. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover vaccine candidates or the use of our vaccine candidates.

The scope of a patent claim is determined by the interpretation of the law, the words of a patent claim, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending patent application may be incorrect, which may negatively impact our ability to market our products. We may incorrectly determine that our products or vaccine candidates are not covered by a third-party patent or may incorrectly predict whether a third party's pending patent application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, and we may incorrectly conclude that a third-party patent is invalid or unenforceable. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products and vaccine candidates. If we fail to identify and correctly

interpret relevant patents, we may be subject to infringement claims. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we fail in any such dispute, in addition to being forced to pay damages, we may be temporarily or permanently prohibited from commercializing any of our vaccine candidates that are held to be infringing. We might, if possible, also be forced to redesign vaccine candidates or services so that we no longer infringe the third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

We may be subject to claims asserting that our employees, consultants or advisors have wrongfully used or disclosed alleged trade secrets of their current or former employers or claims asserting ownership of what we regard as our own intellectual property.

Some of our employees, consultants and advisors are currently or were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and advisors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these individuals have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such individual's current or former employer. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our management.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Such claims could have a material adverse effect on our business, financial condition, results of operations and prospects.

Third-party claims of intellectual property infringement, misappropriation or other violations against us or our potential future collaborators could be expensive and time consuming and may prevent or delay the development and commercialization of our vaccine candidates.

Our commercial success depends in part on our ability to avoid infringing, misappropriating and otherwise violating the patents and other intellectual property rights of third parties. There is a substantial amount of complex litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as well as administrative proceedings for challenging patents, including interference, derivation and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. As discussed above, recently, due to changes in U.S. law referred to as patent reform, new procedures including inter partes review and post-grant review have also been implemented. As stated above, this reform adds uncertainty to the possibility of challenge to our patent rights in the future.

Numerous U.S. and foreign issued patents and pending patent applications owned by third parties exist in the fields in which we are commercializing or plan to commercialize HIL-214. As the biotechnology and pharmaceutical industries expand and more patents are issued, and as we gain greater visibility and market exposure as a public company, the risk increases that HIL-214 or any future vaccine candidates, and commercializing activities may give rise to claims of infringement of the patent rights of others. We cannot

assure you that HIL-214 or any future vaccine candidates will not infringe existing or future patents owned by third parties. We may not be aware of patents that have already been issued for which a third party, such as a competitor in the fields in which we are developing our vaccine candidates, might accuse us of infringing. It is also possible that patents owned by third parties of which we are aware, but which we do not believe we infringe or that we believe we have valid defenses to any claims of patent infringement, could be found to be infringed by us. It is not unusual that corresponding patents issued in different countries have different scopes of coverage, such that in one country a third-party patent does not pose a material risk, but in another country, the corresponding third-party patent may pose a material risk to our vaccine candidates. As such, we monitor third-party patents in the relevant pharmaceutical markets. In addition, because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that we may infringe.

In the event that any third-party claims that we infringe their patents or that we are otherwise employing their proprietary technology without authorization and initiates litigation against us, even if we believe such claims are without merit, a court of competent jurisdiction could hold that such patents are valid, enforceable and infringed by us. Defense of infringement claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and other employee resources from our business, and may impact our reputation. In the event of a successful claim of infringement against us, we may be enjoined from further developing or commercializing the infringing products or technologies. In addition, we may be required to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties and/or redesign our infringing products or technologies, which may be impossible or require substantial time and monetary expenditure. Such licenses may not available on commercially reasonable terms or at all. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us might be nonexclusive, which could result in our competitors gaining access to the same intellectual property. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms or at all, we may be unable to commercialize the infringing products or technologies or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business. In addition, we may in the future pursue patent challenges with respect to third- party patents, including as a defense against the foregoing infringement claims. The outcome of such challenges is unpredictable.

Even if resolved in our favor, the foregoing proceedings could be very expensive, particularly for a company of our size, and time-consuming. Such proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such proceedings adequately. Some of our competitors may be able to sustain the costs of litigation or administrative proceedings more effectively than we can because of greater financial resources. Such proceedings may also absorb significant time of our technical and management personnel and distract them from their normal responsibilities. Uncertainties resulting from such proceedings could impair our ability to compete in the marketplace. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. The occurrence of any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

We may become involved in lawsuits to protect or enforce our patent and other intellectual property rights, which could be expensive, time-consuming and unsuccessful.

Third parties, such as a competitor, may infringe our patent rights. In an infringement proceeding, a court may decide that a patent owned by us or licensed to us is invalid or unenforceable or may refuse to stop the other party from using the invention at issue on the grounds that the patent does not cover the technology in

question. In addition, our or our licensors' patent rights may become involved in inventorship, priority or validity disputes. To counter or defend against such claims can be expensive and time-consuming. An adverse result in any litigation proceeding could put our patent rights at risk of being invalidated, held unenforceable or interpreted narrowly. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation and proceedings, there is a risk that some of our confidential information could be compromised by disclosure during such litigation and proceedings.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, diluted, circumvented or declared generic or determined to be infringing, misappropriating or violating other marks. During trademark registration proceedings, we may receive rejections of our applications by the USPTO or in other foreign jurisdictions. Although we are given an opportunity to respond to such rejections, we may be unable to overcome them. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, which may not survive such proceedings. Moreover, any name we may propose to use with HIL-214 or any future vaccine candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. Similar requirements exist in Europe. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA or an equivalent administrative body in a foreign jurisdiction objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe, misappropriate or otherwise violate the existing rights of third parties and be acceptable to the FDA. Furthermore, in many countries, owning and maintaining a trademark registration may not provide an adequate defense against a subsequent infringement claim asserted by the owner of a senior trademark.

We may not be able to obtain, protect or enforce our rights to these trademarks and trade names, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors or other third parties may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement, misappropriation, dilution or other claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected.

Our efforts to obtain, enforce or protect our proprietary rights related to trademarks, trade names, domain name or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and prospects.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make products that are similar to HIL-214 or any future vaccine candidates or utilize similar technology but that are not covered by the claims of the patents that we license;
- we or our licensors might not have been the first to make the inventions covered by our or our licensors' current or future patent applications;
- we or our licensors might not have been the first to file patent applications covering our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our or our licensors' technologies without infringing our intellectual property rights;
- it is possible that our or our licensors' current or future patent applications will not lead to issued patents;
- any patent issuing from our or our licensors' current or future patent applications may be held invalid or unenforceable, including as a result of legal challenges by our competitors or other third parties;
- others may have access to the same intellectual property rights licensed to use in the future on a non-exclusive basis;
- our competitors or other third parties might conduct research and development activities in countries where we or our licensors do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- the patents or other intellectual property rights of others may harm our business; and
- we may choose not to file for patent protection in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent application covering such intellectual property.

Should any of the foregoing occur, it could adversely affect our business, financial condition, results of operations and prospects.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

The growth of our business may depend in part on our ability to acquire, in-license or use third-party intellectual property and proprietary rights. For example, HIL-214 or any future vaccine candidates may require specific formulations to work effectively and efficiently and we may develop vaccine candidates containing our compounds and pre-existing pharmaceutical compounds, which could require us to obtain rights to use intellectual property held by third parties. For example, we may find from our preclinical or clinical trials that HIL-214 or any future vaccine candidates achieve improved efficacy through combination with proprietary adjuvants. We may not be able to achieve long-term access to these adjuvants or may be only able to do so

under unfavorable terms. This could limit the effectiveness of HIL-214 or any future vaccine candidates if we are unable to obtain access to these adjuvants or could impact our potential profitability if we can only obtain access under unfavorable terms. In addition, with respect to any patent or other intellectual property rights we may co-own with third parties, we may require licenses to such co-owners interest to such patents. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary or important to our business operations. In addition, we may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. Were that to happen, we may need to cease use of the compositions or methods covered by those third-party intellectual property rights, and may need to seek to develop alternative approaches that do not infringe, misappropriate or otherwise violate those intellectual property rights, which may entail additional costs and development delays, even if we were able to develop such alternatives, which may not be feasible. Even if we are able to obtain a license, it may be non-exclusive, which means that our competitors may also receive access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology.

Additionally, we may collaborate with academic institutions to accelerate our preclinical research or development under written agreements with these institutions. In certain cases, these institutions provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Even if we hold such an option, we may be unable to negotiate a license from the institution within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, the institution may offer the intellectual property rights to others, potentially blocking our ability to pursue our program.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies that may be more established or have greater resources than we do may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize HIL-214 or any future vaccine candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. There can be no assurance that we will be able to successfully complete these types of negotiations and ultimately acquire the rights to the intellectual property surrounding the additional vaccine candidates that we may seek to develop or market. If we are unable to successfully obtain rights to required third-party intellectual property or to maintain the existing intellectual property rights we have, we may have to abandon development of certain programs and our business financial condition, results of operations and prospects could suffer.

Intellectual property discovered through government funded programs may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies. Compliance with such regulations may limit our exclusive rights and limit our ability to contract with non-U.S. manufacturers.

We have in-licensed certain patents and patent applications that have been generated through the use of U.S. government funding or grants, and we may acquire or license in the future additional intellectual property rights that have been generated through the use of U.S. government funding or grants. Pursuant to the Bayh-Dole Act of 1980, the U.S. government has certain rights in inventions developed with government funding. Many of the U.S. patents and patent applications that we currently license that may be subject to these government rights are licensed from Takeda pursuant to the Takeda License and relate to HIL-214. These U.S. government rights include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right, under certain limited

circumstances, to require us to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third-party if it determines that: (1) adequate steps have not been taken to commercialize the invention; (2) government action is necessary to meet public health or safety needs; or (3) government action is necessary to meet requirements for public use under federal regulations (also referred to as “march-in rights”). If the U.S. government exercises its march-in rights in our current or future intellectual property rights that are generated through the use of U.S. government funding or grants, we could be forced to license or sublicense intellectual property developed by us or that we license on terms unfavorable to us, and there can be no assurance that we would receive compensation from the U.S. government for the exercise of such rights. The U.S. government also has the right to take title to these inventions if the grant recipient fails to disclose the invention to the government or fails to file an application to register the intellectual property within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us or the applicable licensor to expend substantial resources. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States. This preference for U.S. industry may be waived by the federal agency that provided the funding if the owner or assignee of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. industry may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property. Any exercise by the government of such rights or failure by us to comply with federal regulations regarding intellectual property rights that were developed through the use of U.S. government funding could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Risks related to our common stock, this offering and being a public company

There has been no public market for our common stock. An active, liquid and orderly market for our common stock may not develop, and you may not be able to resell your common stock at or above the initial public offering price.

Prior to this offering, there has been no public market for our common stock. Although we have applied to list our common stock on the Nasdaq Global Select Market (Nasdaq), an active trading market for our common stock may never develop or may not be sustained following this offering. We and the representatives of the underwriters will determine the initial public offering price of our common stock through negotiation. This price will not necessarily reflect the price at which investors in the market will be willing to buy and sell our shares following this offering. In addition, an active trading market may not develop following the consummation of this offering or, if it is developed, may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. An inactive market may also impair our ability to raise capital by selling shares and may impair our ability to acquire other businesses or technologies using our shares as consideration, which, in turn, could materially adversely affect our business.

The trading price of the shares of our common stock could be highly volatile, and purchasers of our common stock could incur substantial losses.

Our stock price is likely to be volatile. The stock market in general and the market for stock of biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the initial public offering price. The market price for our common stock may be influenced by the factors discussed in this "Risk factors" section and many others, including:

- recalls or adverse developments or publicity;
- results of our preclinical studies and clinical studies, and the results of trials of our competitors or those of other companies in our market sector;
- our ability to enroll subjects in our future clinical trials;
- regulatory approval of HIL-214 or any future vaccine candidates, or limitations to specific label indications or target populations for its use, or changes or delays in the regulatory review process;
- regulatory or legal developments in the United States and foreign countries;
- changes in the structure of healthcare payment systems;
- the success or failure of our efforts to develop, acquire or license additional vaccine candidates;
- innovations, clinical trial results, product approvals and other developments by our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- manufacturing, supply or distribution delays or shortages;
- any changes to our relationship with any manufacturers, suppliers, collaborators or other strategic partners;
- achievement of expected product sales and profitability;
- variations in our financial results or those of companies that are perceived to be similar to us;
- market conditions in the biopharmaceutical sector and issuance of securities analysts' reports or recommendations;
- trading volume of our common stock;
- an inability to obtain additional funding;
- sales of our stock by insiders and stockholders, including Takeda;
- general economic, industry and market conditions, many of which are beyond our control;
- additions or departures of key personnel;
- intellectual property, product liability or other litigation against us;
- changes in our capital structure, such as future issuances of securities and the incurrence of additional debt; and
- changes in accounting standards, policies, guidelines, interpretations or principles.

In addition, in the past, stockholders have initiated class action lawsuits against biopharmaceutical companies following periods of volatility in the market prices of these companies' stock. Such litigation, if instituted against us, could cause us to incur substantial costs, divert our management's attention and resources and damage our reputation, which could have a material adverse effect on our business, financial condition and results of operations and prospects.

We may allocate the net proceeds from this offering in ways of which you and other stockholders may not approve.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in "Use of Proceeds." Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment, and the failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short-and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected results, which could cause our stock price to decline.

You will suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase.

The initial public offering price of our common stock will be substantially higher than the pro forma as adjusted net tangible book value per share of our outstanding common stock immediately after the completion of this offering. Purchasers of common stock in this offering will experience immediate dilution of approximately $ per share, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover of this prospectus. For a further description of the dilution that you will experience immediately after this offering, see "Dilution."

After this offering, our executive officers, directors and principal stockholders, if they choose to act together, will continue to have the ability to significantly influence all matters submitted to stockholders for approval.

Following the completion of this offering, our executive officers, directors and greater than 5% stockholders, in the aggregate, will own approximately % of our outstanding common stock (assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options, warrants or other rights, and without giving effect to any potential purchases by such persons in this offering). As a result, such persons, acting together, will have the ability to significantly influence all matters submitted to our board of directors or stockholders for approval, including the appointment of our management, the election and removal of directors and approval of any significant transaction, as well as our management and business affairs. This concentration of ownership may have the effect of delaying, deferring or preventing a change in control, impeding a merger, consolidation, takeover or other business combination involving us, or discouraging a potential acquiror from making a tender offer or otherwise attempting to obtain control of our business, even if such a transaction would benefit other stockholders.

We do not currently intend to pay dividends on our common stock, and, consequently, your ability to achieve a return on your investment will depend on appreciation, if any, in the price of our common stock.

We have never declared or paid any cash dividend on our common stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock. There is no guarantee that shares of our common stock will appreciate in value or even maintain the price at which stockholders have purchased their shares.

Sales of a substantial number of shares of our common stock by our existing stockholders in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur could significantly reduce the market price of our common stock and impair our ability to raise adequate capital through the sale of additional equity securities.

Based on shares of common stock outstanding as of September 30, 2021, upon the closing of this offering, we will have outstanding a total of shares of common stock, assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options, warrants or other rights. Of these shares, only the shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable, without restriction, in the public market immediately following this offering, unless they are purchased by one of our affiliates.

In addition, immediately following the completion of this offering, Takeda will beneficially own % of our outstanding shares of common stock, including 3,500,000 shares of common stock issuable pursuant to the Takeda Warrant (or % if the underwriters exercise their option to purchase additional shares in full). The sale by Takeda of a substantial number of shares after this offering, or a perception that such sales could occur, could significantly reduce the market price of our common stock.

Our directors and officers and holders of substantially all of our outstanding securities have entered into lock-up agreements with the underwriters pursuant to which they may not, with limited exceptions, for a period of 180 days from the date of this prospectus, offer, sell or otherwise transfer or dispose of any of our securities, without the prior written consent of J.P. Morgan Securities LLC and SVB Leerink LLC. The underwriters may permit our officers, directors and other securityholders who are subject to the lock-up agreements to sell shares prior to the expiration of the lock-up agreements at any time in their sole discretion. See "Underwriting." Sales of these shares, or perceptions that they will be sold, could cause the trading price of our common stock to decline.

After the lock-up agreements expire, up to an additional shares of common stock will be eligible for sale in the public market, of which shares are held by directors, executive officers and other affiliates and will be subject to volume limitations under Rule 144 under the Securities Act, in each case based on shares of common stock outstanding as of September 30, 2021 and without giving effect to any potential purchases by such persons in this offering.

In addition, promptly following this offering, we intend to file one or more registration statements on Form S-8 under the Securities Act registering the issuance of approximately shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and the restrictions of Rule 144 in the case of our affiliates. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

After this offering, the holders of shares of our outstanding common stock, or approximately % of our total outstanding common stock based on shares outstanding as of September 30, 2021, will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to vesting and the 180-day lock-up agreements described above. In addition, upon the closing of this offering Takeda will be entitled to the same rights with respect to the registration of 3,500,000 shares of our common stock underlying the Takeda Warrant. See "Description of capital stock—Registration rights." Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by affiliates, as defined in Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

We are an emerging growth company and a smaller reporting company, and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.

We are an emerging growth company, as defined in the JOBS Act, and may remain an emerging growth company until the last day of the fiscal year following the fifth anniversary of the completion of this offering. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer", as defined under the Exchange Act, our annual gross revenue exceeds $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, unless the U.S. Securities and Exchange Commission (SEC) determines the new rules are necessary for protecting the public;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We have taken advantage of reduced reporting burdens in this prospectus. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be reduced or more volatile. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have elected to avail ourselves

of this exemption and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

We are also a smaller reporting company as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than $100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect immediately prior to the consummation of this offering will contain provisions that could significantly reduce the value of our shares to a potential acquiror or delay or prevent changes in control or changes in our management without the consent of our board of directors. The provisions in our charter documents will include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors, unless the board of directors grants such right to the stockholders, to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the required approval of at least 66-2/3% of the shares entitled to vote to remove a director for cause, and the prohibition on removal of directors without cause;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the ability of our board of directors to alter our amended and restated bylaws without obtaining stockholder approval;
- the required approval of at least 66-2/3% of the shares entitled to vote to adopt, amend or repeal our amended and restated bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- an exclusive forum provision providing that the Court of Chancery of the State of Delaware will be the exclusive forum for certain actions and proceedings;

- the requirement that a special meeting of stockholders may be called only by the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction.

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine; provided, that, this provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, our amended and restated certificate of incorporation will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. By agreeing to this provision, however, stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. Furthermore, the enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. If a court were to find the choice of forum provisions in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

General risk factors

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Exchange Act, which will require, among other things, that we file with the SEC annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes Oxley Act, as well as rules subsequently adopted by the SEC and Nasdaq to implement provisions of Sarbanes-Oxley, impose significant requirements on public companies,

including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the SEC has adopted additional rules and regulations in these areas, such as mandatory "say on pay" voting requirements that will apply to us when we cease to be an emerging growth company. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our products or services. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We could face criminal liability and other serious consequences for violations, which could harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls and anti-corruption and anti-money laundering laws and regulations, including the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, CROs, contractors and other collaborators and partners from authorizing, promising, offering, providing, soliciting or receiving, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties for clinical trials outside of the United States, to sell our products abroad once we enter a commercialization phase, and/or to obtain necessary permits, licenses, patent registrations and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, CROs, contractors and other collaborators and partners, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, blizzards and other extreme weather conditions, fires, public health pandemics or epidemics (including, for example, the COVID-19 pandemic) and other natural or manmade disasters or business interruptions, for which we are predominantly self-insured. We rely on third-party manufacturers to produce HIL-214. Our ability to obtain clinical supplies of HIL-214 or any future vaccine candidates could be disrupted if the operations of these suppliers were affected by a man-made or natural disaster or other business interruption. In addition, our corporate headquarters is located in Boston, Massachusetts, where we are subject to both severe winter and summer weather conditions. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

We and any of our third-party manufacturers or suppliers may use potent chemical agents and hazardous materials, and any claims relating to improper handling, storage or disposal of these materials could be time-consuming or costly.

We and any of our third-party manufacturers or suppliers and current or potential future collaborators will use biological materials, potent chemical agents and may use hazardous materials, including chemicals and biological agents and compounds that could be dangerous to human health and safety of the environment. Our operations and the operations of our third-party manufacturers and suppliers also produce hazardous waste products. Federal, state and local laws and regulations govern the use, generation, manufacture, storage, handling and disposal of these materials and wastes. Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our product development efforts. In addition, we cannot eliminate the risk of accidental injury or contamination from these materials or wastes. We do not carry specific biological or hazardous waste insurance coverage, and our property, casualty and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. In the event of contamination or injury, we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and our clinical trials or regulatory approvals could be suspended. Although we maintain workers' compensation insurance for certain costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials or other work-related injuries, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for toxic tort claims that may be asserted against us in connection with our storage or disposal of biologic, hazardous or radioactive materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations, which have tended to become more stringent over time. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions or liabilities, which could materially adversely affect our business, financial condition, results of operations and prospects.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

The global credit and financial markets have recently experienced extreme volatility and disruptions, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur.

Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult, more costly and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers, manufacturers and other partners may not survive an economic downturn, which could directly affect our ability to attain our operating goals on schedule and on budget.

Our ability to use net operating loss carryforwards and other tax attributes may be limited in connection with this offering or other ownership changes.

We have incurred substantial losses during our history, do not expect to become profitable in the near future and may never achieve profitability. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire (if at all). We had no material net operating loss carryforwards as of December 31, 2020.

Under the Tax Cuts and Jobs Act (the Tax Act), federal NOL carryforwards generated in periods after December 31, 2017, may be carried forward indefinitely. The deductibility of federal NOL carryforwards, particularly for tax years beginning after December 31, 2020, may be limited. It is uncertain if and to what extent various states will conform to the Tax Act or the Coronavirus Aid, Relief, and Economic Security Act (the CARES Act). In addition, our NOL carryforwards are subject to review and possible adjustment by the Internal Revenue Service (IRS), and state tax authorities. Under Section 382 of the Internal Revenue Code (the Code), our federal NOL carryforwards may be or become subject to an annual limitation in the event we have had or have in the future certain cumulative changes in the ownership of our company. An “ownership change” pursuant to Section 382 of the Code generally occurs if one or more stockholders or groups of stockholders who own at least 5% of a company’s stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Similar rules may apply under state tax laws. We have not yet determined the amount of the cumulative change in our ownership resulting from this offering or other transactions, or any resulting limitations on our ability to utilize our NOL carryforwards and other tax attributes. However, we believe that our ability to utilize our NOL carryforwards and other tax attributes to offset future taxable income or tax liabilities may be limited as a result of ownership changes, including potential changes in connection with this offering. If we earn taxable income, such limitations could result in increased future income tax liability to us and our future cash flows could be adversely affected. We have recorded a full valuation allowance related to our NOL carryforwards and other deferred tax assets due to the uncertainty of the ultimate realization of the future benefits of those assets.

Changes in U.S. tax law may materially adversely affect our financial condition, results of operations and cash flows.

On March 27, 2020, the CARES Act was signed into law to address the COVID-19 crisis. The CARES Act is an approximately $2 trillion emergency economic stimulus package that includes numerous U.S. federal income tax provisions, including the modification of: (i) NOL rules, (ii) the alternative minimum tax refund and (iii) business interest deduction limitations under Section 163(j) of the Code.

The Tax Act also significantly changed the U.S. federal income taxation of U.S. corporations. The Tax Act remains unclear in many respects and has been, and may continue to be, the subject of amendments and technical corrections, as well as interpretations and implementing regulations by the IRS, which have lessened or increased certain adverse impacts of the Tax Act and may continue to do so in the future. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation, which often uses federal

taxable income as a starting point for computing state and local tax liabilities. We continue to work with our tax advisors and auditors to determine the full impact the Tax Act and the CARES Act will have on us.

Congress may enact additional legislation in connection with the COVID-19 pandemic, and as a result of changes in the U.S. presidential administration and control of the U.S. Senate, additional tax legislation may also be enacted, which could have an impact on our company. We urge our investors to consult with their legal and tax advisors with respect to the Tax Act, the CARES Act, and possible changes in U.S. tax law and the potential tax consequences of investing in our common stock.

If securities or industry analysts do not publish research or reports or publish unfavorable research or reports about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us, our business, our market or our competitors. We do not currently have and may never obtain research coverage by securities and industry analysts. If no securities or industry analysts commence coverage of our company, the trading price for our stock would be negatively impacted. In the event we obtain securities or industry analyst coverage, if one or more of the analysts who covers us downgrades our stock, or if we fail to meet the expectations of one or more of these analysts, our stock price would likely decline. If one or more of these analysts ceases to cover us or fails to regularly publish reports on us, interest in our stock could decrease, which could cause our stock price or trading volume to decline.

If we fail to maintain proper and effective internal control over financial reporting, our ability to produce accurate and timely financial statements could be impaired, investors may lose confidence in our financial reporting and the trading price of our common stock may decline.

Pursuant to Section 404 of the Sarbanes-Oxley Act, our management will be required to report upon the effectiveness of our internal control over financial reporting beginning with the annual report for our fiscal year ending December 31, 2023. When we lose our status as an “emerging growth company” and do not otherwise qualify as a “smaller reporting company” with less than $100 million in annual revenue, our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for our management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the requirements of being a reporting company under the Exchange Act, we may need to upgrade our information technology systems; implement additional financial and management controls, reporting systems and procedures; and hire additional accounting and finance staff. If we or, if required, our auditors are unable to conclude that our internal control over financial reporting is effective, investors may lose confidence in our financial reporting and the trading price of our common stock may decline.

We cannot assure you that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting once that firm begin its Section 404 reviews, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us, because biotechnology and biopharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of our management's attention and resources, which could harm our business.

Special note regarding forward-looking statements

This prospectus contains forward-looking statements. All statements other than statements of historical fact contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, research and development plans, the anticipated timing, costs, design and conduct of our planned and potential clinical trials and preclinical studies for HIL-214 and any future vaccine candidates, the timing and likelihood of regulatory filings and approvals for HIL-214 and any future vaccine candidates, our ability to commercialize our vaccine candidates, if approved, the impact of COVID-19 on our business, the pricing and reimbursement of our vaccine candidates, if approved, the potential to develop future vaccine candidates, the potential benefits of strategic collaborations and our intent to enter into any strategic arrangements, the timing and likelihood of success, plans and objectives of management for future operations, and future results of anticipated product development efforts, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar expressions. The forward-looking statements in this prospectus are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition, results of operations and prospects. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described under the sections titled “Risk factors” and “Management’s discussion and analysis of financial condition and results of operations” and elsewhere in this prospectus. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by applicable law, we undertake no obligation to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See the section titled “Where you can find more information.”

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to rely unduly upon them.

Market and industry data

We obtained the industry, market and competitive position data used throughout this prospectus from our own internal estimates and research, as well as from independent market research, industry and general publications and surveys, governmental agencies and publicly available information in addition to research, surveys and studies conducted by third parties. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of our industry and market. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires. In addition, while we believe the industry, market and competitive position data included in this prospectus is reliable and based on reasonable assumptions, such data involve risks and uncertainties and are subject to change based on various factors, including those discussed in the section titled “Risk factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties or by us.

Use of proceeds

We estimate that the net proceeds to us from this offering will be approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares in full) from the sale of the shares of common stock offered by us in this offering, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. A one million share increase (decrease) in the number of shares offered by us would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming that the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We do not expect that a change in the initial public offering price or the number of shares by these amounts would have a material effect on our intended uses of the net proceeds from this offering, although it may accelerate the time at which we will need to seek additional capital.

The principal purposes of this offering are to obtain additional capital to support our operations, to create a public market for our common stock and to facilitate our future access to the public equity markets. We intend to use approximately $ of the net proceeds from this offering to fund the clinical development of HIL-214, including certain manufacturing activities, and the remainder for working capital and general corporate purposes.

We may also use a portion of the remaining net proceeds to in-license, acquire or invest in complementary businesses, technologies, products or assets, although we have no current agreements, commitments or understandings to do so.

Based on our current operating plan, we believe our existing cash, together with the estimated net proceeds from this offering, will be sufficient to meet our anticipated cash requirements through at least the next months. In particular, we expect that the net proceeds from this offering will allow us to complete . We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we expect. The net proceeds of this offering, together with our existing cash, will not be sufficient to complete development of HIL-214, and after this offering, we will require substantial capital in order to advance HIL-214 and any future vaccine candidates through clinical trials, regulatory approval and commercialization.

Our expected use of existing cash and our net proceeds from this offering represent our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. Predicting the costs necessary to develop vaccine candidates can be difficult and we will need substantial additional capital to complete our clinical development of HIL-214 and any future vaccine candidates. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress and costs of our development activities, the status of and results from clinical trials, as well as the status and results from our current and any future collaborations with third parties for HIL-214 and any future vaccine candidates, and any unforeseen cash needs.

Our management will have broad discretion in the application of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of those net proceeds. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending these uses, we plan to invest these net proceeds in short-term, interest bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the United States.

Dividend policy

We have never declared or paid, and do not anticipate declaring or paying in the foreseeable future, any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant.

Capitalization

The following table sets forth our cash and capitalization as of September 30, 2021:

- on an actual basis;
- on a pro forma basis, giving effect to (i) the automatic conversion of the August 2021 Notes into an aggregate of shares of our common stock immediately prior to the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and assuming the conversion occurs on , 2021), (ii) the reclassification of the Takeda Warrant to stockholders' equity (deficit), and (iii) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur immediately prior to the closing of this offering; and
- on a pro forma as adjusted basis to reflect (i) the pro forma adjustments set forth above and (ii) our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

You should read the information in this table together with our combined financial statements and related notes included elsewhere in this prospectus and the section titled "Management's discussion and analysis of financial condition and results of operations."

	As of September 30, 2021		
(in thousands, except share and per share data)	**Actual**	**Pro forma**	**Pro forma as adjusted(1)**
	(unaudited)	**(unaudited)**	**(unaudited)**
Cash	$	$	$
Convertible promissory notes payable at fair value (including accrued interest)	$	$	$
Warrant liabilities			
Stockholders' equity (deficit):			
Preferred stock, par value $0.0001 per share; no shares authorized, issued and outstanding, actual; shares authorized and no shares issued or outstanding pro forma and pro forma as adjusted			
Common stock, par value $0.0001 per share; shares authorized, shares issued and shares outstanding (excluding 1,626,870 shares subject to forfeiture or repurchase), actual; shares authorized pro forma and pro forma as adjusted; shares issued and shares outstanding (excluding 1,626,870 shares subject to forfeiture or repurchase), pro forma; shares issued and shares outstanding (excluding 1,626,870 shares subject to forfeiture or repurchase), pro forma as adjusted			
Additional paid-in capital			
Accumulated deficit			
Total stockholders' equity (deficit)			
Total capitalization	$	$	$

(1) The pro forma as adjusted information set forth above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per

share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash, additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. A one million share increase (decrease) in the number of shares offered by us at the assumed initial public offering price per share of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash, additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately $ million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The table above is based on the number of shares of common stock outstanding as of September 30, 2021 and excludes:

- 3,500,000 shares of common stock issuable to Takeda upon the exercise of the Takeda Warrant, as of September 30, 2021, at an exercise price of $0.0001 per share;
- shares of common stock reserved for future issuance under the 2022 Plan, which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the 2022 Plan); and
- shares of common stock reserved for future issuance under the ESPP, which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

Each $1.00 increase in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would decrease the number of shares of our common stock issued upon conversion of the August 2021 Notes by shares. Each $1.00 decrease in the assumed initial public offering price of $ per share would increase the number of shares of our common stock issued upon conversion of the August 2021 Notes by shares.

Dilution

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

As of September 30, 2021, our historical net tangible book value (deficit) was $ million, or $ per share of our common stock, based on shares of common stock outstanding as of such date, including shares subject to forfeiture or our right of repurchase as of such date. Our historical net tangible book value (deficit) per share represents the amount of our total tangible assets less total liabilities, divided by the total number of shares of common stock outstanding at September 30, 2021.

After giving effect to (i) the automatic conversion of the August 2021 Notes into an aggregate of shares of our common stock immediately prior to the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and assuming the conversion occurs on , 2021), and (ii) the reclassification of the Takeda Warrant to stockholders' equity (deficit), our pro forma net tangible book value as of September 30, 2021 would have been approximately $ million, or approximately $ per share of our common stock.

After giving further effect to the sale of shares of our common stock that we are offering at the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2021 would have been $ million, or approximately $ per share. This amount represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $ per share to new investors participating in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the assumed initial public offering price per share paid by new investors. The following table illustrates this dilution (without giving effect to any exercise by the underwriters of their option to purchase additional shares):

Assumed initial public offering price per share		$
Historical net tangible book value (deficit) per share at September 30, 2021	$	
Pro forma increase in historical net tangible book value (deficit) per share as of September 30, 2021 attributable to the pro forma adjustments described above		
Pro forma net tangible book value per share as of September 30, 2021		
Increase in pro forma net tangible book value per share attributable to investors participating in this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors participating in this offering		$

A $1.00 increase in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would decrease the number of shares of our common stock issued upon conversion of the August 2021 Notes by shares, and would increase the pro forma as adjusted net tangible book value per share after this offering by approximately $, and decrease the dilution in pro forma net tangible book value per share to new investors by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting

the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. A $1.00 decrease in the assumed initial public offering price of $ per share would increase the number of shares of our common stock issued upon conversion of the August 2021 Notes by shares, and would decrease the pro forma as adjusted net tangible book value per share after this offering by approximately $, and increase the dilution in pro forma net tangible book value per share to new investors by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

We may also increase or decrease the number of shares we are offering. An increase of one million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase our pro forma as adjusted net tangible book value per share after this offering by approximately $ and decrease the dilution to investors participating in this offering by approximately $ per share, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. Similarly, a decrease of one million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would decrease the pro forma as adjusted net tangible book value per share after this offering by approximately $ and increase the dilution to investors participating in this offering by approximately $ per share, assuming the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

If the underwriters exercise their option to purchase up to additional shares of our common stock in full in this offering, the pro forma as adjusted net tangible book value after the offering would be $ per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be $ per share and the dilution per share to new investors would be $ per share, in each case assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus.

If the Takeda Warrant had been exercised as of September 30, 2021, the pro forma as adjusted net tangible book value after this offering would be approximately $ million, or approximately $ per share, and total dilution per share to new investors would be approximately $ per share.

The following table summarizes, on a pro forma as adjusted basis as of September 30, 2021, the number of shares of common stock purchased or to be purchased from us, the total consideration paid or to be paid to us in cash and the average price per share paid by existing stockholders for shares issued prior to this offering and the price to be paid by new investors in this offering. The calculation below is based on the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. As the table below shows, investors participating in this offering will pay an average price per share substantially higher than our existing stockholders paid.

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
Investors participating in this offering					$
Total		100.0%	$	100.0%	

If the underwriters exercise their option to purchase additional shares of our common stock in full:

- the percentage of shares of common stock held by existing stockholders before this offering will decrease to approximately % of the total number of shares of our common stock outstanding after this offering; and
- the number of shares held by new investors participating in this offering will increase to , or approximately % of the total number of shares of our common stock outstanding after this offering.

The foregoing tables and calculations exclude:

- 3,500,000 shares of common stock issuable to Takeda upon the exercise of the Takeda Warrant, as of September 30, 2021, at an exercise price of $0.0001 per share;
- shares of common stock reserved for future issuance under the 2022 Plan, which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the 2022 Plan); and
- shares of common stock reserved for future issuance under the ESPP, which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

To the extent any outstanding warrants or other rights are exercised, or we issue additional equity or convertible securities in the future, there will be further dilution to new investors.

Management's discussion and analysis of financial condition and results of operations

The following discussion and analysis should be read in conjunction with our combined financial statements and related notes included elsewhere in this prospectus. This discussion and analysis and other parts of this prospectus contain forward-looking statements based upon current beliefs, plans and expectations that involve risks, uncertainties and assumptions, such as statements regarding our plans, objectives, expectations, intentions and projections. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of several factors, including those set forth in the section titled "Risk factors" and elsewhere in this prospectus. You should carefully read the "Risk factors" section of this prospectus to gain an understanding of the important factors that could cause actual results to differ materially from our forward-looking statements. Please also see the section titled "Special note regarding forward-looking statements."

Overview

We are a clinical-stage biopharmaceutical company focused on developing and commercializing novel vaccines. Our initial program, HIL-214, is a VLP-based vaccine candidate for the prevention of moderate-to-severe AGE caused by norovirus infection. It is estimated that norovirus causes nearly 700 million cases of illness and more than 200,000 deaths worldwide per year, as well as significant additional economic and social burden. To date, HIL-214 has been studied in nine clinical trials, which collectively generated safety and immunogenicity data from more than 4,500 and 2,200 subjects, respectively, including safety and immunogenicity data from more than 800 pediatric subjects. A randomized, placebo-controlled Phase 2b field efficacy trial enrolled 4,712 adult subjects, and HIL-214 was well tolerated and demonstrated clinical proof of concept in preventing moderate-to-severe cases of AGE from norovirus infection. We plan to initiate a Phase 2b clinical trial in to evaluate the safety, immunogenicity, and efficacy of HIL-214 in infants. We expect to report safety and immunogenicity data from this trial for the first 200 subjects in and top-line data in . We believe HIL-214 has the potential to be the first ever vaccine approved for norovirus-related illnesses and will help grow HilleVax into a leading global vaccines company.

We commenced our operations in 2019 and have devoted substantially all of our resources to date to organizing and staffing our company, business planning, raising capital, in-licensing intellectual property related to our initial vaccine candidate, HIL-214, preparing for our planned clinical trials of HIL-214, and providing other general and administrative support for our operations. We have funded operations to date primarily through the issuance of convertible promissory notes. As of December 31, 2020 and September 30, 2021, we had cash of $0.5 million and $ million, respectively. From inception to December 31, 2020, we raised aggregate gross proceeds of $2.2 million from the issuance of convertible promissory notes. Subsequent to December 31, 2020, we raised aggregate gross proceeds of $135.0 million from the issuance of convertible promissory notes.

We do not have any products approved for sale, have not generated any revenue and have incurred net losses since our inception. Our net losses for the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020 were $0.7 million and $2.1 million, respectively. As of December 31, 2020, we had an accumulated deficit of $2.8 million. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our clinical development activities, other research and development activities and pre-commercialization activities. We expect our expenses and operating losses will increase substantially as we advance HIL-214 through clinical trials, seek regulatory approval for HIL-214, expand our clinical, regulatory, quality, manufacturing and commercialization

capabilities, incur significant commercialization expenses for marketing, sales, manufacturing and distribution in anticipation of obtaining potential marketing approval for HIL-214, obtain, maintain, protect and enforce our intellectual property, expand our general and administrative support functions, including hiring additional personnel, and incur additional costs associated with operating as a public company.

Based on our current operating plan, we believe that our existing cash, together with the estimated net proceeds from this offering, will be sufficient to meet our anticipated cash requirements through at least the next months. We have never generated any revenue and do not expect to generate any revenue from product sales unless and until we successfully complete development of, and obtain regulatory approval for, HIL-214, which will not be for several years, if ever. Accordingly, until such time as we can generate significant revenue from sales of HIL-214, if ever, we expect to finance our cash needs through equity offerings, debt financings, or other capital sources, including potential collaborations, licenses and other similar arrangements. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. Our failure to raise capital or enter into such other arrangements when needed would have a negative impact on our financial condition and could force us to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market vaccine candidates that we would otherwise prefer to develop and market ourselves.

The global COVID-19 pandemic continues to evolve, and we will continue to monitor the COVID-19 situation closely. The extent of the impact of the COVID-19 pandemic on our business, operations and clinical development timelines and plans remains uncertain, and will depend on certain developments, including its impact on our clinical trial enrollment, trial sites, manufacturers, CROs and other third parties with whom we do business, as well as its impact on regulatory authorities and our key scientific and management personnel. The ultimate impact of the COVID-19 pandemic, including the impact of new variants of the virus that causes COVID-19, or a similar health epidemic is highly uncertain and subject to change. To the extent possible, we are conducting business as usual, with necessary or advisable modifications to employee travel and most of our non-lab-based employees working remotely. We will continue to actively monitor the evolving situation related to COVID-19 and may take further actions that alter our operations, including those that may be required by federal, state or local authorities, or that we determine are in the best interests of our employees and other third parties with whom we do business. At this point, the extent to which the COVID-19 pandemic may affect our business, operations and development timelines and plans, including the resulting impact on our expenditures and capital needs, remains uncertain and is subject to change.

Financial operations overview

Our combined financial statements include the accounts of HilleVax (formerly MokshaCo, Inc. and also the receiving entity), North Bridge V, Inc. (North Bridge V) and YamadaCo III, Inc. (YamadaCo III), prior to being merged into a single entity effective February 8, 2021. HilleVax, North Bridge V and YamadaCo III were entities under common control of Frazier Life Sciences X, L.P. or its affiliates (Frazier), as a result of, among other things, Frazier's: (i) ownership of a majority of the outstanding capital stock of each of the combined companies; (ii) financing of each of the combined companies; (iii) control of board of directors of each of the combined companies; and (iv) management of each of the combined companies. All of the combined companies were formed for the purpose of identifying potential assets around which to form an operating company. As the merged entities were under common control, the combined financial statements report the financial position, results of operations and cash flows of the combined companies for all periods presented. All intercompany transactions have been eliminated in combination.

License agreement with Takeda

On July 2, 2021, we and Takeda Vaccines, Inc. (Takeda), a subsidiary of Takeda Pharmaceutical Company Limited, entered into a license agreement (the Takeda License), pursuant to which we exclusively in-licensed

certain intellectual property rights to commercialize HIL-214 products worldwide (excluding Japan) (the Territory). We will be responsible, at our cost, for the development, manufacture and commercialization of HIL-214 products. We are obligated to use commercially reasonable efforts to develop and commercialize HIL-214 products in the Territory, and to seek regulatory approval for such products throughout the world.

We paid Takeda upfront consideration consisting of 500,000 shares of our common stock and a warrant to purchase 3,500,000 shares of our common stock (the Takeda Warrant). We further agreed that, in the event that Takeda's fully-diluted ownership, including the Takeda Warrant, represents less than a certain specified percentage of our fully-diluted capitalization, including shares issuable upon conversion of outstanding convertible promissory notes, calculated immediately prior to the closing of this offering, we will issue an additional warrant to purchase shares of common stock such that Takeda would hold a certain specified percentage of the fully-diluted capitalization immediately before the closing of this offering. We also paid Takeda $2.5 million in cash upon the consummation of our convertible note financing in August 2021 and are obligated to pay an additional cash payment of $2.5 million upon release of certain drug product and completion of certain regulatory activities. We are required to make to Takeda a one-time payment of $7.5 million upon achievement of a specified development milestone and one-time commercial milestone payments of up to $150.0 million in the aggregate if certain annual sales targets for HIL-214 products are met in the Territory. We agreed to pay Takeda tiered high-single digit to low-teen percentage royalties on net sales of HIL-214 products in the Territory, subject to specified offsets and reductions, and Takeda agreed to pay us tiered mid-single digit to low-double digit percentage royalties on net sales of HIL-214 products in Japan, subject to specified offsets and reductions. Royalties will be payable, on a product-by-product and country-by-country basis beginning on the first commercial sale of such product in such country, until the later of (i) the expiration of the licensed patents covering the applicable product, (ii) the expiration of regulatory exclusivity in such country, or (iii) 20 years following the first commercial sale of such product in such country. For additional information regarding the Takeda License, including termination provisions, see "Business—Intellectual property—License agreement with Takeda."

Components of results of operations

Operating expenses

Research and development

We did not incur any research and development expenses through December 31, 2020. Since December 31, 2020, our research and development expenses have been related to the development of HIL-214. Research and development expenses are recognized as incurred, and payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods or services are received.

Research and development expenses include:

- salaries, payroll taxes, employee benefits, and stock-based compensation charges for those individuals involved in research and development efforts;
- external research and development expenses incurred under agreements with CROs and consultants to conduct and support our planned clinical trials of HIL-214; and
- costs related to manufacturing HIL-214 for our planned clinical trials.

We plan to substantially increase our research and development expenses for the foreseeable future as we continue the development of HIL-214. We cannot determine with certainty the timing of initiation, the duration or the completion costs of current or future preclinical studies and clinical trials of HIL-214 or any future

vaccine candidates due to the inherently unpredictable nature of clinical and preclinical development. Clinical and preclinical development timelines, the probability of success and development costs can differ materially from expectations. In addition, we cannot forecast whether HIL-214 or any future vaccine candidates may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

Our future development costs may vary significantly based on factors such as:

- the number of trials required for approval;
- the number of sites included in the trials;
- the countries in which the trials are conducted;
- the length of time required to enroll eligible subjects;
- the number of subjects that participate in the trials;
- the number of doses evaluated in the trials;
- the costs and timing of manufacturing HIL-214 and placebo for use in our trials;
- the drop-out or discontinuation rates of clinical trial subjects;
- potential additional safety monitoring requested by regulatory agencies;
- the duration of subject participation in the trials and follow-up;
- the phase of development of the vaccine candidate;
- the impact of any interruptions to our operations or to those of the third parties with whom we work due to the ongoing COVID-19 pandemic; and
- the safety, purity, potency, immunogenicity and efficacy of the vaccine candidate.

General and administrative

General and administrative expenses consist of salaries and employee-related costs for personnel in executive, finance and other administrative functions, legal fees relating to intellectual property and corporate matters, and professional fees for accounting, auditing and consulting services. We anticipate that our general and administrative expenses will increase substantially in the future to support our research and development activities, pre-commercial preparation activities for HIL-214 and, if any vaccine candidate receives marketing approval, commercialization activities. We also anticipate increased expenses related to audit, legal, regulatory, and tax-related services associated with maintaining compliance with exchange listing and SEC requirements, director and officer insurance premiums, and investor relations costs associated with operating as a public company.

Interest expense

Interest expense consists of interest on our outstanding convertible promissory notes.

Change in fair value of convertible promissory notes

We issued convertible promissory notes in 2019 and 2020 for which we have elected the fair value option. We adjust the carrying value of our convertible promissory notes to their estimated fair value at each reporting

date, with any change in fair value of the convertible promissory notes recorded as an increase or decrease to change in fair value of convertible promissory notes in our combined statements of operations. All outstanding convertible promissory notes and related accrued interest will convert into shares of our common stock upon the closing of this offering.

The fair value of our convertible promissory notes was estimated using a scenario-based analysis that estimated the fair value of the convertible promissory notes based on the probability-weighted present value of expected future investment returns, considering possible outcomes available to the noteholders, including conversions in subsequent equity financings, settlement by exchange for new convertible promissory notes and dissolution.

Results of operations

Comparison of the period from January 8, 2019 (inception) to December 31, 2019 and the Year Ended December 31, 2020

The following table summarizes our results of operations for the periods indicated (in thousands):

	Period from January 8, 2019 (inception) to December 31, 2019	Year Ended December 31, 2020	Change
Operating expenses:			
General and administrative	$ 633	$ 1,295	$ 662
Total operating expenses	633	1,295	662
Loss from operations	(633)	(1,295)	(662)
Other income (expense):			
Interest expense	(9)	(29)	(20)
Change in fair value of convertible promissory notes	(31)	(779)	(748)
Total other income (expense)	(40)	(808)	(768)
Net loss	$ (673)	$ (2,103)	$ (1,430)

General and Administrative Expenses. General and administrative expenses were $0.6 million and $1.3 million for the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, respectively. The increase of $0.7 million was primarily due to increases in personnel-related expenses.

Other Income (Expense). Other expense of $40,000 for the period from January 1, 2019 (inception) to December 31, 2019 consisted of $9,000 of interest expense on our outstanding convertible promissory notes and $31,000 of other expense related to the increase in fair value of such convertible promissory notes. Other expense of $0.8 million for the year ended December 31, 2020 consisted of $0.8 million of other expense related to the increase in the fair value of our convertible promissory notes and $29,000 of interest expense on our outstanding convertible promissory notes.

Unaudited pro forma net loss per share

The unaudited pro forma basic and diluted net loss per share reflects (i) the automatic conversion of all outstanding convertible promissory notes and related accrued interest into shares of common stock (assuming an IPO price of $ per share, which is the midpoint of the price range set forth on the cover

page of this prospectus and assuming the conversion occurs on 2021, the expected closing date of this offering), and (ii) the reclassification of the Takeda Warrant to stockholders' equity (deficit), each as of the beginning of the period presented or the issuance date, if later.

The unaudited pro forma basic and diluted net loss per share amounts do not give effect to the issuance of common stock issued in this offering nor do they give effect to potential dilutive securities where the impact would be anti-dilutive.

The following table summarizes our unaudited pro forma net loss per share (in thousands, except share and per share data):

	Year Ended December 31, 2020	Nine Months Ended September 30, 2021
Numerator		
Net loss	$ (2,103)	$
Interest expense on convertible promissory notes	29	
Change in fair value of Takeda Warrant	—	
Change in fair value of convertible promissory notes	779	
Pro forma net loss	$ (1,295)	$
Denominator		
Weighted-average shares of common stock outstanding, basic and diluted	2,598,266	
Pro forma adjustments to reflect assumed weighted-average effect of conversion of convertible promissory notes		
Pro forma weighted-average shares of common stock outstanding, basic and diluted		
Pro forma net loss per share, basic and diluted	$	$

Liquidity and capital resources

We have incurred net losses and negative cash flows from operations since our inception and anticipate we will continue to incur net losses for the foreseeable future as we continue the development and potential commercialization of HIL-214. We have funded our operations to date through the issuance of convertible promissory notes. As of December 31, 2020, we had cash of $0.5 million. Subsequent to December 31, 2020, we raised aggregate gross proceeds of $135.0 million from the issuance of convertible promissory notes.

Convertible note financings

From inception to July 2021, we issued an aggregate of $8.5 million of convertible promissory notes to Frazier (the Frazier Notes), bearing interest at per annum rates ranging from 0.12% to 2.52%. In August 2021, these notes and related accrued interest were exchanged for the August 2021 Notes described below.

On August 31, 2021, we entered into a note purchase agreement under which we issued $139.5 million of unsecured convertible promissory notes (the August 2021 Notes). Of the August 2021 Notes, $103.8 million were issued to new investors, $25.0 million were issued to Frazier for cash and $10.7 million were issued to Frazier in exchange for the then outstanding principal and accrued interest on the Frazier Notes. The August 2021 Notes

bear interest at a rate of 6% per annum, compounded annually. The August 2021 Notes become payable upon demand of the holders of at least a majority of the outstanding principal, including Frazier (the Requisite Holders), on August 31, 2022 (the Maturity Date), and become due and payable on August 31, 2024, subject to earlier conversion or repayment in the event we complete certain equity financings or a change of control. The August 2021 Notes will automatically convert into shares of our common stock immediately prior to the completion of this offering.

Funding requirements

Based on our current operating plan, we believe that our existing cash, together with the estimated net proceeds from this offering, will be sufficient to meet our anticipated cash requirements through at least the next months. In particular, we expect the net proceeds from this offering will allow us to complete . However, our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties, and actual results could vary materially. We have based this estimate on assumptions that may prove to be wrong, and we could deplete our capital resources sooner than we expect. Additionally, the process of testing vaccine candidates in clinical trials is costly, and the timing of progress and expenses in these trials is uncertain.

Our future capital requirements will depend on many factors, including:

- the initiation, type, number, scope, results, costs and timing of, our planned clinical trials of HIL-214 and preclinical studies or clinical trials of other potential vaccine candidates we may choose to pursue in the future, including any modifications to clinical development plans based on feedback that we may receive from regulatory authorities;
- the costs and timing of manufacturing for HIL-214 and placebo to be used in our planned clinical trials, as well as commercial scale manufacturing, if any vaccine candidate is approved;
- the costs, timing and outcome of regulatory meetings and reviews of HIL-214 or any future vaccine candidates;
- any delays and cost increases that may result from the COVID-19 pandemic;
- the costs of obtaining, maintaining and enforcing our patents and other intellectual property rights;
- our efforts to enhance operational systems and hire additional personnel to satisfy our obligations as a public company, including enhanced internal controls over financial reporting;
- the costs associated with hiring additional personnel and consultants as our business grows, including additional officers and clinical development and commercial personnel;
- the terms and timing of establishing and maintaining collaborations, licenses and other similar arrangements;
- the timing and amount of the milestone, royalty or other payments we must make to Takeda and any future licensors;
- the costs and timing of establishing or securing sales and marketing capabilities if HIL-214 or future vaccine candidates are approved;
- our ability to receive recommendations from the ACIP or other foreign NITAGs, and achieve sufficient market acceptance, coverage and adequate reimbursement from third-party payors and adequate market share and revenue for any approved products;

- vaccine recipients' willingness to pay out-of-pocket for any approved products in the absence of coverage and/or adequate reimbursement from third-party payors; and
- costs associated with any products or technologies that we may in-license or acquire.

Until such time, if ever, as we can generate substantial product revenues to support our cost structure, we expect to finance our cash needs through equity offerings, debt financings, or other capital sources, including potential collaborations, licenses and other similar arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Debt financing and equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise funds through collaborations, or other similar arrangements with third parties, we may have to relinquish valuable rights to our technologies, intellectual property, future revenue streams, research programs or vaccine candidates or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our vaccine candidates even if we would otherwise prefer to develop and market such vaccine candidates ourselves. We have prepared cash flow forecasts which indicate that based on our expected operating losses, negative cash flows and maturities of outstanding convertible promissory notes, there is substantial doubt about our ability to continue as a going concern without raising additional capital within 12 months after the date that the combined financial statements for the year ended December 31, 2020 are issued. Our independent registered public accounting firm also included an explanatory paragraph in its report on our combined financial statements as of and for the year ended December 31, 2020 indicating that there is substantial doubt about our ability to continue as a going concern.

Cash flows

The following table sets forth a summary of the net cash flow activity for each of the periods indicated (in thousands):

	Period from January 8, 2019 (inception) to December 31, 2019	Year Ended December 31, 2020
Net cash provided by (used in):		
Operating activities	$ (474)	$ (1,272)
Financing activities	877	1,326
Net increase in cash	$ 403	$ 54

Operating activities

Net cash used in operating activities was approximately $0.5 million for the period from January 8, 2019 (inception) to December 31, 2019 and $1.3 million for the year ended December 31, 2020. The net cash used in operating activities for the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020 was primarily due to our net loss in each period, adjusted for net changes in operating assets and liabilities and noncash charges related to our outstanding convertible promissory notes.

Financing activities

Net cash provided by financing activities for the period from January 8, 2019 (inception) to December 31, 2019 and for the year ended December 31, 2020 was primarily due to proceeds from our issuance of convertible promissory notes.

Contractual obligations and commitments

The following table summarizes our contractual obligations as of December 31, 2020 (in thousands):

		Payments Due by Period			
	Total	Less than 1 Year	1—3 Years	3—5 Years	More than 5 Years
Convertible promissory notes(1)(2)	$2,214	$ 2,214	$ —	$ —	$ —
Total	$2,214	$ 2,214	$ —	$ —	$ —

(1) As of December 31, 2020, our outstanding convertible promissory notes were scheduled to mature at various dates through October 2021. The amounts exclude interest since such amounts are not material.

(2) The table above excludes the issuance of $6.3 million of convertible promissory notes issued between April and July 2021 and the subsequent conversion of all then outstanding convertible promissory notes into the August 2021 Notes described above. The current outstanding principal balance of the August 2021 Notes is $139.5 million.

Under the Takeda License, we have milestone payment obligations that are contingent upon the achievement of certain development milestones and specified levels of product sales and are required to make certain royalty payments in connection with the sale of products developed under the agreement. We are currently unable to estimate the timing or likelihood of achieving the milestones or making future product sales and, therefore, any related payments are not included in the table above.

We enter into contracts in the normal course of business for contract research services, contract manufacturing services, professional services and other services and products for operating purposes. These contracts generally provide for termination after a notice period, and, therefore, are cancelable contracts and not included in the table above.

Critical accounting policies and significant judgments and estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our combined financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States (GAAP). The preparation of our combined financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities and expenses and the disclosure of contingent assets and liabilities in our combined financial statements and accompanying notes. We evaluate these estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in Note 1 to our combined financial statements included elsewhere in this prospectus, we believe that the following accounting policies are the most critical for fully understanding and evaluating our financial condition and results of operations.

Fair value of convertible promissory notes

As described above, our convertible promissory notes are revalued at each reporting period with changes in the fair value of the liabilities recorded as a component of other income (expense) in the combined statements of operations. There are significant judgments and estimates inherent in the determination of the fair value of these liabilities. If we

had made different assumptions including, among others, those related to the timing and probability of various corporate scenarios, discount rates, volatilities and exit valuations, the carrying values of our convertible promissory notes, and our net loss and net loss per common share could have been significantly different.

JOBS act and smaller reporting company

As an emerging growth company under the Jumpstart Our Business Startups Act of 2012 (the JOBS Act), we can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. We intend to rely on other exemptions provided by the JOBS Act, including without limitation, not being required to comply with the auditor attestation requirements of Section 404(b) of Sarbanes-Oxley. As a result, our combined financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year following the fifth anniversary of the consummation of this offering, (ii) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (iii) the last day of the fiscal year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year, or (iv) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

We are also a smaller reporting company as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than $100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

Recent accounting pronouncements

See Note 1 to our combined financial statements appearing elsewhere in this prospectus for recent accounting pronouncements.

Off-balance sheet arrangements

During the periods presented we did not have, nor do we currently have, any off-balance sheet arrangements as defined under SEC rules.

Quantitative and qualitative disclosures about market risk

Interest rate risk

Our cash consists of cash in readily available checking accounts. As a result, the fair value of our portfolio is relatively insensitive to interest rate changes. Our outstanding convertible promissory notes bear interest at a fixed rate and therefore have no exposure to changes in interest rates.

Effects of inflation

Inflation generally affects us by increasing our cost of labor and research and development contract costs. We do not believe inflation has had a material effect on our results of operations during the periods presented.

Business

Our founders and inspirations

We are founded on the legacies of leading vaccine developers who inspire us to build a company to benefit human health on a global scale. Our late co-founder, Dr. Tadataka “Tachi” Yamada, championed vaccines as a powerful means to address health inequities and equalize opportunity for people around the world. As the former Chief Medical and Scientific Officer at Takeda Pharmaceutical Company Limited (Takeda Pharmaceuticals), Tachi helped establish Takeda Pharmaceuticals’ vaccine pipeline, which included the most advanced norovirus vaccine candidate in clinical development. Through his most recent role as a venture partner at Frazier Healthcare Partners (Frazier), he helped Frazier and Takeda Pharmaceuticals launch their third collaboration, HilleVax, to continue the development of this novel norovirus vaccine candidate, HIL-214 (formerly TAK-214). At HilleVax, we aim to continue Tachi’s mission of improving global health with a sense of urgency by always putting patients first.

Our work, and company name itself, is also inspired by Dr. Maurice Hilleman. Dr. Hilleman is considered by many to be the father of modern vaccines. He developed many of the vaccines that are routinely recommended for children today. By the end of his career, Dr. Hilleman had played a key role in developing more than forty vaccines, including those for the flu, chickenpox, hepatitis A, hepatitis B, pneumococcus, meningococcus, measles, mumps, rubella, and other diseases. These vaccines are estimated to save millions of lives every year. We are honored that his daughter, Jeri Hilleman, serves on our Board of Directors.

We aim to have a global impact on human health and believe the best way to achieve this goal is by developing novel vaccines for severe and life-threatening diseases. HIL-214 is our foundational vaccine candidate from which we are building our company. We are honored to continue Dr. Yamada’s and Dr. Hilleman’s legacies through the further development of HIL-214 and other potential vaccine candidates.

Overview

We are a clinical-stage biopharmaceutical company focused on developing and commercializing novel vaccines. Our initial program, HIL-214, is a virus-like particle (VLP) based vaccine candidate for the prevention of moderate-to-severe acute gastroenteritis (AGE) caused by norovirus infection. It is estimated that norovirus causes nearly 700 million cases of illness and more than 200,000 deaths worldwide per year, as well as significant additional economic and social burden. To date, HIL-214 has been studied in nine clinical trials, which collectively generated safety and immunogenicity data from more than 4,500 and 2,200 subjects, respectively, including both safety and immunogenicity data from more than 800 pediatric subjects. A randomized, placebo-controlled Phase 2b field efficacy trial enrolled 4,712 adult subjects, and HIL-214 was well tolerated and demonstrated clinical proof of concept in preventing moderate-to-severe cases of AGE from norovirus infection. We plan to initiate a Phase 2b clinical trial in to evaluate the safety, immunogenicity, and efficacy of HIL-214 in infants. We expect to report safety and immunogenicity data from this trial for the first 200 subjects in and top-line data in . We believe HIL-214 has the potential to be the first ever vaccine approved for norovirus-related illnesses and will help grow HilleVax into a leading global vaccines company.

Norovirus is the most common cause of viral AGE worldwide and is characterized by diarrhea, vomiting, abdominal pain, nausea, and, sometimes, fever that may, together, lead to clinically significant dehydration. The global cost of norovirus-caused AGE is estimated to be over $4 billion in direct health system costs and approximately $60 billion in societal costs per year. In the United States alone, norovirus-caused AGE is estimated to result in $2 billion in direct medical costs and $10 billion in societal costs per year. While norovirus can cause illness in any age group, the majority of deaths and illnesses due to norovirus are borne by young children and older adults. In children younger than four years of age, norovirus is estimated to cause 95,000

deaths and 450 million illnesses globally each year. Up to 80% of children will experience a norovirus infection within one year of birth, with the majority of cases occurring between six months and two years of age. Almost all children will experience at least one norovirus infection by the age of five. In the United States, this results in approximately 627,000 outpatient visits, 281,000 emergency room visits and 14,000 hospitalizations each year for children under the age of five. Older adults are also vulnerable to severe norovirus infection given their higher rate of comorbidities, especially if they live in settings conducive to outbreaks, such as assisted living facilities. For adults older than 55 years of age, norovirus is estimated to cause 78,000 deaths and 81 million illnesses globally each year. In the United States, older adults are estimated to account for 17% of illnesses due to norovirus yet comprise 52% of hospitalizations and 94% of deaths. There are currently no approved vaccines or antiviral therapies for either the prevention or treatment of norovirus-related illness.

In July 2021, Takeda Vaccines, Inc. (Takeda) granted us, among other things, an exclusive license (the Takeda License) under certain intellectual property to commercialize HIL-214 (formerly TAK-214) worldwide (excluding Japan) in exchange for upfront consideration as well as future cash milestones and royalties on net sales. Takeda will retain commercialization rights in Japan, and we will integrate certain Japan development activities into our global development plan. As of September 30, 2021, our intellectual property portfolio for HIL-214 includes six issued U.S. composition and formulation patents that are licensed to us under the Takeda License.

HIL-214 is a bivalent vaccine candidate consisting of VLPs representing two common genotypes of norovirus and is co-formulated with an aluminum hydroxide (alum) adjuvant, which is commonly used in adult and pediatric vaccines to enhance immunogenicity. Alum may also improve the stability of VLPs in solution. VLPs are self-assembling structures that mimic the unique and repetitive geometric features that characterize the surface of a live virus. VLPs can be produced in a wide range of expression systems and can be readily manufactured at large scale. Importantly, VLPs lack a viral genome and can therefore neither replicate nor cause infection, which may present an important safety advantage over live vaccines. The genotypes represented by the two VLPs in HIL-214 are from the GI and GII genogroups of norovirus, which are responsible for the majority of human norovirus infection. VLP-based vaccines are well-characterized and include currently marketed vaccines, such as Gardasil, Cervarix, and Sci-B-Vac, and have been administered to millions of patients worldwide.

HIL-214 has been extensively evaluated in nine Phase 1 and 2 clinical trials. Safety data generated across more than 4,500 subjects in these trials showed that HIL-214 was well tolerated across all age groups and had an adverse event profile similar to that of other approved alum-adjuvanted vaccines. In addition, immunogenicity data has been collected in over 2,200 subjects. HIL-214 was found to induce antibody responses greater than eight-fold above baseline at least 28 days post vaccination against norovirus in all age groups. An extensive set of clinical dose finding and formulation studies were conducted to evaluate the immune response across age groups and between the two VLPs contained in HIL-214. In a clinical trial of military recruits, in which 4,712 subjects were administered HIL-214 or placebo, HIL-214 demonstrated an estimated 80% efficacy in preventing AGE caused by norovirus strains represented in our vaccine candidate and 62% efficacy for AGE caused by any norovirus strain (including those not represented in HIL-214) in the first 45 days post vaccination. We believe this trial demonstrated clinical proof of concept and protection against strains not included in the vaccine (i.e., heterotypic or cross-protection).

Our near-term clinical development plan is focused on infants, a population in which norovirus is routinely circulating and infections are common. We plan to initiate a Phase 2b clinical trial in to evaluate the safety, immunogenicity, and efficacy of HIL-214 in infants. We expect to report a safety and immunogenicity analysis from this trial for the first 200 subjects in and top-line data in . After conclusion of the Phase 2b trial in infants, we plan to proceed to a pivotal Phase 3 efficacy trial in infants. We believe that successful completion of these Phase 2b and Phase 3 trials, together with existing clinical data and additional co-administration trials with other common pediatric vaccines and lot-to-lot consistency trials, will support

regulatory submissions for marketing approval in the United States, Europe, Japan, and other key markets. We also expect these data to be evaluated by the Advisory Committee on Immunization Practices (ACIP), an advisory body of the Centers for Disease Control and Prevention (CDC) which develops vaccine recommendations for children and adults in the United States. New pediatric vaccines that receive a preferred recommendation from ACIP are nearly universally adopted in the United States, with many reaching national immunization rates of over 90%. In addition, depending upon the results from our Phase 2b trial in infants, we also plan to initiate a series of trials to support the potential approval of HIL-214 for older children, adults, and older adults.

The global vaccine market is estimated to be over $50 billion in 2020 and is expected to exceed $100 billion by 2027. While there are currently no approved vaccines for the prevention of norovirus-related illness, we believe there are market analogues that we can use to estimate the size of the commercial opportunity for HIL-214. In the pediatric market, we believe that rotavirus vaccines are the closest analogue to HIL-214. Rotavirus was the leading cause of pediatric viral AGE before the introduction of the rotavirus vaccines, Rotarix and RotaTeq. These vaccines, approved only in infants, are now widely adopted worldwide, with many countries achieving vaccination rates above 80% among one-year-olds. Rotavirus vaccines generated approximately $1.6 billion in global sales in 2020. In the older adult market, we believe that Shingrix, a vaccine developed by GlaxoSmithKline to prevent shingles, is an analogue for HIL-214. Shingrix generated $2.7 billion in sales in 2020. Furthermore, we believe that there is a commercial opportunity in other groups at high risk for norovirus infection, such as healthcare workers, immunocompromised individuals, military personnel, food handlers, and travelers, including cruise ship passengers.

Our company was founded by Frazier and Takeda Pharmaceuticals with the goal of developing and commercializing the first vaccine for norovirus-related illnesses. Our late co-founder, Tachi Yamada, M.D., was the former Chief Medical and Scientific Officer at Takeda Pharmaceuticals. Since our founding, we have assembled a distinguished group of executives, directors, and advisors with extensive experience in vaccine development, clinical trial operations, manufacturing, and commercialization, including prior experience developing HIL-214 at Takeda Pharmaceuticals. Our President, Chief Executive Officer, and Chairman, Rob Hershberg, M.D., Ph.D., was previously Executive Vice President and Chief Scientific Officer of Celgene and was subsequently Executive Vice President and Head of Business Development & Global Alliances and served as a member of the Executive Committee until the acquisition of Celgene by Bristol-Myers Squibb in 2019. David Socks, our Chief Financial Officer and Chief Business Officer, co-founded Arcutis, Cadence Pharmaceuticals, Incline Therapeutics, Passage Bio, and Phathom Pharmaceuticals, where he was the Chief Executive Officer through the company's initial public offering in 2019 and later served as interim Chief Financial Officer. Aditya Kohli, Ph.D., our Chief Operating Officer, co-founded Scout Bio, Passage Bio, and Phathom Pharmaceuticals and currently serves as the Chief Business Officer at Phathom and on the board of Scout Bio. Astrid Borkowski, M.D., Ph.D., our Chief Medical Officer, is the former VP, Head of Clinical Development at Takeda Pharmaceuticals' Vaccine Business Unit where she oversaw the clinical development of all vaccine assets, including HIL-214. Paul Bavier, our General Counsel, Secretary, and Chief Administrative Officer, is the former General Counsel at VelosBio, Avedro and Biodel.

Since our inception, we have raised over $135 million in capital from leading investors, including Frazier Healthcare Partners, RA Capital Management, Deerfield Management Company, Abingworth, Lightspeed Venture Partners, Perceptive Advisors, Franklin Templeton, Catalys Pacific, Samsara BioCapital, BVF Partners LP, Qiming Venture Partners USA, Greenspring Associates, Richard King Mellon Foundation, and Sahsen Ventures.

Our strategy

Our goal is to be a leader in the development and commercialization of novel vaccines. Our strategy is initially focused on the development and commercialization of HIL-214 as the first potential vaccine for the prevention of AGE caused by norovirus infection. Key elements of this strategy include:

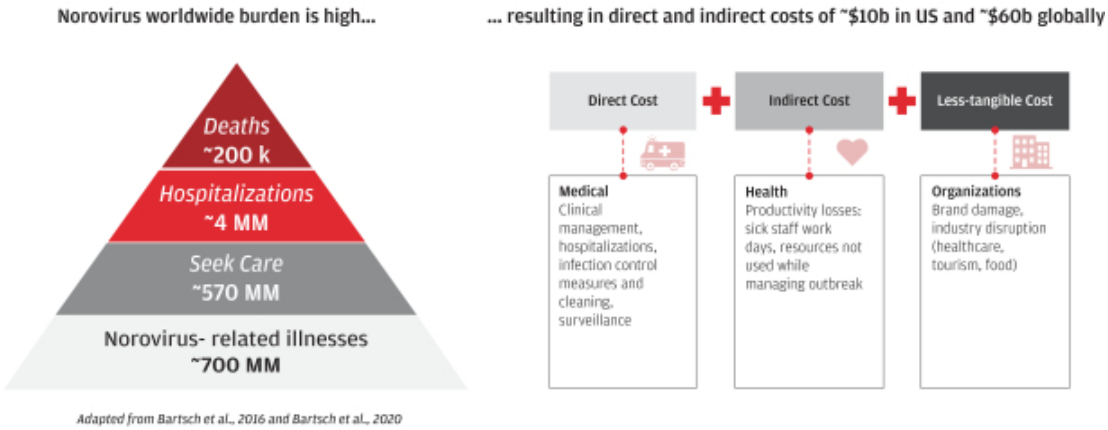
- **Advance the clinical development of HIL-214 for the prevention of norovirus-caused AGE in infants.** We are leveraging the extensive clinical data as well as our management team's vaccine development experience to advance HIL-214 through Phase 2b and 3 clinical trials in infants. We believe that initial development of HIL-214 in infants will de-risk its advancement given the endemic nature of disease in this population, which allows for rapid case accrual, and the lack of pre-existing immunity to norovirus, which may enhance the ability to show the effect of a vaccine. We plan to initiate a Phase 2b clinical trial in to evaluate the safety, immunogenicity, and efficacy of HIL-214 in infants. We expect to report interim safety and immunogenicity data from this trial for the first 200 subjects in and top-line data in . Pending the successful completion of the planned Phase 2b trial in infants, we plan to proceed to a pivotal Phase 3 efficacy trial in infants.
- **Expand the development of HIL-214 to older populations and other high-risk groups.** Given the vulnerability of older adults to norovirus infection, we plan to expand the development of HIL-214 to adults older than 60 years of age. We also plan to expand the development of HIL-214 to older children and adults to cover other high-risk populations such as healthcare workers, immunocompromised individuals, military personnel, food handlers, and travelers, including cruise ship passengers.
- **Commercialize HIL-214 in the United States.** We plan to independently commercialize HIL-214, if approved, in the United States by building a highly-targeted sales force to support the adoption of HIL-214. We also plan to seek a preferred recommendation from ACIP to facilitate the broad uptake of HIL-214.
- **Seek commercial partnerships to maximize the HIL-214 opportunity outside of the United States.** We believe there is a significant global commercial opportunity for HIL-214. To address geographies outside of the United States, we plan to seek one or more partners with existing commercial infrastructure and expertise in these markets.
- **Pursue expansion strategies for HIL-214.** We plan to support alternative formulations or combinations where there is clear unmet need, clinical rationale, and commercial justification. We also plan to further expand the breadth of coverage for our norovirus vaccine through the addition of new norovirus strains to cover relevant or emerging genotypes as needed.
- **In-license or acquire additional products or technology platforms relevant to the prevention of other infectious diseases.** We intend to take advantage of our management team's vaccine expertise and extensive business development experience to opportunistically in-license or acquire additional innovative vaccines or technology platforms.

Overview of norovirus

Overview

Norovirus is the most common cause of viral AGE. AGE is characterized by acute-onset vomiting and diarrhea, typically lasting between one and three days, that may be accompanied by abdominal cramps, nausea, and fever. Most infections result in a full recovery, although severe outcomes such as hospitalization and death are more common among young children and older adults. Given that there are no antiviral therapies available to treat norovirus infections, clinical management is focused on supportive care to prevent dehydration and manage symptoms.

The burden of norovirus falls disproportionately on young children and older adults. Incidence of norovirus is highest among young children, with 70% of cases in children under four years of age occurring between six months and two years of age. As a result, almost all children will have experienced at least one norovirus infection by the age of five. While incidence is lower among older adults, norovirus illnesses are more likely to result in lingering symptoms, hospitalization, and death in this population. Older adults are also more likely to be found in high risk settings for norovirus outbreaks, such as long-term care facilities and hospitals. Other high-risk groups for norovirus infection include healthcare workers, immuno-compromised individuals, military personnel, food handlers, and travelers, including cruise ship passengers. Globally, norovirus is estimated to result in over approximately 700 million cases of AGE and 200,000 deaths per year, resulting in over $4 billion in direct health system costs and $60 billion in societal costs per year. In the United States alone, norovirus is estimated to result in over 20 million cases of AGE, resulting in over $2 billion in direct medical costs, and $10 billion in indirect societal costs, per year. In addition, outbreaks of norovirus at restaurant chains, cruise ships, and in other industries have caused significant industry disruptions and reputational damage to the affected brands.

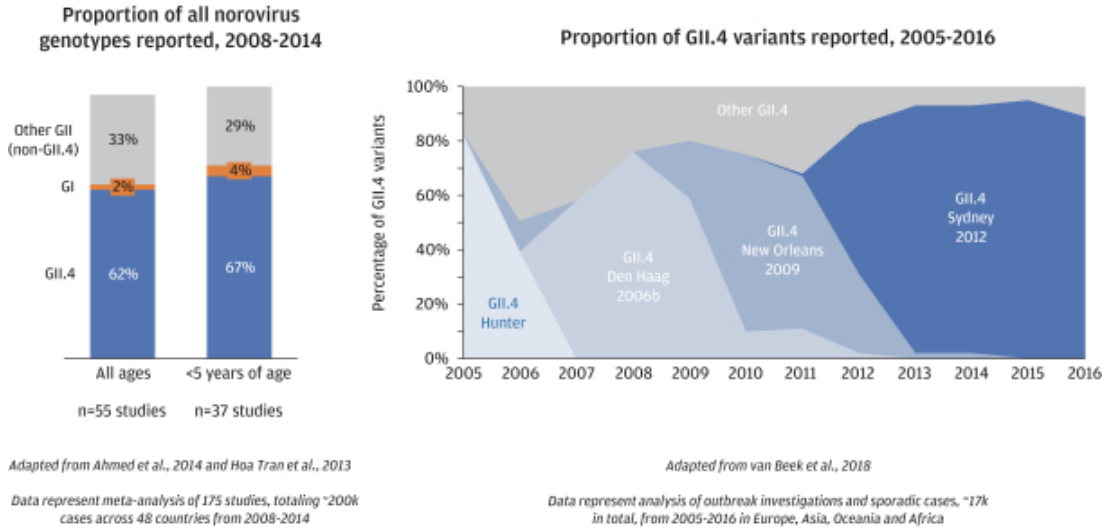


Adapted from Bartsch et al., 2016 and Bartsch et al., 2020

Genogroups and genotypes

Noroviruses are a group of small, non-enveloped viruses belonging to the *Caliciviridae* family. Noroviruses contain a single-stranded positive-sense RNA genome that codes for seven nonstructural and two structural proteins. The first structural protein, VP1, encodes the major capsid protein. VP1 is further subdivided into the N-terminal, shell, and protruding domains. The protruding domain of VP1 is present on the surface of viral particles and is necessary for binding to histo-blood group antigens (HBGAs) on epithelial cells in the human gastrointestinal tract.

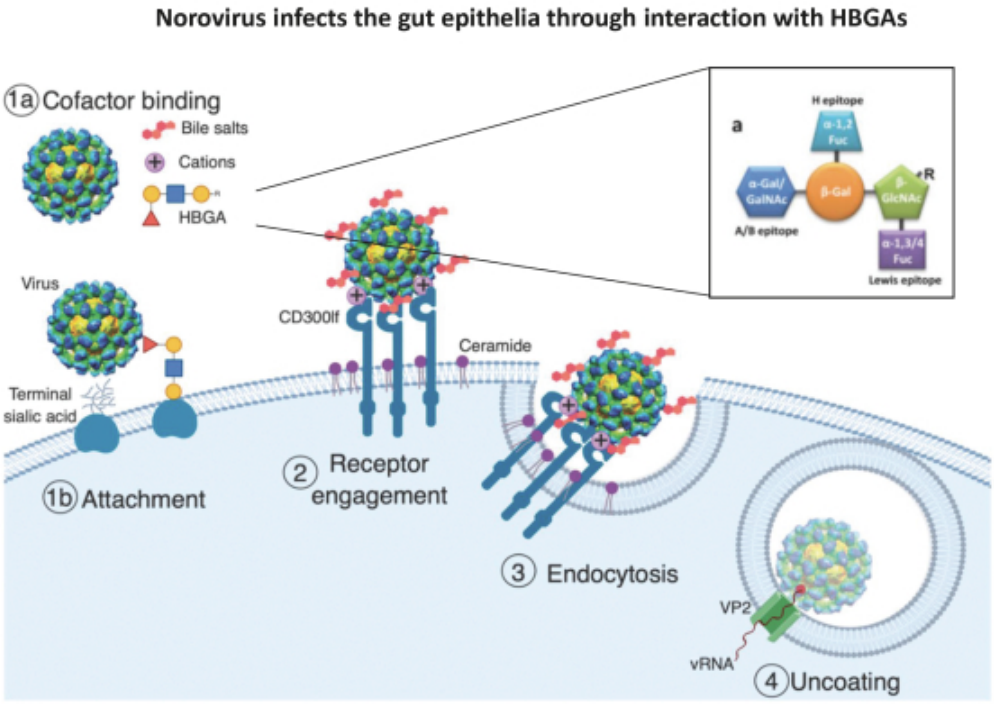
Noroviruses are classified into ten genetic groups called genogroups. These genogroups, GI through GX, are based on amino acid diversity in the major capsid protein VP1. Genogroups GI and GII are responsible for the majority of human infections, with GII accounting for an estimated 96% of global prevalence. Norovirus genogroups are further subdivided into at least 48 genotypes: 9 genotypes in GI, 26 genotypes in GII, and 13 genotypes in GIII through GX. A single genotype, GII.4, is estimated to be responsible for nearly two-thirds of norovirus outbreaks in both developed and developing countries. GII.4 has been the dominant genotype in circulation for the last two decades, and of the GII.4 strains, GII.4 Sydney 2012 has been the predominant variant detected worldwide since 2012. In addition to causing the majority of norovirus infections, hospitalizations and deaths were more likely in outbreaks associated with GII.4 viruses.



Norovirus attachment and entry

Norovirus entry into host cells is a multi-step process. The first step is norovirus binding to attachment factors that concentrate the virus on the cell surface. The most well-characterized attachment factors are HBGAs. HBGAs are oligosaccharides found on the epithelia of the respiratory, genitourinary, and digestive tracts, as well as in body fluids such as blood and saliva. The interaction between norovirus and HBGAs is known to promote viral entry into host cells, and this interaction is supported by population genetics. Specifically, individuals with mutations in the *FUT2* gene, which is required for secretion of HBGAs into body fluids, are highly resistant to infection by GI.1 and most GII.4 norovirus strains. Approximately 20% of Caucasians lack a functional *FUT2* gene. Given the importance of HBGAs for norovirus attachment and cell entry, measurement of HBGA-blocking antibodies is the primary functional method used to assess the immunogenicity of norovirus vaccine candidates. We believe that data from our planned clinical trials of HIL-214 will help determine whether anti-HBGA antibodies are an appropriate surrogate for evaluating norovirus vaccine efficacy.

The next step for norovirus entry is receptor engagement. Receptors are essential host factors that bind to the norovirus particle and actively promote entry into the cell. The receptor(s) for human norovirus are currently unknown. The last steps for norovirus entry are endocytosis and uncoating, which results in release of the viral genome into the host cytoplasm. New norovirus particles are then produced and released via cell lysis, which results in inflammation of the stomach or intestines, the underlying pathology of AGE.



Clinical presentation and management

Clinical presentation of norovirus infections can range widely, from asymptomatic infections to life-threatening dehydration and diarrhea. Asymptomatic cases are estimated to account for 30% of norovirus infections. For a symptomatic case, the illness typically begins after an incubation period of 12 to 48 hours and is characterized by acute-onset vomiting and diarrhea that may be accompanied by abdominal cramps, nausea, and fever. Other symptoms, including muscle pain, malaise, headache, and chills, can also occur. The duration of clinical symptoms is typically 12 to 72 hours in otherwise healthy individuals. The most serious complication is severe dehydration leading to hypovolemic shock, which occurs when the body loses more than one-fifth of its fluid supply. Hypovolemic shock makes it difficult for the heart to pump sufficient blood to the body and can lead to organ failure, coma, and death. Severe outcomes of acute AGE as a result of norovirus infection, such as hospitalization and death, are more likely among young children, older adults, and immunocompromised patients.

There are currently no antiviral therapies available to treat norovirus infection. Clinical management is focused on supportive therapy to prevent dehydration. First line therapy is comprised of oral rehydration solutions, followed by intravenous rehydration for patients with profuse vomiting or worsening dehydration that could lead to hypovolemic shock. Medicines to relieve pain, nausea, or vomiting can also be used.

Transmission and prevention

Norovirus is highly transmissible, with as few as 18 viral particles needed to make a person sick. For context, a single gram of feces can contain up to 95 billion particles of norovirus. A systematic review of norovirus outbreak data in the United States from 2009-2017 reported a median R_0 (a measure of the average number of

people who will contract a viral disease from one infected person) of 2.75, but this number is likely to be a lower bound for norovirus globally given generally high sanitation rates and comparatively easy access to clean food and water in the United States compared to other nations with higher burden of norovirus infection. For context, seasonal strains of influenza in the United States tend to have R_0 values between 1 and 2.

There are three general modes of norovirus transmission: person-to-person, foodborne, and waterborne. Person-to-person transmission occurs mainly through the fecal-oral route and potentially through aerosolized vomitus. Viral shedding in stool can also occur before the onset of symptoms and continue up to eight weeks after a person has been infected, leading to secondary transmission rates of up to 30%. Person-to-person transmission can also occur indirectly through contaminated fomites, such as clothes and utensils, or through environmental surfaces. Foodborne transmission typically occurs by exposure to infected food handlers, although exposure to human waste further upstream in the food distribution system is also a possibility. For example, oysters filter ocean water through their bodies to get food and will absorb viral particulates when exposed to untreated human waste, which can make its way into ocean water in the case of leaky septic systems and/or dysfunctional waste-water treatment plants. Waterborne transmission can occur through the failure to properly chlorinate municipal water or through the contamination of well water with human waste. Norovirus outbreaks can occur throughout the year, although increased activity is observed in the winter months.

Preventing the spread of norovirus is challenging. The virus can persist on environmental surfaces such as utensils and countertops for up to two weeks. Norovirus can remain infectious on foods that are frozen and until heated above 140°F. Furthermore, alcohol-based hand sanitizers are not as effective at removing norovirus particles as washing hands with soap and water, and their use in place of hand washing is associated with a greater risk for norovirus outbreaks in long-term care facilities. This resistance to common disinfectants appears to be unique to norovirus, as there have not been similar reports of outbreaks associated with the use of hand sanitizers in lieu of handwashing for other common viruses. The CDC recommends four strategies to help prevent the transmission of norovirus: proper hand hygiene, safe food handling, isolation while sick, and surface decontamination. Hand hygiene with running water and soap is viewed as the most effective method to control norovirus transmission. Food and vegetables should be carefully washed before eating, and affected individuals should refrain from preparing food for others for up to two days after symptoms stop. Furthermore, kitchen surfaces and frequently touched objects should be sanitized using chlorine-based disinfectants such as bleach. In the event of an outbreak in a high transmission environment like a cruise ship, nursing home, daycare, or hospital ward, a full decontamination procedure must be performed in order minimize the risk of additional spread.

Burden in young children

Norovirus routinely circulates among young children, a mode of transmission categorized as endemic. Up to 80% of children will experience a norovirus infection within one year of birth, with the majority of cases occurring between six months and two years of age. Although norovirus can infect all age groups, the incidence of norovirus is highest among young children. The GII genogroup is the dominant source of infection in children, accounting for 96% of all sporadic infections, and the GII.4 genotype, in particular, accounts for 70% of detected genotypes. The consistent dominance of GII.4 in circulation over more than two decades, particularly among children, highlights the importance of vaccination efforts to be directed against this strain.

Most infections are completely resolved, resulting in a full recovery, although severe outcomes such as hospitalization and death are more common among young children when considering global burden. In both high- and middle-income countries with mature rotavirus vaccination programs, norovirus is now the most common cause of pediatric gastroenteritis requiring medical care. In the United States, norovirus is estimated to result in 627,000 outpatient visits, 281,000 emergency room visits, and 14,000 hospitalizations each year

for children under the age of five. Globally, norovirus is estimated to result in 450 million illnesses and 95,000 deaths annually for children under the age of four, resulting in a total societal cost of approximately $39 billion. In the United States alone, norovirus is estimated to result in 2.8 million illnesses annually in children under the age of four, resulting in a total societal cost of approximately $1.2 billion.

For comparison, norovirus today has a similar morbidity, mortality, and economic burden in children as rotavirus did before the introduction of rotavirus vaccines. Prior to rotavirus vaccines becoming available, rotavirus was estimated to result in 2.7 million illnesses each year in children under the age of five, resulting in a total societal cost of approximately $1.5 billion. Today, rotavirus vaccines are estimated to avert 280,000 outpatient visits, 62,000 emergency room visits, and 45,000 hospitalizations each year. When considering all age groups, the overall burden of norovirus is greater than that of rotavirus.

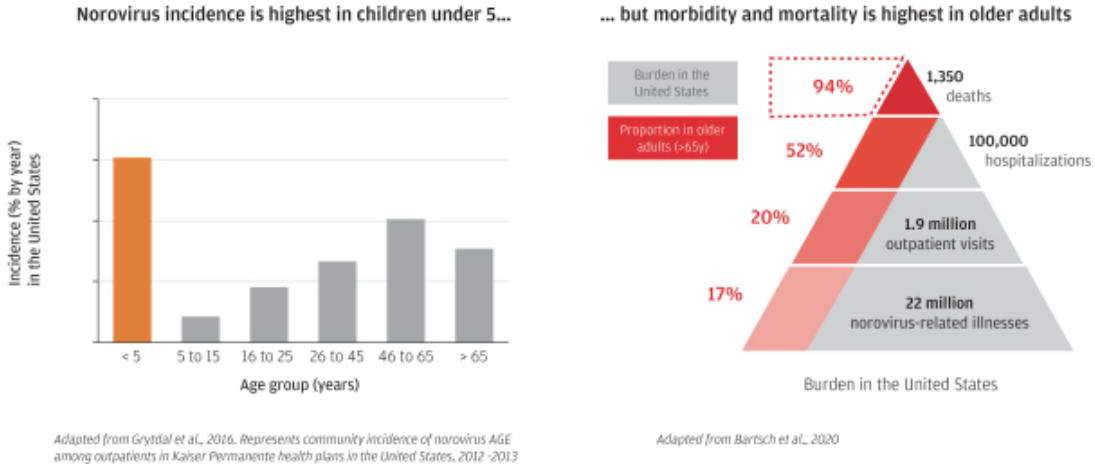
Norovirus burden in the US is similar to rotavirus burden before the introduction of vaccines

Disease	Age	US cases	US hospitalizations	US deaths	US economic burden (in 2020 dollars)
Norovirus	≤4 years	2.8 million	12,000	20	$1.2 billion
	5 - 64 years	15.7 million	34,000	70	$6.4 billion
	≥ 65 years	3.7 million	50,000	1,250	$3.2 billion
	All ages	22 million	96,000	1,350	$10 billion
Rotavirus (pre-vaccine)	≤ 5 years	2.7 million	70,000	60	$1.5 billion

Adapted from CDC and Bartsch et al., 2020

Burden in older adults

Adults older than 65 are another high-risk group for norovirus infections. In the United States, older adults are estimated to account for 17% of illnesses due to norovirus yet comprise 52% of hospitalizations and 94% of deaths. Symptoms are often more severe in this age group and include diarrhea lasting up to nine days and headache, thirst, and vertigo lasting up to 19 days. Older adults are also more likely to be found in certain settings vulnerable to norovirus outbreaks. Long-term care facilities (LTCFs) are the most commonly reported location for norovirus outbreaks, with an estimated 8 – 17% of LTCFs experiencing an outbreak each year. Hospitals are another common setting for norovirus outbreaks. After admittance to a hospital, older adults are more likely to acquire a norovirus infection than younger hospitalized patients. In the United States, norovirus is estimated to result in 3.7 million illnesses, 380,000 outpatient visits, 50,000 hospitalizations, and 1,250 deaths annually for adults over 65. Globally, norovirus is estimated to result in 81 million illnesses and 78,000 deaths annually for adults older than 55.



Adapted from Grytdal et al., 2016. Represents community incidence of norovirus AGE among outpatients in Kaiser Permanente health plans in the United States, 2012 -2013

Adapted from Bartsch et al., 2020

Burden in other high-risk groups

In addition to young children and older adults, there are other groups that are at high risk for norovirus infection. These include healthcare workers, immunocompromised individuals, military personnel, food handlers, and travelers, including cruise ship passengers. More than 100 outbreaks of norovirus have been described in military units since 1988, reducing operational effectiveness and staff availability for duties. Food handlers are another source of concern. Given the small amount of virus needed for infection, a single individual can be responsible for widespread virus transmission. For example, a norovirus outbreak in 2006 resulting in at least 350 gastroenteritis cases was linked to a single food handler. Another series of high-profile outbreaks occurred at Chipotle restaurants between 2015 and 2018, where 1,100 patrons fell ill after eating at various locations of the chain restaurant. This outbreak resulted in the largest fine in food safety in U.S. history. Travelers are another high-risk group, with more than 20% of travelers with diarrheal symptoms testing positive for norovirus. Cruise ships present a high risk of norovirus outbreaks due to their ideal conditions for transmission: common sources for food and drinks, a semi-closed environment, and older adult passengers that may be more vulnerable to infections and complications arising from gastroenteritis. Outbreaks on cruise ships can be quite severe with infection rates for passengers ranging from 19% to 74%. The CDC reported 84 outbreaks of norovirus on cruise ships between 2010 and 2019.

Our solution: HIL-214

HIL-214 is a bivalent vaccine candidate in development for the prevention of moderate-to-severe AGE caused by norovirus infection. HIL-214 consists of VLPs which are designed to mimic the structure of norovirus and are co-formulated with an alum adjuvant to enhance immunogenicity and stability of the VLPs in solution. HIL-214 is administered intramuscularly via prefilled syringes and has demonstrated stability at standard refrigeration temperatures of 4°C for months.

VLP technology

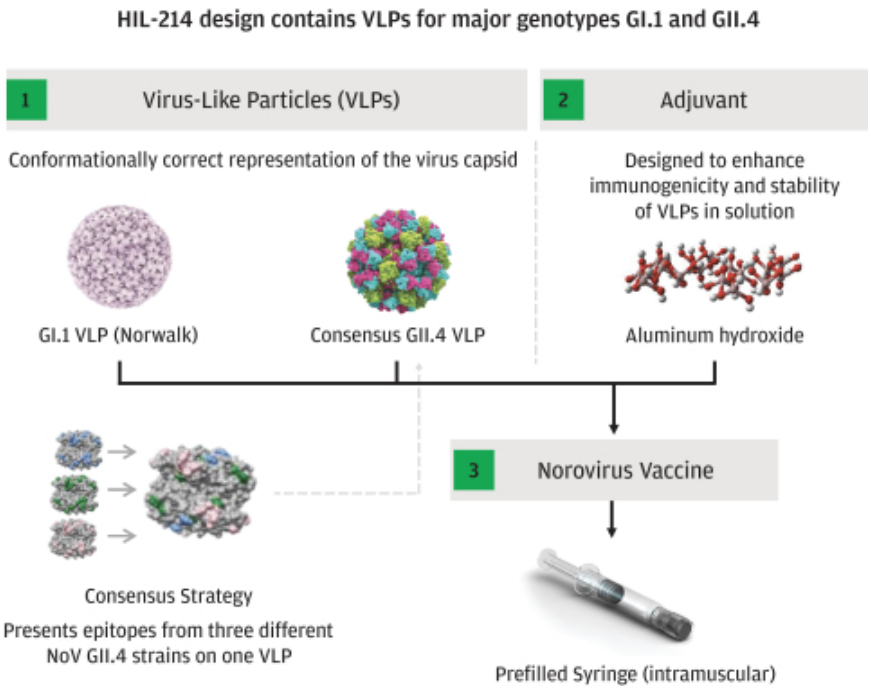
VLPs are self-assembling structures that mimic the unique and repetitive geometric features that characterize the surface of a live virus. VLPs can be produced using a common range of expression systems, including bacterial, mammalian, or insect cells, and can present a conformationally correct representation of the virus capsid to the immune system. As a result, VLPs can be readily manufactured in cell culture at large scale and offer a highly immunogenic vaccine template. Importantly, VLPs lack a viral genome and can therefore neither replicate nor cause infection, which may provide an important safety advantage over live vaccines.

There is ample precedent for the development of safe and effective vaccines that leverage VLP technology. Gardasil, a commercially available vaccine for human papillomavirus (HPV) developed by Merck, consists of recombinant VLPs self-assembled from the capsid protein of HPV types 6, 11, 16, and 18. A subsequent iteration of the product, known as Gardasil9, added five additional VLPs to its formulation to cover HPV types 31, 33, 45, 52, and 58. Other commercially available VLP vaccines include Cervarix, an HPV vaccine manufactured by GlaxoSmithKline, and Sci-B-Vac, an HBV vaccine developed by VBI Vaccines. There are also a number of VLP vaccines in clinical development for H1N1, HIV, malaria, respiratory syncytial virus, human metapneumovirus, and COVID-19, among other indications. Vaccines that employ VLP technology have been given to millions of patients worldwide.

HIL-214 construct

HIL-214 includes VLPs representing the two genogroups of norovirus responsible for the majority of human infection: GI and GII. Our G1.1 Norwalk VLP was selected based on its potential to promote a broad immune response to GI norovirus strains. In an independent study, infection of human volunteers with GI.1 Norwalk virus resulted in a broad antibody response against GI.1, GI.2, GI.3, and GI.4 strains. Our GII.4 VLP is a consensus sequence of three GII.4 strains that were responsible for major outbreaks in 2002 and 2006: GII.4 Houston/2002, GII.4 Yerseke/2006a, and GII.4 Den Haag/2006b. The GII.4 genotype accounts for two-thirds of norovirus outbreaks worldwide and its prevalence is attributed to its ability to rapidly evolve, with novel variants emerging every two to four years that may evade immunity in the human population. We believe that presenting epitopes from three GII.4 strains on our GII.4 VLP will result in a broader response to GII.4 strains than a VLP presenting a single strain. Sera from subjects vaccinated with HIL-214 have been shown to generate antibody titers against a broad range of GI and GII norovirus genogroups. Specifically, HIL-214 resulted in a greater than fourfold rise in antibodies against multiple GI strains (GI.1, GI.5, GI.6) and GII.4 strains (2002, 2006a, 2006b, 2009, 2012). The observation that HIL-214 induced antibodies against GII.4 strains that have emerged after the formulation of our vaccine candidate (GII.4 New Orleans 2009 and GII.4 Sydney 2012) suggests that our GII.4 VLP may protect against newly emerging strains in the future.

HIL-214 also includes alum as an adjuvant. Alum is the predominant adjuvant used in human vaccines and is a common component of several pediatric vaccines, including those for pneumococcus, diphtheria-tetanus-pertussis (DTaP), Hepatitis A, Hepatitis B and HPV.



HIL-214 clinical data

Overview

HIL-214 has been the subject of nine Phase 1 and Phase 2 clinical trials, including more than 4,500 subjects of which more than 2,200 subjects have been evaluated for immunogenicity. These subjects have ranged from 6 weeks to 102 years old. An overview of the clinical trials conducted to date by Takeda and its predecessor, LigoCyte Pharmaceuticals, Inc., is tabulated below:

Completed HIL-214 Clinical Trials

Sponsor	Trial no.	Phase	Safety	Immuno	Dose/ regimen	Efficacy	Trial pop.	HIL-214 safety (n)	HIL-214 immuno (n)
LigoCyte	LV01-103	1/2	☑	☑		☑ *Challenge*	18 – 50 yrs	N/A[1]	N/A[1]
	LV03-104	1	☑	☑	☑		18 – 85 yrs	66	66
	LV03-105	1/2	☑	☑		☑ *Challenge*	18 – 50 yrs	67	67
Takeda	NOR-210	2	*Generation of serum controls for assay validation*				18 – 49 yrs	50	50
	NOR-107	2	☑	☑			18 – 64 yrs	418	418
	NOR-201	2	☑	☑			18 – 49 yrs	425	425
	NOR-204	2	☑	☑	☑		18 – >85 yrs	311	311
	NOR-211	2b	☑	☑		☑ *Field study*	18 – 49 yrs	2,355	97
	NOR-202	2	☑	☑	☑		6 wks – 9 yrs	839	839
							TOTAL:	**4,531**	**2,273**

1. Intranasal formulation of vaccine, not included in HIL-214 safety and immunogenicity subject numbers

Dose finding and formulation trials in infants and children

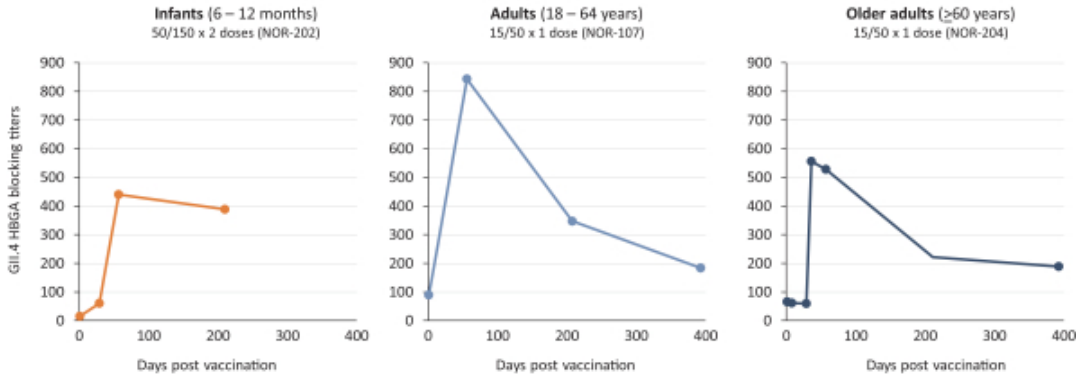
A Phase 2 dose finding and formulation trial has been conducted in infants and children for HIL-214. Based on the results from this trial, in addition to considerations around disease burden and maternal antibody concentrations, we have selected the following dose and schedule to continue to evaluate HIL-214 in infants: two doses of 50/150 µg GI.1/GII.4 with 500 µg alum given at approximately 5 months of age at the time of the first dose. Further details on this trial are summarized below.

NOR-202—A Phase 2 safety, immunogenicity, and dose finding trial of HIL-214 in infants and children between the ages of 6 weeks and 9 years old. The trial enrolled 840 subjects in Colombia, Panama, and Finland into two cohorts. The first cohort was aged 6 months to 9 years old and received one or two doses of one of four potential HIL-214 formulations containing either 15/15, 15/50, 50/50, or 50/150 µg of the GI.1/GII.4 VLP combination and 500 µg of alum. The second cohort was aged 6 weeks to 6 months old and received two or three doses of one of the four potential HIL-214 formulations. All dosages of HIL-214 were generally well tolerated with no adverse events (AEs) related to HIL-214 leading to study withdrawal. All HIL-214 formulations were found to be immunogenic in each pediatric age group as measured by HBGA blocking titers. In children between 6 weeks and 6 months of age, both the two- and three-dose regimens of the 50/150 µg formulation of HIL-214 were found to be immunogenic. In children between 6 and 12 months of age, two doses of the 50/150 µg formulation of HIL-214 were found to be more immunogenic than one dose.

Formulation of HIL-214 across different age groups

	Infants (6 weeks – 1 year)	Toddlers (1 – 5 years)	Kids (5 – 18 years)	Adults (18 – 64 years)	Older adults (>65 years)
Dose	50 / 150 µg (GI.1 and GII.4 VLPs)		15 / 50 µg (GI.1 and GII.4 VLPs)		
No. of doses	2 doses		1 dose		
Aluminum	500 µg of aluminum hydroxide				

HIL-214 induced HBGA blocking titers above baseline for all age groups



Dose finding and formulation trials in adults

Four dose finding and formulation trials have been conducted in adults for HIL-214. Based on the results of these trials, we selected a single dose of 15/50 µg GI.1/GII.4 VLP combination with 500 µg alum to continue to evaluate HIL-214 in adults. Further details on these trials are summarized below.

LV03-104—A Phase 1, randomized, double-blind, placebo-controlled age- and dose-escalation trial to evaluate the safety and immunogenicity of HIL-214 in adults aged 18 to 85 years old. Two doses of a 5/5, 15/15, 50/50, or

150/150 µg GI.1/GII.4 VLP combination were administered four weeks apart. At all tested dose levels, the vaccine was generally well tolerated and immunogenic as measured by pan-IG, class-specific IgG, and HBGA blocking titers. A second dose at day 28 provided no apparent improvement in immunogenicity across any of the age groups.

NOR-107—A Phase 2, randomized, double-blind trial to evaluate the safety, immunogenicity, dose, and adjuvant justification of HIL-214 in healthy adults aged 18 to 64 years old. One or two doses of HIL-214 were administered 28 days apart in a factorial design testing combination of 15, 50 or 150 µg of each VLP with 0, 15 or 50 µg of monophosphoryl lipid A (MPL) and 167 or 500 µg of alum. The trial demonstrated that the adjuvant MPL offered no clear benefit for immunogenicity, and that seroresponse rates were greater with 500 µg of alum than with 167 µg of alum. The study also showed that a second dose of the 15/50 µg GI.1/GII.4 formulation provided no apparent improvement in immunogenicity.

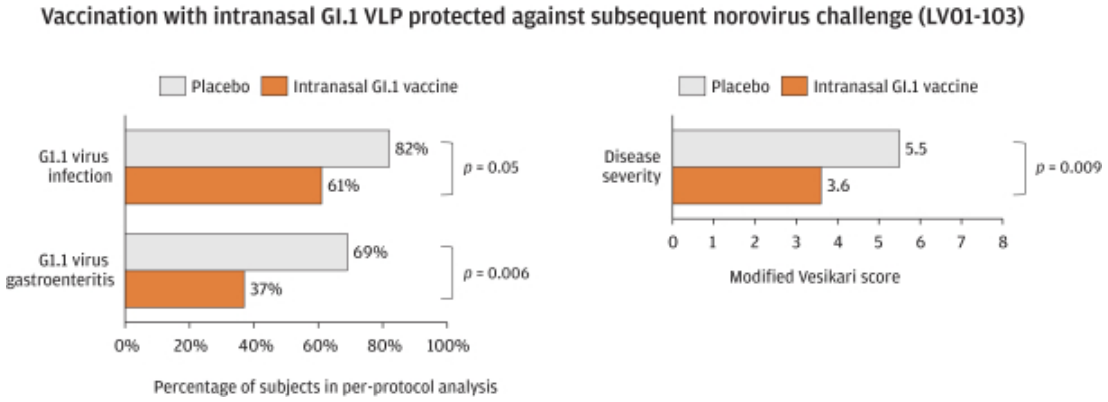
NOR-201—A Phase 2, randomized, double-blind trial to evaluate the safety and immunogenicity of HIL-214 in adults aged 18 to 49 years old. One dose of placebo, 15/50, or 50/50 µg GI.1/GII.4 VLP combination was administered to subjects. Both formulations contained 50 ug of MPL and 500 µg of alum. The results from this trial suggest that the 15/50 µg dose may be the optimal formulation to evaluate in adults.

NOR-204—A Phase 2, randomized, double-blind trial to evaluate the safety, immunogenicity, dose formulation, and dose regimen of HIL-214 in healthy adults aged 18 to over 85 years old. Older adults were stratified into three groups of 60-74 years, 75-84 years and greater than 85 years. A cohort of younger adults of 18 to 49 years was enrolled for comparison. One or two doses of HIL-214 were administered in a 15/50 µg GI.1/GII.4 VLP combination adjuvanted with 500 µg alum with or without 50 µg of MPL. The results of this trial suggest that there was no benefit of either MPL or a second dose on immunogenicity, and further, suggested that the formulation of 15/50 µg GI.1/GII.4 VLP combination and 500 µg alum may be the optimal formulation to evaluate in adults. The trial also found that the antibody response in each of the older age groups was similar to that in the young adult age group.

Efficacy trials in adults

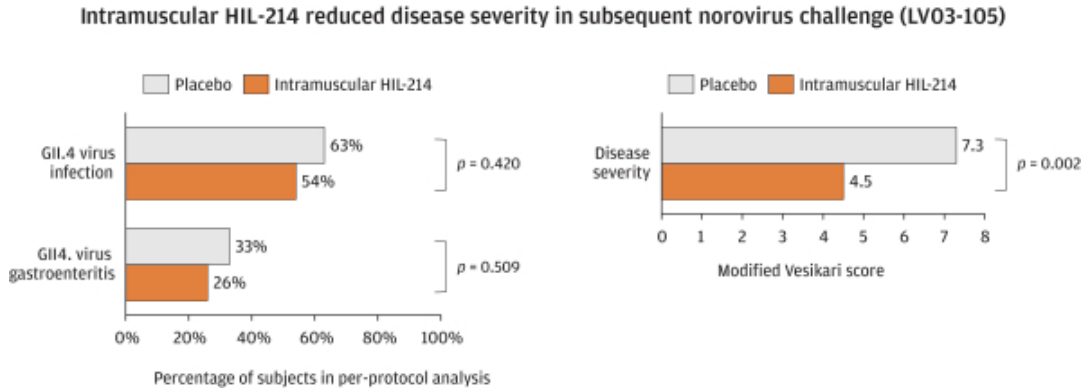
Proof-of-concept of the efficacy of HIL-214 in adults has been demonstrated across three clinical trials: two Phase 1/2 challenge trials and a Phase 2b field efficacy trial. Further details on these trials are summarized below.

Challenge trial (LV01-103)—A Phase 1/2, randomized, double-blind, placebo-controlled trial to evaluate the efficacy of an intranasal GI.1 VLP vaccine candidate after challenge with a live, vaccine-matched GI.1 norovirus strain. The vaccine formulation used in the trial contained 100 µg of GI.1 VLP and was adjuvanted with chitosan and MPL. Subjects were between 18 and 50 years of age and received two doses of either placebo or GI.1 vaccine delivered intranasally three weeks apart. Subjects were then challenged with a live GI.1 virus to test the effect of vaccination on norovirus infection and disease. Vaccination significantly reduced the frequency of GI.1 infection (occurring in 61% in vaccine recipients vs. 82% in placebo recipients, $p = 0.05$). Vaccination also significantly reduced the frequency of GI.1 virus gastroenteritis (occurring in 37% of vaccine recipients vs. 69% of placebo recipients, $p = 0.006$). Furthermore, disease severity was significantly reduced as measured by modified Vesikari score, which is a validated common metric for rating the severity of gastroenteritis symptoms based on a scale of 20 (3.6 for vaccine recipients vs. 5.5 for placebo recipients, $p = 0.009$).



A p-value is the probability that the reported result was achieved purely by chance, such that a p-value of less than or equal to 0.05 means that there is a less than or equal to 5% probability that the difference between the control group and the treatment group is purely due to chance. A p-value of 0.05 or less typically represents a statistically significant result. The United States Food and Drug Administration's (FDA's) evidentiary standard when evaluating the results of a clinical trial generally relies on a p-value of less than or equal to 0.05.

Challenge trial (LV03-105)—A Phase 1/2, randomized, double-blind, placebo-controlled trial to evaluate the efficacy of HIL-214 after challenge with a live, GII.4 norovirus strain. The HIL-214 formulation used in the trial contained a 50/50 μg ratio of GI.1 and GII.4 VLPs and was adjuvanted with 500 μg of alum and 50 μg MPL. Subjects were between 18 and 50 years of age and received two doses of either placebo or GI.1/GII.4 vaccine intramuscularly four weeks apart. Subjects were then challenged with a live GII.4 virus to test the effect of vaccination on norovirus infection or disease. HIL-214 led to a significant reduction in the severity of vomiting or diarrhea by subject assessment (20% in vaccine recipients vs. 42% in placebo recipients, p = 0.028). HIL-214 also led to a significant reduction in disease severity as measured by modified Vesikari score (4.5 in vaccine recipients vs. 7.3 in placebo recipients, p = 0.002). The results of this trial showed a directional, albeit not statistically significant, reduction in frequency of AGE (26% vs. 33%) and infection (54% vs. 63%) for the HIL-214 group relative to the placebo group after challenge. We believe the lack of statistical significance was potentially due to a lower than expected infection and illness rate; only 57 of the 98 subjects were successfully infected with norovirus which lowered the statistical power for the study.



Field efficacy trial (NOR-211)—A Phase 2b, randomized, double-blind, placebo-controlled trial to evaluate the efficacy of HIL-214 to prevent norovirus infection and moderate-to-severe AGE in the field setting. The trial was conducted in U.S. military recruits at a single base in Great Lakes, Illinois over the course of two winter seasons (2016 – 2018). In total, 4,712 subjects aged 18-49 years old were enrolled in the trial and received one dose of either placebo or HIL-214 (15/50 µg of GI.1/GII.4 with 500 µg of alum as an adjuvant). The primary endpoint of the NOR-211 trial was the efficacy of a single dose of HIL-214 compared to placebo to prevent cases of moderate to severe AGE due to infection by genotype matched norovirus strains represented in the vaccine (i.e., GI.1 or GII.4). The low attack rate of norovirus strains represented in the vaccine resulted in insufficient cases to assess the primary endpoint. Thirty vaccine-matched AGE cases were required to provide 80% statistical power to detect 70% vaccine efficacy; however, only 6 vaccine-matched cases occurred during the trial. Of those 6 cases, 5 were in the placebo group, corresponding to 80% vaccine efficacy for genotype matched cases of AGE (p=0.1417).

On account of this lower than anticipated attack rate of GI.1 and GII.4, the statistical analysis plan was amended prior to locking the database and unblinding the trial. While only 6 vaccine-matched AGE cases caused by GII.4 were observed, a total of 36 AGE cases caused by any norovirus genotype was observed, which was a sufficient number to evaluate the secondary endpoint of HIL-214 against moderate-to-severe AGE due to norovirus infection irrespective of genotype. Of those 36 cases, 26 were in the placebo group, corresponding to 62% vaccine efficacy (p = 0.0097) for any norovirus genotype, including those not included in HIL-214. In sum, this trial provided statistically significant evidence of heterotypic protection against at least one non-vaccine norovirus strain (GII.2). This trial also provided encouraging evidence of protection against vaccine-matched strains.

HIL-214 reduced the incidence and severity of norovirus-related illness (NOR-211)

	Cases of moderate-to-severe AGE			Viral efficacy	
	Pathogen	Placebo N = 2,357	HIL-214 N = 2,355	%	*p* value
1°	HIL-214 vaccine strain only[1]	5	1	80.0	*p* = 0.142
2°	Any norovirus strain	26	10	61.8	*p* = 0.0097
Post-hoc	GII.2 strain	21	9	57.4	*p* = 0.0321

AGE severity		
	Placebo N = 2,357	HIL-214 N = 2,355
Moderate	10	4
Severe	17	8

1. GI.1 or GII.4.
Note that case numbers in left and right tables may differ due to case definition

One potential explanation for the cross-protection observed in this trial is that HIL-214 may have induced cross-reactive antibodies against GII.2 viruses (evidence of heterotypic protection). In support of this hypothesis, HIL-214 was found to induce both binding and HBGA-blocking antibodies against GII.2 VLPs.

Safety results in infants and children

Safety data for HIL-214 in infants and children were collected in NOR-202, a Phase 2 safety, immunogenicity and dose finding trial. This trial demonstrated that all doses of HIL-214 were well tolerated, and there were no HIL-214-related AEs leading to trial withdrawal. AEs were largely mild to moderate in intensity and tended to subside in 3 to 4 days. In children between 6 weeks to 6 months of age who received two doses of HIL-214, the most common reactions were irritability / fussiness (19—28%), drowsiness (16—21%), pain near the injection site (9—21%), and diarrhea (10—19%). In children between 6 months and 9 years of age who received two doses of HIL-214, the most common reactions were pain near the injection site (21—33%), fatigue (16—24%), headache (14—21%), and irritability / fussiness (10—20%). A comparison of the reactogenicity of HIL-214 to other common pediatric vaccinations is tabulated below. These data are presented for informational purposes only, as the comparison in the table below is not based on head-to-head clinical studies and these data may not be comparable due to differences in vaccine design, disease under evaluation, trial designs and subject characteristics.

Pediatric safety summary for HIL-214

Disease	Vaccine	Age	Local reactions	Systemic reactions	
			Pain, swelling, redness	Fever > 38°C	Irritability, fussiness
Norovirus	HIL-214	6 weeks – 6 months[5]	9 – 21%[1]	2 – 9%[1]	19 – 28%[1]
		6 months – 9 years[5]	21 – 33%[1]	7 – 8%[1]	10 – 20%[1]
Pneumococcal	Prevnar 13	2 – 15 months	20 – 42%[1,4]	24 – 37%[3]	80 – 86%[3]
Rotavirus	Rotarix	6 – 24 weeks	Ora – N/Al	25 – 28%[1]	42 – 52%[1]
	RotaTeq	5 – 36 weeks		17 – 20%[2]	4 – 7%[2]
Pertussis	Daptacel (TDaP)	2 – 6 months	1 – 6%[2,4]	8 – 24%[2]	32 – 40%[2]
	Whole cell DTP	2 – 6 months	5 – 11%[2,4]	65 – 74%[2]	73 – 85%[2]
MMRV	M-M-R II & Varivax	12 – 23 months	10 – 16%[4]	15%	7%
	ProQuad	12 – 23 months	8 – 14%[4]	22%	7%
Polio	OPV	2 months – 6 years	Oral – N/A	< 1%	< 1%

1. After doses one or two. 2. After doses one, two, or three. 3. After doses one, two, three, or four. 4. Refers to redness and swelling only 5. Data from NOR-202.

Safety in adults

Safety data for HIL-214 in adults have been collected for over 4,000 subjects across seven clinical trials. These trials have demonstrated that HIL-214 was well tolerated, and there were no HIL-214-related AEs leading to trial withdrawal. In the NOR-211 field efficacy trial of military recruits, the most common reaction was pain near the injection site with a mean duration of 2 days (48% for HIL-214 vs. 38% for placebo). Systemic AEs were found to occur at a similar rate to placebo (56% for HIL-214 vs. 60% for placebo). In a study of adults over the age of 60, local AEs were mostly mild in intensity and injection-site pain was the most frequently reported symptom. In addition to these completed trials, a Phase 2 trial is currently ongoing to evaluate the long-term safety and immunogenicity of HIL-214 in 528 subjects between 18 and 85 years of age up to 5 years post vaccination (NOR-213). A comparison of the reactogenicity of HIL-214 to other common adult vaccinations is tabulated below. These data are presented for informational purposes only, as the comparison in the table below is not based on head-to-head clinical studies and these data may not be comparable due to differences in vaccine design, disease under evaluation, trial designs, and subject characteristics.

Adult safety summary for HIL-214

Disease	Vaccine	Age	Local reactions	Systemic reactions	
			Pain at injection site	Fever > 38°c	Headache
Norovirus	HIL-214	18 to 49 years[4]	48%	6%	35%
		>60 years[5]	33%	<1%	8%
COVID-19	Comirnaty	16 to 55 years	78 – 84%[1]	4 – 16%[1]	44 – 54%[1]
	Moderna	18 to 64 years	87 – 90%[1]	1 – 17%[1]	35 – 63%[1]
HPV	Gardasil 9	16 to 26 years	71 – 74%[2]	2 – 3%[2]	15%
Influenza	Afluria	18 to 64 years	48%	1%	22%
	FluBlok	>50 years	19%	<1%	13%
Shingles	Shingrix	>50 years	69 – 88%[3]	14 – 28%[3]	29 – 51%[3]

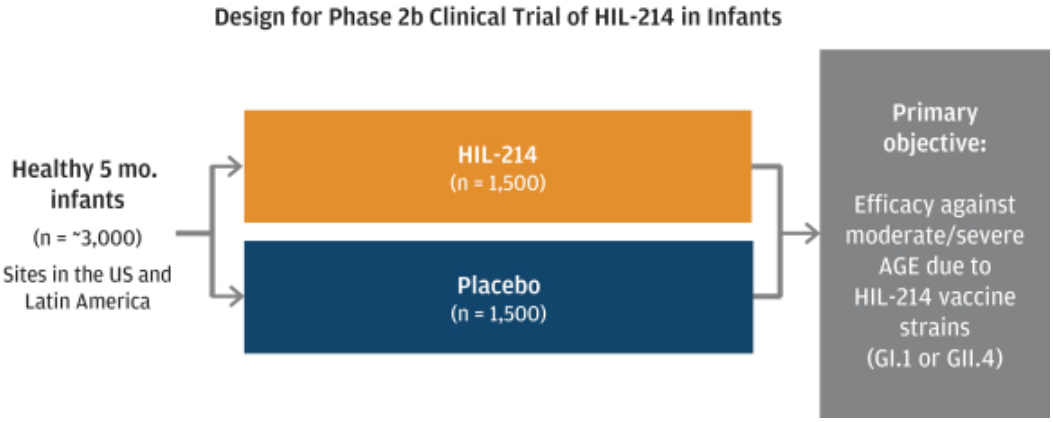
1. After doses one or two. 2. After doses one, two, or three. 3. Range given for patients 50 – 59, 60 – 69, and >70 years of age 4. Data from NOR-211. 5. Data from NOR-204.

Our clinical program in infants

Phase 2b infant efficacy trial

We plan to build on the extensive clinical data generated to date by initiating our next clinical trial in infants. We believe that initial development of HIL-214 in infants will de-risk its development given the endemic nature of disease in this population, which allows for rapid case accrual and enrollment of subjects without pre-existing immunity to norovirus.

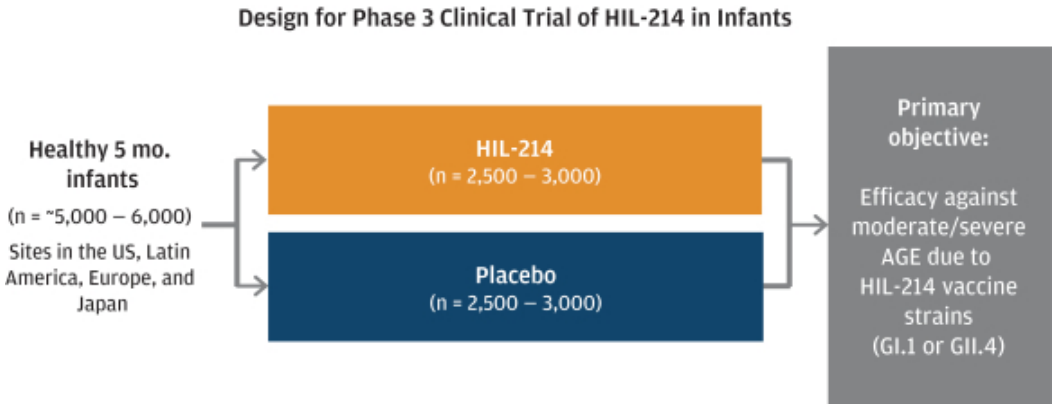
This clinical trial will be a Phase 2b, randomized, double-blind, placebo-controlled trial to evaluate the efficacy, safety, and immunogenicity of HIL-214 in infants of approximately 5 months of age at time of initial vaccination at sites in the United States and Latin America. We believe 5 months of age is the optimum time to begin immunization as it is prior to the sharp increase in incidence of norovirus that begins at 6 months of age and coincides with the waning of maternal antibodies to norovirus. We plan to enroll 3,000 subjects (irrespective of *FUT2* secretor status) who will be randomized 1:1 to receive either HIL-214 or placebo. In the vaccine arm, subjects will receive HIL-214 (50/150 µg GI.1/GII.4 VLP combination with 500 µg alum) in a two-dose regimen delivered 28 to 56 days apart. In the control arm, subjects will receive saline placebo at the corresponding timepoints. We expect that the primary objective of the trial will be to evaluate the protective efficacy of HIL-214 against the first confirmed moderate or severe AGE event due to GI.1 or GII.4 norovirus strains (excluding certain co-infections) that occurs prior to each subject reaching 12 months of age. Key secondary endpoints may include evaluation of the protective efficacy of HIL-214 against any GI or GII norovirus strain. We plan to conduct a pre-specified safety and immunogenicity analysis on the first 200 subjects.



We are developing and qualifying a number of clinical assays to support the determination of our primary and secondary endpoints. These include an assay to detect norovirus in stool samples and determine norovirus genogroup (e.g., GI or GII), a sequencing assay to determine norovirus genotype (e.g., GI.1 or GII.4), and a co-pathogen assay to detect other pathogens that may cause AGE (e.g., rotavirus or *Salmonella*). The immunogenicity of HIL-214 will be evaluated using assays that measure HBGA-blocking antibody titers and pan-Ig antibody titers. We have designed our planned Phase 2b clinical trial based on learnings from the NOR-211 Phase 2b study as well as preliminary feedback Takeda received from the FDA and European Medicines Agency (EMA). We expect to report safety and immunogenicity data for the first 200 subjects in and top-line results from this Phase 2b trial in .

Phase 3 infant efficacy trial

Based on the results from our planned Phase 2b trial, if positive, we plan to interact with key regulatory authorities and initiate a Phase 3, randomized, double-blind, placebo-controlled trial to evaluate the efficacy, safety, and immunogenicity of HIL-214 in a larger clinical trial. We expect that this trial will enroll approximately 5,000 to 6,000 subjects that will be randomized 1:1 into the vaccine or control arm. Trial sites under consideration include those located in the United States, Latin America, Europe, and Japan.



Other trials in infants

We are planning additional trials in infants to support regulatory submissions and the potential co-administration of HIL-214 with common pediatric vaccines. These potentially include a Phase 3 trial to evaluate the safety and immunogenicity of HIL-214 when co-administered with other routine pediatric vaccines and a Phase 3 trial to evaluate lot-to-lot consistency of HIL-214. We believe that successful completion of this clinical program in infants, together with existing clinical data, will support regulatory submissions for marketing approval in most territories of the world, including the United States, Europe, Japan, and Latin America.

Our immunobridging strategy to other age groups

Overview

If we are successful in obtaining approval for HIL-214 in infants, we plan to subsequently seek approval of HIL-214 in additional age groups, including older children and adolescents (1 to 18 years of age), adults (18 to 59 years of age), and older adults (60 years of age and older). Our preferred strategic approach for seeking approval in these populations is through conducting immunobridging trials, which aim to demonstrate non-inferiority of immune response between a reference age group (i.e., infants) and target age groups. These trials require an appropriate serological surrogate for efficacy and can potentially support regulatory submissions seeking approval to expand to these other age groups without the need for an efficacy trial. Key requirements for an immunobridging strategy include:

- **Comparability**. The same or comparable immune assay should be used in the reference and target populations.
- **Predictability.** The immune assay should be reasonably likely to predict protection from infection or disease. Regulatory authorities are more likely to accept functional immune assays (e.g., blocking or neutralization assays) than non-functional immune assays (e.g., assays that measure bulk antibody levels).

- **Well-defined non-inferiority margins.** Non-inferiority margins should be prospectively defined and justified to regulatory authorities.

We believe the most likely serological surrogate will be blocking antibodies to HBGAs, which have previously been shown to correlate with protection against norovirus. We are planning to collect HBGA-blocking titers for all subjects in our planned Phase 2b and Phase 3 infant efficacy trials to use as a reference for immunobridging to other age groups. In addition to HBGA-blocking antibodies, we are also exploring the measurement of other immune parameters that may be reasonably likely to predict protection.

If we are not able to confirm an appropriate serological surrogate in our planed infant efficacy trials, or if the FDA or EMA do agree with our proposed immunobridging strategy, we plan to directly evaluate HIL-214 for efficacy in older adults (65 years of age and older). We would plan to conduct this trial across multiple sites at high-risk for norovirus outbreaks, including nursing homes, assisted living facilities, and other older adult communities.

Historical precedent for immunobridging

A number of vaccines have successfully used immunobridging to expand the approval of a vaccine to those in other age groups, without conducting further efficacy studies, including Boostrix, Gardasil, Cervarix, and Vaxchora. For example, Boostrix used a prior infant efficacy study to bridge to older subjects and included the use of a different vaccine strength and regimen in infants and older age groups. This immunobridging strategy was based on demonstrating non-inferiority of pertussis antigen seroresponses in adolescents (10 to 18 years of age), adults (19 to 64 years of age), and older adults (65 years of age and older) to prior infant responses in efficacy trials. Of particular note, this strategy was successful for Boostrix even in the absence of an established correlate of protection for pertussis.

HIL-214 commercial opportunity

The global vaccine market is estimated to be over $50 billion in 2020 and is expected to exceed $100 billion by 2027. Pneumococcal vaccines have historically been the largest vaccine category, with $7.0 billion in sales in 2020. COVID-19 vaccines are expected to become the largest category in 2021. We believe that the increased attention given to infectious diseases during the COVID-19 pandemic, and the important role of vaccines in disease prevention, is likely to further increase the size of the global vaccine market.

There are currently no approved vaccines for the prevention of norovirus-related illness. However, there are market analogues that we believe we can use to estimate the size of the commercial opportunity for HIL-214. In the pediatric market, we believe that rotavirus vaccines are the closest analogue to HIL-214. Rotavirus was the leading cause of pediatric viral AGE before the introduction of the rotavirus vaccines, Rotarix and RotaTeq. These vaccines, approved only in infants, are now widely adopted worldwide, with many countries achieving vaccination rates above 80% among one-year-olds. Rotavirus vaccines generated more than $1.6 billion in sales in 2020. In the older adult market, we believe that Shingrix, a recombinant protein vaccine developed by GSK to prevent shingles, is an analogue for HIL-214. Shingrix generated $2.7 billion in sales in 2020[7]. Furthermore, we believe that there is a commercial opportunity for a norovirus vaccine in other groups at high risk for norovirus infection, such as healthcare workers, immunocompromised individuals, military personnel, food handlers, and travelers, including cruise ship passengers.

A key element of our commercial strategy is to receive advisory body recommendations for the use of HIL-214. In particular, we are focused on the ACIP, which is an advisory body of the CDC that develops vaccine recommendations for children and adults in the United States. New pediatric vaccines that received a preferred

recommendation from ACIP are nearly universally adopted by pediatricians and are often required by schools. Rotavirus vaccines received an ACIP recommendation in 2006, which has contributed to their broad uptake in the United States. Following completion of our planned Phase 2b and 3 trials in infants, we expect ACIP to review these data with the goal of having ACIP recommend HIL-214 for routine pediatric use. We also plan to pursue an ACIP recommendation in the older adult population.

Competition

Our industry is characterized by rapidly advancing technologies, intense competition, and strong emphasis on proprietary products. According to EvaluatePharma, October, 2021, the current vaccine market is concentrated among a few global biopharmaceutical companies including BioNTech, CSL Bering, GlaxoSmithKline, Merck, Moderna, Pfizer, Sanofi, and Takeda, which together account for the majority of global vaccine sales. Other pharmaceutical and biotechnology companies, academic institutions, governmental agencies, and public and private research institutions are also active in the vaccine market given the continuing global need for both existing and new vaccines.

While we believe that our team, technology, strategy, and depth of clinical data relative to other products in clinical development provide us with a strong competitive advantage, if HIL-214 receives marketing approval, we will have to compete with new products and therapies that may become available in the future. The key competitive factors that will affect the success of HIL-214 are similar to those faced by other vaccine products: safety, immunogenicity, protective efficacy, duration of effect, convenience of administration, price, public health policy, and reimbursement by third-party payors.

There are currently no approved vaccines for the prevention of norovirus-related illness. While we are not aware of all of our competitors' efforts, based on public statements, we believe that several companies are in various stages of developing a vaccine for norovirus including China National Biotec, Chongqing Zhifei Biological, Icon Genetics and Vaxart. We believe that HIL-214 is well positioned to be the first norovirus vaccine approved in any market worldwide.

Manufacturing

We do not have, nor do we plan to establish, large-scale manufacturing facilities that are compliant with current Good Manufacturing Practices (cGMP). For our Phase 2b infant efficacy trial, we plan to use clinical material that was previously manufactured by Takeda. We plan to continue to use third-party manufacturers to produce cGMP material for our future clinical trials and commercial supply, if approved.

Intellectual property

Intellectual property, including patents, trade secrets, and trademarks, is important to our business. Our commercial success depends in part on our ability to obtain and maintain proprietary intellectual property protection for HIL-214, as well as for future vaccine candidates and novel discoveries, product development technologies, and know-how. Our commercial success also depends in part on our ability to operate without infringing, misappropriating or violating the intellectual property and proprietary rights of others and to prevent others from infringing, misappropriating or violating our intellectual property and proprietary rights. Our policy is to develop and maintain protection of our proprietary position by, among other methods, licensing or filing U.S. and foreign patents and applications relating to our technology, inventions, and improvements that are important to the development and implementation of our business.

Our patent portfolio, comprising patents and patent applications exclusively licensed to us, is built with a goal of establishing broad protection that generally includes, for the vaccine candidate compound, claims directed to composition of matter, pharmaceutical compositions or formulations, methods of synthesis, and methods of

use of such pharmaceutical compositions or formulations. As of October 7, 2021, our patent portfolio covering HIL-214 consists solely of patents and patent applications exclusively licensed from Takeda. Subject to the terms of the Takeda License we entered into with Takeda on July 2, 2021, we have licensed from Takeda exclusive commercialization rights worldwide, excluding Japan, to patents and patent applications covering the composition of matter, formulation, use and/or manufacture of HIL-214. Our patent portfolio comprises 9 distinct patent families protecting the technology relating to HIL-214 composition of matter, methods of manufacturing HIL-214, formulations of HIL-214 products, as well as methods of use of HIL-214. As of October 7, 2021, our portfolio consists of approximately 23 issued U.S. patents, 5 pending U.S. patent applications, 62 issued foreign patents including 7 issued European patents subsequently validated in individual European countries, and 54 foreign patent applications pending in major international markets. The issued patents and pending applications have nominal expiration dates ranging from 2027 to 2039, without accounting for any available patent term adjustments or extensions.

The term of individual patents in our portfolio depends upon the legal term of patents in the countries in which they are obtained. In most countries in which we file, including the United States, the patent term is 20 years from the earliest date of filing a non-provisional patent application. In the United States, the term of a patent may be eligible for patent term adjustment, which permits patent term restoration as compensation for delays incurred at the USPTO during the patent prosecution process. In addition, for patents that cover an FDA-approved drug, the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Amendments, permits a patent term extension of up to five years beyond the expiration of the patent. While the length of the patent term extension is related to the length of time the drug is under regulatory review, patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent per approved drug may be extended, and only those claims covering the approved drug, a method for using it or a method for manufacturing it may be extended. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our products receive FDA approval, we expect to apply for patent term extensions on patents covering those products. We plan to seek any available patent term extension to any issued patents we may be granted in any jurisdiction where such extensions are available; however, there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. The relevant patent laws and their interpretation outside of the United States is also uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our technology or vaccine candidates and could affect the value of such intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell or importing products that infringe, misappropriate or violate our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions and improvements. We cannot guarantee that patents will be granted with respect to any of our licensed pending patent applications or with respect to any patent applications we may file in the future, nor can we be sure that any patents that may be granted to us or Takeda in the future will be commercially useful in protecting our products or the methods of use or manufacture of those products. Moreover, issued patents do not guarantee the right to practice our technology in relation to the commercialization of our products. Issued patents only allow us to block potential competitors from practicing the claimed inventions of the issued patents.

Further, patents and other intellectual property rights in the pharmaceutical and biotechnology space are evolving and involve many risks and uncertainties. For example, third parties may have blocking patents that could be used to prevent us from commercializing HIL-214 and any future vaccine candidates and practicing our proprietary technology, and any issued patents may be challenged, invalidated or circumvented, which could

limit our ability to stop competitors from marketing related products or could limit the term of patent protection that otherwise may exist for HIL-214 and any future vaccine candidates. In addition, the scope of the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies that are outside the scope of the rights granted under any issued patents. For these reasons, we may face competition with respect to HIL-214 and any future vaccine candidates. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any particular vaccine candidate can be commercialized, any patent protection for such product may expire or remain in force for only a short period following commercialization, thereby reducing the commercial advantage the patent provides.

It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us, and for employees and consultants to enter into invention assignment agreements with us. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. Where applicable, the agreements provide that all inventions to which the individual contributed as an inventor shall be assigned to Hillevax, and as such, will become our property. There can be no assurance, however, that these agreements will provide meaningful protection or adequate remedies for our trade secrets in the event of unauthorized use or disclosure of such information. For information regarding the risks related to intellectual property, see "Risk factors—Risks related to our intellectual property."

Further, we have filed for three trademark applications in the United States for the HilleVax trademark and logo.

License agreement with Takeda

On July 2, 2021, we and Takeda entered into the Takeda License. Pursuant to the Takeda License, Takeda granted us: (a) an exclusive, royalty-bearing, sublicensable (with Takeda's reasonable consent) license under (1) certain patents and know-how relating to HIL-214 (formerly TAK-214), and owned or controlled by Takeda during the term of the Takeda License and (2) Takeda's rights in intellectual property jointly created by the parties under the Takeda License (the Joint Intellectual Property), in each case, to commercialize for all human uses worldwide outside of Japan (the Territory) any pharmaceutical products (the Products) containing the HIL-214 compounds and any derivatives thereof to prevent or minimize disease and/or infections caused by norovirus (the Compounds), and (b) a worldwide, non-exclusive, sublicensable (with Takeda's reasonable consent) license under such patents and know-how to develop and manufacture the Compounds and Products solely to: (1) exploit the Compounds and Products in the Territory, (2) perform certain development activities in Japan, and (3) supply the Product to Takeda pursuant to any clinical supply or commercial supply agreement. We granted Takeda: (a) a non-exclusive, fully paid-up, royalty-free, sublicensable license under our rights in any patents and know-how and our rights in the Joint Intellectual Property that are necessary or useful to enable Takeda to develop and manufacture the Compounds and Products anywhere in the world for the purposes of commercialization of the Products in Japan, (b) an exclusive, royalty-bearing, sublicensable license under such patents and know-how to (1) commercialize Products in Japan and (2) commercialize Products for purposes other than for use in humans, and (c) an exclusive, sublicensable license to use Product trademarks solely for commercialization of a Product for human uses in Japan. Certain rights granted to us under the Takeda License are subject to rights granted by Takeda to the United States government pursuant to sponsored research, clinical development and material transfer agreements.

If, other than due to force majeure or our failure to perform our obligations under the Takeda License, Takeda fails to pursue regulatory or commercialization activities by specified deadlines, and does not dispute such failure or initiate such activities by a specified deadline, then the Territory may be expanded to include Japan (i.e., worldwide). During the term of the Takeda License, neither party is permitted to commercialize any vaccine product (other than the Product) that includes norovirus virus-like particles and is being developed for or is approved for the prevention or minimization of symptoms caused by norovirus infections without the other party's prior written consent. We will be responsible, at our cost, for the development, manufacture and commercialization of the Product in the Territory. We are obligated to use commercially reasonable efforts to develop and commercialize the Product in the Territory, and to seek regulatory approval for the Product throughout the world.

We paid Takeda upfront consideration consisting of 500,000 shares of common stock and a warrant to purchase 3,500,000 shares of common stock (the Takeda Warrant). We further agreed that, in the event that Takeda's fully-diluted ownership, including the Takeda Warrant, represents less a certain specified percentage of our fully-diluted capitalization, including shares issuable upon conversion of outstanding convertible promissory notes, calculated immediately prior to the closing of this offering, we will issue an additional warrant to purchase shares of common stock such that Takeda would hold a certain specified percentage of the fully-diluted capitalization immediately before the closing of this offering (the Takeda Warrant Right). We also paid Takeda a cash payment of $2.5 million upon the consummation of our convertible note financing in August 2021 and are obligated to pay an additional cash payment of 2.5 million upon release of certain drug product and completion of certain regulatory activities. We are required to make to Takeda a one-time payment of $7.5 million upon achievement of a specified development milestone and one-time commercial milestone payments of up to $150.0 million in the aggregate if certain annual sales targets for Products are met in the Territory. We agreed to pay Takeda tiered high-single digit to low-teen percentage royalties on net sales of Products in the Territory, subject to specified offsets and reductions, and Takeda agreed to pay us tiered mid-single digit to low-double digit percentage royalties on net sales of Products in Japan, subject to specified offsets and reductions. Royalties will be payable, on a Product-by-Product and country-by-country basis beginning on the first commercial sale of such Product in such country, until the later of (i) the expiration of the licensed patents covering the applicable Product, (ii) the expiration of regulatory exclusivity in such country, or (iii) 20 years following the first commercial sale of such Product in such country.

Absent early termination, the Takeda License expires on a country-by-country and Product-by-Product basis upon the expiration of the applicable royalty term with respect to each Product in each country, as applicable, or in its entirety upon the expiration of the royalty term with respect to the last Product commercialized in the last country. We may terminate the Takeda License in its entirety without cause upon six months' prior written notice. We and Takeda may terminate the Takeda License in the case of the other party's insolvency, or upon prior written notice within a specified time period for the other party's material uncured breach. Takeda may terminate the Takeda License in its entirety if we challenge the licensed patents, or if we assist any third party in challenging such patents. Upon termination of the Takeda License, Takeda will have an exclusive, transferable, fully paid-up, royalty-free, sublicensable license under the patents and know-how we license to Takeda under the Takeda License and our rights in the Joint Intellectual Property to exploit the Product in the terminated countries.

Government regulation and product approval

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of biologics such as those we are developing. We, along with third-party contractors, will be required to navigate the various

preclinical, clinical and commercial approval requirements of the regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. biologics regulation

In the United States, biological products, or biologics, such as vaccines are subject to regulation under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act, and other federal, state, local and foreign statutes and regulations. The process required by the FDA before biologics may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's Good Laboratory Practice requirements (GLPs);
- submission to the FDA of an investigational new drug application (IND), which must become effective before clinical trials may begin;
- approval by an institutional review board (IRB) or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials to establish the safety, purity and potency of the proposed biologic product candidate for its intended use;
- preparation of and submission to the FDA of a biologics license application (BLA), after completion of all pivotal clinical trials and other necessary studies;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with cGMP, and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency, and of selected clinical investigation sites to assess compliance with Good Clinical Practice requirements (GCPs); and
- FDA review and approval of the BLA to permit commercial marketing of the product for particular indications for use in the United States.

The preclinical developmental stage generally involves laboratory evaluations of chemistry, formulation and stability, as well as studies to evaluate the product candidate's toxicity in animals, in an effort to support subsequent clinical testing. The conduct of preclinical studies is subject to federal regulations and requirements, including GLP regulations.

Prior to beginning the first clinical trial with a product candidate in the United States, the trial sponsor must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational biologic to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product candidate, chemistry, manufacturing, and controls information, and any available human data or literature to support the use of the product candidate. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time

period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control, in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring subject safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study, and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or on other grounds, such as failure to demonstrate efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries, including clinicaltrials.gov.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1—The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- Phase 2—The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3—The investigational product is administered to an expanded patient population to further evaluate dosage, to provide substantial evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or sponsors may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may also be made a condition to approval of the BLA.

While the IND is active, progress reports summarizing the results of the clinical trials and nonclinical studies performed since the last progress report, among other information, must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the same or similar drugs, findings from animal or in vitro testing suggesting a significant risk to humans, and any

clinically important increased incidence of a serious suspected adverse reaction compared to that listed in the protocol or investigator brochure.

In addition, during the development of a new biologic, sponsors are given opportunities to meet with the FDA at certain points, including prior to submission of an IND, at the end of Phase 2, and before a BLA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and the FDA to reach alignment on the next phase of development. Sponsors typically use the meetings at the end of the Phase 2 trial to discuss Phase 2 clinical results and present plans for the pivotal Phase 3 clinical trials that they believe will support approval of the product candidate.

Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA submission and review by the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, preclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product candidate for one or more indications. The BLA must include all relevant data available from preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of a use of the product candidate, or from a number of alternative sources, including studies initiated by independent investigators. The submission of a BLA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the FDA accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. Once a BLA has been accepted for filing, the FDA's goal is to review standard applications within ten months after the filing date, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process may also be extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether the product candidate is safe, pure and potent for the proposed indication, and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may also convene an advisory committee to provide clinical insight on application review questions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. If the FDA determines that the application, manufacturing process or

manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter (CRL). An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A CRL will describe all of the deficiencies that the FDA has identified in the BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the CRL without first conducting required inspections, testing submitted product lots, and/or reviewing proposed labeling. In issuing the CRL, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may include limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy (REMS), to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy implemented to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once a BLA is approved, the FDA may withdraw such approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety, purity and potency after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited development and review programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. For example, the fast track program is intended to expedite or facilitate the process for reviewing product candidates that are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product candidate and the specific indication for which it is being studied. The sponsor of a fast track product candidate has opportunities for more frequent interactions with the applicable FDA review team during product development and, once a BLA is submitted, the product candidate may be eligible for priority review. A fast track product candidate may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

A product candidate intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product candidate can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product candidate, alone or

in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product candidate, including involvement of senior managers.

Any marketing application for a biologic product candidate submitted to the FDA for approval, including a product candidate with a fast track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite the FDA review and approval process, such as priority review and accelerated approval. A BLA is eligible for priority review if the product candidate is designed to treat a serious or life-threatening disease or condition, and if approved, would provide a significant improvement in safety or effectiveness compared to available alternatives for such disease or condition. For original BLAs, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (as compared to ten months under standard review).

Additionally, product candidates studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product candidate has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. Products receiving accelerated approval may be subject to expedited withdrawal procedures if the sponsor fails to conduct the required post-marketing studies or if such studies fail to verify the predicted clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

Fast track designation, breakthrough therapy designation, priority review, and accelerated approval do not change the standards for approval but may expedite the development or approval process. Even if a product candidate qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Post-approval requirements

Biologics are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual program fees for any marketed products. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements up. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters, or untitled letters;
- clinical holds on clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims that are in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict a manufacturer's communications on the subject of off-label use of their products.

Biosimilars and reference product exclusivity

The Affordable Care Act, signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act (BPCIA), which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product.

Biosimilarity, which requires that the biological product be highly similar to the reference product notwithstanding minor differences in clinically inactive components and that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered

multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. However, complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured are still being worked out by the FDA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

A biological product can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study.

Other U.S. regulatory requirements

In addition to FDA regulation of pharmaceutical products, pharmaceutical companies are also subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business and may constrain the financial arrangements and relationships through which we research, as well as sell, market and distribute any products for which we obtain marketing authorization. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, data privacy and security, and transparency laws and regulations related to drug pricing and payments and other transfers of value made to physicians and other healthcare providers. If their operations are found to be in violation of any of such laws or any other governmental regulations that apply, they may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of operations, integrity oversight and reporting obligations, exclusion from participation in federal and state healthcare programs and imprisonment.

Coverage and reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of HIL-214 or any potential future vaccine candidate for which we may seek regulatory approval. Sales in the United States will depend, in part, on the availability of sufficient coverage and adequate reimbursement from third-party payors, which include government health programs such as Medicare, Medicaid, TRICARE and the Veterans Administration, as well as managed care organizations and private health insurers. Prices at which we or our customers seek reimbursement for HIL-214 or any potential future vaccine candidates can be subject to challenge, reduction or denial by third-party payors.

Certain ACA marketplace and other private payor plans are required to include coverage for certain preventative services, including vaccinations recommended by the ACIP without cost share obligations (i.e., co-payments, deductibles or co-insurance) for plan members. Children through 18 years of age without other

health insurance coverage may be eligible to receive such vaccinations free-of-charge through the CDC's Vaccines for Children program. For Medicare beneficiaries, vaccines may be covered under either the Part B or Part D program depending on several criteria, including the type of vaccine and the beneficiary's coverage eligibility. If our vaccine candidates, once approved, are covered only under the Part D program, physicians may be less willing to use our products because of the claims adjudication costs and time related to the claims adjudication process and collection of co-payments associated with the Part D program.

The process for determining whether a third-party payor will provide coverage for a product is typically separate from the process for setting the reimbursement rate that the payor will pay for the product. In the United States, there is no uniform policy among payors for coverage or reimbursement. Decisions regarding whether to cover any of a product, the extent of coverage and the amount of reimbursement to be provided are made on a plan-by-plan basis. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own coverage and reimbursement policies, but also have their own methods and approval processes. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that can require manufacturers to provide scientific and clinical support for the use of a product to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. Third-party payors may not consider HIL-214 or our potential future vaccine candidates to be medically necessary or cost-effective compared to other available therapies. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product that receives approval.

In some foreign countries, the proposed pricing for a product candidate must be approved before it may be lawfully marketed. The requirements governing product pricing vary widely from country to country. For example, in the European Union (EU) pricing and reimbursement of pharmaceutical products are regulated at a national level under the individual EU member states' social security systems. Some foreign countries provide options to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and can control the prices and reimbursement levels of medicinal products for human use. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular product candidate to currently available therapies. A country may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for products will allow favorable reimbursement and pricing arrangements for any of our product candidates. Even if approved for reimbursement, historically, product candidates launched in some foreign countries, such as some countries in the EU, do not follow price structures of the United States and prices generally tend to be significantly lower.

Healthcare reform

In the United States, there have been, and continues to be, legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of product candidates, restrict or regulate post-approval activities, and affect the profitable sale of product candidates, and similar healthcare laws and regulations exist in the European Union (EU) and other jurisdictions. Among

policy makers and payors in the United States, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

By way of example, in March 2010, the Patient Protection and Affordable Care Act (the ACA) was passed, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly affected the pharmaceutical industry. The ACA, among other things, increased the minimum level of Medicaid rebates payable by manufacturers of brand name drugs from 15.1% to 23.1% of the average manufacturer price; required collection of rebates for drugs paid by Medicaid managed care organizations; required manufacturers to participate in a coverage gap discount program, in which manufacturers must agree to offer point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D; imposed a non-deductible annual fee on pharmaceutical manufacturers or importers who sell certain "branded prescription drugs" to specified federal government programs; implemented a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected; expanded eligibility criteria for Medicaid programs; creates a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and established a Center for Medicare Innovation at the CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

Since its enactment, there have been judicial, executive and political challenges to certain aspects of the ACA. The U.S. Supreme Court is currently reviewing the constitutionality of the ACA in its. Although the Supreme Court has not yet ruled, President Biden issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how the Supreme Court ruling, other such litigation, and the healthcare reform measures of the Biden administration will impact the ACA.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. These changes included aggregate reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through December 31, 2021, unless additional Congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for pharmaceutical products. The likelihood of success of these and other reforms initiated by the former Trump administration is unclear, particularly in light of the new Biden administration.

Individual states in the United States have also become increasingly active in implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine which drugs and suppliers will be included in their healthcare programs Furthermore, there has been increased interest by third party payors and governmental authorities in reference pricing systems and publication of discounts and list prices.

Foreign regulation

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical studies and any commercial sales and distribution of our product candidates. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

Whether or not we obtain FDA approval for a product candidate, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product candidates in those countries. The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. Failure to comply with applicable foreign regulatory requirements, may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Preclinical studies and clinical trials

Similar to the United States, the various phases of preclinical and clinical research in the EU are subject to significant regulatory controls.

Preclinical studies are performed to demonstrate the health or environmental safety of new chemical or biological substances. Preclinical studies must be conducted in compliance with the principles of good laboratory practice (GLP) as set forth in EU Directive 2004/10/EC. In particular, preclinical studies, both in vitro and in vivo, must be planned, performed, monitored, recorded, reported and archived in accordance with the GLP principles, which define a set of rules and criteria for a quality system for the organizational process and the conditions for preclinical studies. These GLP standards reflect the Organization for Economic Co-operation and Development requirements.

Clinical trials of medicinal products in the EU must be conducted in accordance with EU and national regulations and the International Conference on Harmonization (ICH), guidelines on good clinical practices (GCP) as well as the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki. If the sponsor of the clinical trial is not established within the EU, it must appoint an EU entity to act as its legal representative. The sponsor must take out a clinical trial insurance policy, and in most EU countries, the sponsor is liable to provide ‘no fault’ compensation to any study subject injured in the clinical trial.

Certain countries outside of the United States, including the EU, have a similar process that requires the submission of a clinical study application much like the IND prior to the commencement of human clinical studies. A CTA must be submitted to each country’s national health authority and an independent ethics committee, much like the FDA and the IRB, respectively. Once the CTA is approved by the national health authority and the ethics committee has granted a positive opinion in relation to the conduct of the trial in the relevant member state(s), in accordance with a country’s requirements, clinical study development may proceed.

The CTA must include, among other things, a copy of the trial protocol and an investigational medicinal product dossier containing information about the manufacture and quality of the medicinal product under investigation. Currently, CTAs must be submitted to the competent authority in each EU member state in which the trial will be conducted. Under the new Regulation on Clinical Trials, which is currently expected to become applicable by early 2022, there will be a centralized application procedure where one national authority takes the lead in reviewing the application and the other national authorities have only limited involvement. Any substantial changes to the trial protocol or other information submitted with the CTA must be notified to or approved by the relevant competent authorities and ethics committees. Medicines used in clinical trials must be manufactured in accordance with good manufacturing practice (GMP). Other national and EU-wide regulatory requirements may also apply.

Marketing authorizations

In the EU, medicinal products can only be placed on the market after obtaining a marketing authorization (MA). To obtain regulatory approval of an investigational biological product under EU regulatory systems, we must submit a marketing authorization application (MAA). The application used to file the BLA in the United States is similar to that required in the EU, with the exception of, among other things, country specific document requirements. The process for doing this depends, among other things, on the nature of the medicinal product.

The centralized procedure results in a single MA, issued by the European Commission, based on the opinion of the European Medicines Agency's (EMA) Committee for Human Medicinal Products (CHMP) which is valid across the entire territory of the EU. The centralized procedure is compulsory for human medicines that are: (i) derived from biotechnology processes, such as genetic engineering, (ii) contain a new active substance indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative diseases, autoimmune and other immune dysfunctions and viral diseases, (iii) designated orphan medicines and (iv) ATMPs, such as gene therapy, somatic cell therapy or tissue-engineered medicines. The centralized procedure may at the request of the applicant also be used in certain other cases.

National MAs, which are issued by the competent authorities of the EU member states and only cover their respective territory, are available for products not falling within the mandatory scope of the centralized procedure. Where a product has already been authorized for marketing in an EU member state, this national MA can be recognized in another member state through the mutual recognition procedure. If the product has not received a national MA in any member state at the time of application, it can be approved simultaneously in various member states through the decentralized procedure. Under the decentralized procedure an identical dossier is submitted to the national competent authority of each of the member states in which the MA is sought, one of which is selected by the applicant as the Reference member state.

Under the centralized procedure, the maximum timeframe for the evaluation of a MAA by the EMA is 210 days. In exceptional cases, the CHMP might perform an accelerated review of a MAA in no more than 150 days (not including clock stops). Innovative products that target an unmet medical need and are expected to be of major public health interest may be eligible for a number of expedited development and review programs, such as the PRIME scheme, which provides incentives similar to the breakthrough therapy designation in the U.S. PRIME is a voluntary scheme aimed at enhancing the EMA's support for the development of medicines that target unmet medical needs. It is based on increased interaction and early dialogue with companies developing promising medicines, to optimize their product development plans and speed up their evaluation to help them reach patients earlier. Product developers that benefit from PRIME designation can expect to be eligible for accelerated assessment but this is not guaranteed. The benefits of a PRIME designation include the appointment of a CHMP rapporteur before submission of a MAA, early dialogue and scientific advice at key development milestones, and the potential to qualify products for accelerated review earlier in the application

process. Innovative medicines fulfilling a medical need may also benefit from different types of fast track approvals, such as a conditional MA or a MA under exceptional circumstances granted on the basis of less comprehensive clinical data than normally required (respectively in the likelihood that the sponsor will provide such data within an agreed timeframe or when comprehensive data cannot be obtained even after authorization).

Classical MAs have an initial duration of five years. After these five years, the authorization may be renewed for an unlimited period on the basis of a reevaluation of the risk-benefit balance.

Data and marketing exclusivity

The EU also provides opportunities for market exclusivity. For example, in the EU, upon receiving MA, new chemical entities generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents regulatory authorities in the EU from referencing the innovator's data to assess a generic or biosimilar application. During the additional two year period of market exclusivity, a generic/biosimilar MA can be submitted, and the innovator's data may be referenced, but no generic/biosimilar product can be marketed until the expiration of the market exclusivity. The overall ten-year market exclusivity period may be extended to a maximum of eleven years if, during the first eight years a new therapeutic indication with significant clinical benefit over existing therapies is approved. However, there is no guarantee that a product will be considered by the EU's regulatory authorities to be a new chemical entity, and products may not qualify for data exclusivity.

There is a special regime for biosimilars, or biological medicinal products that are similar to a reference medicinal product but that do not meet the definition of a generic medicinal product, for example, because of differences in raw materials or manufacturing processes. For such products, the results of appropriate preclinical or clinical trials must be provided, and guidelines from the EMA detail the type of quantity of supplementary data to be provided for different types of biological product. There are no such guidelines for complex biological products, such as gene or cell therapy medicinal products, and so it is unlikely that biosimilars of those products will currently be approved in the EU. However, guidance from the EMA states that they will be considered in the future in light of the scientific knowledge and regulatory experience gained at the time.

Foreign post-approval requirements

Similar to the United States, both MA holders and manufacturers of medicinal products are subject to comprehensive regulatory oversight by the EMA, the European Commission and/or the competent regulatory authorities of the member states. The holder of a MA must establish and maintain a pharmacovigilance system and appoint an individual qualified person for pharmacovigilance who is responsible for oversight of that system. Key obligations include expedited reporting of suspected serious adverse reactions and submission of periodic safety update reports (PSURs).

All new MAA must include a risk management plan (RMP) describing the risk management system that the company will put in place and documenting measures to prevent or minimize the risks associated with the product. The regulatory authorities may also impose specific obligations as a condition of the MA. Such risk-minimization measures or post-authorization obligations may include additional safety monitoring, more frequent submission of PSURs, or the conduct of additional clinical trials or post-authorization safety studies.

The advertising and promotion of medicinal products is also subject to laws concerning promotion of medicinal products, interactions with physicians, misleading and comparative advertising and unfair commercial practices. All advertising and promotional activities for the product must be consistent with the approved

summary of product characteristics, and therefore all off-label promotion is prohibited. Direct-to-consumer advertising of prescription medicines is also prohibited in the EU. Although general requirements for advertising and promotion of medicinal products are established under EU directives, the details are governed by regulations in each member state and can differ from one country to another.

The aforementioned EU rules are generally applicable in the European Economic Area (EEA) which consists of the 27 EU member states plus Norway, Liechtenstein and Iceland.

Failure to comply with EU and member state laws that apply to the conduct of clinical trials, manufacturing approval, MA of medicinal products and marketing of such products, both before and after grant of the MA, manufacturing of pharmaceutical products, statutory health insurance, bribery and anti-corruption or with other applicable regulatory requirements may result in administrative, civil or criminal penalties. These penalties could include delays or refusal to authorize the conduct of clinical trials, or to grant MA, product withdrawals and recalls, product seizures, suspension, withdrawal or variation of the MA, total or partial suspension of production, distribution, manufacturing or clinical trials, operating restrictions, injunctions, suspension of licenses, fines and criminal penalties.

Privacy and data protection laws

We are also subject to laws and regulations in non-U.S. countries covering privacy and data security the protection of health-related and other personal information. EU member states and other jurisdictions have adopted data protection laws and regulations, which impose significant compliance obligations. Laws and regulations in these jurisdictions apply broadly to the collection, use, storage, disclosure, transfer, security and other processing of personal information that identifies or may be used to identify an individual, such as names, contact information, and sensitive personal data such as health data. These laws and regulations are subject to frequent revisions and differing interpretations, and have generally become more stringent over time.

As of May 25, 2018, Regulation 2016/676, known as the General Data Protection Regulation (GDPR) replaced the Data Protection Directive with respect to the processing of personal data of individuals within the EEA. The GDPR imposes many requirements for controllers and processors of personal data, including, for example, higher standards for obtaining consent from individuals to process their personal data, more robust disclosures to individuals and a strengthened individual data rights regime, shortened timelines for data breach notifications, limitations on retention and secondary use of information, increased requirements pertaining to health data and pseudonymised (i.e., key-coded) data (including data from clinical trials) and additional obligations when we contract third-party processors in connection with the processing of the personal data. The GDPR is directly applicable in each member state and is extended to the EEA. However, the GDPR allows EEA countries to make additional laws and regulations further limiting, among other things, the processing of genetic, biometric or health data. Failure to comply with the requirements of the GDPR may result in fines of up to €20,000,000 or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, and other administrative penalties. Among other requirements, the GDPR regulates transfers of personal data subject to the GDPR to third countries that have not been found to provide adequate protection to such personal data, including the U.S., and the efficacy and longevity of current transfer mechanisms between the EU and the U.S. remains uncertain. For example, in 2016, the EU and U.S agreed to a transfer framework for data transferred from the EU to the United States, called the Privacy Shield, but the Privacy Shield was invalidated in July 2020 by the Court of Justice of the European Union (CJEU). While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances. Use of the standard contractual clauses must now be assessed on a case-by-case basis taking into account the legal

regime applicable in the destination country, in particular applicable surveillance laws and rights of individuals and additional measures and/or contractual provisions may need to be put in place, however, the nature of these additional measures is currently uncertain.

Legal proceedings

From time to time, we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not currently a party to any material proceedings. Regardless of outcome, such proceedings or claims can have an adverse impact on us because of defense and settlement costs, diversion of resources and other factors, and there can be no assurances that favorable outcomes will be obtained.

Facilities

We lease space for our principal offices and laboratory in Boston, Massachusetts pursuant to a written lease for approximately square feet. The current term of our lease expires in . We believe that our existing facilities will be sufficient for our needs for the foreseeable future.

Employees

As of September 30, 2021, we had 13 full-time employees and no part-time employees. Of these employees, 7 hold Ph.D. or M.D. degrees and 7 are engaged in research and development. Our employees are not represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Management

Executive officers and directors

The following table sets forth the name, age and position of each of our executive officers and directors as of September 30, 2021.

Name	Age	Position
Executive Officers		
Rob Hershberg, M.D., Ph.D.	58	Chairman, President and Chief Executive Officer
Aditya Kohli, Ph.D.	33	Chief Operating Officer
David Socks	47	Chief Financial Officer and Chief Business Officer
Astrid Borkowski, M.D., Ph.D.	52	Chief Medical Officer
Non-Employee Directors		
Shelley Chu, M.D., Ph.D.(4)	52	Director
Julie Gerberding, M.D. M.P.H.	66	Director
Patrick Heron	51	Director
Jeri Hilleman	64	Director
Jaime Sepulveda, M.D., D.Sc., M.P.H.	67	Director
Susan Silbermann	59	Director
Rajeev Venkayya, M.D.	54	Director
Elise Wang(4)	62	Director

(1) Member of the compensation committee

(2) Member of the audit committee

(3) Member of the nominating and corporate governance committee

(4) Dr. Chu and Ms. Wang will resign from our board of directors immediately prior to the effectiveness of the registration statement of which this prospectus forms a part.

Executive officers

Robert M. Hershberg, M.D., Ph.D. is our co-founder and has served as our President and Chief Executive Officer and on our board of directors since March 2020. Since March 2020, Dr. Hershberg has been a Venture Partner at Frazier Healthcare Partners, a venture capital firm focused exclusively on biotechnology investments. From March 2017 until the acquisition of Celgene by Bristol-Myers Squibb in November 2019, Dr. Hershberg served as Executive Vice President of Business Development and Global Alliances of Celgene Corporation, a publicly traded biopharmaceutical company, where he was a member of the Executive Committee and was responsible for all business development related activities across the company and management of business alliances. From January 2016 to March 2017, Dr. Hershberg served as the Chief Scientific Officer, where he was responsible for overseeing Celgene's scientific platforms, discovery capabilities and early clinical development, and from July 2014 to January 2016, he served as Senior Vice-President of Immuno-Oncology at Celgene, where

he led Celgene's research and early development efforts across its immuno-oncology portfolio. From 2011 to 2017, Dr. Hershberg was President and Chief Executive Officer of VentiRx Pharmaceuticals, a clinical stage biopharmaceutical company, which he co-founded in 2006; from 2006 to 2011 he also served as its Executive Vice President and Chief Medical Officer. Prior to co-founding VentiRx, Dr. Hershberg served as Senior Vice President and Chief Medical Officer at Dendreon Corporation, a biotechnology company, where he led the clinical, regulatory and biometrics groups, focusing on the development of Provenge® in metastatic prostate cancer. From 2001 to 2003, Dr. Hershberg was the Vice President of Medical Genetics at Corixa, a pharmaceutical company (acquired by GlaxoSmithKline in 2005). Earlier in his career, Dr. Hershberg served as an Assistant Professor at Harvard Medical School and an Associate Physician at the Brigham and Women's Hospital in Boston, Massachusetts. Dr. Hershberg holds a clinical faculty position at the University of Washington School of Medicine and is a member of the scientific advisory board of the Institute for Protein Design at the University of Washington. He has served as an independent member of the board of directors of Adaptive Biotechnologies Corporation since February 2013, Fate Therapeutics, Inc. since April 2019, NanoString Technologies, Inc. since March 2015, Recursion Pharmaceuticals since June 2019, and Silverback Therapeutics since April 2017. He holds a B.S. in Molecular Biology and M.D. from UCLA, and a Ph.D. in Biology from the Salk Institute. We believe Dr. Hershberg's extensive experience as a senior executive officer at multiple biotechnology companies contributed to our board of directors' conclusion that he should serve as a director of our company.

Aditya Kohli, Ph.D. is our co-founder and has served as our Chief Operating Officer since February 2021. Since March 2019, Dr. Kohli has served as the Chief Business Officer of Phathom Pharmaceuticals, Inc. Since January 2021, Dr. Kohli has served as Venture Partner of Frazier Healthcare Partners. From January 2020 to December 2020, Dr. Kohli served as Principal of Frazier Healthcare Partners. From January 2018 to December 2019, Dr. Kohli served as Vice President of Frazier Healthcare Partners. From September 2016 to December 2017, Dr. Kohli served as Senior Associate of Frazier Healthcare Partners. In this capacity, he has co-founded HilleVax, Phathom Pharmaceuticals, Passage Bio, Scout Bio and Recida Therapeutics, Inc. and has served on the board of directors of Scout Bio since April 2019. Prior to joining Frazier Healthcare Partners, Dr. Kohli worked at McKinsey & Company as an Engagement Manager from June 2016 until September 2016 and as an Associate from September 2014 until May 2016, where he consulted with biopharmaceutical companies on business development, research and development, and marketing and sales strategy. Dr. Kohli received his Ph.D. from the UC Berkeley and UC San Francisco joint graduate program in bioengineering and holds B.S. and M.Eng. degrees in biological engineering from the Massachusetts Institute of Technology.

David Socks is our co-founder and has served as our Chief Financial Officer and Chief Business Officer since February 2021. Mr. Socks is also a co-founder and has served as a member of the board of directors of Phathom Pharmaceuticals, Inc. since January 2018. Mr. Socks previously served as the Chief Executive Officer of Phathom Pharmaceuticals from January 2018 until his appointment as interim Chief Financial Officer, a position he held from December 2019 until July 2020. Since July 2020, Mr. Socks has served as a Strategic Advisor to Phathom Pharmaceuticals. Since July 2021, he has served as Chairman of the board of directors of Eleusis Holdings Limited. From August 2014 to September 2021, Mr. Socks was a Venture Partner at Frazier Healthcare Partners. In this capacity, he co-founded Arcutis, Inc., Passage Bio, and multiple private companies for which he served as Chief Executive Officer. Prior to joining Frazier, Mr. Socks co-founded Incline Therapeutics, Inc. in 2010 and served as its President and Chief Operating Officer from 2010 until its sale to The Medicines Company in 2013. He also co-founded Cadence Pharmaceuticals, Inc. in 2004 and served as its Vice President of Business Development and then as its Senior Vice President, Corporate Development and Strategy from 2004 until 2010. From 2000 to 2004, Mr. Socks was a Venture Partner at Windamere Venture Partners, a venture capital firm founding and investing in early stage life science companies, where he cofounded multiple biopharmaceutical companies. Mr. Socks holds a B.S. from Georgetown University and an M.B.A. from Stanford University.

Astrid Borkowski, M.D., Ph.D. has served as our Chief Medical Officer since March 2021. Prior to HilleVax, Dr. Borkowski served as Vice President, Head of Clinical Development at Takeda Pharmaceuticals' Vaccine Business Unit, where she oversaw the clinical development of vaccine assets, including HIL-214, from October 2012 to April 2021. Prior to joining Takeda Pharmaceuticals, Dr. Borkowski was Chief Medical Officer responsible for the European Region and later led early viral and bacterial vaccine development at Novartis Vaccines from January 2007 to September 2012. Prior to Novartis, she served as Director, Worldwide Clinical Development Influenza Vaccines from January 2006 to December 2006 at GSK, where she was responsible for the pandemic influenza vaccine development. From 2000 to 2005, Dr. Borkowski served as Global Clinical Team Leade CR&MA at Chiron Vaccines where she worked on meningococcal and seasonal influenza vaccine development. Dr. Borkowski completed her Medical Degree at the Humboldt University in Berlin, Germany, from which she also received her Ph.D. in Immunology. She trained in internal medicine/rheumatology before completing her postdoctoral studies at the Mayo Clinic, Rochester, MN.

Non-employee directors

Shelley Chu, Ph.D. has served on our board of directors since August 2021. Since November 2020, Dr. Chu has served as a partner of Lightspeed Venture Partners. Prior to Lightspeed, Dr. Chu served as Senior Director, R&D Strategy at Gilead from 2012 to 2015, where she led R&D strategy across all therapeutic areas and business development in immuno-oncology and HBV. She has served on the board of directors of several private companies, including Phathom Pharmaceuticals, Inc., Enlaza Therapeutics, Inc., Abata Therapeutics, Inc., 3T Biosciences, Inc., Medikine, Inc., Adanate, Inc., Scorpion Therapeutics, Inc., Tizona Therapeutics, Inc. (acquired by Gilead Sciences), Trishula Therapeutics, Inc. (partnered with AbbVie), SFJ Pharmaceuticals, Inc., IFM Therapeutics, Inc. (acquired by Bristol Myers Squibb), IFM Tre (acquired by Novartis), IFM Due (partnered with Novartis), IFM Quattro, Q32 Bio Inc., and Venatorx Pharmaceuticals, Inc. Dr. Chu holds an M.D. and a Ph.D. in Biochemistry and Biophysics from the University of California at San Francisco and a B.A. in Molecular Biology from Princeton University, where she serves as Co-Chair for Princeton ASC. She is also a member of the Scientific Advisory Board for BioCentury. Dr. Chu's investment experience in the biopharmaceutical industry as well as her experience on numerous public and private company boards of directors contributed to our board of directors' conclusion that she should serve as a director of our company.

Julie Gerberding, M.D., M.P.H. has served as a member of our board of directors since April 2021. Since December 2014, Dr. Gerberding has served as Executive Vice President and Chief Patient Officer at Merck & Co., Inc., where she is responsible for patient engagement, corporate social responsibility, ESG, and other functions. Formerly, Dr. Gerberding oversaw the communications and global public policy functions. She joined Merck in 2010 as president of vaccines and was instrumental in increasing access to the company's vaccines to people around the world. Previously, Dr. Gerberding was Director of the CDC, where she led the agency through SARS and over 40 emergency responses to public health crises. She serves on the boards of Cerner Corporation and MSD Wellcome Trust Hilleman Laboratories, a non-profit that develops new technologies for developing countries. She also co-chairs the CSIS Commission on Strengthening America's Health Security. Dr. Gerberding holds a B.A. in Chemistry/Biology and an M.D. from Case Western Reserve University and an M.P.H. from the University of California, Berkeley. She completed her internship and residency in Internal Medicine and fellowship in Clinical Pharmacology and Infectious Diseases at the University of California, San Francisco, where she is currently an Adjunct Associate Professor of Medicine. Dr. Gerberding's experience as an executive officer of a pharmaceutical company and experience on various boards of directors contributed to our board of directors' conclusion that she should serve as a director of our company.

Patrick Heron has served as a member of our board of directors since March 2020. Mr. Heron has served as Managing General Partner of Frazier Healthcare Partners since 1999. Prior to that, Mr. Heron helped develop McKinsey & Company's west coast biotechnology consulting practice. Mr. Heron has served on the boards of

directors of publicly-traded biopharmaceutical companies Arcutis Biotherapeutics, Inc. since April 2017, Mirum Pharmaceuticals, Inc. since November 2018, and Imago Biosciences, Inc. since October 2014 as well as several private companies. Mr. Heron holds a B.A. in Political Science from the University of North Carolina at Chapel Hill and an M.B.A. from Harvard Business School. Mr. Heron's investment experience in the biopharmaceutical industry as well as his experience on numerous public and private company boards of directors contributed to our board of directors' conclusion that he should serve as a director of our company.

Jeryl Hilleman has served as a member of our board of directors since April 2021. Ms. Hilleman brings extensive experience in life sciences and served as a public company CFO for close to 20 years. Most recently, From June 2014 to November 2019, Ms. Hilleman served as the Chief Financial Officer for Intersect ENT, Inc., a publicly-traded commercial drug delivery company focusing on patients with ear, nose and throat conditions. From September 2013 to May 2014, Ms. Hilleman served as Chief Financial Officer and Secretary of Ocera Therapeutics, Inc., a biopharmaceutical company, where she was responsible for managing Ocera's financial and accounting operations. From 2012 to 2013, Ms. Hilleman provided independent financial and strategic consulting for biotech and cleantech companies. From January 2008 to May 2012, she served as Chief Financial Officer of Amyris, Inc., a multinational, renewable products company based in California and Brazil, where she was responsible for managing Amyris' financial and accounting operations. Since December 2019, Ms. Hilleman has served as a member of the board of directors of SI-Bone, Inc. Since July 2018, Ms. Hilleman has served as a member of the board of directors of Minerva Neurosciences, Inc. and as a member of the board of directors of NovoCure Limited. From January 2005, Ms. Hilleman served as a member of the board of directors of Xenoport, Inc., a biopharmaceutical company, until it was acquired in July 2016. Ms. Hilleman received a B.A. in History from Brown University and an M.B.A. from the Wharton School at the University of Pennsylvania. Ms. Hilleman's financial experience, experience with biotechnology companies and her knowledge of our company contributed to our board of directors' conclusion that she should serve as a director of our company.

Jaime Sepulveda, M.D., D.Sc., M.P.H. has served as a member of our board of directors since February 2021. Since September 2011, Dr. Sepulveda, the Haile T. Debas Distinguished Professor of Global Health, has served as Executive Director of the UCSF Institute for Global Health Sciences. Prior to UCSF, he was a member of the Foundation Leadership Team at the Bill & Melinda Gates Foundation where he served as Director of Integrated Health Solutions, Director of Special Initiatives, and Senior Fellow in the Global Health Program from 2007 to 2011. During this time, Dr. Sepulveda also served as executive committee Chair and board Vice Chair of Gavi, the Vaccine Alliance. Previously, he served in the government of Mexico as Director General of the National Institute of Public Health, Dean of the National School of Public Health, Director of the National Institutes of Health, and Vice Minister of Health from 1985 to 2006. Dr. Sepulveda holds an M.S. in Public Health, a M.S. in Tropical Medicine and a Ph.D. from Harvard University. He received the Harvard Alumni Award of Merit and was elected to serve (2002-2008) at the Harvard Board of Overseers. He is also an elected member of the National Academy of Medicine and the American Academy of Arts and Sciences. Dr. Sepulveda's extensive experience as a professor in global health sciences and his understanding of our business contributed to our board of directors' conclusion that he should serve as a director of our company.

Susan Silbermann has served as a member of our board of directors since March 2021. From December 2018 to December 2020, Ms. Silbermann was the Global President for Emerging Markets at Pfizer and From June 2012 to December 2018, she was the Global President of Pfizer Vaccines. Throughout her 30-year career at Pfizer, Ms. Silbermann held numerous senior leadership positions in marketing, commercial and business development, and general management in the United States and multiple international markets. She has also served as a member of the board of Gavi, the Vaccine Alliance from August 2017 to August 2020, Vice Chair of the President's Advisory Council on Doing Business in Africa from June 2019 to March 2021, and an advisor to Catalyst Inc., a nonprofit organization that promotes inclusive workplaces for women around the world from January 2010 to January 2019. She is currently an advisor to the Malaria project at the TS Chan School of Public

Health at Harvard and a member of the board of Meet the Writers, a non-profit organization that brings inspiring and diverse authors and illustrators to New York City Public Schools. Ms. Silbermann holds a B.S. in Biology and B.A. in French from Tufts University and a joint M.B.A./M.A. degree in International Business and French Studies from the Stern Graduate School of Business and the Institute of French Studies at New York University. Ms. Silbermann's extensive vaccine experience and leadership roles at pharmaceutical companies contributed to our board of directors' conclusion that she should serve as a director of our company.

Rajeev Venkayya, M.D. has served on our board of directors since August 2021. Since September 2014, Dr. Venkayya has served as President of the Vaccine Business Unit at Takeda Pharmaceuticals. Prior to that, he served as Head of the Vaccine Business Unit since 2012. Prior to Takeda, from 2008 to 2011, Dr. Venkayya served as Director of Vaccine Delivery in the Global Health Program at the Bill & Melinda Gates Foundation, where he was responsible for the Foundation's efforts in polio eradication and new vaccine introduction. While at the foundation, he served on the board of the Global Alliance for Vaccines and Immunization. Dr. Venkayya was previously the Special Assistant to the President for Biodefense at the White House from 2005 to 2007. He also served as co-director of the Medical Intensive Care Unit and Director of the High-Risk Asthma Clinic at San Francisco General Hospital. He was Chief Medical Resident in internal medicine at the University of Michigan. Dr. Venkayya holds a B.S. and M.D. from the Northeast Ohio Universities College of Medicine, where he was inducted into the Alpha Omega Alpha honorary medical society. Dr. Venkayya's experience extensive experience as an officer of vaccine companies and his knowledge of our company contributed to our board of directors' conclusion that he should serve as a director of our company.

Elise Wang has served as a member of our board of directors since August 2021. Since January 2021, Ms. Wang has served as a Partner on the Public Structured Finance group at Deerfield Management Partners and joined Deerfield in 2010. Ms. Wang provides extensive research and analysis on individual companies operating in the healthcare industry in both the United States and Europe for Deerfield. Prior to joining Deerfield, from 2001 to 2007, Ms. Wang was a Senior Research Analyst and Managing Director in healthcare primarily covering the biotechnology industry at Citigroup. From 1996 to 2001, Ms. Wang was a Senior Research Analyst and Managing Director at PaineWebber Inc., where she covered biotechnology. Ms. Wang began her career in healthcare in 1987 as a venture capitalist and banker at PaineWebber Inc. and was an officer of PaineWebber Development Corporation, which managed entities invested in biotechnology and high technology companies. Ms. Wang currently serves on the board of directors of Jaguar Gene Therapy since July 2020, Axovia Therapeutics since February 2020 and Apertura Gene Therapy since May 2021. Ms. Wang holds an A.B. in Engineering Sciences with a specialty in Biomechanics from Harvard University and an M.B.A. from Harvard Business School. Ms. Wang's breadth of investment experience in the life sciences industry and her financial background contributed to our board of directors' conclusion that she should serve as a director of our company.

Board composition and election of directors

Director independence

Our board of directors currently consists of nine members and, following the completion of this offering, will consist of seven members. Our board of directors has determined that all of our directors, other than Dr. Hershberg and , are independent directors in accordance with the listing requirements of the Nasdaq Global Market (Nasdaq). The Nasdaq independence definition includes a series of objective tests, including that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his or her family members has engaged in various types of business dealings with us. In addition, as required by Nasdaq rules, our board of directors has made a subjective determination as to each independent director that no relationships exist, which, in the opinion of our board of directors, would

interfere with the exercise of independent judgment in carrying out the responsibilities of the director. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director's business and personal activities and relationships as they may relate to us and our management. There are no family relationships among any of our directors or executive officers.

Classified board of directors

In accordance with the terms of our amended and restated certificate of incorporation that will go into effect immediately prior to the closing of this offering, our board of directors will be divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the directors whose terms then expire will be eligible for reelection until the third annual meeting following reelection. Effective upon the closing of this offering, our directors will be divided among the three classes as follows:

- the Class I directors will be , , and their terms will expire at our first annual meeting of stockholders following this offering;
- the Class II directors will be , and their terms will expire at our second annual meeting of stockholders following this offering; and
- the Class III directors will be , and their terms will expire at our third annual meeting of stockholders following this offering.

Our amended and restated certificate of incorporation that will go into effect immediately prior to the closing of this offering will provide that the authorized number of directors may be changed only by resolution of the board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our board of directors or a change in control of our company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of our outstanding voting stock then entitled to vote in an election of directors.

Board leadership structure

Our board of directors is currently chaired by Dr. Hershberg, who also serves as our Chief Executive Officer. Our board of directors has determined that having an employee director serve as Chairman is in the best interest of our stockholders at this time because combining the roles allows one person to drive strategy and agenda-setting at the board level, as well as maintaining responsibility for executing on that strategy. Although we do not have a policy regarding the separation of the roles of Chief Executive Officer and Chairman of the board of directors, our board of directors believes that having the positions combined is the appropriate leadership structure for us at this time. We have a governance structure in place, including independent directors, designed to ensure the powers and duties of the dual role are handled responsibly. Our board of directors recognizes that, depending on the circumstances, other leadership models, such as separating the roles of Chief Executive Officer and Chairman, might be appropriate. Accordingly, our board of directors will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Role of board in risk oversight process

Our board of directors has responsibility for the oversight of our risk management processes and, either as a whole or through its committees, regularly discusses with management our major risk exposures, their

potential impact on our business and the steps we take to manage them. The risk oversight process includes receiving regular reports from board committees and members of senior management to enable our board of directors to understand our risk identification, risk management and risk mitigation strategies with respect to areas of potential material risk, including operations, finance, legal, regulatory, strategic and reputational risk.

The audit committee reviews information regarding liquidity and operations, and oversees our management of financial risks. Periodically, the audit committee reviews our policies with respect to risk assessment, risk management, loss prevention and regulatory compliance. Oversight by the audit committee includes direct communication with our external auditors, and discussions with management regarding significant risk exposures and the actions management has taken to limit, monitor or control such exposures. The compensation committee is responsible for assessing whether any of our compensation policies or programs has the potential to encourage excessive risk-taking. The nominating and corporate governance committee manages risks associated with the independence of the board of directors, corporate disclosure practices and potential conflicts of interest. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire board of directors is regularly informed through committee reports about such risks. Matters of significant strategic risk are considered by our board of directors as a whole.

Board committees and independence

Our board of directors has established three standing committees – audit, compensation and nominating and corporate governance – each of which operates under a charter that has been approved by our board of directors.

Audit committee

The audit committee's main function is to oversee our accounting and financial reporting processes and the audits of our financial statements. This committee's responsibilities include, among other things:

- appointing our independent registered public accounting firm;
- evaluating the qualifications, independence and performance of our independent registered public accounting firm;
- approving the audit and non-audit services to be performed by our independent registered public accounting firm;
- reviewing the design, implementation, adequacy and effectiveness of our internal accounting controls and our critical accounting policies;
- discussing with management and the independent registered public accounting firm the results of our annual audit and the review of our quarterly unaudited financial statements;
- reviewing, overseeing and monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to financial statements or accounting matters;
- reviewing on a periodic basis, or as appropriate, any investment policy and recommending to our board of directors any changes to such investment policy;
- reviewing with management and our auditors any earnings announcements and other public announcements regarding our results of operations;
- preparing the report that the SEC requires in our annual proxy statement;

- reviewing and approving any related party transactions and reviewing and monitoring compliance with our code of conduct and ethics; and
- reviewing and evaluating, at least annually, the performance of the audit committee and its members including compliance of the audit committee with its charter.

The members of our audit committee are , and . serves as the chairperson of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and Nasdaq . Our board of directors has determined that is an "audit committee financial expert" as defined by applicable SEC rules and has the requisite financial sophistication as defined under the applicable Nasdaq listing standards. Our board of directors has determined each of , and is independent under the applicable rules of the SEC and Nasdaq. Upon the listing of our common stock on Nasdaq, the audit committee will operate under a written charter that satisfies the applicable standards of the SEC and Nasdaq.

Compensation committee

Our compensation committee approves policies relating to compensation and benefits of our officers and employees. The compensation committee approves corporate goals and objectives relevant to the compensation of our Chief Executive Officer and other executive officers, evaluates the performance of these officers in light of those goals and objectives and approves the compensation of these officers based on such evaluations. The compensation committee also approves the issuance of stock options and other awards under our equity plans. The compensation committee will review and evaluate, at least annually, the performance of the compensation committee and its members, including compliance by the compensation committee with its charter.

The members of our compensation committee are , and . serves as the chairperson of the committee. Our board of directors has determined that each of and is independent under the applicable Nasdaq listing standards and is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act. Upon the listing of our common stock on Nasdaq, the compensation committee will operate under a written charter, which the compensation committee will review and evaluate at least annually.

Nominating and corporate governance committee

The nominating and corporate governance committee is responsible for assisting our board of directors in discharging the board of directors' responsibilities regarding the identification of qualified candidates to become board members, the selection of nominees for election as directors at our annual meetings of stockholders (or special meetings of stockholders at which directors are to be elected), and the selection of candidates to fill any vacancies on our board of directors and any committees thereof. In addition, the nominating and corporate governance committee is responsible for overseeing our corporate governance policies, reporting and making recommendations to our board of directors concerning governance matters and oversight of the evaluation of our board of directors.

The members of our nominating and corporate governance committee are , and . serves as the chairperson of the committee. Our board of directors has determined that each of , and is independent under the applicable Nasdaq listing standards. Upon the listing of our common stock on Nasdaq, the nominating and corporate governance committee will operate under a written charter, which the nominating and corporate governance committee will review and evaluate at least annually.

Compensation committee interlocks and insider participation

None of the members of our compensation committee has ever been one of our officers or employees. None of our executive officers currently serves, or has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Board diversity

Upon the closing of this offering, our nominating and corporate governance committee will be responsible for reviewing with the board of directors, on an annual basis, the appropriate characteristics, skills and experience required for the board of directors as a whole and its individual members. In evaluating the suitability of individual candidates (both new candidates and current members) for election or appointment, the nominating and corporate governance committee and the board of directors will take into account many factors, including the following:

- personal and professional integrity, ethics and values;
- experience in corporate management, such as serving as an officer or former officer of a publicly-held company;
- experience as a board member or executive officer of another publicly-held company;
- strong finance experience;
- diversity of expertise and experience in substantive matters pertaining to our business relative to other board members;
- diversity of background and perspective, including, but not limited to, with respect to age, gender, race, place of residence and specialized experience;
- experience relevant to our business industry and with relevant social policy concerns; and
- relevant academic expertise or other proficiency in an area of our business operations.

Currently, our board of directors evaluates, and following the closing of this offering will evaluate, each individual in the context of the board of directors as a whole, with the objective of assembling a group that can best maximize the success of the business and represent stockholder interests through the exercise of sound judgment using its diversity of experience in these various areas.

Code of business conduct and ethics

We plan to adopt a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, which will be effective upon the closing of this offering. Upon the closing of this offering, our code of business conduct and ethics will be available under the Corporate Governance section of our website at www.hillevax.com. In addition, we intend to post on our website all disclosures that are required by law or the listing standards of Nasdaq concerning any amendments to, or waivers from, any provision of the code. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

Executive and director compensation

This section discusses the material components of the executive compensation program for our named executive officer who is named in the "Summary Compensation Table" below.

For 2020, our only "named executive officer" was Robert Hershberg, M.D., Ph.D, our Chairman, President and Chief Executive Officer.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt following the closing of this offering may differ materially from the currently planned programs summarized in this discussion.

We are an "emerging growth company," as that term is used in the JOBS Act, and have elected to comply with the reduced compensation disclosure requirements available to emerging growth companies under the JOBS Act.

Summary compensation table

The following table presents summary information regarding the total compensation that was awarded to, earned by or paid to our named executive officer for services rendered during the year ended December 31, 2020.

Name and principal position	Year	Salary($)(1)	Bonus($)	Stock awards($)	All other compensation($)	Total($)
Robert Hershberg, M.D., Ph.D. Chairman, President and Chief Executive Officer	2020	388,258	—	—	—	388,258

(1) Dr. Hershberg served as an independent contractor and not an employee in fiscal year 2020. Amount reported as salary represents retainers paid to Dr. Hershberg for his consulting services during 2020.

Narrative disclosure to summary compensation table

Annual base salary

The compensation of our executive officers is generally determined and approved at the time of their commencement of employment or service by our board of directors or the compensation committee.

During 2020 and through February 8, 2021, Dr. Hershberg was a consultant and received a monthly retainer of $41,667.

Commencing with his commencement of employment on February 8, 2021, Dr. Hershberg's annual base salary for his service as our Chief Executive Officer was $500,000. His annual base salary was adjusted down to $400,000 effective on September 1, 2021, subsequent to our entry into the Takeda License with Takeda and the closing of the August 2021 Note Financing, pursuant to his employment letter, as described below.

Bonus compensation

From time to time our board of directors or compensation committee may approve bonuses for our executive officers based on individual performance, company performance or as otherwise determined appropriate. No bonus plan was in effect during 2020.

Dr. Hershberg's target annual bonus for 2021 is equal to 35% of his annual base salary, which annual bonus will be prorated to reflect the portion of the year following the closing of the August 2021 Note Financing.

Equity-based incentive awards

Our equity-based incentive awards are designed to align our interests and the interests of our stockholders with those of our employees and consultants, including our named executive officer. We did not grant any equity awards during 2020.

Stock issuance to Dr. Hershberg and stock restriction agreement with Dr. Hershberg. On April 1, 2020, we issued and sold to Dr. Hershberg, 462,500 shares of our common stock for a per share purchase price of $0.00105946, after giving effect to the 943.8776-for-1 forward stock split immediately prior to the Merger (these shares are referred to as the "Hershberg Founders' Shares").

On February 8, 2021, we entered into a stock restriction agreement with Dr. Hershberg whereby the Hershberg Founders' Shares were subjected to new vesting conditions, such that 115,625 shares were deemed vested as of February 8, 2021 and the remaining 346,875 shares were converted into unvested shares of restricted stock that vest in equal monthly installments over the 48 months thereafter ending on February 8, 2025, subject, in each case, to continued employment or status as a service provider. Any unvested Hershberg Founders' Shares held by Dr. Hershberg upon a termination of employment or service (after giving effect to any accelerated vesting provisions described further below), will be subject to repurchase by us at the original purchase price.

Under Dr. Hershberg's stock restriction agreement, 100% of any unvested Hershberg Founders' Shares will automatically accelerate and vest upon (1) a termination of his employment or service by us without cause or by him for good reason, (2) our failure to engage him as a consultant in connection with any mutually agreed upon termination of his employment or service as a member of our board of directors in a manner that ensures there is no break in his service to us for purposes of the stock restriction agreement, including any failure by us to execute the consulting agreement in the form attached to the stock restriction agreement prior to or concurrently with any such termination, and (3) his death or disability, in each case, subject to his continued employment or service through the date of such event.

For purposes of the stock restriction agreement with Dr. Hershberg:

- "cause" means: (1) his commission of an act of fraud, embezzlement or dishonesty, or the commission of some other illegal act, that has a demonstrable adverse impact on us or any successor or affiliate; (2) his conviction of, or plea of "guilty" or "no contest" to, a non-vehicular felony or any crime involving fraud, dishonesty or moral turpitude; (3) any intentional, unauthorized use or disclosure by him of our confidential information or trade secrets; (4) his gross negligence, insubordination or material violation of any duty of loyalty, or any other demonstrable material misconduct; (5) his ongoing and repeated failure or refusal to perform or neglect of duties as required by his employment or consulting agreement or comply with the reasonable and lawful instructions given by the board, which failure, refusal or neglect continues for 15 days of receiving written notice thereof (provided that it is understood that this clause (5) does not permit us to terminate Dr. Hershberg for cause solely because of his failure to meet specified performance objectives or achieve a specific result or outcome, or our dissatisfaction with the quality of services provided by him in the good faith performance of his duties to us); and (6) willful, material breach of any material company policy or any material provision of any employment or consulting agreement or any proprietary information and inventions assignment agreement; provided, that, in the case of clauses (4), (5) and (6), Dr. Hershberg shall receive written notice thereof and have an opportunity to remedy such breach.
- "disability" means the inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months.
- "good reason" means any of the following without his written consent: (1) a material diminution in his authority, duties or responsibilities, including, while Dr. Hershberg is an employee, a requirement that he

report to a corporate officer in lieu of the board; (2) a material diminution in his base compensation or consulting fees, unless such reduction is imposed across-the-board to senior management; (3) a material change in the geographic location at which he must perform his duties (and the parties acknowledge that a relocation of the geographic location at which he must perform his services to a location that increases his one-way commute from his residence by more than 50 miles from his principal place of employment prior to such relation will constitute a material change for purposes of this clause (3)); or (4) any other action or inaction that constitutes a material breach by us or any successor or affiliate of our obligations to him under the stock restriction agreement or any written employment or consulting agreement with the us or any successor or affiliate; provided, that, Dr. Hershberg's voluntary termination shall only constitute good reason if such termination occurs within six months following the initial existence of the act or failure to act constituting good reason.

Stock issuance to David Stocks and stock restriction agreement with Mr. Socks. On June 27, 2019, North Bridge V issued and sold to a family trust of which David Socks, our Chief Financial Officer and Chief Business Officer, is a trustee (the "David Socks Trust"), 462,500 shares of North Bridge V common stock for a per share purchase price of $0.00105946, after giving effect to the 943.8776-for-1 forward stock split immediately prior to Merger (the "Socks Founders' Shares").

On February 8, 2021, we entered into a stock restriction agreement with the David Socks Trust and Mr. Socks, whereby the Socks Founders' Shares were subjected to new vesting conditions, such that 115,625 shares were deemed vested as of February 8, 2021 and the remaining 346,875 shares were converted into unvested shares of restricted stock that vest in equal monthly installments over the 48 months thereafter ending on February 8, 2025, subject, in each case, to Mr. Socks' continued employment or status as a service provider. Any unvested Socks Founders' Shares held by the David Socks Trust upon a termination of Mr. Socks' employment or service (after giving effect to any accelerated vesting provisions described further below), will be subject to repurchase by us at the original purchase price. The terms of the stock restriction agreement with the David Socks Trust and Mr. Socks are substantially identical to the terms of the stock restriction agreement with Dr. Hershberg described above.

Employment letters with our executive officers

Each of our executive officers' employment is "at will" and may be terminated at any time, subject to our contractual obligations to them as described below.

Employment letter with Dr. Hershberg

We have entered into an employment letter with Dr. Hershberg, our President and Chief Executive Officer, setting forth the terms of his employment, effective February 8, 2021.

The employment letter for Dr. Hershberg provides for an annual base salary of $500,000, which was adjusted down to $400,000 effective September 1, 2021, subsequent to the closing of the August 2021 Note Financing, and an annual bonus with a target amount equal to 35% of Dr. Hershberg's annual base salary, which annual bonus will be prorated to reflect the portion of the year following the closing of the August 2021 Note Financing. Under the employment letter for Dr. Hershberg, he will devote at least 70% of his time to our company. Additionally, under the employment letter, Dr. Hershberg is eligible to participate in all employee benefit plans and programs generally available to similarly situated employees of our company and is entitled to vacation benefits in accordance with our policies.

Regardless of the manner in which Dr. Hershberg's employment terminates, he will be entitled to receive amounts previously earned during his term of employment, including unpaid salary and accrued but unused

vacation. In addition, Dr. Hershberg will be entitled to certain severance benefits under his employment letter, subject to his execution of a release of claims, return of all company property, compliance with post-termination obligations and resignation from positions with us.

Dr. Hershberg's employment letter provides for severance benefits for certain terminations that arise during and outside a change in control period (as defined below). Upon a termination without cause or resignation for good reason outside of a change in control period, Dr. Hershberg will be entitled to: (1) continuation of his base salary for 9 months (such applicable period, the "severance period"), (2) a lump sum equal to his target bonus for the year during which such termination occurs, prorated for the portion of the calendar year in which his termination occurs that has elapsed prior to such termination, plus any unpaid annual bonus for the calendar year prior to the year in which his termination occurs, to the extent he is entitled to such bonus and if such bonus has not already been paid, (3) payments of the COBRA premiums for his and his eligible dependents until the earliest of (a) the end of the severance period, (b) expiration of his eligibility for continuation coverage under COBRA, or (c) the date he becomes eligible for health insurance coverage in connection with his new employment, and (4) acceleration of the vesting of all outstanding equity awards that would have vested during the severance period (provided that Dr. Hershberg's Founders' Shares will be governed by his stock restriction agreement, as described above).

Upon a termination without cause or resignation for good reason that occurs within 24 months after a change in control (the "change in control period"), Dr. Hershberg will be entitled to all of the same severance benefits described above, except (1) the severance period is increased from 9 months to 12 months, (2) Dr. Hershberg will be entitled to a lump sum payment equal to his target bonus for the year during which such termination occurs, to the extent he is entitled to such bonus and if such bonus for the year during which such termination occurs, plus any unpaid annual bonus for the calendar year prior to the year in which his termination occurs, to the extent he is entitled to such bonus and if such bonus has not already been paid, and (3) all unvested and outstanding equity awards will become fully vested on the effective date of his release (provided that Dr. Hershberg's Founders' Shares will be governed by his stock restriction agreement, as described above).

For purposes of Dr. Hershberg's employment letter:

- "cause" means (1) his commission of an act of fraud, embezzlement or dishonesty, or the commission of some other illegal act, that has a demonstrable adverse impact on us or any successor or affiliate; (2) his conviction of, or plea of "guilty" or "no contest" to, a non-vehicular felony or any crime involving fraud, dishonesty or moral turpitude; (3) any intentional, unauthorized use or disclosure by him of our confidential information or trade secrets; (4) his gross negligence, insubordination or material violation of any duty of loyalty to us or any successor or affiliate thereof, or any other demonstrable material misconduct on his part; (5) his ongoing and repeated failure or refusal to perform or neglect of his duties as required by the employment letter or comply with the reasonable and lawful instructions given by the board, which failure, refusal or neglect continues for 15 days following his receipt of written notice from the board of directors stating with specificity the nature of such failure, refusal or neglect (provided that it is understood that this clause (5) does not permit us to terminate Dr. Hershberg for cause solely because of his failure to meet specified performance objectives or achieve a specific result or outcome, or our dissatisfaction with the quality of services provided by him in the good faith performance of his duties to us); or (6) his willful, material breach of any material company policy or any material provision of the employment letter or his proprietary information and inventions assignment agreement; provided, that, in the case of clauses (4), (5) and (6), Dr. Hershberg shall receive written notice thereof and have an opportunity to remedy such breach.
- "change in control" has the same meaning given to such term in our 2021 Equity Incentive Plan (the 2021 Plan); and

- "good reason" means any of the following without his written consent: (1) a material diminution in his authority, duties or responsibilities, including a requirement that he report to a corporate officer in lieu of the board; (2) a material diminution in his base compensation (and any diminution of 10% or more shall be considered material for this purpose, regardless of whether such diminution occurs due to a single reduction or a series of reductions in his base compensation), unless such a reduction is imposed across-the-board to senior management; (3) a material change in the geographic location at which he must perform his duties (and the parties acknowledge that a relocation of the geographic location at which he must perform his services to a location that increases his one-way commute from his residence by more than 50 miles from his principal place of employment prior to such relation will constitute a material change for purposes of this clause (3)); or (4) any other action or inaction that constitutes a material breach by us or any successor or affiliate of its obligations to his under the employment letter or his stock restriction agreement. Dr. Hershberg must provide written notice to us of the occurrence of any of the foregoing events or conditions without his written consent within 6 months of the occurrence of such event, and we will have 30 days to cure such event or condition after receipt of written notice from Dr. Hershberg. Dr. Hershberg's resignation for good reason must occur within 30 days following the expiration of the 30-day cure period.

Employment letters with other executives

Employment letters with Dr. Kohli and Mr. Socks

We entered into employment letters with each of Dr. Kohli and Mr. Socks setting forth the terms of their employment as our Chief Operating Officer and Chief Financial Officer, Chief Business Officer and Treasurer, respectively.

The employment letter for Dr. Kohli provides for an annual base salary of $200,000, which adjusted up to $400,000 on March 1, 2021, and an annual bonus with a target amount equal to 35% of Dr. Kohli's annual base salary. Under the employment letter for Dr. Kohli, he will devote at least 70% of his time to our company. Additionally, under the employment letter, Dr. Kohli is eligible to participate in all employee benefit plans and programs generally available to similarly situated employees of our company and is entitled to vacation benefits in accordance with our policies.

The employment letter for Mr. Socks provides for an annual base salary of $200,000, which was increased to $400,000 on March 1, 2021, and an annual bonus with a target amount equal to 35% of Mr. Socks' annual base salary. Under the employment letter for Mr. Socks, he will devote at least 70% of his time to our company. Additionally, under the employment letter, Mr. Socks is eligible to participate in all employee benefit plans and programs generally available to similarly situated employees of our company and is entitled to vacation benefits in accordance with our policies.

Regardless of the manner in which each executive's employment terminates, he will be entitled to receive amounts previously earned during his term of employment, including unpaid salary and accrued but unused vacation. In addition, each executive will be entitled to certain severance benefits under his employment letter, subject to execution of a release of claims, return of all company property, compliance with post-termination obligations and resignation from positions with us.

The executive employment letters provide for severance benefits for certain terminations that arise during and outside a change in control period (as defined below). Upon a termination without cause or resignation for good reason outside of a change in control period, an executive will be entitled to: (1) continuation of his base salary for 9 months (such applicable period, the "severance period"), (2) a lump sum equal to his target bonus for the year during which such termination occurs, plus any unpaid annual bonus for the calendar year prior to the year in which his termination occurs, to the extent he is entitled to such bonus and if such bonus has not already been paid, (3) payments of the COBRA premiums for his and his eligible dependents until the earliest of

(a) the end of the severance period, (b) expiration of his eligibility for continuation coverage under COBRA, or (c) the date he becomes eligible for health insurance coverage in connection with his new employment, and (4) acceleration of the vesting of all outstanding equity awards that would have vested during the severance period (provided that, with respect to Mr. Socks, the Socks Founders' Shares will be governed by his stock restriction agreement, as described above).

Upon a termination without cause or resignation for good reason that occurs 24 months after a change in control (the "change in control period"), an executive will be entitled to all of the same severance benefits described above, except (1) the severance period is increased from 9 months to 12 months, (2) the executive will be entitled to a lump sum payment equal to his target bonus for the year during which such termination occurs, to the extent he is entitled to such bonus and if such bonus for the year during which such termination occurs, plus any unpaid annual bonus for the calendar year prior to the year in which his termination occurs, to the extent he is entitled to such bonus and if such bonus has not already been paid, and (3) all unvested and outstanding equity awards will become fully vested on the effective date of his release (provided that, with respect to Mr. Socks, the Socks Founders' Shares will be governed by his stock restriction agreement, as described above).

For purposes of the executive employment letters, the terms "cause," "change in control" and "good reason" generally have the same meanings as those described above for Dr. Hershberg's employment letter.

Employment agreement with Dr. Borkowski

We entered into an employment agreement with Dr. Borkowski setting forth the terms of her employment, effective May 1, 2021.

The employment agreement with Dr. Borkowski provides for an annual base salary of CHF 355,000, and an annual bonus with a target amount equal to 30% of Dr. Borkowski's annual base salary. Under the employment agreement for Dr. Borkowski, her employment is on a full-time basis, with her principal place of work being Zurich, Switzerland, with the agreement that she will work approximately two weeks out of every month in the Greater Boston area. Additionally, under the employment agreement, Dr. Borkowski is generally eligible to participate in employee benefit plans and programs available to similarly situated employees at our company and is entitled to four weeks of paid vacation per year.

The employment agreement also provides for an indefinite term of employment, which may be terminated by either party upon nine months' notice. Upon the termination of her employment, Dr. Borkowski is subject to a one year non-competition period covering the territories of Switzerland and Germany, during which the company will pay Dr. Borkowski monthly compensation equal to 100% of her monthly gross salary. A violation of this non-competition period will result in Dr. Borkowski owing liquidated damages to the company in the amount of 50% of the annual base salary for each instance of violation. The company also reserves the right to request, by way of specific performance, that Dr. Borkowski cease and desist any activity which violates the non-competition provision. Dr. Borkowski is also subject to a one year non-solicitation provision following her termination.

Outstanding equity awards at fiscal year-end

Our named executive officer did not hold any equity awards as of December 31, 2020.

Other elements of compensation

Perquisites, health, welfare and retirement benefits

Our executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, group life, disability and accidental death and dismemberment insurance plans, in each case on the

generally on same basis as all of our other employees. We generally do not provide perquisites or personal benefits to our named executive officer, except in limited circumstances. Our board of directors may elect to adopt qualified or non-qualified benefit plans in the future if it determines that doing so is in our best interests.

Nonqualified deferred compensation

We do not maintain nonqualified defined contribution plans or other nonqualified deferred compensation plans. Our board of directors may elect to provide our officers and other employees with non-qualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

Severance and change in control benefits

Our executive officers may become entitled to certain benefits or enhanced benefits upon a qualifying termination of employment, including in connection with a change in control, pursuant to their employment letters. In addition, the stock restriction agreements with Dr. Hershberg and the David Socks Trust provide for accelerated vesting of all outstanding Hershberg Founders' Shares and Socks Founders' Shares, respectively, upon a qualifying termination. For additional discussion, please see "—Equity-Based Incentive Awards" and "—Employment Letters with our Executive Officers" above.

Incentive award plans

2022 incentive award plan

Effective the day prior to the first public trading date of our common stock, we intend to adopt and ask our stockholders to approve the 2022 Plan under which we may grant cash and equity based incentive awards to eligible service providers in order to attract, retain and motivate the persons who make important contributions to the company. The material terms of the 2022 Plan, as it is currently contemplated, are summarized below. Our board of directors is still in the process of developing, approving and implementing the 2022 Plan and, accordingly, this summary is subject to change.

Shares available. The number of shares initially available for issuance under awards granted pursuant to the 2022 Plan will be the sum of (1) shares of our common stock, plus (2) any shares subject to outstanding awards under the 2021 Plan as of the effective date of the 2022 Plan that become available for issuance under the 2022 Plan thereafter in accordance with its terms. The number of shares initially available for issuance will be increased by an annual increase on January 1 of each calendar year beginning in 2022 and ending in and including 2031, equal to the lesser of (1) % of the shares of common stock outstanding on the final day of the immediately preceding calendar year and (2) such smaller number of shares as determined by our board of directors. No more than shares of common stock may be issued upon the exercise of incentive stock options under the 2022 Plan. Shares available under the 2022 Plan may be authorized but unissued shares, shares purchased on the open market or treasury shares.

If an award under the 2022 Plan expires, lapses or is terminated, exchanged for cash, surrendered, repurchased, or canceled without having been fully exercised or forfeited, any unused shares subject to the award will, as applicable, become or again be available for new grants under the 2022 Plan. Awards granted under the 2022 Plan upon the assumption of, or in substitution for, awards authorized or outstanding under a qualifying equity plan maintained by an entity with which we enter into a merger or similar corporate transaction will not reduce the shares available for grant under the 2022 Plan.

Eligibility and administration. Our employees, consultants and directors, and employees and consultants of our subsidiaries will be eligible to receive awards under the 2022 Plan. The 2022 Plan will be administered by

our board of directors with respect to awards to non-employee directors and by our compensation committee with respect to other participants, each of which may delegate its duties and responsibilities to committees of our directors and/or officers (referred to collectively as the plan administrator below), subject to the limitations that may be imposed under the 2022 Plan, Section 16 of the Exchange Act, stock exchange rules and other applicable laws. The plan administrator will have the authority to take all actions and make all determinations under the 2022 Plan, to interpret the 2022 Plan and award agreements and to adopt, amend and repeal rules for the administration of the 2022 Plan as it deems advisable. The plan administrator will also have the authority to determine which eligible service providers receive awards, grant awards and set the terms and conditions of all awards under the 2022 Plan, including any vesting and vesting acceleration provisions, subject to the conditions and limitations in the 2022 Plan.

Awards. The 2022 Plan provides for the grant of stock options, including incentive stock options (ISOs), and nonqualified stock options (NSOs), restricted stock, dividend equivalents, restricted stock units (RSUs), stock appreciation rights (SARs), and other stock or cash-based awards. Certain awards under the 2022 Plan may constitute or provide for payment of "nonqualified deferred compensation" under Section 409A of the Code. All awards under the 2022 Plan will be set forth in award agreements, which will detail the terms and conditions of awards, including any applicable vesting and payment terms and post-termination exercise limitations. A brief description of each award type follows.

- *Stock options and SARs.* Stock options provide for the purchase of shares of our common stock in the future at an exercise price set on the grant date. ISOs, by contrast to NSOs, may provide tax deferral beyond exercise and favorable capital gains tax treatment to their holders if certain holding period and other requirements of the Code are satisfied. The exercise price of a stock option will not be less than 100% of the fair market value of the underlying share on the date of grant (or 110% in the case of ISOs granted to certain significant stockholders), except with respect to certain substitute options granted in connection with a corporate transaction. The term of a stock option may not be longer than ten years (or five years in the case of ISOs granted to certain significant stockholders). Vesting conditions determined by the plan administrator may apply to stock options and may include continued service, performance and/or other conditions. ISOs generally may be granted only to our employees and employees of our parent or subsidiary corporations, if any. SARs entitle their holder, upon exercise, to receive from us an amount equal to the appreciation of the shares subject to the award between the grant date and the exercise date. The exercise price of a SAR will not be less than 100% of the fair market value of the underlying share on the date of grant (except with respect to certain substitute SARs granted in connection with a corporate transaction), and the term of a SAR may not be longer than ten years. Vesting conditions determined by the plan administrator may apply to SARs and may include continued service, performance and/or other conditions.
- *Restricted stock and RSUs.* Restricted stock is an award of nontransferable shares of our common stock that remain forfeitable unless and until specified conditions are met, and which may be subject to a purchase price. RSUs are contractual promises to deliver shares of our common stock in the future, which may also remain forfeitable unless and until specified conditions are met and may be accompanied by the right to receive the equivalent value of dividends paid on shares of our common stock prior to the delivery of the underlying shares. The plan administrator may provide that the delivery of the shares underlying RSUs will be deferred on a mandatory basis or at the election of the participant. The terms and conditions applicable to restricted stock and RSUs will be determined by the plan administrator, subject to the conditions and limitations contained in the 2022 Plan.
- *Other stock or cash based awards.* Other stock or cash-based awards are awards of cash, fully vested shares of our common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our common stock or other property. Other stock or cash-based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone

payments and as payment in lieu of compensation to which a participant is otherwise entitled. The plan administrator will determine the terms and conditions of other stock or cash based awards, which may include any purchase price, performance goal, transfer restrictions and vesting conditions.

Performance criteria. The plan administrator may select performance criteria for an award to establish performance goals for a performance period. Performance criteria under the 2022 Plan may include, but are not limited to, the following: net earnings or losses (either before or after one or more of interest, taxes, depreciation, amortization, and non-cash equity based compensation expense); gross or net sales or revenue or sales or revenue growth; net income (either before or after taxes) or adjusted net income; profits (including but not limited to gross profits, net profits, profit growth, net operation profit or economic profit), profit return ratios or operating margin; budget or operating earnings (either before or after taxes or before or after allocation of corporate overhead and bonus); cash flow (including operating cash flow and free cash flow or cash flow return on capital); return on assets; return on capital or invested capital; cost of capital; return on stockholders' equity; total stockholder return; return on sales; costs, reductions in costs and cost control measures; expenses; working capital; earnings or loss per share; adjusted earnings or loss per share; price per share or dividends per share (or appreciation in or maintenance of such price or dividends); regulatory achievements or compliance; implementation, completion or attainment of objectives relating to research, development, regulatory, commercial, or strategic milestones or developments; market share; economic value or economic value added models; division, group or corporate financial goals; customer satisfaction/growth; customer service; employee satisfaction; recruitment and maintenance of personnel; human resources management; supervision of litigation and other legal matters; strategic partnerships and transactions; financial ratios (including those measuring liquidity, activity, profitability or leverage); debt levels or reductions; sales related goals; financing and other capital raising transactions; cash on hand; acquisition activity; investment sourcing activity; and marketing initiatives, any of which may be measured in absolute terms or as compared to any incremental increase or decrease. Such performance goals also may be based solely by reference to the company's performance or the performance of a subsidiary, division, business segment or business unit of the company or a subsidiary, or based upon performance relative to performance of other companies or upon comparisons of any of the indicators of performance relative to performance of other companies. When determining performance goals, the plan administrator may provide for exclusion of the impact of an event or occurrence which the plan administrator determines should appropriately be excluded, including, without limitation, non-recurring charges or events, acquisitions or divestitures, changes in the corporate or capital structure, events unrelated to the business or outside of the control of management, foreign exchange considerations, and legal, regulatory, tax or accounting changes.

Certain transactions. In connection with certain corporate transactions and events affecting our common stock, including a change in control, or change in any applicable laws or accounting principles, the plan administrator has broad discretion to take action under the 2022 Plan to prevent the dilution or enlargement of intended benefits, facilitate the transaction or event or give effect to the change in applicable laws or accounting principles. This includes canceling awards for cash or property, accelerating the vesting of awards, providing for the assumption or substitution of awards by a successor entity, adjusting the number and type of shares subject to outstanding awards and/or with respect to which awards may be granted under the 2022 Plan and replacing or terminating awards under the 2022 Plan. In addition, in the event of certain non-reciprocal transactions with our stockholders, the plan administrator will make equitable adjustments to the 2022 Plan and outstanding awards as it deems appropriate to reflect the transaction. In the event of a change in control of the company (as defined in the 2022 Plan), to the extent that the surviving entity declines to continue, convert, assume or replace outstanding awards, then all such awards may become fully vested and exercisable in connection with the transaction. Individual award agreements may provide for additional accelerated vesting and payment provisions.

Provisions of the 2022 plan relating to director compensation. The 2022 Plan provides that the plan administrator may establish compensation for non-employee directors from time to time subject to the 2022 Plan's limitations. Prior to commencing this offering, we intend to approve and implement a compensation program for our non-employee directors. Our board of directors or its authorized committee may modify the non-employee director compensation program from time to time in the exercise of its business judgment, taking into account such factors, circumstances and considerations as it shall deem relevant from time to time, provided that the sum of any cash compensation or other compensation and the grant date fair value of any equity awards granted under the 2022 Plan as compensation for services as a non-employee director during any fiscal year may not exceed $ (increased to $ in the calendar year of a non-employee director's initial service as a non-employee director or any calendar year in which a non-employee director serves as chairman of the board or lead independent director for any portion of such year), which limits shall not apply to the compensation for any non-employee director who serves in any capacity in addition to that of a non-employee director for which he or she receives additional compensation or any compensation paid to any non-employee director prior to the first calendar year following the completion of this offering. The plan administrator may make exceptions to this limit for individual non-employee directors in extraordinary circumstances, as the plan administrator may determine in its discretion, subject to the limitations in the 2022 Plan.

Foreign participants, clawback provisions, transferability and participant payments. The plan administrator may modify awards granted to participants who are foreign nationals or employed outside the United States or establish subplans or procedures to address differences in laws, rules, regulations or customs of such foreign jurisdictions. All awards will be subject to any company claw back policy as set forth in such claw back policy or the applicable award agreement. Except as the plan administrator may determine or provide in an award agreement, awards under the 2022 Plan are generally non transferrable, except by will or the laws of descent and distribution, or, subject to the plan administrator's consent, pursuant to a domestic relations order and are generally exercisable only by the participant. With regard to tax withholding obligations arising in connection with awards under the 2022 Plan and exercise price obligations arising in connection with the exercise of stock options under the 2022 Plan, the plan administrator may, in its discretion, accept cash, wire transfer or check, shares of our common stock that meet specified conditions, a promissory note, a "market sell order," such other consideration as the plan administrator deems suitable or any combination of the foregoing.

Plan amendment and termination. Our board of directors may amend or terminate the 2022 Plan at any time; however, no amendment, other than an amendment that increases the number of shares available under the 2022 Plan, may materially and adversely affect an award outstanding under the 2022 Plan without the consent of the affected participant and stockholder approval will be obtained for any amendment to the extent necessary to comply with applicable laws. Further, the plan administrator may, without the approval of our stockholders, amend any outstanding stock option or SAR to reduce its price per share, other than in the context of corporate transactions or equity restructurings, as described above. The 2022 Plan will remain in effect until the tenth anniversary of its effective date, unless earlier terminated by our board of directors. No awards may be granted under the 2022 Plan after its termination.

2021 equity incentive plan

On February 8, 2021, our board of directors and our stockholders approved the adoption of the 2021 Plan.

A total of 1,766,500 shares of our common stock are reserved for issuance under the 2021 Plan. As of September 30, 2021, 929,500 shares of our common stock were subject to outstanding restricted stock awards under the 2021 Plan, no options to purchase shares of our common stock have been granted under the 2021 Plan, and 837,000 shares of our common stock remained available for future issuance under the 2021 Plan.

After the effective date of the 2022 Plan, no additional awards will be granted under the 2021 Plan. However, the 2021 Plan will continue to govern the terms and conditions of the outstanding awards granted under it. Shares of our common stock subject to awards granted under the 2021 Plan that expire, lapse or are terminated, exchanged for cash, surrendered, repurchased or forfeited following the effective date of the 2021 Plan will be available for issuance under the 2022 Plan in accordance with its terms.

Administration. Our board of directors administers the 2021 Plan, unless it delegates authority for administration of the plan. Subject to the terms and conditions of the 2021 Plan, the administrator has the authority to select the persons to whom awards are to be made, to determine the type or types of awards to be granted to each person, determine the number of awards to grant, determine the number of shares to be subject to such awards, and the terms and conditions of such awards, and make all other determinations and decisions and to take all other actions necessary or advisable for the administration of the 2021 Plan. The plan administrator is also authorized to establish, adopt, amend or revise rules relating to administration of the 2021 Plan, subject to certain restrictions.

Eligibility. Awards under the 2021 Plan may be granted to individuals who are then our employees, consultants and members of our board of directors and our subsidiaries. Only employees may be granted ISOs.

Awards. The 2021 Plan provides that our administrator may grant or issue stock options (including NSOs and ISOs), restricted stock, RSUs, other stock-based awards, or any combination thereof. The administrator considers each award grant subjectively, considering factors such as the individual performance of the recipient and the anticipated contribution of the recipient to the attainment of our long-term goals. Each award is set forth in a separate agreement with the person receiving the award and indicates the type, terms and conditions of the award.

Certain transactions. The plan administrator has broad discretion to equitably adjust the provisions of the 2021 Plan and the terms and conditions of existing and future awards, including with respect to aggregate number and type of shares subject to the 2021 Plan and awards granted pursuant to the 2021 Plan, to prevent the dilution or enlargement of intended benefits and/or facilitate necessary or desirable changes in the event of certain transactions and events affecting our common stock, such as stock dividends, stock splits, mergers, acquisitions, consolidations and other corporate transactions. The plan administrator may also provide for the acceleration, cash-out, termination, assumption, substitution or conversion of awards in the event of a change in control or certain other unusual or nonrecurring events or transactions. In addition, in the event of certain non-reciprocal transactions with our stockholders, or an “equity restructuring,” the plan administrator will make equitable adjustments to the 2021 Plan and outstanding awards as it deems appropriate to reflect the equity restructuring.

In the event of a change of control where the acquirer does not assume awards granted under the 2021 Plan, awards issued under the 2021 Plan held by persons who have not experienced a termination of service will be subject to accelerated vesting such that 100% of the awards will become vested and exercisable or payable, as applicable, immediately prior to the change in control. Under the 2021 Plan, a change of control is generally defined as: (1) a merger or consolidation of our company with or into any other corporation or other entity or person; (2) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of our company’s assets; or (3) any other transaction, including the sale by us of new shares of our capital stock or a transfer of existing shares of our capital stock, the result of which is that a third party that is not an affiliate of us or our stockholders (or a group of third parties not affiliated with us or our stockholders) immediately prior to such transaction acquires or holds capital stock representing a majority of our outstanding voting power immediately following such transaction; provided that the following events shall not constitute a “change in control” under the 2021 Plan: (a) a transaction (other than a sale of all or substantially all of our assets) in which the holders of our voting securities immediately prior to the merger or

consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (b) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of our assets to an affiliate of ours; (c) an initial public offering of any of our securities or any other transaction principally for bona fide equity financing purposes; (d) a reincorporation solely to change our jurisdiction; or (e) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held our securities immediately before such transaction.

Plan amendment and termination. Our board of directors may terminate, amend or modify the 2021 Plan. However, stockholder approval of any amendment to the 2021 Plan must be obtained to the extent necessary and desirable to comply with any applicable law, regulation or stock exchange rule, or for any amendment to the 2021 Plan that increases the number of shares available under the 2021 Plan.

2022 employee stock purchase plan

Effective the day prior to the first public trading date of our common stock, we intend to adopt and ask our stockholders to approve the 2022 Employee Stock Purchase Plan, or the 2022 ESPP. The material terms of the 2022 ESPP, as it is currently contemplated, are summarized below. Our board of directors is still in the process of developing, approving and implementing the 2022 ESPP and, accordingly, this summary is subject to change.

The 2022 ESPP is comprised of two distinct components in order to provide increased flexibility to grant options to purchase shares under the 2022 ESPP to U.S. and to non-U.S. employees. Specifically, the 2022 ESPP authorizes (1) the grant of options to U.S. employees that are intended to qualify for favorable U.S. federal tax treatment under Section 423 of the Code, (the "Section 423 Component"), and (2) the grant of options that are not intended to be tax-qualified under Section 423 of the Code to facilitate participation for employees located outside of the U.S. who do not benefit from favorable U.S. federal tax treatment and to provide flexibility to comply with non-U.S. law and other considerations (the "Non-Section 423 Component"). Where permitted under local law and custom, we expect that the Non-Section 423 Component will generally be operated and administered on terms and conditions similar to the Section 423 Component.

Shares available; administration. A total of shares of our common stock will initially be reserved for issuance under the 2022 ESPP. In addition, the number of shares available for issuance under the 2022 ESPP will be annually increased on January 1 of each calendar year beginning in 2022 and ending in and including 2031, by an amount equal to the lesser of (1) % of the shares outstanding on the final day of the immediately preceding calendar year and (2) such smaller number of shares as is determined by our board of directors, provided that no more than shares of our common stock may be issued under the 2022 ESPP. Our board of directors or a committee of our board of directors will administer and will have authority to interpret the terms of the 2022 ESPP and determine eligibility of participants. We expect that the compensation committee will be the initial administrator of the 2022 ESPP.

Eligibility. We expect that all of our employees will be eligible to participate in the 2022 ESPP. However, an employee may not be granted rights to purchase stock under our 2022 ESPP if the employee, immediately after the grant, would own (directly or through attribution) stock possessing 5% or more of the total combined voting power or value of all classes of our stock.

Grant of rights. Stock will be offered under the 2022 ESPP during offering periods. The length of the offering periods under the 2022 ESPP will be determined by the plan administrator and may be up to 27 months long. Employee payroll deductions will be used to purchase shares on each purchase date during an offering period. The purchase dates for each offering period will be the final trading day in the offering period. Offering periods under the 2022 ESPP will commence when determined by the plan administrator. The plan administrator may,

in its discretion, modify the terms of future offering periods. In non-U.S. jurisdictions where participation in the 2022 ESPP through payroll deductions is prohibited, the plan administrator may provide that an eligible employee may elect to participate through contributions to the participant's account under the 2022 ESPP in a form acceptable to the 2022 ESPP administrator in lieu of or in addition to payroll deductions.

The 2022 ESPP permits participants to purchase common stock through payroll deductions of up to a specified percentage of their eligible compensation. The plan administrator will establish a maximum number of shares that may be purchased by a participant during any offering period. In addition, no employee will be permitted to accrue the right to purchase stock under the Section 423 Component at a rate in excess of $25,000 worth of shares during any calendar year during which such a purchase right is outstanding (based on the fair market value per share of our common stock as of the first day of the offering period).

On the first trading day of each offering period, each participant will automatically be granted an option to purchase shares of our common stock. The option will expire at the end of the applicable offering period, and will be exercised at that time to the extent of the payroll deductions accumulated during the offering period. The purchase price of the shares, in the absence of a contrary designation, will be 85% of the lower of the fair market value of our common stock on the first trading day of the offering period or on the purchase date. Participants may voluntarily end their participation in the 2022 ESPP at any time during a specified period prior to the end of the applicable offering period, and will be paid their accrued payroll deductions that have not yet been used to purchase shares of common stock. Participation ends automatically upon a participant's termination of employment.

A participant may not transfer rights granted under the 2022 ESPP other than by will or the laws of descent and distribution, and are generally exercisable only by the participant.

Certain transactions. In the event of certain non-reciprocal transactions or events affecting our common stock, the plan administrator will make equitable adjustments to the 2022 ESPP and outstanding rights. In the event of certain unusual or non-recurring events or transactions, including a change in control, the plan administrator may provide for (1) either the replacement of outstanding rights with other rights or property or termination of outstanding rights in exchange for cash, (2) the assumption or substitution of outstanding rights by the successor or survivor corporation or parent or subsidiary thereof, if any, (3) the adjustment in the number and type of shares of stock subject to outstanding rights, (4) the use of participants' accumulated payroll deductions to purchase stock on a new purchase date prior to the next scheduled purchase date and termination of any rights under ongoing offering periods or (5) the termination of all outstanding rights.

Plan amendment and termination. The plan administrator may amend, suspend or terminate the 2022 ESPP at any time. However, stockholder approval will be obtained for any amendment that increases the aggregate number or changes the type of shares that may be sold pursuant to rights under the 2022 ESPP or changes the corporations or classes of corporations whose employees are eligible to participate in the 2022 ESPP.

Director compensation

Historically, we have not paid cash or stock-based compensation to directors for their service on our board of directors.

On April 10, 2019, YamadaCo III, Inc. issued and sold to Dr. Yamada, 462,500 shares of common stock of YamadaCo III, Inc. for a per share purchase price of $0.00105946, after giving effect to the Merger.

On February 8, 2021, we entered into a stock restriction agreement with Dr. Yamada whereby Dr. Yamada's previously-acquired 462,500 shares of our common stock were subjected to new vesting conditions, such that 115,625 shares were deemed vested as of February 8, 2021 and the remaining 346,875 shares were converted into unvested shares of restricted stock that were scheduled to vest in equal monthly installments over the

48 months thereafter ending on February 8, 2025, subject, in each case, to continued employment or status as a service provider. Any unvested shares held by Dr. Yamada upon a termination of employment or service (after giving effect to any accelerated vesting provisions described further below), were subject to repurchase by us at the original purchase price.

Under Dr. Yamada's stock restriction agreement, 100% of any unvested shares automatically accelerated and vested upon his death. In connection with Dr. Yamada's passing on August 4, 2021, all unvested shares of restricted stock held by Dr. Yamada as of such date were accelerated in full.

Post-initial public offering director compensation program

In connection with this offering, we intend to adopt and ask our stockholders to approve the initial terms of our non-employee director compensation program. The material terms of the non-employee director compensation program, as it is currently contemplated, are summarized below.

The non-employee director compensation program will provide for annual retainer fees and/or long-term equity awards for our non-employee directors. We expect each non-employee director will receive an annual retainer of $. Non-employee directors serving as the chairs of the audit, compensation and nominating and corporate governance committees will receive additional annual retainers of $, $ and $, respectively. Non-employee directors serving as members of the audit, compensation and nominating and corporate governance committees will receive additional annual retainers of $, $ and $, respectively. The non-employee directors will also receive initial grants of options to purchase shares of our common stock upon election to the board of directors, which will vest in equal monthly installments over the three years following the date of grant, and thereafter annual grants of options to purchase shares of our common stock, vesting in equal monthly installments over the 12 months following the date of grant (or, if earlier, on the next occurring annual meeting of our stockholders), in each case, subject to the non-employee director continuing in service on our board of directors through such vesting dates.

Compensation under our non-employee director compensation program will be subject to the annual limits on non-employee director compensation set forth in the 2022 Plan, as described above. Our board of directors or its authorized committee may modify the non-employee director compensation program from time to time in the exercise of its business judgment, taking into account such factors, circumstances and considerations as it shall deem relevant from time to time, subject to the annual limit on non-employee director compensation set forth in the 2022 Plan. As provided in the 2022 Plan, our board of directors or its authorized committee may make exceptions to this limit for individual non-employee directors in extraordinary circumstances, as the board of directors or its authorized committee may determine in its discretion, provided that the non-employee director receiving such additional compensation may not participate in the decision to award such compensation or in other compensation decisions involving non-employee directors.

Limitations of liability and indemnification matters

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by the Delaware General Corporation Law, which prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of the director's duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Our amended and restated certificate of incorporation and our amended and restated bylaws also provide that if Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. This limitation of liability does not apply to liabilities arising under the federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation and our amended and restated bylaws also provide that we shall have the power to indemnify our employees and agents to the fullest extent permitted by law. Our amended and restated bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in this capacity, regardless of whether our amended and restated bylaws would permit indemnification. We have obtained directors' and officers' liability insurance.

We have entered into separate indemnification agreements with our directors and executive officers, in addition to indemnification provided for in our amended and restated certificate of incorporation and amended and restated bylaws. These agreements, among other things, provide for indemnification of our directors and executive officers for expenses, judgments, fines and settlement amounts incurred by this person in any action or proceeding arising out of this person's services as a director or executive officer or at our request. We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and indemnification agreements are necessary to attract and retain qualified persons as directors and executive officers.

The above description of the indemnification provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and our indemnification agreements is not complete and is qualified in its entirety by reference to these documents, each of which is filed as an exhibit to the registration statement of which this prospectus is a part.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

Certain relationships and related person transactions

The following includes a summary of transactions since our inception to which we have been a party in which the amount involved exceeded or will exceed the lesser of $120,000 and one percent of the average of our total assets at year-end for the last two completed fiscal years, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under “Executive and Director Compensation.” We also describe below certain other transactions with our directors, executive officers and stockholders. The transactions below also include transactions of North Bridge V, Inc. and YamadaCo III, Inc. prior to the Merger. We also describe below certain other transactions with our directors, executive officers and stockholders.

Convertible promissory note financings

Prior convertible promissory note financings with Frazier Life Sciences IX, L.P. and Frazier Life Sciences X, L.P.

In April 2019, YamadaCo III, Inc. entered into a convertible promissory note purchase agreement with Frazier Life Sciences IX, L.P. (FLS IX), as amended in October 2020, pursuant to which from April 2019 through September 2019 YamadaCo III issued and sold to FLS IX two convertible promissory notes and from March 2020 through October 2020, YamadaCo III issued and sold to Frazier Life Sciences X, L.P. (FLS X) two convertible promissory notes (collectively, the YamadaCo Notes), in the aggregate principal amount of approximately $1.3 million. On March 31, 2020, YamadaCo III, FLS IX and FLS X entered into a Securities Transfer Agreement (the YamadaCo Securities Transfer Agreement), pursuant to which the convertible promissory notes issued to FLS IX in 2019 were transferred to FLS X and FLS IX assigned all of its rights, remedies, obligations or liabilities under the convertible note purchase agreement to FLS X. The YamadaCo Notes accrued interest at the issuance date applicable federal rate (2.52%, 1.85%, 1.50% and 0.14%, respectively) per annum, and were due and payable upon demand by FLS X 12 months from the date of transfer for the convertible promissory notes issued in 2019, and 12 months from the date of issuance for the convertible promissory notes issued in 2020, subject to earlier conversion or repayment in the event YamadaCo III completed an equity financing or a change of control.

In May 2019, North Bridge V, Inc. entered into a convertible note purchase agreement FLS IX, pursuant to which in May 2019 North Bridge V issued and sold to FLS IX a convertible promissory note and from March 2020 through August 2020, North Bridge V issued and sold to FLS X two convertible promissory notes (collectively, the North Bridge Notes), in the aggregate principal amount of approximately $0.4 million. On March 31, 2020, North Bridge V, FLS IX and FLS X entered into a Securities Transfer Agreement (the North Bridge Securities Transfer Agreement), pursuant to which the convertible promissory notes issued to FLS IX in 2019 were transferred to FLS X and FLS IX assigned all of its rights, remedies, obligations or liabilities under the convertible note purchase agreement to FLS X. The North Bridge Notes accrued interest at the issuance date applicable federal rate (2.39%,1.50% and 0.17%, respectively) per annum, and were due and payable upon demand by FLS X 12 months from the date of transfer for the convertible promissory note issued in 2019, and 12 months from the date of issuance for the convertible promissory notes issued in 2020, subject to earlier conversion or repayment in the event North Bridge completed an equity financing or a change of control.

In March 2020, we entered into a convertible note purchase agreement with FLS X, pursuant to which in March 2020 we issued and sold to FLS X a convertible promissory note (the March 2020 HilleVax Note), in the principal amount of $0.5 million. The March 2020 HilleVax Note accrued interest at the issuance date applicable federal rate (1.50%) per annum, and was due and payable upon demand by FLS X 18 months from the date of issuance, subject to earlier conversion or repayment in the event we completed an equity financing or a change of control.

In April 2021, we entered into a convertible note purchase agreement with FLS X, as amended in June 2021 and July 2021, pursuant to which from April 2021 through June 2021 we issued and sold to FLS X three convertible promissory notes (the April 2021 HilleVax Notes), in the principal amount of $1.75 million. Each of the April 2021 HilleVax Notes accrued interest at the issuance date applicable federal rate (0.12%) per annum, and were due and payable upon demand by FLS X 18 months from the date of issuance, subject to earlier conversion or repayment in the event we completed an equity financing or a change of control.

In July 2021, we entered into a convertible note purchase agreement with FLS X, pursuant to which in July 2021 we issued and sold to FLS X a convertible promissory note (the July 2021 HilleVax Note), in the principal amount of $4.5 million. The July 2021 HilleVax Note accrued interest at the issuance date applicable federal rate (0.12%) per annum, and was due and payable upon demand by FLS X 18 months from the date of issuance, subject to earlier conversion or repayment in the event we completed an equity financing or a change of control.

The YamadaCo Notes, the North Bridge Notes, the March 2020 HilleVax Note, the April 2021 HilleVax Notes and the July 2021 HilleVax Note, in the aggregate amount of approximately $8.5 million, including accrued interest thereon, were cancelled and exchanged for August 2021 Notes issued in the August 2021 convertible note financing described below.

The general partner of FLS X is FHMLS X, L.P., and the general partner of FHMLS X, L.P. is FHMLS X, L.L.C. Patrick Heron, a member of our board of directors, is one of the managing members of FHMLS X, L.L.C.

2021 convertible promissory note financing

In August 2021, we entered into a note purchase agreement with certain investors (the Note Purchase Agreement), pursuant to which in August 2021 we issued and sold to such investors the August 2021 Notes, in the aggregate principal amount of approximately $139.5 million. The August 2021 Notes accrue interest at a rate of 6% per annum and become payable upon demand of the holders of at least a majority of the outstanding principal amount of the August 2021 Notes, including FLS X, one year from the date of issuance, subject to earlier conversion or repayment in the event we complete an equity financing or a change of control. We have not paid any interest on the August 2021 Notes to date. The participants in this August 2021 Note financing included the following 5% or greater stockholders and or entities affiliated with members of our board of directors.

Participants	Aggregate principal amount of notes
Frazier Life Sciences X, L.P.(1)	$ 35,772,111
Deerfield Private Design Fund V, L.P.(2)	$ 15,000,000
Entities affiliated with Lightspeed Venture Partners(3)	$ 10,000,000

(1) Includes (i) approximately $2.3 million of principal amount and accrued interest from the YamadaCo Notes, the North Bridge Notes and the March 2020 HilleVax Note, which converted into approximately $4.5 million principal amount of August 2021 Notes, (ii) approximately $6.3 million of principal amount and accrued interest from the April 2021 HilleVax Notes and the July 2021 HilleVax Note and (iii) $25.0 million of principal amount issued for cash consideration. Additional details regarding FLS X and its equity holdings are provided under the section titled “Principal stockholders.” Patrick Heron, a member of our board of directors, is one of the managing members of FHMLS X, L.L.C, which is an affiliate of FLS X.

(2) Elise Wang, a member of our board of directors, was a Partner at the Public Structured Finance group at Deerfield at the time of our August 2021 convertible promissory note financing.

(3) Represents notes acquired by Lightspeed Venture Partners Select IV, L.P., Lightspeed Frontier I-M L.P., Lightspeed Frontier I-E L.P. and Lightspeed Frontier I-N L.P. Shelley Chu, a member of our board of directors, was a Partner at Lightspeed Venture Partners at the time of our August 2021 convertible promissory note financing.

The outstanding principal and unpaid accrued interest due on the August 2021 Notes will automatically convert into shares of our common stock immediately prior to the closing of this offering.

Investor rights under the Note Purchase Agreement

Registration rights

The Note Purchase Agreement provides FLS X, Takeda, and all holders of the August 2021 Notes with specified registration rights relating to the registration of shares of common stock held by such entities, including shares of our common stock issuable upon conversion of the August 2021 Notes, shares of common stock held by FLS X and shares of our common stock (including shares issuable upon the exercise or conversion of any securities exercisable or convertible into shares of our common stock) held by Takeda.

The registration rights terminate upon the earlier of: (i) the closing of a qualified corporate transaction, as defined in the Note Purchase Agreement, (ii) five years after the closing of this offering or (iii) with respect to a particular holder, such time at which such holder can sell all shares held by it in compliance with Rule 144 under the Securities Act.

See the section titled “Description of capital stock—Registration rights” for more information regarding these registration rights.

Voting rights

The Note Purchase Agreement provides for rights relating to the election of members to serve on our board of directors. Pursuant to the Note Purchase Agreement, the following directors served as members of our board of directors and, as of the date of this prospectus, continue to so serve: Shelley Chu, M.D., Ph.D., Julie Gerberding, M.D. M.P.H., Robert Hershberg, M.D., Ph.D., Jeri Hilleman, Patrick Heron, Jaime Sepulveda, M.D., D.Sc., M.P.H., Susan Silbermann, Rajeev Venkayya, M.D. and Elise Wang. Dr. Hershberg, our Chairman, President and Chief Executive Officer, was initially selected to serve on our board of directors in his role as Chief Executive Officer. Dr. Chu, Mr. Heron, Mr. Venkayya and Ms. Wang were initially selected to serve on our board of directors as designees of Lightspeed Venture Partners Select IV, L.P., FLS X, Takeda and Deerfield Private Design Fund V, L.P., respectively.

The voting rights provisions of the Note Purchase Agreement will terminate upon the closing of this offering, and members previously elected to our board of directors pursuant to this agreement will continue to serve as directors until they resign, are removed or their successors are duly elected by holders of our common stock. The composition of our board of directors after this offering is described in more detail under “Management—Board composition and election of directors.”

Other rights

The Note Purchase Agreement provides certain holders of the August 2021 Notes with various additional rights including, among others, information rights, pre-emptive rights, drag along rights, rights of first refusal, co-sale rights, and certain additional covenants made by us. Except as set forth above, all rights under the Note Purchase Agreement will terminate upon the closing of this offering.

Takeda agreements

License agreement and clinical manufacturing and supply agreement

On July 2, 2021, we and Takeda, one of our 5% stockholders, entered into the Takeda License and a clinical supply agreement. The Takeda License is described in “Business—Intellectual property—License agreement with Takeda.”

In connection with the Takeda License, we (i) entered into a Stock Issuance Agreement with Takeda, pursuant to which we issued Takeda 500,000 shares of our common stock, (ii) issued the Takeda Warrant to purchase 3,500,000 shares of our common stock at an exercise price of $0.0001 per share and (iii) granted the Takeda Warrant Right, pursuant to which Takeda has a right to receive an additional common stock warrant upon the closing of this offering if Takeda's fully-diluted ownership represents less than a specified percentage of our fully-diluted capitalization, including shares issuable upon conversion of the August 2021 Notes, calculated immediately prior to the closing of this offering, each as partial consideration under the Takeda License. The Takeda Warrant expires ten years from its date of issuance, subject to its earlier termination upon the completion of certain mergers, acquisitions and similar transactions. The Takeda Warrant Right will expire upon the closing of this offering based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover of this prospectus. See the section titled "Description of capital stock—Warrants" for more information regarding the Takeda Warrant and the Takeda Warrant Right. In connection with the Takeda License, we provided Takeda with various investor rights, including pre-emptive rights, drag along rights, voting rights and certain registration rights. See "—Investor rights under the Note Purchase Agreement" above for more information regarding these voting rights and registration rights.

Merger

Initial founder equity issuances

On April 19, 2019, YamadaCo III issued and sold to Tadataka Yamada, M.D., a former member of our board of directors, 462,500 shares of YamadaCo III common stock at a purchase price of $0.00105946 per share, after giving effect to the merger described below. On April 10, 2019, YamadaCo III issued and sold to FLS IX 481,377 shares of YamadaCo III common stock at a purchase price of $0.00105946 per share, after giving effect to the merger described below. On March 31, 2020, the shares issued and sold to FLS IX were transferred to FLS X pursuant to the YamadaCo Securities Transfer Agreement.

On June 27, 2019, North Bridge V issued and sold to a family trust of which David Socks, our Chief Financial Officer and Chief Business Officer, is a trustee (the David Socks Trust), 462,500 shares of North Bridge V common stock at a purchase price of $0.00105946 per share, after giving effect to the merger described below. On May 30, 2019, North Bridge V issued and sold to FLS IX 481,377 shares of North Bridge V common stock at a purchase price of $0.00105946 per share, after giving effect to the merger described below. On March 31, 2020, the shares issued and sold to FLS IX were transferred to FLS X pursuant to the North Bridge Securities Transfer Agreement.

On April 1, 2020, we issued and sold to Robert Hershberg, M.D., Ph.D., our President and Chief Executive Officer and a member of our board of directors, 462,500 shares of our common stock at a purchase price of $0.00105946 per share. On March 31, 2020, we issued and sold to FLS X 481,377 shares of our common stock at a purchase price of $0.00105946 per share.

On February 8, 2021, we entered into stock restriction agreements with each of Dr. Hershberg, Dr. Yamada and Mr. Socks providing for vesting and a company right to repurchase the unvested shares held by Dr. Hershberg, Dr. Yamada and Mr. Socks upon the occurrence of certain events.

For more information regarding these stock issuances to Dr. Hershberg and Mr. Socks, see the section in this prospectus entitled "Executive and director compensation—Equity-based incentive awards" and "Executive and Director compensation—Narrative disclosure to summary compensation table—Director compensation."

Merger agreement

On February 8, 2021, YamadaCo III and North Bridge V merged with and into our company, with our company surviving the merger (the Merger). Immediately prior to the Merger, we effected a 943.8776-for-1 forward stock split for each outstanding share of our common stock. Effective upon the closing of the Merger, each issued and outstanding share of YamadaCo III and North Bridge V was converted into 943.8776 shares of our common stock.

Additional equity issuances

Following the Merger, on February 8, 2021, we issued and sold to FLS X 955,869 shares of our common stock at a purchase price of $0.00105946 per share.

Equity grants to executive officers and directors

We have granted restricted stock to certain of our executive officers and non-employee directors, as more fully described in the section titled "Executive and director compensation."

Employment arrangements

We have entered into employment letter agreements with our executive officers. For more information regarding these letter agreements, see the section titled "Executive and director compensation—Employment letter agreements with our executive officers."

Director and officer indemnification

We have entered into indemnification agreements with each of our directors and executive officers. These agreements, among other things, require us or will require us to indemnify each director (and in certain cases their related venture capital funds) and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director or executive officer.

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that we will indemnify each of our directors and officers to the fullest extent permitted by the Delaware General Corporation Law. Further, we have purchased a policy of directors' and officers' liability insurance that insures our directors and officers against the cost of defense, settlement or payment of a judgment under certain circumstances. For further information, see "Executive and director compensation—Limitations of liability and indemnification matters."

Policies and procedures for related person transactions

Our board of directors will adopt a written related person transaction policy, to be effective upon the closing of this offering, setting forth the policies and procedures for the review and approval or ratification of related-person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, where the amount involved exceeds the lesser of $120,000 or one percent of the average of our total assets at year-end for the last two completed fiscal years, and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person

has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our audit committee is tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

Principal stockholders

The following table sets forth information with respect to the beneficial ownership of our common stock as of September 30, 2021, and as adjusted to reflect the sale of shares of common stock in this offering, by:

- our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each person or group of affiliated persons known by us to beneficially own more than 5% of our common stock.

The number of shares beneficially owned by each stockholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which a person has sole or shared voting power or investment power. Applicable percentage ownership prior to this offering is based on 5,488,000 shares of common stock outstanding on September 30, 2021, which includes 1,626,870 shares subject to forfeiture or a right of repurchase. Applicable percentage ownership after this offering is based on the sale of shares of common stock in this offering and gives effect to the automatic conversion of the August 2021 Notes into an aggregate of shares of our common stock immediately prior to the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and assuming the conversion occurs on , 2021). In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of September 30, 2021 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. The table below excludes any potential purchases in this offering by the beneficial owners identified in the table below.

Unless otherwise indicated, the address of each beneficial owner listed below is c/o HilleVax, Inc., 75 State Street, Suite 100 - #9995, Boston, Massachusetts 02109. We believe, based on information provided to us, that each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

	Beneficial ownership prior to this offering		Beneficial ownership after this offering	
Name of beneficial owner	**Number**	**Percent**	**Number**	**Percent**
5% or greater stockholders				
Frazier Life Sciences X, L.P.(1)	2,400,000	43.7%		
Takeda Vaccines, Inc.(2)	500,000	9.1%		
Estate of Tadataka Yamada, M.D.(3)	462,500	8.4%		
Named executive officers and directors				
Rob Hershberg, M.D., Ph.D.(4)	462,500	8.4%		
Shelley Chu, Ph.D.	—	*		
Julie Gerberding, M.D. Ph.D.(5)	25,000	*		
Patrick Heron(2)	2,400,000	43.7%		
Jeri Hilleman(6)	25,000	*		
Jaime Sepulveda, M.D., D.Sc., MPH(7)	25,000	*		
Susan Silbermann(8)	25,000	*		
Rajeev Venkayya, M.D.	—	*		
Elise Wang	—	*		
All executive officers and directors as a group (12 persons)(9)	3,959,000	72.1%		

* Less than 1%.

(1) The shares are held directly by Frazier Life Sciences X, L.P. (FLS X). The general partner of FLS IX is FHMLS X, L.P., and the general partner of FHMLS X, L.P. is FHMLS X, L.L.C. James Topper, M.D., Ph.D., and Patrick Heron are the sole managing members of FHMLS X, L.L.C. and share voting and investment power of the securities held by FLS X. Dr. Topper and Mr. Heron disclaim beneficial ownership of such securities except to the extent of their pecuniary interest therein. The number of shares beneficially owned after the offering includes shares of common stock issuable upon the conversion of August 2021 Notes in the aggregate principal amount of $35.8 million plus accrued interest held by FLS X immediately prior to the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and assuming the conversion occurs on , 2021). The address for FLS X is 601 Union Street, Suite 3200, Seattle, WA 98101.

(2) The number of shares beneficially owned by Takeda Vaccines, Inc., an indirect wholly owned subsidiary of Takeda Pharmaceutical Company Limited, before the offering does not include 3,500,000 shares of common stock issuable upon exercise of the Takeda Warrant, which becomes exercisable upon the closing of this offering. The number of shares beneficially owned after the offering includes 3,500,000 shares of common stock issuable upon the exercise of the Takeda Warrant. The address for Takeda Vaccines, Inc. is 75 Sidney Street, Cambridge, Massachusetts 02139 and the address of Takeda Pharmaceutical Company Limited is 1-1, Nihonbashi-Honcho 2-chome, Chuo-ku, Tokyo, 103-8668, Japan.

(3) Consists of (i) 393,848 shares of common stock held in the Tadataka Yamada Estate, of which the spouse of Dr. Yamada is the executor, and (ii) 68,652 shares of common stock held by a family trust, for which the spouse of Dr. Yamada is a trustee.

(4) Includes 281,836 shares subject to repurchase by us within 60 days after September 30, 2021.

(5) Includes 25,000 shares subject to repurchase by us within 60 days after September 30, 2021.

(6) Includes 25,000 shares subject to repurchase by us within 60 days after September 30, 2021.

(7) Includes 25,000 shares subject to repurchase by us within 60 days after September 30, 2021.

(8) Includes 25,000 shares subject to repurchase by us within 60 days after September 30, 2021.

(9) Includes the shares described in footnotes 4 through 8 above. Also includes 457,500 shares of common stock held by David Socks, our Chief Financial Officer and Chief Business Officer, 439,000 shares of common stock held by Aditya Kohli, Ph.D., our Chief Operating Officer, and 100,000 shares held by Astrid Borkowski, M.D., Ph.D., our Chief Medical Officer. Includes 1,045,508 shares subject to repurchase by us within 60 days after September 30, 2021.

Description of capital stock

General

The following description summarizes some of the terms of our amended and restated certificate of incorporation and amended and restated bylaws and of the Delaware General Corporation Law. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and our investors' rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is a part.

Following the closing of this offering, our authorized capital stock will consist of shares of common stock, $0.0001 par value per share, and shares of preferred stock, $0.0001 par value per share.

Common stock

As of September 30, 2021, there were 5,488,000 shares of our common stock outstanding, including 1,626,870 shares of restricted common stock which are subject to forfeiture or our right of repurchase, and held of record by 38 stockholders. Based on the number of shares of common stock outstanding as of September 30, 2021, and assuming (i) the automatic conversion of the August 2021 Notes into an aggregate of shares of our common stock immediately prior to the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and assuming the conversion occurs on , 2021) and (ii) the issuance by us of shares of common stock in this offering, there will be shares of common stock outstanding upon the closing of this offering. Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders, including the election of directors, and do not have cumulative voting rights. Accordingly, the holders of a majority of the outstanding shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they so choose, other than any directors that holders of any preferred stock we may issue may be entitled to elect. Subject to supermajority votes for some matters, other matters shall be decided by the affirmative vote of our stockholders having a majority in voting power of the votes cast by the stockholders present or represented and voting on such matter. Our amended and restated certificate of incorporation and amended and restated bylaws also provide that our directors may be removed only for cause and only by the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon. In addition, the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon is required to amend or repeal, or to adopt any provision inconsistent with, several of the provisions of our amended and restated certificate of incorporation. See below in "—Anti-takeover effects of Delaware law and our certificate of incorporation and bylaws—Amendment of charter provisions."

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared by the board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, the holders of common stock will be entitled to share ratably in the assets legally available for distribution to stockholders after the payment of or provision for all of our debts and other liabilities, subject to the prior rights of any preferred stock then outstanding. Holders of common stock have no preemptive or conversion rights or other subscription rights and there are no redemption or sinking funds provisions applicable to the common stock. All outstanding shares of common stock are, and the common stock to be outstanding upon the closing of this offering will be, duly authorized, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred stock

As of the date of this prospectus, we do not have shares of preferred stock authorized or outstanding. Under the terms of our amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, our board of directors has the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the dividend, voting and other rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deterring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Warrants

In July 2021, in connection with the Takeda License, we issued the Takeda Warrant to purchase 3,500,000 shares of our common stock with an exercise price of $0.0001 per share. The Takeda Warrant contains a net exercise provision under which Takeda may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares of our common stock based on the fair market value of our common stock at the time of the net exercise of the warrant after deduction of the aggregate exercise price. The Takeda Warrant becomes exercisable upon the closing of this offering and expires ten years from its date of issuance, subject to its earlier termination upon the completion of certain mergers, acquisitions and similar transactions.

In July 2021, in connection with the Takeda License, we granted to Takeda the Takeda Warrant Right, pursuant to which Takeda has a right to right to receive an additional common stock warrant should Takeda's fully-diluted ownership represent less than a certain specified percentage of our fully-diluted capitalization, including shares issuable upon conversion of the outstanding August 2021 Notes in connection with this offering, calculated immediately prior to the closing of this offering. The Takeda Warrant Right will expire upon the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover of this prospectus).

Registration rights

As of September 30, 2021, upon the closing of this offering holders of shares of our common stock, which includes all of the shares of common stock issuable upon the automatic conversion of the August 2021 Notes, or their transferees, will be entitled to the following rights with respect to the registration of such shares for public resale under the Securities Act, pursuant to the Note Purchase Agreement by and among us and certain investors. In addition, upon the closing of this offering Takeda will be entitled to the same rights with respect to the registration of 3,500,000 shares of our common stock underlying the Takeda Warrant. The registration of shares of common stock as a result of the following rights being exercised would enable holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective.

Demand registration rights

Form S-1. If at any time beginning six months following the effective date of the registration statement of which this prospectus forms a part, the holders of at least 25% of the registrable securities request in writing that we effect a registration with respect to all or a part of the registrable securities then outstanding where the price to the public of the offering is $10.0 million or more, we may be required to provide notice to all holders of registrable securities and to use commercially reasonable efforts to effect such registration; provided, however, that we will not be required to effect such a registration if, within the preceding 12 months, we have already effected two registrations for the holders of registrable securities in response to these demand registration rights, subject to certain exceptions.

Form S-3. If at any time we become entitled under the Securities Act to register our shares on Form S-3, the holders of at least 20% of the registrable securities request in writing that we effect a registration with respect to all or a part of the registrable securities then outstanding where the price to the public of the offering is $3.0 million or more, we may be required to provide notice to all holders of registrable securities and to use commercially reasonable efforts to effect such registration; provided, however, that we will not be required to effect such a registration if, within the preceding 12 months, we have already effected two registrations on Form S-3 for the holders of registrable securities.

If the holders requesting registration intend to distribute their shares by means of an underwriting, the underwriter of such offering will have the right to limit the numbers of shares to be underwritten for reasons related to the marketing of the shares.

Piggyback registration rights

If at any time following the closing of this offering we propose to register any shares of our common stock under the Securities Act, subject to certain exceptions, the holders of registrable securities will be entitled to notice of the registration and to include their shares of registrable securities in the registration. If our proposed registration involves an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares.

Indemnification

The Note Purchase Agreement contains customary cross indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in a registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Expenses

Ordinarily, other than underwriting discounts and commissions, we will be required to pay all expenses incurred by us related to any registration effected pursuant to the exercise of these registration rights. These expenses may include all registration and filing fees, printing expenses, fees and disbursements of our counsel, reasonable fees and disbursements of a counsel for the selling securityholders, blue sky fees and expenses and the expenses of any special audits incident to the registration.

Termination of registration rights

The registration rights terminate upon the earlier of: (i) five years after the closing of this offering or (ii) with respect to a particular holder, such time at which such holder can sell all shares held by it in compliance with Rule 144 under the Securities Act.

Anti-takeover effects of Delaware law and our certificate of incorporation and bylaws

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Undesignated preferred stock

The ability of our board of directors, without action by the stockholders, to issue up to shares of undesignated preferred stock with voting or other rights or preferences as designated by our board of directors could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Stockholder meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board of directors, chief executive officer or president, or by a resolution adopted by a majority of our board of directors.

Requirements for advance notification of stockholder nominations and proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of stockholder action by written consent

Our amended and restated certificate of incorporation and amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Staggered board of directors

Our amended and restated bylaws provides that our board of directors will be divided into three classes. The directors in each class will serve for a three-year term, with one class being elected each year by our stockholders. For more information on the classified board of directors, see “Management—Board composition and election of directors.” This system of electing directors may tend to discourage a third party from attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Removal of directors

Our amended and restated certificate of incorporation provides that no member of our board of directors may be removed from office except for cause and, in addition to any other vote required by law, upon the approval of not less than two thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

Stockholders not entitled to cumulative voting

Our amended and restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our preferred stock may be entitled to elect.

Delaware anti-takeover statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed to be "interested stockholders" from engaging in a "business combination" with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors.

Choice of forum

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative form, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders, creditors or other constituents; (iii) any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware or our amended and restated certificate of incorporation or amended and restated bylaws; (iv) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws; or (v) any action asserting a claim governed by the internal affairs doctrine. The provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, our amended and restated certificate of incorporation will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause or causes of action arising under the Securities Act, including all causes of action asserted against any defendant to such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering. In any case, stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal

proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. Our amended and restated certificate of incorporation also provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this choice of forum provision.

Amendment of charter provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock, would require approval by holders of at least two thirds of the total voting power of all of our outstanding voting stock.

The provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board of directors and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer agent and registrar

The transfer agent and registrar for our common stock will be . The transfer agent and registrar's address is .

The Nasdaq Global Market listing

We have applied to list our common stock on the Nasdaq Global Market under the symbol "HLVX."

Limitations of liability and indemnification matters

For a discussion of liability and indemnification, see "Executive and director compensation—Limitations of liability and indemnification matters."

Shares eligible for future sale

Immediately prior to this offering, there was no public market for our common stock. Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock. Although we intend to apply to have our common stock listed on Nasdaq, we cannot assure you that there will be an active public market for our common stock.

Based on the number of shares of our common stock outstanding as of September 30, 2021, and assuming (i) the issuance of shares in this offering, (ii) the automatic conversion of the August 2021 Notes into an aggregate of shares of our common stock immediately prior to the closing of this offering (based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and assuming the conversion occurs on ,2021), (iii) no exercise of the underwriters' option to purchase additional shares of common stock and (iv) no exercise of outstanding options, warrants or other rights, we will have outstanding an aggregate of shares of common stock immediately following this offering.

Of these shares, all shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act. Shares purchased by our affiliates would be subject to the Rule 144 resale restrictions described below, other than the holding period requirement.

The remaining shares of common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration, such as under Rule 144 or 701 under the Securities Act, each of which is summarized below. We expect that substantially all of these shares will be subject to the 180-day lock-up period under the lock-up agreements described below.

In addition, 3,500,000 shares of common stock issuable to Takeda upon the exercise of the Takeda Warrant will become exercisable upon the closing of this offering. Upon exercise of the Takeda Warrant, these shares of common stock will be eligible for sale subject to the lock–up agreements described below and Rules 144 and 701 under the Securities Act.

Lock-up agreements

We, our officers, directors and holders of all or substantially all of our securities, have agreed with the underwriters that for a period of 180 days, after the date of this prospectus, subject to specified exceptions, we or they will not sell or offer to sell any shares or related securities currently or hereafter owned either of record or beneficially (as defined in Rule 13d-3 under the Exchange Act) by the holder or family member, enter into any swap, make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any shares or related securities, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration, or publicly announce any intention to do any of the foregoing. Upon expiration of the lock-up period, certain of our stockholders will have the right to require us to register their shares under the Securities Act. See "—Registration rights" below and "Description of capital stock—Registration rights."

J.P. Morgan Securities LLC and SVB Leerink LLC may, in their sole discretion and at any time or from time to time before the termination of the lock-up period, in certain cases without public notice, release all or any portion of the securities subject to lock-up agreements.

Upon the expiration of the lock-up period, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Rule 10b5-1 trading plans

Following the closing of this offering, certain of our officers, directors and significant stockholders may adopt written plans, known as Rule 10b5-1 trading plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis to diversify their assets and investments. Under these 10b5-1 trading plans, a broker may execute trades pursuant to parameters established by the officer, director or stockholder when entering into the plan, without further direction from such officer, director or stockholder. Such sales would not commence until the expiration of the applicable lock-up agreements entered into by such officer, director or stockholder in connection with this offering.

Rule 144

Affiliate resales of restricted securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours, or who was an affiliate at any time during the 90 days before a sale, who has beneficially owned shares of our common stock for at least six months would be entitled to sell in "broker's transactions" or certain "riskless principal transactions" or to market makers, a number of shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume in our common stock on Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Affiliate resales under Rule 144 are also subject to the availability of current public information about us. In addition, if the number of shares being sold under Rule 144 by an affiliate during any three-month period exceeds 5,000 shares or has an aggregate sale price in excess of $50,000, the seller must file a notice on Form 144 with the SEC and Nasdaq concurrently with either the placing of a sale order with the broker or the execution of a sale directly with a market maker.

Non-affiliate resales of restricted securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is not an affiliate of ours at the time of sale, and has not been an affiliate at any time during the three months preceding a sale, and who has beneficially owned shares of our common stock for at least six months but less than a year, is entitled to sell such shares subject only to the availability of current public information about us. If such person has held our shares for at least one year, such person can resell under Rule 144(b)(1) without regard to any Rule 144 restrictions, including the 90-day public company requirement and the current public information requirement.

Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Rule 701

In general, under Rule 701, any of an issuer's employees, directors, officers, consultants or advisors who purchases shares from the issuer in connection with a compensatory stock or option plan or other written

agreement before the effective date of a registration statement under the Securities Act is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

Equity plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under our equity incentive plans and employee stock purchase plan. We expect to file the registration statement covering shares offered pursuant to these stock plans shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market subject to compliance with the resale provisions of Rule 144.

Registration rights

Upon the closing of this offering holders of shares of our common stock, which includes all of the shares of common stock issuable upon the automatic conversion of the August 2021 Notes immediately prior to the closing of this offering, will be entitled to various rights with respect to the registration of these shares under the Securities Act upon the closing of this offering. In addition, upon the closing of this offering, Takeda will be entitled to the same rights with respect to the registration of shares of our common stock underlying the Takeda Warrant. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchase by our affiliates. See “Description of capital stock—Registration rights” for additional information. Shares covered by a registration statement will be eligible for sale in the public market upon the expiration or release from the terms of the lock-up agreement.

Material United States federal income tax consequences to non-U.S. holders

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended (the Code) Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the IRS), in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the Medicare contribution tax on net investment income and the alternative minimum tax. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers or traders in securities;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans; and
- "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

If an entity treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our

common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a non-U.S. holder

For purposes of this discussion, a "Non-U.S. Holder" is any beneficial owner of our common stock that is neither a "U.S. person" nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (i) is subject to the primary supervision of a U.S. court and the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code), or (ii) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section titled "Dividend policy," we do not anticipate declaring or paying cash dividends to holders of our common stock in the foreseeable future. However, if we do make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below in "—Sale or other taxable disposition."

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder of our common stock will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). If a Non-U.S. Holder holds the stock through a financial institution or other intermediary, the Non-U.S. Holder will be required to provide appropriate documentation to the intermediary, which then will be required to provide certification to the applicable withholding agent, either directly or through other intermediaries. A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder

maintains a permanent establishment or fixed base in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or other taxable disposition

A Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment or fixed base in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest (USRPI) by reason of our status as a U.S. real property holding corporation (USRPHC) for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

A Non-U.S. Holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on gain realized upon the sale or other taxable disposition of our common stock, which may be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition of our common stock by a Non-U.S. Holder will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information reporting and backup withholding

Payments of dividends on our common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a United States person and the holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any distributions on our common stock paid to the Non-U.S. Holder, regardless of whether such distributions constitute dividends or whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional withholding tax on payments made to foreign accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections are commonly referred to as the Foreign Account Tax Compliance Act (FATCA)) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or subject to the proposed Treasury Regulations discussed below, gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (i) the foreign financial institution undertakes certain diligence and reporting obligations, (ii) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in clause (i) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock. While withholding under FATCA would also have applied to payments of gross proceeds from the sale or other disposition of stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers (including applicable withholding agents) generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

Underwriting

We are offering the shares of common stock described in this prospectus through a number of underwriters. J.P. Morgan Securities LLC and SVB Leerink LLC are acting as joint book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the initial public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Name	Number of shares
J.P. Morgan Securities LLC	
SVB Leerink LLC	
Stifel, Nicolaus & Company, Incorporated	
Guggenheim Securities, LLC	
Total	

The underwriters are committed to purchase all the shares of common stock offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $ per share. Any such dealers may resell shares to certain other brokers or dealers at a discount of up to $ per share from the initial public offering price. After the initial offering of the shares to the public, if all of the shares of common stock are not sold at the initial public offering price, the underwriters may change the offering price and the other selling terms. Sales of any shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to purchase up to additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is $ per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Without option to purchase additional shares exercise	With full option to purchase additional shares exercise
Per Share	$	$
Total	$	$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately $. We have agreed to reimburse the underwriters for expenses of up to $ relating to the clearance of this offering with the Financial Industry Regulatory Authority.

A prospectus in electronic format may be made available on the websites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the Securities and Exchange Commission a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exercisable or exchangeable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, loan, disposition or filing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of J.P. Morgan Securities LLC and SVB Leerink LLC for a period of 180 days after the date of this prospectus, other than the shares of our common stock to be sold in this offering.

Our directors, executive officers and substantially all of our stockholders (collectively, the lock-up parties) have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each lock-up party, with limited exceptions, for a period of 180 days after the date of this prospectus (such period, the restricted period), may not (and may not cause any of their direct or indirect affiliates to), without the prior written consent of J.P. Morgan Securities LLC and SVB Leerink LLC, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such lock-up parties in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant (collectively with the common stock, the lock-up securities)), (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the lock-up securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of lock-up securities, in cash or otherwise, (3) make any demand for, or exercise any right with respect to, the registration of any lock-up securities, or (4) publicly disclose the intention to do any of the foregoing. Such persons or entities have further acknowledged that these undertakings preclude them from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (by any person or entity, whether or not a signatory to such agreement) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any lock-up securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of lock-up securities, in cash or otherwise.

The restrictions described in the immediately preceding paragraph and contained in the lock-up agreements between the underwriters and the lock-up parties do not apply, subject in certain cases to various conditions, to

certain transactions, including (a) transfers of lock-up securities: (i) as bona fide gifts, or for bona fide estate planning purposes, (ii) by will, other testamentary document or intestacy, (iii) to any member of the undersigned's immediate family or to trust for the direct or indirect benefit of the lock-up party or the immediate family of the lock-up party, or if the lock-up party is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, (iv) to a partnership, limited liability company or other entity of which the lock-up party and its immediate family members are the legal and beneficial owner of all of the outstanding equity securities or similar interests, (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv), (vi) in the case of a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of the lock-up party, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the lock-up party or its affiliates or (B) as part of a distribution to members or stockholders of the lock-up party; (vii) by operation of law, provided that any transferee or distributee shall execute and deliver to the representatives a lock-up agreement, (viii) to us from an employee or consultant upon death, disability or termination of employment of such employee or consultant, (ix) as part of a sale of lock-up securities acquired in this offering or in open market transactions after the completion of this offering, (x) to us in connection with the vesting, settlement or exercise of restricted stock units, options, warrants or other rights to purchase shares of our common stock (including "net" or "cashless" exercise), including for the payment of exercise price and tax and remittance payments, or (xi) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction approved by our board of directors and made to all stockholders involving a change in control, provided that if such transaction is not completed, all such lock-up securities would remain subject to the restrictions in the immediately preceding paragraph; (b) exercise of the options, settlement of RSUs or other equity awards, or the exercise of warrants granted pursuant to plans described in this prospectus, provided that any lock-up securities received upon such exercise, vesting or settlement would be subject to restrictions similar to those in the immediately preceding paragraph; (c) the conversion of outstanding convertible notes into shares of our common stock or warrants to acquire shares of our common stock, provided that any common stock or warrant received upon such conversion would be subject to restrictions similar to those in the immediately preceding paragraph; and (d) the establishment by lock-up parties of trading plans under Rule 10b5-1 under the Exchange Act, provided that such plan does not provide for the transfer of lock-up securities during the restricted period.

J.P. Morgan Securities LLC and SVB Leerink LLC, in their sole discretion, may release the securities subject to any of the lock-up agreements with the underwriters described above, in whole or in part at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

We intend to apply to have our common stock listed on the Nasdaq Global Market under the symbol "HLVX."

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be "naked" shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in

the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on the , in the over-the-counter market or otherwise.

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In determining the initial public offering price, we and the representatives of the underwriters expect to consider a number of factors including:

- the information set forth in this prospectus and otherwise available to the representatives;
- our prospects and the history and prospects for the industry in which we compete;
- an assessment of our management;
- our prospects for future earnings;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Neither we nor the underwriters can assure investors that an active trading market will develop for our shares of common stock, or that the shares will trade in the public market at or above the initial public offering price.

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and

other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Selling restrictions

Notice to prospective investors in the European Economic Area

In relation to each Member State of the European Economic Area, or, each a Member State, no shares have been offered or will be offered pursuant to the offering to the public in that Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the competent authority in that Member State, all in accordance with the Prospectus Regulation, except that offers of shares may be made to the public in that Member State at any time under the following exemptions under the Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the underwriters; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and us that it is a “qualified investor” within the meaning of Article 2(e) of the Prospectus Regulation. In the case of any shares being offered to a financial intermediary as that term is used in the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Member State to qualified investors as so defined or in circumstances in which the prior consent of the underwriters have been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an “offer to the public” in relation to shares in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

Notice to prospective investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are “qualified investors” (as defined in the Prospectus Regulation) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order, or, all such persons together being referred to as relevant persons, or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000.

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons.

Notice to prospective investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to prospective investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, us or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority, or FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to prospective investors in the Dubai International Financial Centre (DIFC)

This document relates to an Exempt Offer in accordance with the Markets Rules 2012 of the Dubai Financial Services Authority (DFSA). This document is intended for distribution only to persons of a type specified in the Markets Rules 2012 of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for this document. The securities to which this document relates may be illiquid and/or subject to

restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this document you should consult an authorized financial advisor.

In relation to its use in the DIFC, this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

Notice to prospective investors in the United Arab Emirates

The shares have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the Dubai Financial Services Authority.

Notice to prospective investors in Australia

This prospectus:

- does not constitute a disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) (Corporations Act);
- has not been, and will not be, lodged with the Australian Securities and Investments Commission (ASIC), as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document for the purposes of the Corporations Act; and
- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, available under section 708 of the Corporations Act, Exempt Investors.

The shares may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the shares may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any shares may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the shares, you represent and warrant to us that you are an Exempt Investor.

As any offer of shares under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the shares you undertake to us that you will not, for a period of 12 months from the date of issue of the shares, offer, transfer, assign or otherwise alienate those shares to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Notice to prospective investors in Japan

The shares have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares nor any interest therein may be offered or sold,

directly or indirectly, in Japan or to, or for the benefit of, any "resident" of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

Notice to prospective investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), or the SFO, of Hong Kong and any rules made thereunder; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong), or the CO, or which do not constitute an offer to the public within the meaning of the CO. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made thereunder.

Notice to prospective investors in Singapore

Singapore SFA Product Classification—In connection with Section 309B of the SFA and the CMP Regulations 2018, unless otherwise specified before an offer of shares, the we have determined, and hereby notify all relevant persons (as defined in Section 309A(1) of the SFA), that the shares are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Each underwriter has acknowledged that this prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each underwriter has represented and agreed that it has not offered or sold any shares or caused the shares to be made the subject of an invitation for subscription or purchase and will not offer or sell any shares or cause the shares to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, whether directly or indirectly, to any person in Singapore other than:

(a) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time, or the SFA) pursuant to Section 274 of the SFA;

(b) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA and in accordance with the conditions specified in Section 275 of the SFA; or

(c) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

(i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 276(4)(i)(B) of the SFA;

(ii) where no consideration is or will be given for the transfer;

(iii) where the transfer is by operation of law;

(iv) as specified in Section 276(7) of the SFA; or

(v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Notice to prospective investors in Bermuda

Shares may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

Notice to prospective investors in Saudi Arabia

This document may not be distributed in the Kingdom of Saudi Arabia except to such persons as are permitted under the Offers of Securities Regulations as issued by the board of the Saudi Arabian Capital Market Authority, or the CMA, pursuant to resolution number 2-11-2004 dated 4 October 2004 as amended by resolution number 1-28-2008, as amended, or the CMA Regulations. The CMA does not make any representation as to the accuracy or completeness of this document and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this document, you should consult an authorized financial adviser.

Notice to prospective investors in the British Virgin Islands

The shares are not being, and may not be offered to the public or to any person in the British Virgin Islands for purchase or subscription by or on behalf of us. The shares may be offered to companies incorporated under the BVI Business Companies Act, 2004 (British Virgin Islands), or BVI Companies, but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands.

Notice to prospective investors in China

This prospectus will not be circulated or distributed in the PRC and the shares will not be offered or sold, and will not be offered or sold to any person for re-offering or resale directly or indirectly to any residents of the PRC except pursuant to any applicable laws and regulations of the PRC. Neither this prospectus nor any advertisement or other offering material may be distributed or published in the PRC, except under circumstances that will result in compliance with applicable laws and regulations.

Notice to prospective investors in Korea

The shares have not been and will not be registered under the Financial Investments Services and Capital Markets Act of Korea, or the FSCMA, and the decrees and regulations thereunder and the shares have been and will be offered in Korea as a private placement under the FSCMA. None of the shares may be offered, sold or delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the FSCMA and the Foreign Exchange Transaction Law of Korea, or the FETL, and the decrees and regulations thereunder. The shares have not been listed on any of securities exchanges in the world including, without limitation, the Korea Exchange in Korea. Furthermore, the purchaser of the shares shall comply with all applicable regulatory requirements (including but not limited to requirements under the FETL) in connection with the purchase of the shares. By the purchase of the shares, the relevant holder thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the shares pursuant to the applicable laws and regulations of Korea.

Notice to prospective investors in Taiwan

The shares have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the shares in Taiwan.

Notice to prospective investors in South Africa

Due to restrictions under the securities laws of South Africa, no “offer to the public” (as such term is defined in the South African Companies Act, No. 71 of 2008 (as amended or re-enacted), or the South African Companies Act, is being made in connection with the issue of the shares in South Africa. Accordingly, this document does not, nor is it intended to, constitute a “registered prospectus” (as that term is defined in the South African Companies Act) prepared and registered under the South African Companies Act and has not been approved by, and/or filed with, the South African Companies and Intellectual Property Commission or any other regulatory authority in South Africa. The shares are not offered, and the offer shall not be transferred, sold, renounced or delivered, in South Africa or to a person with an address in South Africa, unless one or other of the following exemptions stipulated in section 96 (1) applies:

Section 96 (1) (a) the offer, transfer, sale, renunciation or delivery is to:

(i) persons whose ordinary business, or part of whose ordinary business, is to deal in securities, as principal or agent;

(ii) the South African Public Investment Corporation;

(iii) persons or entities regulated by the Reserve Bank of South Africa;

(iv) authorized financial service providers under South African law;

(v) financial institutions recognized as such under South African law;

(vi) a wholly-owned subsidiary of any person or entity contemplated in (c), (d) or (e), acting as agent in the capacity of an authorized portfolio manager for a pension fund, or as manager for a collective investment scheme (in each case duly registered as such under South African law); or

(vii) any combination of the person in (i) to (vi); or

Section 96 (1) (b)	the total contemplated acquisition cost of the securities, for any single addressee acting as principal is equal to or greater than ZAR1,000,000 or such higher amount as may be promulgated by notice in the Government Gazette of South Africa pursuant to section 96(2)(a) of the South African Companies Act.

Information made available in this prospectus should not be considered as "advice" as defined in the South African Financial Advisory and Intermediary Services Act, 2002.

Notice to prospective investors in Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, and any offer of the shares of common stock is directed only at, (i) a limited number of persons in accordance with the Israeli Securities Law and (ii) investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals," each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case, purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

Legal matters

The validity of the shares of common stock offered hereby will be passed upon for us by Latham & Watkins LLP. The underwriters are being represented by Davis Polk & Wardwell, Menlo Park, California.

Experts

Ernst & Young LLP, independent registered public accounting firm, has audited our combined financial statements at December 31, 2019 and 2020 and for the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, as set forth in their report (which contains an explanatory paragraph describing conditions that raise substantial doubt about HilleVax, Inc.'s ability to continue as a going concern as described in Note 1 to the combined financial statements). We have included our combined financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

Where you can find more information

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed thereto. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. Upon the closing of this offering, we will be required to file periodic reports, proxy statements and other information with the SEC pursuant to the Exchange Act. The SEC maintains an Internet website that contains reports, proxy statements and other information about registrants, like us, that file electronically with the SEC. The address of that site is www.sec.gov.

Upon the closing of this offering, we will become subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, will file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information will be available at the website of the SEC referred to above. We maintain a website at www.hillevax.com. Upon the closing of this offering, you may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website address does not constitute incorporation by reference of the information contained on our website, and you should not consider the contents of our website in making an investment decision with respect to our common stock.

HilleVax, Inc.

Index to Combined Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of HilleVax, Inc.

Opinion on the Financial Statements

We have audited the accompanying combined balance sheets of HilleVax, Inc. (the Company) as of December 31, 2019 and 2020, the related combined statements of operations, stockholders' deficit and cash flows for the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, and the related notes (collectively referred to as the "combined financial statements"). In our opinion, the combined financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2020, and the results of its operations and its cash flows for the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020 in conformity with U.S. generally accepted accounting principles.

The Company's Ability to Continue as a Going Concern

The accompanying combined financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations, has a working capital deficiency, and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 1. The combined financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2021.

San Diego, California
October 19, 2021

HilleVax, Inc.
Combined Balance Sheets
(in thousands, except share and par value data)

	December 31, 2019	December 31, 2020
Assets		
Current assets:		
Cash	$ 403	$ 457
Prepaid expenses and other current assets (includes related party amounts of $30 and $48, respectively)	48	48
Total current assets and total assets	$ 451	$ 505
Liabilities and Stockholders' Deficit		
Current liabilities:		
Accounts payable (includes related party amounts of $202 and $130, respectively)	$ 202	$ 130
Accrued expenses	5	100
Accrued interest (includes related party amounts of $9 and $24, respectively)	9	24
Convertible promissory notes payable at fair value (includes related party amounts of ($906 and $3,024, respectively)	906	3,024
Total current liabilities and total liabilities	1,122	3,278
Commitments and contingencies (Note 3)		
Stockholders' deficit:		
Common stock, $0.0001 par value; authorized shares—10,000,000 at December 31, 2020; issued and outstanding shares—1,887,754 and 2,831,631 at December 31, 2019 and 2020, respectively	—	—
Additional paid-in capital	2	3
Accumulated deficit	(673)	(2,776)
Total stockholders' deficit	(671)	(2,773)
Total liabilities and stockholders' deficit	$ 451	$ 505

See accompanying notes.

HilleVax, Inc.
Combined Statements of Operations
(in thousands, except share and per share data)

	Period from January 8, 2019 (inception) to December 31, 2019	Year Ended December 31, 2020
Operating expenses:		
General and administrative (includes related party amounts of $424 and $467, respectively)	$ 633	$ 1,295
Total operating expenses	633	1,295
Loss from operations	(633)	(1,295)
Other income (expense):		
Interest expense (includes related party amounts of $(9) and $(29), respectively)	(9)	(29)
Change in fair value of convertible promissory notes (includes related party amounts of $(31) and $(779), respectively)	(31)	(779)
Total other income (expense)	(40)	(808)
Net loss	$ (673)	$ (2,103)
Net loss per share, basic and diluted	$ (0.55)	$ (0.81)
Weighted-average shares of common stock outstanding, basic and diluted	1,223,006	2,598,266

See accompanying notes.

HilleVax, Inc.
Combined Statements of Stockholders' Deficit
(in thousands, except share data)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount			
Combined balance at January 8, 2019 (inception)	—	$ —	$ —	$ —	$ —
Issuance of common stock to founders	1,887,754	—	2	—	2
Net loss	—	—	—	(673)	(673)
Combined balance at December 31, 2019	1,887,754	—	2	(673)	(671)
Issuance of common stock to founders	943,877	—	1	—	1
Net loss	—	—	—	(2,103)	(2,103)
Combined balance at December 31, 2020	2,831,631	$ —	$ 3	$ (2,776)	$ (2,773)

See accompanying notes.

HilleVax, Inc.
Combined Statements of Cash Flows
(in thousands)

	Period from January 8, 2019 (inception) to December 31, 2019	Year Ended December 31, 2020
Cash flows from operating activities		
Net loss	$ (673)	$ (2,103)
Adjustments to reconcile net loss to net cash used in operating activities:		
Change in fair value of convertible promissory notes (includes related party amounts of $31 and $779, respectively)	31	779
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets (includes related party amounts of $(30) and $(18), respectively)	(48)	—
Accounts payable and accrued expenses (includes related party amounts of $202 and $(72), respectively)	207	23
Accrued interest (includes related party amounts of $9 and $29, respectively)	9	29
Net cash used in operating activities	(474)	(1,272)
Cash flows from financing activities		
Proceeds from issuance of common stock	2	1
Proceeds from issuance of convertible promissory notes	875	1,325
Net cash provided by financing activities	877	1,326
Net increase in cash	403	54
Cash—beginning of period	—	403
Cash—end of period	$ 403	$ 457
Supplemental disclosure of noncash investing and financing activities		
Exchange of convertible promissory notes	$ —	$ 14

See accompanying notes.

HilleVax, Inc.

Notes to Combined Financial Statements

1. Organization, Basis of Presentation and Summary of Significant Accounting Policies

Organization

HilleVax, Inc. (the "Company" or "HilleVax") was incorporated in the state of Delaware in March 2020 under the name MokshaCo, Inc. ("MokshaCo"). On February 8, 2021, MokshaCo changed its name to HilleVax and merged with North Bridge V, Inc. ("North Bridge V") and YamadaCo III, Inc. ("YamadaCo III"), each Delaware corporations formed in 2019, with HilleVax being the surviving entity (the "Merger"). The Company is a biopharmaceutical company focused on developing and commercializing novel vaccines.

Stock Split and Conversion

During 2019, both North Bridge V and YamadaCo III issued 1,000 shares of common stock to their founders at a purchase price of $1.00 per share and had no other capital transactions prior to the Merger. During March and April 2020, MokshaCo issued an aggregate of 1,000 shares of common stock to its founders at a purchase price of $1.00 per share, and had no other capital transactions prior to the Merger. Immediately prior to the Merger, the Company effected a 943.8776-for-1 forward stock split for each outstanding share of its common stock and, effective upon the closing of the Merger, each issued and outstanding share of North Bridge V and YamadaCo III was converted into 943.8776 shares of the Company's common stock. Upon completion of the Merger, the founders of each of MokshaCo, North Bridge V and YamadaCo III held an equal number of shares of common stock of the Company. Immediately following the Merger, the Company completed additional capital transactions (See Note 6). The accompanying combined financial statements and notes to the combined financial statements give retroactive effect to the forward stock split and conversion for all periods presented.

Basis of Presentation

The Company's combined financial statements are prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The accompanying combined financial statements include the accounts of the Company (the receiving entity) North Bridge V and YamadaCo III, prior to the Merger. The Company, North Bridge V and YamadaCo III were entities under the common control of Frazier Life Sciences X, L.P. or its affiliates ("Frazier") as a result of, among others, Frazier's; (i) ownership of a majority of the outstanding capital stock of each of the combined companies, (ii) financing of each of the combined companies, (iii) control of board of directors of each of the combined companies, and (iv) management of each of the combined companies. All of the combined companies were formed for the purpose of identifying potential assets around which to form an operating company. As the merged entities were under common control, the combined financial statements report the financial position, results of operations and cash flows of the combined companies for all periods presented. All intercompany transactions have been eliminated in combination.

Liquidity and Capital Resources

The Company has devoted substantially all of its efforts to organizing and staffing the Company, business planning, raising capital, in-licensing its initial vaccine candidate, HIL-214 (see Note 6), preparing for its planned clinical trials of HIL-214, and providing other general and administrative support for these operations. The Company has a limited operating history, has never generated any revenue, and the sales and income potential of its business is unproven. The Company has incurred net losses and negative cash flows from operating activities since its inception and expects to continue to incur net losses into the foreseeable future as it continues the development and potential commercialization of HIL-214. From inception to December 31, 2020, the Company has funded its operations through the issuance of convertible promissory notes. Subsequent to December 31, 2020, the Company has funded its operations through the issuance of additional convertible promissory notes (see Note 6).

HilleVax, Inc.

Notes to Combined Financial Statements - (Continued)

The accompanying combined financial statements have been prepared assuming the Company will continue as a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business, and do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or amounts and classification of liabilities that may result from the outcome of this uncertainty. Management is required to perform a two-step analysis over the Company's ability to continue as a going concern. Management must first evaluate whether there are conditions and events that raise substantial doubt about the Company's ability to continue as a going concern (Step 1). If management concludes that substantial doubt is raised, management is also required to consider whether its plans alleviate that doubt (Step 2). Management has prepared cash flow forecasts which indicate that based on the Company's expected operating losses, negative cash flows and maturities of outstanding convertible promissory notes, there is substantial doubt about the Company's ability to continue as a going concern for twelve months after the date the combined financial statements for the year ended December 31, 2020 are issued.

The Company's ability to continue as a going concern is dependent upon its ability to raise additional funding. Management intends to raise additional capital through equity offerings, debt financings or other capital sources, including potential collaborations, licenses and other similar arrangements. However, the Company may not be able to secure additional financing in a timely manner or on favorable terms, if at all. Furthermore, if the Company issues equity securities to raise additional funds, its existing stockholders may experience dilution, and the new equity securities may have rights, preferences and privileges senior to those of the Company's existing stockholders. If the Company raises additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to its potential products on terms that are not favorable to the Company. If the Company is unable to raise capital when needed or on attractive terms, it would be forced to delay, reduce or eliminate its research and development programs or other operations. If any of these events occur, the Company's ability to achieve the development and commercialization goals would be adversely affected.

Use of Estimates

The preparation of the Company's combined financial statements requires it to make estimates and assumptions that impact the reported amounts of assets, liabilities and expenses and the disclosure of contingent assets and liabilities in the Company's combined financial statements and accompanying notes. The most significant estimates in the Company's combined financial statements relate to the valuation of convertible promissory notes. Although these estimates are based on the Company's knowledge of current events and actions it may undertake in the future, actual results could differ materially from those estimates and assumptions.

Fair Value Option

As permitted under Accounting Standards Codification ("ASC") 825, *Financial Instruments*, ("ASC 825"), the Company has elected the fair value option to account for its convertible promissory notes issued through December 31, 2020. In accordance with ASC 825, the Company records these convertible promissory notes at fair value with changes in fair value recorded in the combined statements of operations. As a result of applying the fair value option, direct costs and fees related to the convertible promissory notes were recognized in earnings as incurred and not deferred.

Fair Value Measurements

The accounting guidance defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or

non-recurring basis. Fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the accounting guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1: Observable inputs such as quoted prices in active markets.

Level 2: Inputs, other than the quoted prices in active markets that are observable either directly or indirectly.

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The carrying amounts of the Company's financial instruments, including cash classified within the Level 1 designation discussed above, prepaid and other current assets, accounts payable, and accrued liabilities, approximate fair value due to their short maturities. Convertible promissory notes are recorded at fair value on a recurring basis.

The Company has no financial assets measured at fair value on a recurring basis. None of the Company's non-financial assets or liabilities are recorded at fair value on a non-recurring basis. No transfers between levels have occurred during the periods presented.

Liabilities measured at fair value on a recurring basis are as follows (in thousands):

		Fair Value Measurements at Reporting Date Using:		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
As of December 31, 2019:				
Convertible promissory notes	$ 906	$ —	$ —	$ 906
As of December 31, 2020:				
Convertible promissory notes	$ 3,024	$ —	$ —	$ 3,024

As further described in Note 4, the Company issued convertible promissory notes to Frazier from April 2019 to October 2020. The Company has elected the fair value option for each of its convertible promissory note issuances. The fair value of the convertible promissory notes was estimated using a scenario-based analysis that estimated the fair value of the convertible promissory notes based on the probability-weighted present value of expected future investment returns, considering possible outcomes available to the noteholders, including conversions in subsequent equity financings, settlement and dissolution.

The Company adjusts the carrying value of its convertible promissory notes to their estimated fair value at each reporting date, with any related increases or decreases in the fair value recorded as change in fair value of convertible promissory notes in the combined statements of operations.

HilleVax, Inc.

Notes to Combined Financial Statements - (Continued)

The following table summarizes information about the significant unobservable inputs used in the fair value measurements for the convertible promissory notes as of December 31, 2019:

Liability	Key unobservable inputs	Range
Convertible promissory notes	Estimated time to liquidity	1.8 years
	Discount rate	21.4%

The following table summarizes information about the significant unobservable inputs used in the fair value measurements for the convertible promissory notes as of December 31, 2020:

Liability	Key unobservable inputs	Range
Convertible promissory notes	Estimated time to liquidity	1.0 - 1.3 years
	Volatility	90.0%
	Discount rate	21.4%

There are significant judgments, assumptions and estimates inherent in the determination of the fair value of the convertible promissory notes. These include determination of a valuation method and selection of the possible outcomes available to the Company, including the determination of timing and expected future investment returns for such scenarios. The related judgments, assumptions and estimates are highly interrelated and changes in any one assumption could necessitate changes in another. In particular, any changes in the probability of a particular outcome would require a related change to the probability of another outcome. In the future, depending on the valuation approaches used and the expected timing and weighting of each, the inputs described above, or other inputs, may have a greater or lesser impact on the Company's estimates of fair value.

The following table provides a reconciliation of all liabilities measured at fair value using Level 3 significant unobservable inputs (in thousands):

	Convertible Promissory Notes
Balance at January 8, 2019 (inception)	$ —
Issuance of convertible promissory notes	875
Change in fair value	31
Balance at December 31, 2019	906
Issuance of convertible promissory notes	1,325
Exchange of convertible promissory notes	14
Change in fair value	779
Balance at December 31, 2020	$ 3,024

Cash

The Company considers all highly liquid investments with original maturities of three months or less when purchased to be cash equivalents. The Company had no cash equivalents for any of the periods presented. Cash includes cash in readily available checking accounts.

HilleVax, Inc.

Notes to Combined Financial Statements - (Continued)

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. The Company has not experienced any losses in such accounts and management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in the combined statements of operations in the period that includes the enactment date.

The Company recognizes net deferred tax assets to the extent that the Company believes these assets are more likely than not to be realized. In making such a determination, management considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If management determines that the Company would be able to realize its deferred tax assets in the future in excess of their net recorded amount, management would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company records uncertain tax positions on the basis of a two-step process whereby (i) management determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (ii) for those tax positions that meet the more-likely-than-not recognition threshold, management recognizes the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority. The Company recognizes interest and penalties related to unrecognized tax benefits within income tax expense in the combined statements of operations. Any accrued interest and penalties are included within the related tax liability in the combined balance sheets. The Company did not recognize any interest or penalties during the periods presented.

Comprehensive Loss

Comprehensive loss is defined as a change in equity during a period from transactions and other events and circumstances from non-owner sources. The Company’s comprehensive loss was the same as its reported net loss for all periods presented.

Segment Reporting

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker in making decisions on how to allocate resources and assess performance. The Company views its operations and manages its business as one operating segment.

HilleVax, Inc.

Notes to Combined Financial Statements - (Continued)

Net Loss Per Share

Basic net loss per share is computed by dividing the combined net loss by the combined weighted-average number of common shares outstanding for the period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the combined net loss by the weighted-average number of common shares and dilutive common stock equivalents outstanding for the period. The Company has no dilutive common stock equivalents since all outstanding convertible promissory notes are convertible only upon a contingency that is not based on the Company's stock price or the price of the convertible promissory notes.

Emerging Growth Company Status

The Company is an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 ("JOBS Act"). Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has irrevocably elected to avail itself of this exemption from new or revised accounting standards and, therefore, will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Recently Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-02, *Leases (Topic 842)*, which revises the accounting related to leases by requiring lessees to recognize a lease liability and a right-of-use asset for all leases. The new lease guidance also simplifies the accounting for sale-leaseback transactions. The Company adopted the new guidance effective at its inception and the adoption had no material effect on the Company's combined financial statements and related disclosures as the Company had no leases from inception through December 31, 2020.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, which eliminates, modifies and adds disclosure requirements on fair value measurements. The Company adopted the new guidance at its inception and the adoption had no material effect on the Company's combined financial statements and related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which simplifies the accounting for income taxes by removing certain exceptions to the general principles in ASC 740 and also improves consistent application by clarifying and amending existing guidance. The Company adopted the new guidance at its inception and the adoption had no material impact on the Company's combined financial statements and related disclosures.

Recently Issued Accounting Pronouncements

In August 2020, the FASB issued ASU No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity,* which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity's own equity. Specifically, the new guidance simplifies accounting for the issuance of convertible instruments by removing certain separation models required under existing guidance. In addition, the ASU removes certain settlement conditions that are required for equity contracts to qualify for the

derivative scope exception and amends the diluted earnings-per-share ("EPS") calculation guidance in certain areas to improve the consistency of EPS calculations. ASU No. 2020-06 is effective for fiscal years beginning after December 15, 2023, with early adoption permitted for fiscal years beginning after December 15, 2020. The Company does not currently expect the adoption of this guidance will have an impact on its combined financial statements and related disclosures.

2. Related Party Transactions

Frazier is a principal stockholder of the Company and is represented on the Company's board of directors. From January 8, 2019 (inception) to December 31, 2020, the Company and Frazier reimbursed each other for various goods and services, including personnel related expenses, travel, insurance, facilities and other various overhead and administrative expenses. As of December 31, 2019 and 2020, the Company had outstanding amounts due from Frazier of $16,000 and $14,000, respectively, related to these shared operating expenses. As of December 31, 2019 and 2020, the Company had outstanding amounts due to Frazier of $0.2 million and $0.1 million, respectively, related to these shared operating expenses. For the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, the Company incurred $0.5 million and $0.5 million, respectively, of shared operating expenses. In addition to the shared operating expenses, the Company issued convertible promissory notes to Frazier during 2019 and 2020 (see Note 4).

Mountain Field LLC ("Mountain Field") is an entity owned by a member of the Company's board of directors. From January 8, 2019 (inception) to December 31, 2020, the Company charged Mountain Field for various personnel related and other administrative expenses associated with the operations of Mountain Field. These shared expenses were allocated based on time incurred by personnel. As of December 31, 2019 and 2020, the Company had amounts due from Mountain Field of $14,000 and $34,000, respectively, related to shared operating expenses. For the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, the Company charged Mountain Field $0.1 million and $43,000, respectively, for shared expenses.

3. Commitments and Contingencies

Contingencies

In the event the Company becomes subject to claims or suits arising in the ordinary course of business, the Company would accrue a liability for such matters when it is probable that future expenditures will be made and such expenditures can be reasonably estimated.

4. Convertible Promissory Notes

Frazier Convertible Note Financings

During 2019 and 2020, the Company issued unsecured convertible promissory notes to Frazier (the "Frazier Notes") for an aggregate of $2.2 million bearing interest at per annum rates ranging from 0.14% to 2.52%. An aggregate of $0.9 million of Frazier Notes were issued in April, May and September of 2019 (the "2019 Frazier Notes") and an aggregate of $1.3 million of these convertible promissory notes were issued in March, August and October of 2020 (the "2020 Frazier Notes"). The Frazier Notes were generally scheduled to mature 12 to 18 months from the date of issuance and, due to certain embedded features within the Frazier Notes, the Company elected to account for all of the Frazier Notes and their embedded features under the fair value option. The Company recorded changes in the fair value of the Frazier Notes in the combined statements of operations. For

the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, the Company recognized $31,000 and $0.8 million, respectively, of change in fair value of convertible promissory notes in the combined statements of operations related to increases in the fair value of the Frazier Notes. For the period from January 8, 2019 (inception) to December 31, 2019 and the year ended December 31, 2020, the Company recognized $9,000 and $29,000, respectively, of interest expense in connection with the Frazier Notes. As of December 31, 2019 and 2020, the outstanding principal balance was $0.9 million and $2.2 million, respectively.

In March 2020, $14,000 of accrued interest on the 2019 Frazier Notes was converted to principal upon the transfer of those convertible promissory notes between Frazier entities, and the maturity dates of the Frazier Notes were extended to March 2021. The Frazier Notes were exchanged for convertible promissory notes newly issued in connection with a convertible note financing in August 2021 (see Note 6).

5. Income Taxes

A reconciliation between the provision for income taxes and income taxes computed using the U.S. federal statutory corporate tax rate is as follows (in thousands):

	Period from January 8, 2019 (inception) to December 31, 2019	Year Ended December 31, 2020
Tax computed at federal statutory rate	$ (141)	$ (442)
Convertible debt	8	170
Permanent differences and other	2	4
Change in valuation allowance	131	268
Provision for income taxes	$ —	$ —

Significant components of the Company's deferred tax assets are as follows (in thousands):

	December 31,	
	2019	2020
Deferred tax assets:		
Start up and organization costs	$ 131	$ 398
Net operating loss carryforwards	—	1
Total deferred tax assets	131	399
Valuation allowance	(131)	(399)
Deferred tax assets, net of allowance	$ —	$ —

The Company has established a valuation allowance against its deferred tax assets due to the uncertainty surrounding the realization of such assets. The Company periodically evaluates the recoverability of the deferred tax assets. At such time as it is determined that it is more likely than not that deferred assets are realizable, the valuation allowance will be reduced. The Company has recorded a full valuation allowance of $0.4 million as of December 31, 2020 as it cannot conclude that it is more likely than not that the deferred tax assets will be realized primarily due to the generation of pre-tax book losses from its inception.

HilleVax, Inc.

Notes to Combined Financial Statements - (Continued)

As of December 31, 2020, the Company has federal net operating loss carryforwards of approximately $3,000. As a result of the Tax Cuts and Jobs Act of 2017, for U.S. income tax purposes, net operating losses generated after December 31, 2017 can be carried forward indefinitely, but are limited to 80% utilization against future taxable income each year.

Pursuant to Internal Revenue Code Sections 382 and 383, annual use of the Company's net operating loss may be limited in the event a cumulative change in ownership of more than 50% occurs within a three-year period. The Company has not completed an ownership change analysis pursuant to IRS Section 382. If ownership changes have occurred or occur in the future, the amount of remaining tax attribute carryforwards available to offset taxable income and income tax expense in future years may be restricted or eliminated. If eliminated, the related asset would be removed from deferred tax assets with a corresponding reduction in the valuation allowance.

Uncertain tax positions are evaluated based upon the facts and circumstances that exist at each reporting period. Subsequent changes in judgment based upon new information may lead to changes in recognition, derecognition, and measurement. Adjustment may result, for example, upon resolution of an issue with the taxing authorities or expiration of a statute of limitations barring an assessment for an issue. As of December 31, 2020, the Company has no uncertain tax positions.

The Company files income tax returns in the United States. The Company's tax returns from inception through December 31, 2020 remain open and subject to examination. The Company is not currently under examination by any federal, state or local tax authority.

The Company's policy is to recognize interest and penalties related to income tax matters as a component of income tax expense. The Company has not recognized interest or penalties in its combined statements of operations since inception.

6. Subsequent Events

The Company has completed an evaluation of all subsequent events through October 19, 2021, the date the audited combined financial statements were available to be issued, to ensure these financial statements include appropriate disclosure of events both recognized in the financial statements and events which occurred but were not recognized in the financial statements. The Company has concluded that no subsequent event has occurred that requires disclosure except as noted herein and below.

Common Stock Issuance

On February 8, 2021, subsequent to the Merger, the Company issued and sold 955,869 shares of common stock to Frazier at $0.00105946 per share.

Approval of the 2021 Equity Incentive Plan and Equity Awards

On February 8, 2021, the Company's board of directors and stockholders approved and adopted the HilleVax, Inc. 2021 Equity Incentive Plan (the "2021 Plan"). The term of the 2021 Plan is ten years from the adoption date. Under the 2021 Plan, the Company may grant stock options, restricted stock, restricted stock units, and other stock-based awards to employees, directors or consultants of the Company and its subsidiaries. A total of 2,212,500 shares of common stock were initially reserved for issuance under the 2021 Plan, which amount was subsequently decreased to 1,766,500 shares in a series of amendments through July 2, 2021.

HilleVax, Inc.

Notes to Combined Financial Statements - (Continued)

From February through April 2021, the Company issued 1,019,500 shares of restricted common stock to certain of its employees, consultants and directors under the 2021 Plan. The shares are subject to forfeiture restrictions under which the shares would become legally and beneficially owned by the Company in the event the stockholder's service with the Company is terminated. The share restriction generally lapses over a four-year period, with 25% lapsing on the first anniversary of the vesting commencement date and the remaining portion lapsing in 36 equal monthly amounts thereafter.

In March 2021, the Company issued and sold an aggregate of 10,000 shares of restricted common stock under the 2021 Plan at a purchase price of $0.00105946 per share to certain consultants. The Company has the right, but not the obligation, to repurchase unvested shares at the original purchase price in the event the purchaser's relationship with the Company is terminated, subject to certain limitations. The repurchase rights lapse on the first anniversary of the vesting commencement date.

From March through May 2021, the Company issued and sold an aggregate of 421,000 shares of restricted common stock outside of the 2021 Plan at a purchase price of $0.00105946 per share to certain employees and consultants. The Company has the right, but not the obligation, to repurchase unvested shares at the original purchase price in the event the purchaser's relationship with the Company is terminated, subject to certain limitations. The repurchase rights lapse over a four-year period, with 25% lapsing on the first anniversary of the vesting commencement date and the remaining portion lapsing in 36 equal monthly amounts thereafter.

Stock Restriction Agreements

On February 8, 2021, certain of the Company's founders entered into stock restriction agreements granting the Company a repurchase right on 1,387,500 shares of fully vested common stock originally purchased in 2019 and 2020. The Company has the right, but not the obligation, to repurchase unvested shares in the event the founder's relationship with the Company is terminated, subject to certain limitations, at $0.00064139 per share. The repurchase right lapsed for 346,875 shares on the effective date of the stock restriction agreements and the repurchase right for the remaining 1,040,625 shares lapses in equal monthly amounts over the following 48-month period ending in February 2025.

Formation of Subsidiary

In May 2021, the Company formed HilleVax GmbH, a wholly-owned subsidiary, in Zurich Switzerland. HilleVax GmbH has no material operations to date.

Frazier Convertible Note Financings

From April to July 2021, the Company issued convertible promissory notes to Frazier for an aggregate of $6.3 million bearing interest at a per annum rate of 0.12% (the "2021 Frazier Notes" and subsequent to their issuance included in the definition of the "Frazier Notes"). The terms of the 2021 Frazier Notes were substantially the same as the previously issued Frazier Notes, with the exception of certain conversion terms, and were generally scheduled to mature 18 months from the date of issuance. The Frazier Notes were exchanged for convertible promissory notes newly issued in connection with the August 2021 convertible note financing described below.

HilleVax, Inc.

Notes to Combined Financial Statements - (Continued)

License Agreement

On July 2, 2021, the Company entered into a license agreement with Takeda Vaccines, Inc. ("Takeda") pursuant to which it was granted an exclusive sublicensable, royalty-bearing license (the "Takeda License") to commercialize HIL-214 products on a worldwide basis outside of Japan (the "Territory").

The Company will be responsible, at its own cost, for the development, manufacture and commercialization of HIL-214 in the Territory, with the exception that the Company will integrate certain Japan development activities into its development activities at its own cost. The Company is obligated to use commercially reasonable efforts to develop and commercialize HIL-214 products in the Territory, and to seek regulatory approval for such products throughout the world.

In consideration of the Takeda License, the Company (i) paid Takeda $2.5 million in cash, (ii) issued Takeda 500,000 shares of its common stock, (iii) issued Takeda a warrant (the "Takeda Warrant") to purchase 3,500,000 shares of its common stock at an exercise price of $0.0001 per share that expires on July 2, 2031 and becomes exercisable upon certain change of control transactions of the Company or the consummation of an initial public offering ("IPO") by the Company and (iv) issued Takeda a warrant right (the "Takeda Warrant Right") to receive an additional common stock warrant should Takeda's fully-diluted ownership of the Company, including the Takeda Warrant, represent less than a certain specified percentage of the fully-diluted capitalization, including shares issuable upon conversion of outstanding convertible promissory notes, calculated immediately prior to the earlier of the closing of the Company's IPO or a change of control transaction. In addition, the Company is obligated to pay Takeda an aggregate of $2.5 million upon the release of certain drug product and the completion of certain regulatory activities, up to $7.5 million upon the achievement of a specified development milestone, up to an aggregate of $150.0 million in sales milestones upon the achievement of specified annual sales levels of HIL-214 in the Territory, and tiered high single-digit to low teen percentage royalties on net sales of HIL-214, subject to specified offsets and reductions. Takeda has agreed to pay the Company tiered mid-single digit to low-double digit percentage royalties on net sales of HIL-214 products in Japan, subject to specified offsets and reductions. Royalties will be payable, on a product-by-product and country-by-country basis from the first commercial sale of such product in such country, until the latest of expiration of the licensed patents covering the applicable product, expiration of regulatory exclusivity in such country, or 20 years following first commercial sale in such country.

Absent early termination, the Takeda License expires on a country-by-country and product-by-product basis upon the expiration of the applicable royalty term with respect to each product in each country, as applicable, or in its entirety upon the expiration of the royalty term with respect to the last product commercialized in the last country. The Company may terminate the Takeda License upon six months' prior written notice. The Company and Takeda may terminate the Takeda License in the case of the other party's insolvency, or upon prior written notice within a specified time period for the other party's material uncured breach. Takeda may terminate the Takeda License if the Company challenges licensed patents, or assists any third-party in challenging such patents.

August 2021 Convertible Note Financing

On August 31, 2021, the Company entered into a note purchase agreement under which it issued $139.52 million of unsecured convertible promissory notes (the "August 2021 Notes"). Of the August 2021 Notes, $103.75 million were issued to new investors, $25.0 million were issued to Frazier for cash and $10.77 million were issued to Frazier in exchange for the then outstanding principal and accrued interest on the Frazier Notes. The August 2021 Notes bear interest at a rate of 6% per annum, compounded annually. The August 2021 Notes

become payable upon demand of the holders of at least a majority of the outstanding principal, including Frazier (the "Requisite Holders"), on August 31, 2022 (the "Maturity Date"), and become due and payable on August 31, 2024, subject to earlier conversion or repayment in the event the Company completes certain equity financings or a change of control. The August 2021 Notes can be converted/redeemed as follows (i) automatically converted into qualified equity financing shares upon a qualified equity financing, with a conversion price of the lesser of 80% of the price paid per share in such financing or the conversion cap price per share, (ii) optionally converted by election of the Requisite Holders into non-qualified equity financing shares upon a non-qualified equity financing with a conversion price of 80% of the price paid per share in such financing, (iii) optionally converted into common stock any time after the Maturity Date, with a conversion price per share of the conversion cap price per share, (iv) automatically converted into common stock upon a qualified IPO with a conversion price per share of the lesser of 80% of the IPO price per share, or the conversion cap price per share, (v) upon certain corporate transactions, receive cash equal to the greater of (A) two times the then outstanding principal and accrued interest and (B) an amount equal to the amount that would be received as if the August 2021 Notes were converted into common stock with a conversion price of the conversion cap price per share, and (vi) automatically converted into common stock upon a qualified SPAC, with a conversion price of the lesser of 80% of the common stock price implied by the nominal value of the Company in such financing or the conversion cap price per share. The conversion cap price per share is defined as $500.0 million less the outstanding principal and accrued interest divided by the total of (1) the total number of common shares outstanding immediately prior to conversion, (2) the number of common shares issuable upon exercise or conversion of exercisable or convertible securities, and (3) the number of shares of capital stock reserved for issuance under the Company's equity incentive plan.

The note purchase agreement includes, among others, covenants related to delivery of certain financial reports, certain registration rights, voting provisions regarding the composition of the Company's board of directors, and limitations on the Company's ability to pay dividends, incur additional indebtedness or consummate certain changes of control. The note purchase agreement also contains customary events of default, including bankruptcy, the failure to make payments when due, and certain material adverse changes. Upon the occurrence of an event of default, subject to any specified cure periods, all amounts owed by the Company may be declared immediately due and payable.

Table of Contents

shares

Common stock

Preliminary prospectus

J.P. Morgan	**SVB Leerink**	**Stifel**	**Guggenheim Securities**

, 2021

Part II

Information not required in prospectus

Item 13. Other expenses of issuance and distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the SEC registration fee, the Financial Industry Regulatory Authority, Inc. (FINRA) filing fee and the Nasdaq Global Market listing fee.

	Amount paid or to be paid
SEC registration fee	$ *
FINRA filing fee	*
Nasdaq Global Market listing fee	*
Accountants' fees and expenses	*
Legal fees and expenses	*
Transfer agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total expenses	$ *

* To be provided by amendment.

Item 14. Indemnification of directors and officers.

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation provides that no director of the Registrant shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of

all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, provides that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an Indemnitee), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our amended and restated certificate of incorporation provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act, against certain liabilities.

Item 15. Recent sales of unregistered securities.

Set forth below is information regarding unregistered securities issued by us since January 8, 2019. Also included is the consideration received by us for such securities and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

(a) Issuances of Securities

1. From April 2019 to October 2020, YamadaCo III, Inc. issued convertible promissory notes (YamadaCo Notes), in an aggregate principal amount of approximately $1.3 million to Frazer Life Sciences IX, L.P. (FLS IX) (part of which were subsequently transferred to Frazier Life Sciences X, L.P. (FLS X) in March 2020) and FLS X. From May 2019 to August 2020, North Bridge V, Inc. issued convertible promissory notes (North Bridge Notes), in an aggregate principal amount of approximately $0.4 million to FLS IX (part of which were subsequently transferred to FLS X in March 2020) and FLS X). In March 2020, we (originally as MokshaCo, Inc.) issued a convertible promissory note (MokshaCo Note), in a principal amount of $0.5 million to FLS X. From April 2021 to July 2021, we issued convertible promissory notes (HilleVax Notes), in an aggregate principal amount of approximately $6.3 million to FLS X. On August 31, 2021, (i) the YamadaCo Notes, the North Bridge Notes and the MokshaCo Note were cancelled in exchange for newly issued convertible promissory notes in the principal amount of approximately $4.5 million, which amount represented the as converted principal and accrued interest on the such notes as of such date and (ii) the HilleVax Notes were cancelled in exchange for newly issued convertible promissory notes in the principal amount of approximately $6.3 million, which amount represented the principal and accrued interest on the such notes as of such date.

2. In March and April 2020, we (originally as MokshaCo, Inc.) issued an aggregate of 1,000 shares of our common stock to our founders and entities affiliated with them at a purchase price of $1.00 per share pursuant to stock purchase agreements. In February 2021, we effected a 943.8776-for-1 forward stock split for each outstanding share of our common stock, resulting in 943,877 shares of our common stock held by such founders and entities affiliated with them.

3. From May 2019 to June 2019, North Bridge V, Inc. issued an aggregate of 1,000 shares of its common stock to its founders and entities affiliated with them at a purchase price of $1.00 per share pursuant to stock purchase agreements. In February 2021, effective upon the completion of the merger of North Bridge V and YamadaCo III with and into us, each issued and outstanding share of North Bridge V was converted into 943.8776 shares of our common stock, resulting in 943,877 shares of our common stock held by such founders and entities affiliated with them.

4. In April 2019, YamadaCo III, Inc. issued an aggregate of 1,000 shares of its common stock to its founders and entities affiliated with them at a purchase price of $1.00 per share pursuant to stock purchase agreements. In February 2021, effective upon the completion of the merger of North Bridge V and YamadaCo III with and into us, each issued and outstanding share of YamadaCo III was converted into 943.8776 shares of our common stock, resulting in 943,8776 shares of our common stock held by such founders and entities affiliated with them.

5. In February 2021, we issued 955,869 shares of common stock to FLS X at a purchase price of $0.00105946 per share pursuant to a stock purchase agreement.

6. In March, April and May 2021 we issued an aggregate of 421,000 shares of restricted common stock to certain of our employees and consultants at a purchase price of $0.00010596 per share pursuant to stock purchase agreements.

7. In July 2021, we issued 500,000 shares of common stock to Takeda pursuant to a stock issuance agreement and a warrant to purchase 3,500,000 shares of our common stock with an exercise price of $0.0001 per share as partial consideration for the Takeda License.

8. In August 2021, we issued convertible promissory notes in an aggregate principal amount of $139.5 million to FLS X and other investors pursuant to a note purchase agreement, including the exchange of the YamadaCo Notes, the North Bridge Notes, the MokshaCo Note and the HilleVax Notes referenced above.

No underwriters were involved in the foregoing issuances of securities. The securities described in this section (a) of Item 15 were issued to investors in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder relative to transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. All holders of securities described above represented to us in connection with their purchase or issuance that they were accredited investors and were acquiring the securities for their own account for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The holders received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from such registration.

(b) Grants of Restricted Stock

1. In February 2021, we granted 727,500 shares of our restricted common stock under our existing 2021 equity incentive plan to certain of our employees and consultants in connection with services provided to us by such persons, 100,000 of which have been cancelled through the effective date of this registration statement.

2. In March 2021, we granted 196,000 shares of our restricted common stock under our existing 2021 equity incentive plan to certain of our employees, consultants and directors in connection with services provided to us by such persons.

3. In April 2021, we granted 106,000 shares of our restricted common stock under our existing 2021 equity incentive plan to certain of our employees, consultants and directors in connection with services provided to us by such persons.

The restricted stock as described in this section (b) of Item 15 were issued pursuant to written compensatory plans or arrangements with our employees and directors, in reliance on the exemption from the registration requirements of the Securities Act provided by Rule 701 promulgated under the Securities Act or the exemption set forth in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder relative to transactions by an issuer not involving any public offering. All recipients either received adequate information about us or had access, through employment or other relationships, to such information.

All of the foregoing securities are deemed restricted securities for purposes of the Securities Act. All certificates representing the issued shares of capital stock described in this Item 15 included appropriate legends setting forth that the securities had not been registered and the applicable restrictions on transfer.

Item 16. Exhibits and financial statement schedules.

(c) *Exhibits.* See Exhibit Index attached to this registration statement, which is incorporated by reference herein.

(d) *Financial statement schedules*. Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters, at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Exhibit index

Exhibit Number	Description of Exhibit
1.1*	Form of Underwriting Agreement
2.1	Agreement of Merger, dated as of February 8, 2021, by and among the Registrant, YamadaCo III, Inc. and North Bridge V, Inc.
3.1	Certificate of Incorporation, as amended (currently in effect)
3.2	Bylaws (currently in effect)
3.3*	Form of Amended and Restated Certificate of Incorporation (to be effective immediately prior to the closing of this offering)
3.4*	Form of Amended and Restated Bylaws (to be effective immediately prior to the closing of this offering)
4.1*	Specimen stock certificate evidencing the shares of common stock
4.2	Warrant to purchase shares of common stock issued to Takeda Vaccines, Inc., dated July 2, 2021
4.3	Note Purchase Agreement, dated August 31, 2021, by and among the Registrant and the other parties party thereto
5.1*	Opinion of Latham & Watkins LLP
10.1#	HilleVax, Inc. 2021 Equity Incentive Plan, as amended, including form of stock option agreement and form of restricted stock grant notice and restricted stock agreement thereunder
10.2#*	HilleVax, Inc. 2022 Incentive Award Plan and form of stock option agreement and form of restricted stock unit agreement thereunder
10.3#*	HilleVax, Inc. 2022 Employee Stock Purchase Plan
10.4#*	Non-Employee Director Compensation Program
10.5#	Employment Letter Agreement, dated February 8, 2021, by and between Robert Hershberg and the Registrant
10.6#	Amended and Restated Employment Letter Agreement, dated March 1, 2021, by and between Aditya Kohli and the Registrant
10.7#	Amended and Restated Employment Letter Agreement, dated March 1, 2021, by and between David Socks and the Registrant
10.8#	Employment Letter Agreement, dated May 1, 2021, by and between Astrid Borkowski and the Registrant
10.11#*	Form of Indemnification Agreement for Directors and Officers
10.12†	License Agreement, dated July 2, 2021, by and between Takeda Vaccines, Inc. and the Registrant
23.1*	Consent of independent registered public accounting firm
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
24.1*	Power of Attorney (included on signature page)

* To be filed by amendment.

\# Indicates management contract or compensatory plan.

† Portions of this exhibit have been omitted in compliance with Regulation S-K Item(b)(10)(iv).

Table of Contents

Signatures

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Boston, State of Massachusetts, on this day of , 2021.

HILLEVAX, INC.

By: _____
Robert Hershberg, M.D., Ph.D.
Chairman, President and Chief Executive Officer

Signatures and power of attorney

We, the undersigned officers and directors of HilleVax, Inc., hereby severally constitute and appoint Rob Hershberg, M.D., Ph.D. and David Socks, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), as amended, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities held on the dates indicated.

Signature	Title	Date
Rob Hershberg, M.D., Ph.D.	Chairman, President and Chief Executive Officer (principal executive officer)	, 2021
David Socks	Chief Financial Officer and Chief Business Officer (principal financial and accounting officer)	, 2021
Shelley Chu, M.D., Ph.D.	Director	, 2021
Julie Gerberding, M.D. M.P.H.	Director	, 2021
Patrick Heron	Director	, 2021
Jeryl Hilleman	Director	, 2021

Table of Contents

Signature	Title	Date
Jaime Sepulveda, M.D., D.Sc., M.P.H.	Director	, 2021
Susan Silbermann	Director	, 2021
Rajeev Venkayya, M.D.	Director	, 2021
Elise Wang	Director	, 2021

Exhibit 2.1

AGREEMENT OF MERGER

AGREEMENT OF MERGER, dated as of February 8, 2021 (this "Agreement"), among HilleVax, Inc., a Delaware corporation ("HilleVax"), YamadaCo III, Inc., a Delaware corporation ("YamadaCo") and North Bridge V, Inc., a Delaware corporation ("North Bridge").

WITNESSETH:

WHEREAS, HilleVax is a corporation organized and existing under the laws of the State of Delaware, authorized to issue one class of stock, consisting of 10,000,000 shares of Common Stock, par value $0.0001 per share, of which the total number of issued and outstanding shares of Common Stock is 943,877 shares;

WHEREAS, YamadaCo is a corporation organized and existing under the laws of the State of Delaware, authorized to issue one class of stock, consisting of 1,000 shares of Common Stock, par value $0.0001 per share, of which the total number of issued and outstanding shares of Common Stock is 1,000 shares;

WHEREAS, North Bridge is a corporation organized and existing under the laws of the State of Delaware, authorized to issue one class of stock, consisting of 1,000 shares of Common Stock, par value $0.0001 per share, of which the total number of issued and outstanding shares of Common Stock is 1,000 shares;

WHEREAS, HilleVax desires to acquire the assets and property, and to assume all of the liabilities and obligations, of each of YamadaCo and North Bridge by means of a merger of each of YamadaCo and North Bridge with and into HilleVax;

WHEREAS, Section 251 of the Delaware General Corporation Law (the "DGCL") authorizes the merger of any two or more Delaware corporations into a single Delaware corporation;

WHEREAS, each of YamadaCo and North Bridge now desire to merge with and into HilleVax (the "Merger"), following which HilleVax shall be the surviving corporation;

WHEREAS, the Board of Directors of each of HilleVax, YamadaCo and North Bridge has authorized, adopted and approved this Agreement and the consummation of the Merger; and

WHEREAS, all of the stockholders of each of HilleVax, YamadaCo and North Bridge have authorized, adopted and approved this Agreement and the consummation of the Merger.

NOW THEREFORE, the parties hereto agree as follows:

ARTICLE I.

THE MERGER

Section 1.01. The Merger.

(a) After satisfaction or, to the extent permitted hereunder, waiver of all conditions to the Merger, as the parties hereto shall determine, each of YamadaCo and North Bridge shall merge with and into HilleVax, upon which HilleVax shall be the surviving corporation and shall (i) file a

certificate of merger ("Certificate of Merger") with the Secretary of State of the State of Delaware and (ii) make all other filings or recordings required by the State of Delaware or any other jurisdiction in connection with the Merger. The Merger shall become effective upon the filing of the Certificate of Merger with the Office of the Secretary of State of the State of Delaware (the "Effective Time").

(b) Upon the Effective Time, each of YamadaCo and North Bridge shall be merged with and into HilleVax, whereupon the separate existence of each of YamadaCo and North Bridge shall cease, and HilleVax shall be the surviving entity of the Merger (the "Surviving Corporation") in accordance with Section 251 of the DGCL.

Section 1.02. Conversion of YamadaCo Stock; Conversion of North Bridge Stock; Continuation of Stock of Surviving Corporation.

(a) Each issued and outstanding share of Common Stock of YamadaCo shall be converted into 943.8776 shares of Common Stock of the Surviving Corporation as of the Effective Time. All certificates representing shares of Common Stock of YamadaCo outstanding immediately prior to the Effective Time shall upon the Effective Time represent instead the number of shares of Common Stock of the Surviving Corporation as provided above. Notwithstanding the foregoing, any holder of Common Stock may (but shall not be required to) surrender his, her or its stock certificate or certificates to the Surviving Corporation, and upon such surrender the holder may request that the Surviving Corporation issue a certificate for the correct number of shares of Common Stock of the Surviving Corporation to which the holder is entitled under the provisions of this Agreement. No fractional shares of Common Stock shall be issued. Stockholders who would otherwise be entitled to receive fractional shares of Common Stock shall have such fractional shares rounded down to the nearest whole share.

(b) Each issued and outstanding share of Common Stock of North Bridge shall be converted into 943.8776 shares of Common Stock of the Surviving Corporation as of the Effective Time. All certificates representing shares of Common Stock of North Bridge outstanding immediately prior to the Effective Time shall upon the Effective Time represent instead the number of shares of Common Stock of the Surviving Corporation as provided above. Notwithstanding the foregoing, any holder of Common Stock may (but shall not be required to) surrender his, her or its stock certificate or certificates to the Surviving Corporation, and upon such surrender the holder may request that the Surviving Corporation issue a certificate for the correct number of shares of Common Stock of the Surviving Corporation to which the holder is entitled under the provisions of this Agreement. No fractional shares of Common Stock shall be issued. Stockholders who would otherwise be entitled to receive fractional shares of Common Stock shall have such fractional shares rounded down to the nearest whole share.

(c) The issued and outstanding shares of Common Stock of HilleVax shall not be converted or exchanged in any manner, and each share of Common Stock of HilleVax that is issued and outstanding as of the Effective Time shall continue to represent one (1) issued share of Common Stock of the Surviving Corporation.

ARTICLE II.

THE SURVIVING ENTITY

Section 2.01. Certificate of Incorporation and Bylaws.

The Certificate of Incorporation and Bylaws of HilleVax in effect as of the Effective Time shall continue to be the Certificate of Incorporation and Bylaws of the Surviving Corporation unless and until amended in accordance with their terms and applicable law.

Section 2.02. Officers.

The individuals serving as officers of HilleVax immediately prior to the Effective Time will continue to serve as officers of the Surviving Corporation upon the Effective Time, with such persons having the same title at the Surviving Corporation as such persons had at HilleVax.

ARTICLE III.

TRANSFER AND CONVEYANCE OF ASSETS AND ASSUMPTION OF LIABILITIES

Section 3.01. Transfer, Conveyance and Assumption.

Upon the Effective Time, HilleVax shall continue in existence as the Surviving Corporation, and without further transfer, succeed to and possess all of the rights, privileges and powers of each of YamadaCo and North Bridge, and all of the assets and property of whatever kind and character of each of YamadaCo and North Bridge shall vest in HilleVax without further act or deed; thereafter HilleVax, as the Surviving Corporation, shall be liable for all of the liabilities and obligations of each of YamadaCo and North Bridge, and any claim or judgment against either YamadaCo or North Bridge may be enforced against HilleVax, as the Surviving Corporation, in accordance with Section 251 of the DGCL.

Section 3.02. Further Assurances.

If at any time HilleVax shall consider or be advised that any further assignment, conveyance or assurance is necessary or advisable to vest, perfect or confirm of record in HilleVax the title to any property or right of either YamadaCo or North Bridge, or otherwise carry out the provisions hereof, the proper representatives of YamadaCo or North Bridge, as applicable, as of the Effective Time, shall from time to time, as and when requested by HilleVax, execute and deliver any and all proper deeds, assignments, documents, instruments and assurances and do all things necessary or proper to vest, perfect or convey title to such property or right in the Surviving Corporation, and otherwise to evidence and carry out the Merger and the provisions hereof.

ARTICLE IV.

TERMINATION

Section 4.01. Termination.

This Agreement may be terminated and the proposed Merger may be abandoned at any time prior to the Effective Time.

Section 4.02. Effect of Termination.

If this Agreement is terminated pursuant to Section 4.01, this Agreement shall become void and of no effect with no liability on the part of any party hereto.

ARTICLE V.

MISCELLANEOUS

Section 5.01. Amendment; Waiver.

Any provision of this Agreement may, subject to applicable law, be amended or waived prior to the Effective Time by an amendment or waiver signed by duly authorized representatives of the parties hereto.

Section 5.02. Successors and Assigns.

The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns, *provided* that no party may assign, delegate or otherwise transfer any of its rights or obligations under this Agreement without the consent of the other party hereto.

Section 5.03. Reorganization.

For U.S. federal income tax purposes, the parties to this Agreement intend that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the "Code"), and this Agreement will constitute a "plan of reorganization" within the meaning of United States Treasury Regulations Sections 1.368-2(g) and 1.368-3(a) for purposes of Sections 354, 361 and 368 of the Code.

Section 5.04. Governing Law.

This Agreement shall be construed in accordance with and governed by the laws of the State of Delaware, without giving effect to principles of conflicts of law.

Section 5.05. Counterparts; Effectiveness.

This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement shall become effective when signed by each of the parties hereto.

[*Signature page follows*]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their respective authorized representatives as of the day and year first above written.

HilleVax, Inc.

By: /s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

YamadaCo III, Inc.

By: /s/ Tadataka Yamada
Name: Tadataka Yamada
Title: Chief Executive Officer

North Bridge V, Inc.

By: /s/ David Socks
Name: David Socks
Title: Chief Executive Officer

Exhibit 3.1

CERTIFICATE OF INCORPORATION

OF

MOKSHACO, INC.

The undersigned, a natural person (the "***Sole Incorporator***"), for the purpose of organizing a corporation to conduct the business and promote the purposes hereinafter stated, under the provisions and subject to the requirements of the laws of the State of Delaware hereby certifies that:

I.

The name of this corporation is MokshaCo, Inc.

II.

The address of the registered office of the corporation in the State of Delaware is Corporation Service Company, 251 Little Falls Drive, City of Wilmington, County of New Castle, State of Delaware 19808, and the name of the registered agent of the corporation in the State of Delaware at such address is Corporation Service Company.

III.

The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law ("***DGCL***").

IV.

A. This corporation is authorized to issue only one class of stock, to be designated Common Stock. The total number of shares of Common Stock presently authorized is one thousand (1,000), each having a par value of $0.0001.

V.

A. The management of the business and the conduct of the affairs of the corporation shall be vested in its Board of Directors. The number of directors which shall constitute the whole Board of Directors shall be fixed by the Board of Directors in the manner provided in the Bylaws.

B. The Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the corporation; *provided*, *however*, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by this Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least a majority of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

VI.

A. In anticipation that Frazier Life Sciences X, L.P., and/or any affiliates (each, an "***Investor***", and collectively, the "***Investors***") will be, indirectly or directly, substantial stockholders of the Corporation, and in recognition of (i) the benefits to be derived by the Corporation through its continued contractual, corporate and business relations with each Investor (including service of officers, directors, partners, managers, employees or affiliates of each Investor (collectively, "***Investor Persons***") as directors of the Corporation) and (ii) the difficulties attendant to any director, who desires and endeavors fully to satisfy such director's fiduciary duties, in determining the full scope of such duties in any particular situation, the provisions of this Article VI are set forth to regulate, define and guide the conduct of certain affairs of the Corporation as they may involve the Investors and any Investor Persons, and the powers, rights, duties and liabilities of the Corporation and its offices, directors and stockholders in connection therewith.

B. Except as the Investors may other agree in writing, each Investor shall have the right to (i) engage, directly or indirectly, in the same or similar business activities or lines of business as the Corporation and (ii) do business with any client, competitor or customer of the Corporation, with the result that the Corporation shall have no right in or to such activities or any proceeds or benefits therefrom, and no Investor or Investor Person (except as provided in paragraph (c) of this Article VI), shall be liable to the Corporation or its stockholders for breach of any fiduciary duty by reason of any such activities of such Investor or such Investor Person's participation there. In the event that any Investor or Investor Person acquires knowledge of a potential transaction or matter that may be a corporate opportunity for both the Corporation and such Investor, such Investor or Investor Person shall have no duty to communicate or present such corporate opportunity to the Corporation and the Corporation hereby renounces any interest or expectancy it may have in such corporate opportunity, with the result that such Investor or Investor Person shall not be liable to the Corporation or its stockholders for breach of any fiduciary duty, including for breach of any fiduciary duty as a stockholder of the Corporation by reason of the fact that such Investor pursues or acquires such corporate opportunity for itself, directs such Corporation opportunity to another person or entity, or does not present such corporate opportunity to the Corporation.

C. In the event that a director or officer of the Corporation who is an Investor Person acquires knowledge of a potential transaction or matter that may be a corporate opportunity for both the Corporation and any Investor, such corporate opportunity shall belong to such Investor, and the Corporation hereby renounces any interest or expectancy it may have in such corporate opportunity, unless such corporate opportunity is expressly offered to such director or officer in writing solely in his capacity as a director or officers of the Corporation, in which case such corporate opportunity shall belong to the Corporation.

D. For the purposes of this Article VI, "corporate opportunities" shall not include any business opportunities that the Corporation is not financially or contractually able to undertake, or that are, from their nature, not in the line of the Corporation's business or are of no practical advantage to it or that are ones in which the Corporation has no interest or reasonable expectancy.

E. Any person or entity purchasing or otherwise acquiring any interest in any shares of capital stock of the Corporation shall be deemed to have notice of and consent to the provisions of this Article VI.

F. For purposes of this Article VI only, the "Corporation" shall mean MokshaCo, Inc. and all corporations, partnerships, joint ventures, associations and other entities in which the Corporation beneficially owns (directly or indirectly) fifty percent (50%) or more of the outstanding voting stock, voting power or similar voting interests.

VII.

The corporation elects not to be governed by Section 203 of the DGCL.

VIII.

A. The liability of the directors for monetary damages shall be eliminated to the fullest extent under applicable law. If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

B. Any repeal or modification of this Article VIII shall be prospective and shall not affect the rights under this Article VIII in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

IX.

The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon the stockholders herein are granted subject to this reservation.

X.

The name and the mailing address of the Sole Incorporator is as follows:

Alan Hambelton
Cooley LLP
1700 Seventh Avenue, Suite 1900
Seattle, WA 98101

IN WITNESS WHEREOF, this Certificate has been subscribed this 25th day of March, 2020 by the undersigned who affirms that the statements made herein are true and correct.

/s/ Alan Hambelton

ALAN HAMBELTON
Sole Incorporator

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
MOKSHACO, INC.

MokshaCo, Inc. (the "***Corporation***"), a corporation organized and existing under the General Corporation Law of the State of Delaware (the "***DGCL***"), hereby certifies as follows:

1. That the Corporation originally filed its Certificate of Incorporation on March 25, 2020.

2. That the Board of Directors of said Corporation, by unanimous written consent, duly adopted resolutions proposing and declaring advisable the following amendments of the Certificate of Incorporation of said Corporation (the "***Certificate***") and seeking the consent of the stockholders of said Corporation to said amendment. The resolutions setting forth the proposed amendment are as follows:

RESOLVED, that Article I of the Certificate is hereby amended and restated in its entirety as follows:

"The name of this corporation is HilleVax, Inc."

RESOLVED, that Article IV of the Certificate is hereby amended and restated in its entirety as follows:

3. "This corporation is authorized to issue only one class of stock, to be designated Common Stock. The total number of shares of Common Stock presently authorized is Ten Million (10,000,000), each having a par value of $0.0001.

A. Effective upon the filing of this Certificate of Amendment with the Secretary of State of the State of Delaware, a 943.8776-for-1 forward stock split for each share of Common Stock outstanding or held in treasury immediately prior to such time shall automatically and without any action on the part of the holders thereof occur. The par value of the Common Stock shall remain $0.0001 per share. This conversion shall apply to all shares of Common Stock.

B. All certificates representing shares of Common Stock outstanding immediately prior to the filing of this Certificate of Amendment shall immediately after the filing of this Certificate of Amendment represent instead the number of shares of Common Stock as provided above. Notwithstanding the foregoing, any holder of Common Stock may (but shall not be required to) surrender his, her or its stock certificate or certificates to the corporation, and upon such surrender the holder may request that the corporation issue a certificate for the correct number of shares of Common Stock to which the holder is entitled under the provisions of this Certificate of Amendment. No fractional shares of Common Stock shall be issued. Stockholders who would otherwise be entitled to receive fractional shares of Common Stock shall have such fractional shares rounded down to the nearest whole share. Shares of Common Stock that were outstanding

prior to the filing of this Certificate of Amendment, and that are not outstanding after and as a result of the filing of this Certificate of Amendment, shall resume the status of authorized but unissued shares of Common Stock."

3. That the aforesaid amendment has been consented to and authorized by the holders of a majority of the issued and outstanding stock entitled to vote in accordance with the provisions of Section 228 of the DGCL.

4. That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Section 242 and 228 of the DGCL.

5. That the aforesaid amendment shall be executed, filed and recorded in accordance with Section 103 of the DGCL.

[*Signature page follows*]

IN WITNESS WHEREOF, this Certificate of Amendment has been signed by an authorized officer this 8th day of February, 2021.

By: /s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

Exhibit 3.2

BYLAWS

OF

MOKSHACO, INC.

(A DELAWARE CORPORATION)

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of the corporation in the State of Delaware shall be 251 Little Falls Drive City of Wilmington, County of New Castle, 19808 or in such other location as the board of directors of the corporation ("***Board of Directors***") may from time to time determine or the business of the corporation may require.

Section 2. Other Offices. The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the Board of Directors, and may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II

CORPORATE SEAL

Section 3. Corporate Seal. The Board of Directors may adopt a corporate seal. Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE III

STOCKHOLDERS' MEETINGS

Section 4. Place of Meetings. Meetings of the stockholders of the corporation may be held at such place, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the Delaware General Corporation Law ("***DGCL***").

Section 5. Annual Meeting.

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may lawfully come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the corporation's notice of meeting of stockholders; (ii) by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the time of giving of notice provided for in the following paragraph, who is entitled to vote at the meeting and who complied with the notice procedures set forth in this Section.

(b) At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. For nominations or other business to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of paragraph (a) of this Section, (i) the stockholder must have given timely notice thereof in writing

to the Secretary of the corporation, (ii) such other business must be a proper matter for stockholder action under the DGCL and applicable law, (iii) if the stockholder, or the beneficial owner on whose behalf any such proposal or nomination is made, has provided the corporation with a Solicitation Notice (as defined in this paragraph), such stockholder or beneficial owner must, in the case of a proposal, have delivered a proxy statement and form of proxy to holders of at least the percentage of the corporation's voting shares required under applicable law to carry any such proposal, or, in the case of a nomination or nominations, have delivered a proxy statement and form of proxy to holders of a percentage of the corporation's voting shares reasonably believed by such stockholder or beneficial owner to be sufficient to elect the nominee or nominees proposed to be nominated by such stockholder, and must, in either case, have included in such materials the Solicitation Notice, and (iv) if no Solicitation Notice relating thereto has been timely provided pursuant to this Section, the stockholder or beneficial owner proposing such business or nomination must not have solicited a number of proxies sufficient to have required the delivery of such a Solicitation Notice under this Section. To be timely, a stockholder's notice shall be delivered to the Secretary at the principal executive offices of the corporation not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the preceding year's annual meeting; *provided*, *however*, that in the event that the date of the annual meeting is advanced more than 30 days prior to or delayed by more than 30 days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so delivered not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the 10th day following the day on which public announcement of the date of such meeting is first made. In no event shall the public announcement of an adjournment of an annual meeting commence a new time period for the giving of a stockholder's notice as described above. Such Stockholder's notice shall set forth: (A) as to each person whom the stockholder proposed to nominate for election or reelection as a director, all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors in an election contest, or is otherwise required, in each case pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "***1934 Act***"), and Rule 14a-4(d) thereunder (including such person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected); (B) as to any other business that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made; and (C) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made; and (C) as to the stockholder giving notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (i) the name and address of such stockholder, as they appear on the corporation's books, and of such beneficial owner, (ii) the class and number of shares of the corporation that are owned beneficially and of record by such stockholder and such beneficial owner, and (iii) whether either such stockholder or beneficial owner intends to deliver a proxy statement and form of proxy to holders of, in the case of the proposal, at least the percentage of the corporation's voting shares required under applicable law to carry the proposal or, in the case of a nomination or nominations, a sufficient number of holders of the corporation's voting shares to elect such nominee or nominees (an affirmative statement of such intent, a "***Solicitation Notice***").

(c) Notwithstanding anything in the second sentence of paragraph (b) of this Section to the contrary, in the event that the number of directors to be elected to the Board of Directors is increased and there is no public announcement naming all of the nominees for director or specifying the size of the increased Board of Directors made by the corporation at least 100 days prior to the first anniversary of the preceding year's annual meeting, a stockholder's notice required by this Section shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be delivered to the Secretary at the principal executive offices of the corporation not later than the close of business on the 10th day following the day on which such public announcement is first made by the corporation.

(d) Only such persons who are nominated in accordance with the procedures set forth in this Section (or elected or appointed pursuant to Article IV of these Bylaws) shall be eligible to serve as directors and only such business shall be conducted at a meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section. Except as otherwise provided by law, the Chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, to declare that such defective proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded.

(e) Notwithstanding the foregoing provisions of this Section, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, stockholders must provide notice as required by the regulations promulgated under the 1934 Act. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation proxy statement pursuant to Rule 14a-8 under the 1934 Act.

(f) For purposes of this Section, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission (the "***SEC***") pursuant to Sections 13, 14 or 15(d) of the 1934 Act.

Section 6. Special Meetings.

(a) Special meetings of the stockholders of the corporation may be called, for any purpose or purposes, by (i) the Chairman of the Board of Directors, (ii) the Chief Executive Officer, (iii) the Board of Directors pursuant to a resolution adopted by directors representing a quorum of the Board of Directors or (iv) by the holders of shares entitled to cast not less than 20% of the votes at the meeting, and shall be held at such place, on such date, and at such time as the Board of Directors shall fix. At any time or times that the corporation is subject to Section 2115(b) of the California General Corporation Law ("***CGCL***"), stockholders holding 5% or more of the outstanding shares shall have the right to call a special meeting of stockholders as set forth in Section 18(b) of these Bylaws.

(b) If a special meeting is properly called by any person or persons other than the Board of Directors, the request shall be in writing, specifying the general nature of the business

proposed to be transacted, and shall be delivered personally or sent by certified or registered mail, return receipt requested, or by telegraphic or other facsimile transmission to the Chairman of the Board of Directors, the Chief Executive Officer, or the Secretary of the corporation. No business may be transacted at such special meeting otherwise than specified in such notice. The Board of Directors shall determine the time and place of such special meeting, which shall be held not less than 35 nor more than 120 days after the date of the receipt of the request. Upon determination of the time and place of the meeting, the officer receiving the request shall cause notice to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7 of these Bylaws. Nothing contained in this paragraph (b) shall be construed as limiting, fixing, or affecting the time when a meeting of stockholders called by action of the Board of Directors may be held.

Section 7. Notice of Meetings. Except as otherwise provided by law, notice of each meeting of stockholders shall be given in writing or by electronic transmission to each stockholder entitled to vote at such meeting not less than 10 nor more than 60 days before the date of the meeting, such notice to specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at any such meeting. If mailed, notice shall be deemed to have been duly and validly delivered one business day after being deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. If sent via electronic transmission during normal business hours of the recipient, notice shall be deemed to have been duly and validly delivered when sent. If sent via electronic transmission outside of normal business hours of the recipient, notice shall be deemed to have been duly and validly delivered during the recipient's next business day. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his or her attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

Section 8. Quorum. At all meetings of stockholders, except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairman of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of a majority of shares present in person, by remote communication, if applicable, or represented by proxy duly authorized at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by

remote communication, if applicable, or represented by proxy duly authorized at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by statute, the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.

Section 9. Adjournment and Notice of Adjourned Meetings. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairman of the meeting or by the vote of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business that might have been transacted at the original meeting pursuant to the Certificate of Incorporation, these Bylaws or applicable law. If the adjournment is for more than 30 days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 10. Voting Rights. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 12 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every person entitled to vote or execute consents shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three years from its date of creation unless the proxy provides for a longer period.

Section 11. Joint Owners of Stock. If shares or other securities having voting power stand of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting (including giving consent pursuant to Section 13) shall have the following effect: (a) if only one votes, his or her act binds all; (b) if more than one votes, the act of the majority so voting binds all; (c) if more than one votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the DGCL, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (c) shall be a majority or even-split in interest.

Section 12. List of Stockholders. The Secretary shall prepare and make, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, on a reasonably accessible electronic network, *provided* that the information required to gain access to such list is provided with the notice of the meeting, or during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by law.

Section 13. Action Without Meeting.

(a) Unless otherwise provided in the Certificate of Incorporation, any action required by statute to be taken at any annual or special meeting of the stockholders, or any action that may be taken at any annual or special meeting of the stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, or by electronic transmission setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

(b) Every written consent or electronic transmission shall bear the date of signature of each stockholder who signs the consent, and no written consent or electronic transmission shall be effective to take the corporate action referred to therein unless, within 60 days of the earliest dated consent delivered to the corporation in the manner herein required, written consents or electronic transmissions signed by a sufficient number of stockholders to take action are delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be by hand or by certified or registered mail, return receipt requested.

(c) Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing or by electronic transmission and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of stockholders to take action were delivered to the corporation as provided in Section 228(c) of the DGCL. If the action to which the stockholders consent is such as would have required the filing of a certificate under any section of the DGCL if such action had been voted on by stockholders at a meeting thereof, then the certificate filed under such section shall state, in lieu of any statement required by such section concerning any vote of stockholders, that written consent has been given in accordance with Section 228 of the DGCL.

(d) An electronic mail, facsimile or other electronic transmission consenting to an action to be taken and transmitted by a stockholder or proxyholder, shall be deemed to be written, signed and dated for the purposes of this Section, *provided* that any such electronic mail,

facsimile or other electronic transmission sets forth or is delivered with information from which the corporation can determine (i) that the electronic mail, facsimile or other electronic transmission was transmitted by the stockholder or proxyholder or by a person or persons authorized to act for the stockholder and (ii) the date on which such stockholder or proxyholder or authorized person or persons transmitted such electronic mail, facsimile or electronic transmission. The date on which such electronic mail, facsimile or electronic transmission is transmitted shall be deemed to be the date on which such consent was signed. No consent given by electronic mail, facsimile or other electronic transmission shall be deemed to have been delivered until such consent is reproduced in paper form and until such paper form shall be delivered to the corporation by delivery to its registered office in the state of Delaware, its principal place of business or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be made by hand or by certified or registered mail, return receipt requested. Notwithstanding the foregoing limitations on delivery, consents given by electronic mail, facsimile or other electronic transmission may be otherwise delivered to the principal place of business of the corporation or to an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded if, to the extent and in the manner provided by resolution of the Board of Directors. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, *provided* that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing.

Section 14. Organization.

(a) At every meeting of stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Chief Executive Officer, or, if the Chief Executive Officer is absent, a chairman of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairman. The Secretary, or, in his or her absence, an Assistant Secretary directed to do so by the Chief Executive Officer, shall act as secretary of the meeting.

(b) The Board of Directors shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters that are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV

DIRECTORS

Section 15. Number and Term of Office. The authorized number of directors of the corporation shall be fixed by the Board of Directors from time to time. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient.

Section 16. Powers. The business and affairs of the corporation shall be managed by or under the direction of the Board of Directors, except as otherwise provided by statute or by the Certificate of Incorporation.

Section 17. Term of Directors.

(a) Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, directors shall be elected at each annual meeting of stockholders to serve until his or her successor is duly elected and qualified or until his or her death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

(b) No person entitled to vote at an election for directors may cumulate votes to which such person is entitled, unless, at the time of such election, the corporation is subject to Section 2115(b) of the CGCL. During such time or times that the corporation is subject to Section 2115(b) of the CGCL, every stockholder entitled to vote at an election for directors may cumulate such stockholder's votes and give one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which such stockholder's shares are otherwise entitled, or distribute the stockholder's votes on the same principle among as many candidates as such stockholder thinks fit. No stockholder, however, shall be entitled to so cumulate such stockholder's votes unless (i) the names of such candidate or candidates have been placed in nomination prior to the voting and (ii) the stockholder has given notice at the meeting, prior to the voting, of such stockholder's intention to cumulate such stockholder's votes. If any stockholder has given proper notice to cumulate votes, all stockholders may cumulate their votes for any candidates who have been properly placed in nomination. Under cumulative voting, the candidates receiving the highest number of votes, up to the number of directors to be elected, are elected.

Section 18. Vacancies.

(a) Unless otherwise provided in the Certificate of Incorporation, and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director; *provided*, *however*, that whenever the holders of any class or classes of stock or series thereof are

entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director.

(b) At any time or times that the corporation is subject to Section 2115(b) of the CGCL, if, after the filling of any vacancy, the directors then in office who have been elected by stockholders shall constitute less than a majority of the directors then in office, then

(1) any holder or holders of an aggregate of 5% or more of the total number of shares at the time outstanding having the right to vote for those directors may call a special meeting of stockholders; or

(2) the Superior Court of the proper county shall, upon application of such stockholder or stockholders, summarily order a special meeting of the stockholders, to be held to elect the entire Board of Directors, all in accordance with Section 305(c) of the CGCL, the term of office of any director shall terminate upon that election of a successor.

Section 19. Resignation. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time, upon receipt by the Secretary or at the pleasure of the Board of Directors. If no such specification is made, it shall be deemed effective at the pleasure of the Board of Directors. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office for the unexpired portion of the term of the director whose place shall be vacated and until his or her successor shall have been duly elected and qualified.

Section 20. Removal.

(a) Subject to any limitations imposed by applicable law, the Board of Directors or any director may be removed from office at any time (i) with cause by the affirmative vote of the holders of a majority of the voting power of all then-outstanding shares of capital stock of the corporation entitled to vote generally at an election of directors or (ii) without cause by the affirmative vote of the holders of a majority of the voting power of all then-outstanding shares of capital stock of the corporation, entitled to elect such director.

(b) During such time or times that the corporation is subject to Section 2115(b) of the CGCL, the Board of Directors or any individual director may be removed from office at any time without cause by the affirmative vote of the holders of a majority of the outstanding shares entitled to vote on such removal; *provided*, *however*, that unless the entire Board is removed, no

individual director may be removed when the votes be sufficient to elect that director if voted cumulatively at an election at which the same total number of votes were cast (or, if such action is taken by written consent, all shares entitled to vote were voted) and the entire number of directors authorized at the time of such director's most recent election were then being elected.

Section 21. Meetings.

(a) Regular Meetings. Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware that has been designated by the Board of Directors and publicized among all directors, either orally or in writing, including a voice-messaging system or other system designated to record and communicate messages, facsimile, or by electronic mail or other electronic means. No further notice shall be required for a regular meeting of the Board of Directors.

(b) Special Meetings. Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by the Chairman of the Board, the Chief Executive Officer (if a director), the President (if a director) or any director.

(c) Meetings by Electronic Communications Equipment. Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) Notice of Special Meetings. Notice of the time and place of all special meetings of the Board of Directors shall be orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means, during normal business hours, at least 24 hours before the date and time of the meeting. If notice is sent by US mail, it shall be sent by first class mail, postage prepaid at least three days before the date of the special meeting. Notice of any special meeting may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(e) Waiver of Notice. The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though had at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 22. Quorum and Voting.

(a) Unless the Certificate of Incorporation requires a greater number, a quorum of the Board of Directors shall consist of a majority of the total number of directors then serving; *provided*, *however*, that such number shall never be less than 1/3 of the total number of directors except that when one director is authorized, then one director shall constitute a quorum. At any meeting, whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting. If the Certificate of Incorporation provides that one or more directors shall have more or less than one vote per director on any matter, every reference in this Section to a majority or other proportion of the directors shall refer to a majority or other proportion of the votes of the directors.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws.

Section 23. Action Without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 24. Fees and Compensation. Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

Section 25. Committees.

(a) Executive Committee. The Board of Directors may appoint an Executive Committee to consist of one or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any Bylaw of the corporation.

(b) Other Committees. The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one or more members of the Board of Directors and shall

have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) Term. The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock and the provisions of paragraphs (a) or (b) of this Section may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his or her death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he/she or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) Meetings. Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place that has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

Section 26. Organization. At every meeting of the directors, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Chief Executive Officer (if a director), or if the Chief Executive Officer is not a director or is absent, the President (if a director), or if the President is not a director or is absent, the most senior Vice President (if a director) or, in the absence of any such person, a chairman of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his or her absence, any Assistant Secretary directed to do so by the Chief Executive Officer or President, shall act as secretary of the meeting.

ARTICLE V

OFFICERS

Section 27. Officers Designated. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer, the Treasurer and the Controller, all of whom shall be elected at the annual organizational meeting of the Board of Directors. The Board of Directors may also appoint one or more Assistant Secretaries, Assistant Treasurers, Assistant Controllers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors.

Section 28. Tenure and Duties of Officers.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors, or by the Chief Executive Officer or other officer if so authorized by the Board of Directors.

(b) Duties of Chairman of the Board of Directors. The Chairman of the Board of Directors, when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board of Directors shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time. If there is no Chief Executive Officer and no President, then the Chairman of the Board of Directors shall also serve as the Chief Executive Officer of the corporation and shall have the powers and duties prescribed in paragraph (c) of this Section.

(c) Duties of Chief Executive Officer. The Chief Executive Officer shall preside at all meetings of the stockholders and (if a director) at all meetings of the Board of Directors, unless the Chairman of the Board of Directors has been appointed and is present. The Chief Executive Officer shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time.

(d) Duties of President. In the absence or disability of the Chief Executive Officer or if the office of Chief Executive Officer is vacant, the President shall preside at all meetings of the stockholders and (if a director) at all meetings of the Board of Directors, unless the Chairman of the Board of Directors has been appointed and is present. If the office of Chief

Executive Officer is vacant, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time.

(e) Duties of Vice Presidents. The Vice Presidents may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant. The Vice Presidents shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(f) Duties of Secretary. The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties provided for in these Bylaws and other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors shall designate from time to time. The Chief Executive Officer may direct any Assistant Secretary to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer shall designate from time to time.

(g) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the Chief Executive Officer. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to his or her office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer shall designate from time to time. The Chief Executive Officer may direct the Treasurer or any Assistant Treasurer, or the Controller or any Assistant Controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each Controller and Assistant Controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer shall designate from time to time.

Section 29. Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 30. Resignations. Any officer may resign at any time by giving notice in writing or by electronic transmission notice to the Board of Directors or to the Chief Executive Officer or to the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified

therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer.

Section 31. Removal. Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written or electronic consent of the directors in office at the time, or by any committee or superior officers upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI

EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION

Section 32. Execution of Corporate Instruments. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name, or to enter into contracts on behalf of the corporation, except as otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation. All checks and drafts drawn on banks or other depositaries of funds to the credit of the corporation or on special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do. Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

Section 33. Voting of Securities Owned by the Corporation. All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII

SHARES OF STOCK

Section 34. Form and Execution of Certificates. The shares of the corporation shall be represented by certificates, or shall be uncertificated. Certificates for the shares of stock, if any, of the corporation shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of shares of stock in the corporation represented by certificate shall be entitled to have a certificate signed by or in the name of the corporation by any two authorized officers, including but not limited to the Chief Executive Officer, the President, the Chief Financial Officer, any Vice President, the Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him or her in the corporation. Any or all of

the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he or she were such officer, transfer agent, or registrar at the date of issue.

Section 35. Lost Certificates. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

Section 36. Restrictions on Transfer.

(a) No holder of any of the shares of stock of the corporation may sell, transfer, assign, pledge, or otherwise dispose of or encumber any of the shares of stock of the corporation or any right or interest therein, whether voluntarily or by operation of law, or by gift or otherwise (each, a "***Transfer***") without the prior written consent of the corporation, upon duly authorized action of its Board of Directors. The corporation may withhold consent for any legitimate corporate purpose, as determined by the Board of Directors. Examples of the basis for the corporation to withhold its consent include, without limitation, (i) if such Transfer to individuals, companies or any other form of entity identified by the corporation as a potential competitor or considered by the corporation to be unfriendly; or (ii) if such Transfer increases the risk of the corporation having a class of security held of record by 2,000 or more persons, or 500 or more persons who are not accredited investors (as such term is defined by the SEC), as described in Section 12(g) of the 1934 Act and any related regulations, or otherwise requiring the corporation to register any class of securities under the 1934 Act; or (iii) if such Transfer would result in the loss of any federal or state securities law exemption relied upon by the corporation in connection with the initial issuance of such shares or the issuance of any other securities; or (iv) if such Transfer is facilitated in any manner by any public posting, message board, trading portal, internet site, or similar method of communication, including without limitation any trading portal or internet site intended to facilitate secondary transfers of securities; or (v) if such Transfer is to be effected in a brokered transaction; or (vi) if such Transfer represents a Transfer of less than all of the shares then held by the stockholder and its affiliates or is to be made to more than a single transferee.

(b) If a stockholder desires to Transfer any shares, then the stockholder shall first give written notice thereof to the corporation. The notice shall name the proposed transferee and state the number of shares to be transferred, the proposed consideration, and all other terms and conditions of the proposed transfer. Any shares proposed to be transferred to which Transfer the corporation has consented pursuant to paragraph (a) of this Section will first be subject to the corporation's right of first refusal located in Section 37 of these Bylaws.

(c) At the option of the corporation, the stockholder shall be obligated to pay to the corporation a reasonable transfer fee related to the costs and time of the corporation and its legal and other advisors related to any proposed Transfer.

(d) Any Transfer, or purported Transfer, of shares not made in strict compliance with this Section shall be null and void, shall not be recorded on the books of the corporation and shall not be recognized by the corporation.

(e) The foregoing restriction on Transfer shall not apply to the Transfer of shares of Preferred Stock or to the Transfer of any shares of Common Stock issued upon the conversion of any shares of Preferred Stock.

(f) The foregoing restriction on Transfer shall terminate upon the date securities of the corporation are first offered to the public pursuant to a registration statement filed with, and declared effective by, the SEC under the Securities Act of 1933, as amended (the "***1933 Act***").

(g) The certificates representing shares of Common Stock of the corporation shall bear on their face the following legend so long as the foregoing Transfer restrictions are in effect:

> "THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A TRANSFER RESTRICTION, AS PROVIDED IN THE BYLAWS OF THE CORPORATION."

Section 37. Right of First Refusal. No stockholder shall Transfer any of the shares of stock of the corporation, except by a Transfer that meets the requirements set forth in this Section 37, in addition to any other restrictions or requirements set forth under applicable law or these Bylaws:

(a) If the stockholder desires to Transfer any of his or her shares of stock, then the stockholder shall first give written notice thereof to the corporation. The notice shall name the proposed transferee and state the number of shares to be transferred, the proposed consideration, and all other terms and conditions of the proposed transfer.

(b) For 30 days following receipt of such notice, the corporation shall have the option to purchase up to all the shares specified in the notice at the price and upon the terms set forth in such notice; *provided*, *however*, that, with the consent of the stockholder, the corporation shall have the option to purchase a lesser portion of the shares specified in said notice at the price and upon the terms set forth therein. In the event of a gift, property settlement or other Transfer in which the proposed transferee is not paying the full price for the shares, and that is not otherwise exempted from the provisions of this Section, the price shall be deemed to be the fair market value of the stock at such time as determined in good faith by the Board of Directors. In the event the corporation elects to purchase all of the shares or, with consent of the stockholder, a lesser portion of the shares, it shall give written notice to the transferring stockholder of its election and settlement for said shares shall be made as provided below in paragraph (d) of this Section.

(c) The corporation may assign its rights hereunder.

(d) In the event the corporation and/or its assignee(s) elect to acquire any of the shares of the transferring stockholder as specified in said transferring stockholder's notice, the Secretary of the corporation shall so notify the transferring stockholder and settlement thereof shall be made in cash within *provided* that if the terms of payment set forth in said transferring stockholder's notice were other than cash against delivery, the corporation and/or its assignee(s) shall pay for said shares on the same terms and conditions set forth in said transferring stockholder's notice.

(e) In the event the corporation and/or its assignees(s) do not elect to acquire all of the shares specified in the transferring stockholder's notice, said transferring stockholder may, subject to the corporation's approval and all other restrictions on Transfer located in Section 36 of these Bylaws, within the 60-day period following the expiration or waiver of the option rights granted to the corporation and/or its assignees(s) herein, Transfer the shares specified in said transferring stockholder's notice that were not acquired by the corporation and/or its assignees(s) as specified in said transferring stockholder's notice. All shares so sold by said transferring stockholder shall continue to be subject to the provisions of this Bylaw in the same manner as before said Transfer.

(f) Anything to the contrary contained herein notwithstanding, the following transactions shall be exempt from the right of first refusal in paragraph (a) of this Section:

(1) A stockholder's Transfer of any or all shares held either during such stockholder's lifetime or on death by will or intestacy to such stockholder's immediate family or to any custodian or trustee for the account of such stockholder or such stockholder's immediate family or to any limited partnership of which the stockholder, members of such stockholder's immediate family or any trust for the account of such stockholder or such stockholder's immediate family will be the general or limited partner(s) of such partnership. "Immediate family" as used herein shall mean spouse, domestic partner, lineal descendant, father, mother, brother, or sister of the stockholder making such Transfer;

(2) A stockholder's bona fide pledge or mortgage of any shares with a commercial lending institution, *provided* that any subsequent Transfer of said shares by said institution shall be conducted in the manner set forth in this Bylaw;

(3) A stockholder's Transfer of any or all of such stockholder's shares to the corporation or to any other stockholder of the corporation;

(4) A stockholder's Transfer of any or all of such stockholder's shares to a person who, at the time of such Transfer, is an officer or director of the corporation;

(5) A corporate stockholder's Transfer of any or all of its shares pursuant to and in accordance with the terms of any merger, consolidation, reclassification of shares or capital reorganization of the corporate stockholder, or pursuant to a sale of all or substantially all of the stock or assets of a corporate stockholder;

(6) A stockholder's Transfer of shares of Preferred Stock of the corporation (or any shares of Common Stock issued upon conversion thereof);

(7) A corporate stockholder's Transfer of any or all of its shares to any or all of its stockholders; or

(8) A Transfer by a stockholder that is a limited or general partnership to any or all of its partners or former partners in accordance with partnership interests.

In any such case, the transferee, assignee, or other recipient shall receive and hold such stock subject to the provisions of this Section and any other restrictions set forth in these Bylaws, and there shall be no further Transfer of such stock except in accord with this Section and the other provisions of these Bylaws.

(g) The provisions of this Bylaw may be waived with respect to any Transfer either by the corporation, upon duly authorized action of its Board of Directors, or by the stockholders, upon the express written consent of the owners of a majority of the voting power of the corporation (excluding the votes represented by those shares to be transferred by the transferring stockholder). This Bylaw may be amended or repealed either by a duly authorized action of the Board of Directors or by the stockholders, upon the express written consent of the owners of a majority of the voting power of the corporation.

(h) Any Transfer, or purported Transfer, of securities of the corporation shall be null and void unless the terms, conditions, and provisions of this Bylaw are strictly observed and followed.

(i) The foregoing right of first refusal shall terminate upon the date securities of the corporation are first offered to the public pursuant to a registration statement filed with, and declared effective by, the SEC under the Securities Act of 1933, as amended.

(j) The certificates representing shares of Common Stock of the corporation that are subject to the right of first refusal in paragraph (a) of this Section shall bear on their face the following legend so long as the foregoing right of first refusal remains in effect:

"THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A RIGHT OF FIRST REFUSAL OPTION IN FAVOR OF THE CORPORATION AND/OR ITS ASSIGNEE(S), AS PROVIDED IN THE BYLAWS OF THE CORPORATION."

(k) To the extent this Section conflicts with any written agreements between the corporation and the stockholder attempting to Transfer shares, such agreement shall control.

Section 38. Fixing Record Dates.

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than 60 nor less than 10 days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of

business on the day immediately preceding the day on which notice is given, or if notice is waived, at the close of business on the day immediately preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided*, *however*, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. Any stockholder of record seeking to have the stockholders authorize or take corporate action by written consent shall, by written notice to the Secretary, request the Board of Directors to fix a record date. The Board of Directors shall promptly, but in all events within 10 days after the date on which such a request is received, adopt a resolution fixing the record date. If no record date has been fixed by the Board of Directors within 10 days of the date on which such a request is received, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the corporation by delivery to its registered office in the State of Delaware, its principal place of business or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to the corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

(c) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 39. Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VIII

OTHER SECURITIES OF THE CORPORATION

Section 40. Execution of Other Securities. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 34 of these Bylaws), may be signed by the Chairman of the Board of Directors, the Chief Executive Officer, the President or any Vice President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; *provided*, *however*, that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

ARTICLE IX

DIVIDENDS

Section 41. Declaration of Dividends. Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

Section 42. Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X

FISCAL YEAR

Section 43. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 44. Indemnification of Directors, Executive Officers, Other Officers, Employees and Other Agents.

(a) Directors and Executive Officers. The corporation shall indemnify its directors and executive officers (for the purposes of this Article, "executive officers" shall have the meaning defined in Rule 3b-7 promulgated under the 1934 Act) to the fullest extent not prohibited by the DGCL or any other applicable law; *provided*, *however*, that the corporation may modify the extent of such indemnification by individual contracts with its directors and executive officers; and, *provided*, *further*, that the corporation shall not be required to indemnify any director or executive officer in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the DGCL or any other applicable law or (iv) such indemnification is required to be made under paragraph (d) of this Section.

(b) Other Officers, Employees and Other Agents. The corporation shall have power to indemnify its other officers, employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person except executive officers to such officers or other persons as the Board of Directors shall determine.

(c) Expenses. The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a director or executive officer of the corporation, or is or was serving at the request of the corporation as a director or executive officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or executive officer in connection with such proceeding, *provided*, *however*, that, if the DGCL requires, an advancement of expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking, by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal

that such indemnitee is not entitled to be indemnified for such expenses under this Section or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this Section, no advance shall be made by the corporation to an executive officer of the corporation (except by reason of the fact that such executive officer is or was a director of the corporation, in which event this paragraph shall not apply) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by a majority vote of a quorum consisting of directors who were not parties to the proceeding, even if not a quorum, or (ii) by a committee of such directors designated by a majority of such directors, even though less than a quorum, or (iii) if there are no such directors, or such directors so direct, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and executive officers under this Section shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director or executive officer. Any right to indemnification or advances granted by this Section to a director or executive officer shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within 90 days of request therefor. The claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the corporation to indemnify the claimant for the amount claimed. In connection with any claim by an executive officer of the corporation (except in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such executive officer is or was a director of the corporation) for advances, the corporation shall be entitled to raise as a defense as to any such action clear and convincing evidence that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation, or with respect to any criminal action or proceeding that such person acted without reasonable cause to believe that his or her conduct was lawful. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Section shall not be exclusive of any other right that such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote

of stockholders or disinterested directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL or any other applicable law.

(f) Survival of Rights. The rights conferred on any person by this Section shall continue as to a person who has ceased to be a director or executive officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) Insurance. To the fullest extent permitted by the DGCL, or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this Section.

(h) Amendments. Any repeal or modification of this Section shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

(i) Saving Clause. If this Section or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director and executive officer to the full extent not prohibited by any applicable portion of this Bylaw that shall not have been invalidated, or by any other applicable law. If this Section shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director and executive officer to the full extent under applicable law.

(j) Certain Definitions. For the purposes of this Section, the following definitions shall apply:

(1) The term "proceeding" shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(2) The term "expenses" shall be broadly construed and shall include, without limitation, court costs, attorneys' fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

(3) The term the "corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger that, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position

under the provisions of this Section with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(4) References to a "director," "executive officer," "officer," "employee," or "agent" of the corporation shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, executive officer, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

(5) References to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation that imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this Section.

ARTICLE XII

NOTICES

Section 45. Notices.

(a) Notice to Stockholders. Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 of these Bylaws. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by United States mail or nationally recognized overnight courier, or by facsimile, telegraph or telex or by electronic mail or other electronic means.

(b) Notice to Directors. Any notice required to be given to any director may be given by the method stated in paragraph (a) of this Section, or as provided for in Section 21 of these Bylaws. If such notice is not delivered personally, it shall be sent to such address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known post office address of such director.

(c) Affidavit of Mailing. An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) Methods of Notice. It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be

employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(e) Notice to Person with Whom Communication Is Unlawful. Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting that shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) Notice to Stockholders Sharing an Address. Except as otherwise prohibited under DGCL, any notice given under the provisions of DGCL, the Certificate of Incorporation or the Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the corporation within 60 days of having been given notice by the corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the corporation.

ARTICLE XIII

AMENDMENTS

Section 46. Amendments. The Board of Directors is expressly empowered to adopt, amend or repeal Bylaws of the corporation. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the corporation; *provided*, *however*, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of a majority of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

ARTICLE XIV

LOANS TO OFFICERS

Section 47. Loans to Officers. Except as otherwise prohibited under applicable law, the corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiaries, including any officer or employee who is a Director of the corporation or its subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without

limitation, a pledge of shares of stock of the corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

ARTICLE XV

MISCELLANEOUS

Section 48. Annual Report.

(a) Subject to the provisions of paragraph (b) of this Section, the Board of Directors shall cause an annual report to be sent to each stockholder of the corporation not later than 120 days after the close of the corporation's fiscal year. Such report shall include a balance sheet as of the end of such fiscal year and an income statement and statement of changes in financial position for such fiscal year, accompanied by any report thereon of independent accountants or, if there is no such report, the certificate of an authorized officer of the corporation that such statements were prepared without audit from the books and records of the corporation. When there are more than 100 stockholders of record of the corporation's shares, as determined by Section 605 of the CGCL, additional information as required by Section 1501(b) of the CGCL shall also be contained in such report, *provided* that if the corporation has a class of securities registered under Section 12 of the 1934 Act, the 1934 Act shall take precedence. Such report shall be sent to stockholders at least 15 days prior to the next annual meeting of stockholders after the end of the fiscal year to which it relates.

(b) If and so long as there are fewer than 100 holders of record of the corporation's shares, the requirement of sending of an annual report to the stockholders of the corporation is hereby expressly waived.

Section 49. Forum. Unless the corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the corporation; (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the corporation to the corporation or the corporation's stockholders; (iii) any action asserting a claim against the corporation or any director or officer or other employee of the corporation arising pursuant to any provision of the DGCL, the certificate of incorporation or the Bylaws of the corporation; or (iv) any action asserting a claim against the corporation or any director or officer or other employee of the corporation governed by the internal affairs doctrine.

THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS WARRANT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). THESE SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE ACT PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM.

THE SALE OF THE SECURITIES WHICH ARE THE SUBJECT OF THIS WARRANT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA OR ANY OTHER STATE AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION FOR SUCH SECURITIES PRIOR TO SUCH QUALIFICATION IS UNLAWFUL, UNLESS THE SALE OF SUCH SECURITIES IS EXEMPT FROM QUALIFICATION BY SECTION 2511, 25102 OR 25105 OF THE CALIFORNIA CORPORATIONS CODE OR SUCH PROVISIONS OF THE CORPORATIONS CODE OF ANY SUCH OTHER STATE. THE RIGHTS OF THE HOLDER OF THIS WARRANT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED, UNLESS THE SALE IS SO EXEMPT.

Void after July 2, 2031

HILLEVAX, INC.

WARRANT
TO PURCHASE SHARES OF COMMON STOCK

THIS CERTIFIES THAT, for value received, **Takeda Vaccines, Inc.**, together with its permitted successors and assigns ("***Holder***") is entitled, subject to the terms set forth below, to subscribe for and purchase shares of common stock, par value $0.0001 per share (the "***Common Stock***") of **HILLEVAX, INC.**, a Delaware corporation (the "***Company***"), subject to adjustment as provided herein. This warrant and any warrant subsequently issued upon exchange or transfer hereof are hereinafter referred to collectively as the "***Warrant***."

This Warrant is subject to the following terms and conditions:

1. License Agreement. This Warrant is issued in connection with that certain License Agreement dated as of July 2, 2021 by and between Holder and the Company.

2. Exercise of Warrant. The terms and conditions upon which this Warrant may be exercised, and the shares covered hereby may be purchased, are as follows:

2.1 Term. Subject to the terms hereof and unless sooner terminated as provided below in Section 6.2, this Warrant may be exercised at any time on or after the events set forth in Section 2.4, or from time to time, in whole or in part; provided, however, that in no event may this Warrant be exercised later than 5:00 p.m. (Pacific Time) on the close of business on July 2, 2031 (the "***Exercise Period***").

2.2 Number of Common Stock Shares. This Warrant may be exercised for three million five hundred thousand (3,500,000) shares of Common Stock, subject to adjustment as provided herein.

2.3 Exercise Price. The "***Exercise Price***" shall be $0.0001 per share, subject to adjustment as provided herein.

2.4 Exercise Mechanics. This Warrant shall only be exercisable (a) in connection with a consolidation or merger of the Company with or into another corporation (other than a merger solely to effect a reincorporation of the Company into another state), the sale or other disposition of all or

substantially all the properties and assets of the Company in its entirety to any other person, or any other sale or change in voting control of the Company by equity transfer or otherwise (collectively, a "***Change of Control***"), or (b) upon the consummation of, or at any time following the consummation of, an initial public offering of shares of the Company's Common Stock (an "***IPO***"). Subject to the terms and conditions contained herein and while this Warrant remains outstanding and is exercisable, this Warrant is exercisable with respect to any or all of the shares of Common Stock, at the option of Holder, upon surrender of this Warrant to the Company together with either (x) a duly completed Notice of Exercise, in the form attached hereto as Exhibit A, payment of an amount equal to the Exercise Price multiplied by the number of shares of Common Stock with respect to which this Warrant is being exercised as provided in Section 2.5 below, or (y) a Net Issue Election Notice, in the form attached hereto as Exhibit B. If Holder exercises this Warrant with respect to less than all of the shares of Common Stock represented by this Warrant, the Company shall cancel this Warrant upon the surrender thereof and shall execute and deliver to Holder a new Warrant for the balance of such shares of Common Stock.

2.5 Payment. Payment of the Exercise Price for the shares of Common Stock with respect to which this Warrant is being exercised by Holder shall be made, at the option of Holder, (a) by delivery of cash payable by wire transfer of immediately available funds, (b) by the delivery of a cashier's check or certified check, (c) by net issue election as set forth in Section 2.6 below, or (d) by any combination of (a) – (c).

2.6 Net Issue Election. Holder may elect to receive, without payment by Holder of any additional consideration, shares of Common Stock equal to the value of the "spread" on the shares of Common Stock or any portion thereof by the surrender of the Warrant to the Company, together with a duly completed Net Issue Election Notice, in the form attached hereto as Exhibit B, at the principal office of the Company, in which event the Company shall issue to Holder such number of shares of Common Stock as is computed using the following formula, rounded down to the nearest whole share:

$$X = \frac{Y\,(A - B)}{A}$$

Where:

X = The number of shares of Common Stock to be issued to Holder pursuant to the net issue election;

Y = The number of shares of Common Stock in respect of which the net issue election is made;

A = The fair market value (as determined below) of one share of Common Stock at the time the net issue election is made; and

B = The Exercise Price in effect under this Warrant as of the date of the net issue election.

For purposes of this Section 2.6, the fair market value of one share of Common Stock as of a particular date shall be as determined in good faith by the Board of Directors of the Company; provided that in connection with an IPO (including pursuant to Section 6.3 below), the fair market value shall equal the actual price to the public of the Common Stock sold in the IPO regardless of the subsequent trading price of the Common Stock after the initial pricing of the IPO.

3. Adjustment of Exercise Price and Number of Shares. The Exercise Price and the number of shares of Common Stock purchasable upon the exercise of this Warrant shall be subject to adjustment from time to time upon the happening of certain events as follows:

3.1 Split, Subdivision or Combination. If the Company should at any time or from time to time fix a record date for (a) the effectuation of a split or subdivision of the outstanding shares of Common Stock or (b) the determination of the holders of Common Stock entitled to receive a dividend or other distribution payable in additional shares of Common Stock or other securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly, additional shares of Common Stock (hereinafter referred to as the "***Common Stock Equivalents***"), without payment of any consideration by such holder for the additional shares of Common Stock or Common Stock Equivalents, then, as of such record date (or the date of such distribution, split or subdivision if no record date is fixed), the Exercise Price shall be appropriately decreased and the number of shares of Common Stock which this Warrant is exercisable for, if any, shall be appropriately increased in proportion to such increase of outstanding shares. Notwithstanding the foregoing, in any such case, the aggregate purchase price payable by Holder for the total number of shares of Common Stock (as adjusted) shall remain the same.

3.2 Combination of Shares. If the number of shares of Common Stock outstanding at any time after the date hereof is decreased by a combination of the outstanding shares of Common Stock, the Exercise Price shall be appropriately increased and the number of shares of Common Stock for which this Warrant is exercisable, if any, shall be appropriately decreased in proportion to such decrease in outstanding shares. Notwithstanding the foregoing, in any such case, the aggregate purchase price payable by Holder for the total number of shares of Common Stock (as adjusted) shall remain the same.

3.3 Reclassification or Reorganization. If the shares of Common Stock shall be changed into the same or different number of shares of any class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision, conversion or combination of shares or stock dividend provided for in Sections 3.1 and 3.2 above), then and in each such event Holder shall be entitled to receive upon the exercise of this Warrant the kind and amount of shares of stock and other securities and property receivable upon such reorganization, reclassification or other change, to which a holder of the number of shares of Common Stock (or any shares of stock or other securities which may be) issuable upon the exercise of this Warrant would have received if this Warrant had been exercised immediately prior to such reorganization, reclassification or other change, all subject to further adjustment as provided herein. At the request of Holder, this Warrant will thereupon be cancelled and upon its surrender to the Company, the Company will execute and deliver at its expense a new Warrant reflecting the foregoing adjustment, but otherwise identical to the replaced Warrant.

3.4 Notice of Adjustments and Record Dates. The Company shall promptly notify Holder in writing of each adjustment or readjustment of the Exercise Price hereunder and the number of shares of Common Stock issuable upon the exercise of this Warrant. Such notice shall state the adjustment or readjustment and show in reasonable detail the facts on which that adjustment or readjustment is based. In the event of any taking by the Company of a record of holders of shares of Common Stock for the purpose of determining holders thereof who are entitled to receive any dividend or other distribution, the Company shall notify Holder in writing of such record date at least ten (10) days prior to the date specified therein.

3.5 Fractional Shares. No fractional shares shall be issued upon the exercise of this Warrant as a consequence of any adjustment pursuant hereto. All shares of Common Stock (including fractions) issuable upon exercise of this Warrant may be aggregated for purposes of determining whether the exercise would result in the issuance of a fractional share. If, after aggregation, the exercise would result in the issuance of a fractional share, the Company shall, in lieu of issuance of any fractional share, pay Holder otherwise entitled to such fraction a sum in cash equal to the product resulting from multiplying the then current fair market value of a share of Common Stock (as determined in good faith by the Board of Directors of the Company) by such fraction.

3.6 Issue Tax. The issuance of certificates for the shares of Common Stock upon exercise of this Warrant shall be made without charge to Holder for any issuance tax in respect thereof provided that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than that of Holder.

3.7 No Impairment. The Company shall not avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Company, but shall at all times in good faith assist in the carrying out of all the provisions of this Warrant. Without limiting the generality of the foregoing, the Company shall take all such action as may be necessary or appropriate in order that all shares of Common Stock as may be issued pursuant to the exercise of this Warrant shall, upon issuance, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issue thereof.

4. Replacement of Warrants. On receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of any such loss, theft, destruction or mutilation of this Warrant, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of any such mutilation, on surrender and cancellation of such Warrant, the Company at its expense shall execute and deliver to Holder, in lieu thereof, a new Warrant of like tenor.

5. No Rights or Liability as a Stockholder. This Warrant does not entitle Holder to any voting rights or other rights as a stockholder of the Company. No provisions hereof, in the absence of affirmative action by Holder to purchase shares of Common Stock, and no enumeration herein of the rights or privileges of Holder, shall give rise to any liability of Holder as a shareholder of the Company.

6. Miscellaneous.

6.1 Limitations on Disposition. Holder agrees not to make any disposition of this Warrant or any shares of Common Stock issued upon exercise of this Warrant, unless and until (i) the transferee has agreed in writing for the benefit of the Company to be bound by this Section 6.1 and the other provisions of this Warrant as if such transferee were the original Holder hereof, provided and to the extent such provisions are then applicable, and (ii) such transfer is in compliance with all applicable securities laws.

6.2 Early Termination. In the event of, at any time during the Exercise Period, the Company proposes to conduct a Change of Control, the Company shall provide to Holder ten (10) days advance written notice prior to the closing of such Change of Control and this Warrant shall terminate (subject to the provisions of Section 6.3) unless exercised prior to the occurrence of such Change of Control.

6.3 Automatic Conversion upon Expiration or Termination. In the event that, at the end of the Exercise Period or earlier termination of this Warrant pursuant to Section 6.2, the fair market value (as determined in good faith by the Board of Directors of the Company) of one share of Common Stock for which this Warrant is exercisable (or other security issuable upon the exercise hereof) is greater than the Exercise Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be converted pursuant to Section 2.6 above as to all shares of Common Stock (or such other securities) for which it shall not previously have been exercised or converted, and the Company shall promptly deliver a certificate representing the shares of Common Stock (or such other securities) issued upon such conversion to the Holder.

6.4 Titles and Subtitles. The titles and subtitles used in this Warrant are for convenience only and are not to be considered in construing or interpreting this Warrant.

6.5 Notices. All notices and other communications under this Warrant shall be in writing and shall be deemed given upon receipt if delivered personally, or when sent if mailed by registered or certified mail (return receipt requested) or by reputable overnight express courier (charges prepaid) to the party to be notified at the address indicated for such party on the signature page hereof, or at such other address as such party may designate by advance written notice to the other parties.

6.6 Attorneys' Fees. If any action at law or in equity is necessary to enforce or interpret the terms of this Warrant, the prevailing party shall be entitled to reasonable attorneys' fees, costs and disbursements in addition to any other relief to which such party may be entitled.

6.7 Amendments and Waivers. This Warrant may be amended and the observance of any other term of this Warrant may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and Holder. Any amendment or waiver effected in accordance with this Section 6.7 shall be binding upon Holder of this Warrant (and of any shares of Common Stock into which this Warrant is exercisable), and each future holder of all such securities and the Company.

6.8 Severability. If one or more provisions of this Warrant are held to be unenforceable under applicable law, such provision shall be excluded from this Warrant and the balance of the Warrant shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

6.9 Governing Law. This Warrant shall be governed by and construed and enforced in accordance with the laws of the State of Delaware, without giving effect to its conflicts of laws principles.

[SIGNATURE PAGE FOLLOWS]

This Warrant may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Date: July 2, 2021

HILLEVAX, INC.,
a Delaware corporation

By: /s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

ACKNOWLEDGED AND AGREED:

HOLDER:

TAKEDA VACCINES, INC.

By: /s/ Rajeev Venkayya
Name: Rajeev Venkayya, M.D.
Title: President, Global Vaccine Unit

Address:

[SIGNATURE PAGE TO WARRANT TO PURCHASE
SHARES OF COMMON STOCK]

EXHIBIT A

FORM OF NOTICE OF EXERCISE

The undersigned, the holder of the within Warrant, hereby irrevocably elects to exercise this Warrant for, and to purchase thereunder, shares of Common Stock (as defined in the attached Warrant)* of **HILLEVAX, INC.**, a Delaware corporation and herewith makes payment of $ therefor and requests that the certificates for such shares be issued in the name of, and delivered to, , federal taxpayer identification number , whose address is .

In exercising this Warrant, the undersigned hereby confirms and acknowledges that the shares of Common Stock (as defined in the attached Warrant) are being acquired solely for the account of the undersigned and not as a nominee for any other party, and for investment, and the undersigned will not offer, sell or otherwise dispose of any such shares of Common Stock except under circumstances that will not result in a violation of the Securities Act of 1933, as amended, or any state securities laws.

Please issue a new Warrant for the unexercised portion of the attached Warrant in the name of, and delivered to, , federal taxpayer identification number , whose address is .

Dated: _____

_____

(Signature must conform to name of holder
as specified on the face of the Warrant)

* Insert here the number of shares as to which the Warrant is being exercised.

EXHIBIT B

FORM OF NET ISSUE ELECTION NOTICE

(To be signed only on net issue exercise of the Warrant)

The undersigned, the holder of the within Warrant, hereby irrevocably elects to exercise this Warrant with respect to shares of Common Stock (as defined in the attached Warrant) of **HILLEVAX, INC.**, a Delaware corporation, pursuant to the net issue election provisions set forth in Section 2.6 of the Warrant and requests that the certificates for the number of shares of Common Stock issuable pursuant to said Section 2.6 after application of the net issue election formula to such shares of Common Stock be issued in the name of, and delivered to, , federal taxpayer identification number , whose address is .

In exercising this Warrant, the undersigned hereby confirms and acknowledges that the shares of Common Stock are being acquired solely for the account of the undersigned and not as a nominee for any other party, and for investment, and the undersigned will not offer, sell or otherwise dispose of any such shares of Common Stock except under circumstances that will not result in a violation of the Securities Act of 1933, as amended, or any state securities laws.

Please issue a new Warrant for the unexercised portion of the attached Warrant in the name of, and delivered to, , federal taxpayer identification number , whose address is .

Dated: _____

_____

(Signature must conform to name of holder
as specified on the face of the Warrant)

HILLEVAX, INC.

NOTE PURCHASE AGREEMENT

August 31, 2021

TABLE OF CONTENTS

NOTE PURCHASE AGREEMENT

THIS NOTE PURCHASE AGREEMENT ("Agreement") is made as of August 31, 2021, by and among HilleVax, Inc., a Delaware corporation (the "Company"), and the lenders (each, a "Lender" and collectively, the "Lenders") named on the Schedule of Lenders attached hereto (the "Schedule of Lenders"), and the Common Holders (as defined herein) (collectively, the "Parties"). Capitalized terms not otherwise defined in this Agreement shall have the meanings ascribed to them in Section 1 below.

WHEREAS, each of the Lenders intends to provide certain Consideration to the Company as described for each Lender on the Schedule of Lenders;

WHEREAS, the parties wish to provide for the sale and issuance of certain Notes in return for the provision by the Lenders of the Consideration to the Company; and

WHEREAS, the parties intend for the Company to issue in return for the Consideration one or more Notes that are convertible into shares of the Company's Equity Securities.

NOW, THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. Definitions.

(a) "Affiliate" means, with respect to any Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including, without limitation, any general partner, managing member, officer or director of such Person or any venture capital fund or other investment fund now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management or advisory company with, such Person, and with respect to a Person that is an investment fund, its other equityholders, partners (including partners and affiliated partnerships managed by the same management company or managing (general) partner or by any Person that is an Affiliate with such management company or managing (general) partner), members and a trust for the benefit of such other equityholders of such Person.

(b) "Board" means the Board of Directors of the Company.

(c) "Certificate of Incorporation" means the Certificate of Incorporation of the Company, as amended.

(d) "Common Holder" means a holder of Common Stock listed on Exhibit C attached hereto (collectively, the "Common Holders").

(e) "Common Stock" means shares of common stock, par value $0.0001, of the Company.

(f) "Company Intellectual Property" means all patents, patent applications, registered and unregistered trademarks, trademark applications, registered and unregistered service

marks, service mark applications, tradenames, copyrights, trade secrets, domain names, mask works, information and proprietary rights and processes, similar or other intellectual property rights, subject matter of any of the foregoing, tangible embodiments of any of the foregoing, licenses in, to and under any of the foregoing, and any and all such cases that are owned or used by or are necessary to the Company in the conduct of the Company's business as now conducted and as presently proposed to be conducted.

(g) "Consideration" means the amount of money paid by each Lender pursuant to this Agreement as shown on the Schedule of Lenders in the form of a check, wire transfer, cancellation or exchange of indebtedness, or any combination thereof.

(h) "Conversion Cap Price Per Share" means the quotient obtained by dividing the following:

(i) the Valuation Cap less the aggregate principal amount and accrued interest under the Notes, by

(ii) the Pre-closing Capitalization.

(i) "Conversion Price" means:

(i) with respect to a conversion pursuant to Section 2.2(a) below, the lesser of (A) the Discounted Conversion Price or (B) the Conversion Cap Price Per Share;

(ii) with respect to a conversion pursuant to Section 2.2(b) below, the Non-Qualified Discounted Conversion Price;

(iii) with respect to a conversion pursuant to Section 2.2(c) below, the Conversion Cap Price Per Share;

(iv) with respect to a conversion pursuant to Section 2.2(d) below, the lesser of (A) the Discounted Conversion Price or (B) the Conversion Cap Price Per Share;

(v) with respect to a conversion pursuant to Section 2.2(e) below, the Conversion Cap Price Per Share; and

(vi) with respect to a conversion pursuant to Section 2.2(f) below, the lesser of (A) the Discounted SPAC Price or (B) the Conversion Cap Price Per Share.

(j) "Conversion Shares" shall, for purposes of determining the type of Equity Securities issuable upon conversion of the Notes, mean:

(i) if the Notes are converted to equity pursuant to Section 2.2(a) below, the Equity Securities issued in the Next Equity Financing;

(ii) if the Notes are converted to equity pursuant to Section 2.2(b) below, the Equity Securities issued in the Non-Qualified Next Equity Financing;

(iii) if the Notes are converted to equity pursuant to Section 2.2(c) below, shares of Common Stock;

(iv) if the Notes are converted to equity pursuant to Section 2.2(d) below, shares of Common Stock;

(v) if the Notes are converted to equity pursuant to Section 2.2(e) below, shares of Common Stock; and

(vi) if the Notes are converted to equity pursuant to Section 2.2(f) below, shares of Common Stock.

(k) "Corporate Transaction" means (A) the closing of the sale, transfer or other disposition of all or substantially all of this Company's assets, (B) the consummation of the merger or consolidation of this Company with or into another entity (except a merger or consolidation in which the holders of capital stock of this Company immediately prior to such merger or consolidation continue to hold at least 50% of the voting power of the capital stock of this Company or the surviving or acquiring entity in substantially identical proportions and with substantially identical rights, preferences, privileges and restrictions as existed immediately prior to such transaction), (C) the closing of the transfer (whether by merger, consolidation or otherwise), in one transaction or a series of related transactions, to a person or group of affiliated persons (other than an underwriter of this corporation's securities), of this Company's securities if, after such closing, such person or group of affiliated persons would hold 50% or more of the outstanding voting stock of this Company (or the surviving or acquiring entity) (a "Stock Sale") or (D) a liquidation, dissolution or winding up of this Company; provided, however, that a transaction shall not constitute a Corporate Transaction if its sole purpose is to change the state of this Company's incorporation or to create a holding company that will be owned in substantially the same proportions by the persons who held this Company's securities immediately prior to such transaction. Notwithstanding the prior sentence, the sale of shares of Preferred Stock in a bona fide financing transaction for the purposes of raising operating capital to bona fide institutional, venture capital, private equity and similar investors shall not be deemed a "Corporate Transaction."

(l) "Discounted Conversion Price" shall equal 80% of the New Purchase Price.

(m) "Discounted SPAC Price" shall equal 80% of the price per share of Common Stock implied by the nominal value of the Company in the SPAC transaction. For the avoidance of doubt, the nominal value of the Company shall not include any Earn-Out Consideration. For the avoidance of doubt, the nominal value shall be calculated based upon the valuation of the Company implied in the business combination agreement at the signing,

and shall not take into account any changes in pricing based upon changes in the share price of the publicly traded SPAC shares.

(n) "Equity Securities" means the Company's Common Stock or Preferred Stock or any securities conferring the right to purchase the Company's Common Stock or Preferred Stock or securities directly or indirectly convertible into, or exchangeable for (with or without additional consideration), the Company's Common Stock or Preferred Stock.

(o) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(p) "Form S-3" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits inclusion or incorporation of substantial information by reference to other documents filed by the Company with the SEC.

(q) "Frazier" means Frazier Life Sciences X, L.P.

(r) "Free Writing Prospectus" means a free-writing prospectus, as defined in Rule 405.

(s) "Holder" means any Person owning or having the right to acquire Registrable Securities or any assignee thereof in accordance with Section 7.5(j) of this Agreement.

(t) "Initial Public Offering" means the closing of the issuance and sale of shares of Equity Securities of the Company in the Company's first firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act in which the gross cash proceeds to the Company (before underwriting discounts, commissions and fees) are at least $75,000,000 (excluding the aggregate amount of debt securities converted into Equity Securities upon conversion of convertible indebtedness, including, without limitation, the Notes converted pursuant to Section 2.2 below) or such lesser amount as may be approved by the Requisite Noteholders.

(u) "Key Employee" means any executive-level employee (including division director and vice president-level positions) as well as any employee or consultant who either alone or in concert with others develops, invents, programs or designs any Company Intellectual Property.

(v) "Material Adverse Effect" means a material adverse effect on the business, assets (including intangible assets), liabilities, financial condition, property, prospects or results of operations of the Company.

(w) "Maturity Date" means August 31, 2022.

(x) "New Purchase Price" means the lowest price paid per share in cash for Equity Securities by the investors in the Initial Public Offering, Next Equity Financing or the Non-Qualified Next Equity Financing, as applicable, other than as a result of conversion of indebtedness (including the Notes).

(y) "Next Equity Financing" means the next sale (or series of related sales) by the Company of its Equity Securities following the date of this Agreement primarily for bona fide equity financing purposes from which the Company receives gross proceeds of not less than $75,000,000 (excluding the aggregate amount of debt securities converted into Equity Securities upon conversion of convertible indebtedness, including, without limitation, the Notes converted pursuant to Section 2.2 below).

(z) "Non-Qualified Discounted Conversion Price" shall equal the Discounted Conversion Price unless otherwise agreed between the Company and Requisite Noteholders.

(aa) "Non-Qualified Next Equity Financing" means the next sale (or series of related sales) by the Company of its Equity Securities following the date of this Agreement primarily for bona fide equity financing purposes from which the Company receives gross proceeds of less than $75,000,000 (excluding the aggregate amount of debt securities converted into Equity Securities upon conversion of convertible indebtedness, including, without limitation, the Notes converted pursuant to Section 2.2 below).

(bb) "Notes" means the one or more promissory notes issued to each Lender pursuant to Section 2.1 below, the form of which is attached hereto as Exhibit A.

(cc) "Person" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

(dd) "Pre-closing Capitalization" means the sum determined immediately prior to the applicable conversion of the Notes of:

(i) the number of shares of Common Stock of the Company then outstanding immediately prior to the closing of the applicable conversion event, plus

(ii) the number of shares of Common Stock issuable, directly or indirectly, upon the exercise or conversion of exercisable or convertible securities (other than the Notes) then outstanding immediately prior to the closing of the applicable conversion event, plus

(iii) the number of shares of capital stock (determined on an as converted to Common Stock basis) reserved for issuance under the Company's equity incentive plans (net of any such shares underlying securities included in clause (ii) of this definition) including, in the event of a conversion of the Notes in the Next Equity Financing, any increase in the number of such reserved shares expressly required by the terms and conditions of such Next Equity Financing; provided that, for purposes of a conversion pursuant to Section 2.2(d), any shares reserved as part of an equity incentive plan or employee stock purchase plan adopted in connection with an Initial Public Offering shall not be included in this clause (iii).

For the sake of clarity, in connection with a Qualified SPAC, the Company's "Pre-closing Capitalization" shall exclude any shares of the SPAC issued or issuable to investors in such Qualified SPAC transaction or related SPAC PIPE Offering.

(ee) "Preferred Stock" means shares of preferred stock of the Company.

(ff) "Qualified SPAC" shall mean (i) the closing of a merger with a publicly listed special purpose acquisition company (a "SPAC") and (ii) resulting in at least $75,000,000.00 of proceeds to the Company (excluding the aggregate amount of debt securities converted into Equity Securities upon conversion of convertible indebtedness, including, without limitation, the Notes).

(gg) "register," "registered," and "registration" shall refer to a registration effected by preparing and filing a registration statement or similar document in compliance with the Securities Act, and the declaration or ordering of effectiveness of such registration statement or document.

(hh) "Registrable Securities" means (i) the Equity Securities issued or issuable, directly or indirectly, upon conversion of the Notes in accordance with the terms of this Agreement, excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which his, her or its rights under Section 7.5 of this Agreement are not assigned, (ii) any shares of Common Stock held by Frazier and (iii) any shares of Common Stock (including shares of Common Stock issuable upon the exercise or conversion of any securities exercisable or convertible into shares of Common Stock) held by Takeda; excluding for purposes of Sections 7.5 and 8.8 any shares for which registration rights have terminated pursuant to Section 7.5(l) of this Agreement. In addition, the number of shares of Registrable Securities outstanding shall equal the aggregate of the number of shares of Common Stock outstanding that are, and the number of shares of Common Stock issuable, directly or indirectly, pursuant to then exercisable or convertible securities that are, Registrable Securities.

(ii) "Requisite Noteholders" means the holders of not less than a majority in interest of the aggregate outstanding principal amount of the Notes, including Frazier.

(jj) "Rule 144" means Rule 144 under the Securities Act.

(kk) "Rule 144(b)(1)(i)" means subsection (b)(1)(i) of Rule 144 under the Securities Act as it applies to Persons who have held shares for more than one (1) year.

(ll) "Rule 405" means Rule 405 under the Securities Act.

(mm) "SEC" means the Securities and Exchange Commission.

(nn) "Securities Act" means the Securities Act of 1933, as amended.

(oo) "Shares" means and include any securities of the Company the holders of which are entitled to vote for one or more members of the Board, including without limitation, all shares of Common Stock, by whatever name called, now owned or subsequently acquired by a stockholder, however acquired, whether through stock splits, stock dividends, reclassifications, recapitalizations, similar events or otherwise.

(pp) "SPAC PIPE Offering" shall mean an equity financing in connection with the SPAC for the subscription and purchase of shares of the SPAC on or around the closing of the Qualified SPAC.

(qq) "Takeda" means Takeda Vaccines, Inc.

(rr) "Takeda Agreements" means the Takeda License, Takeda Supply Agreement and Takeda Equity Documents.

(ss) "Takeda License" means that certain License Agreement by and between the Company and Takeda dated July 2, 2021.

(tt) "Takeda Equity Documents" means that certain Stock Issuance Agreement and Warrant to Purchase Shares of Common Stock by and between the Company and Takeda and the other requisite parties thereto.

(uu) "Takeda Supply Agreement" means that certain Clinical Supply Agreement by and between the Company and Takeda dated July 2, 2021.

(vv) "Transfer" means any sale, assignment, encumbrance, hypothecation, pledge, conveyance in trust, gift, transfer by bequest, devise or descent, or other transfer or disposition of any kind, including, without limitation, transfers pursuant to divorce or legal separation, transfers to receivers, levying creditors, trustees or receivers in bankruptcy proceedings or general assignees for the benefit of creditors, whether voluntary, involuntarily or by operation of law, directly or indirectly, of any of the Equity Securities.

(ww) "Valuation Cap" means $500,000,000.

2. Terms of the Convertible Notes.

2.1 Issuance of Convertible Notes. In return for the Consideration paid by each Lender, the Company shall sell and issue to such Lender one or more Notes. Each Note shall have a principal balance equal to the Consideration paid by such Lender for the Note, as set forth in the Schedule of Lenders. Each Note shall be convertible into Conversion Shares pursuant to Section 2.2 below.

2.2 Right to Convert Notes.

(a) Next Equity Financing. The then outstanding principal and unpaid accrued interest of each Note shall be automatically converted into Conversion Shares upon the closing of the Next Equity Financing. Notwithstanding the foregoing, accrued interest on each Note may be paid in cash upon mutual agreement of the Company and the applicable Lender. The number of Conversion Shares to be issued upon such conversion shall be equal to the quotient obtained by dividing (i) the outstanding principal and unpaid accrued interest on a Note to be converted on the date of conversion by (ii) the Conversion Price. At least twenty (20) calendar days prior to the closing of the Next Equity Financing, the Company shall notify the holder of each Note in writing of the terms (in reasonable summary detail) under which the Equity Securities will be sold in such financing. Subject to Section 8.12 below, the issuance of Conversion Shares

pursuant to the conversion of each Note shall otherwise be upon and subject to the same terms and conditions applicable to the Equity Securities sold in the Next Equity Financing.

(b) Non-Qualified Next Equity Financing. The then outstanding principal and unpaid accrued interest of each Note shall be automatically converted, upon the written election of the Requisite Noteholders, into Conversion Shares upon the closing of the Non-Qualified Next Equity Financing. Notwithstanding the foregoing, accrued interest on each Note may be paid in cash upon mutual agreement of the Company and the applicable Lender. The number of Conversion Shares to be issued upon such conversion shall be equal to the quotient obtained by dividing (i) the outstanding principal and unpaid accrued interest on a Note to be converted on the date of conversion by (ii) the Conversion Price. At least twenty (20) calendar days prior to the closing of the Non-Qualified Next Equity Financing, the Company shall notify the holder of each Note in writing of the terms (in reasonable summary detail) under which the Equity Securities will be sold in such financing. Subject to Section 8.12 below, the issuance of Conversion Shares pursuant to the conversion of each Note shall otherwise be upon and subject to the same terms and conditions applicable to the Equity Securities sold in the Non-Qualified Next Equity Financing. If the Requisite Noteholders elect to convert the Notes into Conversion Shares in connection with the Non-Qualified Next Equity Financing, the Requisite Noteholders shall inform the Company of such election within twenty (20) calendar days after such notice is effectively given by the Company pursuant to Section 8.5 hereof. In the event that the Requisite Noteholders fail to inform the Company of such election within such twenty (20) calendar day period, the Notes shall thereafter cease to be convertible into Conversion Shares to be issued pursuant to the Non-Qualified Next Equity Financing; provided, however, such Note shall continue to accrue interest at the interest rate applicable to such Note until the redemption or conversion thereof.

(c) Treatment upon Maturity. If the Next Equity Financing, Non-Qualified Next Equity Financing pursuant to which such Note has converted, Corporate Transaction or Initial Public Offering has not occurred on or before the Maturity Date, the principal and unpaid accrued interest of each Note may be converted, at any time following the Maturity Date, at the option of the holder thereof, into Conversion Shares; provided that each Note, to the extent such Note has not already been converted into Conversion Shares at the option of the holder thereof, shall be due and payable in cash following the Maturity Date solely upon demand of the Requisite Noteholders, which demand notice shall be delivered in writing to the Company and each other Lender in accordance with Section 8.5 hereof. The number of Conversion Shares to be issued upon conversion shall be equal to the quotient obtained by dividing (i) the outstanding principal and unpaid accrued interest due on a Note to be converted on the date of the conversion by (ii) the Conversion Price. Notwithstanding anything to contrary in this Section 2.2(c), in the event that a Note is not converted pursuant to this Section 2.2(c) and a Next Equity Financing, Non-Qualified Next Equity Financing pursuant to which such Note has converted, Corporate Transaction or Initial Public Offering has not occurred on or before the third (3rd) anniversary of the Closing, then on such third (3rd) anniversary, the outstanding principal and accrued interest shall become immediately due and payable.

(d) Initial Public Offering. Notwithstanding subsections (a), (b) or (c) above, in the event of an Initial Public Offering prior to full payment of a Note or the prior

conversion of a Note (as provided herein), all outstanding principal and unpaid accrued interest due on such Note shall be converted into Conversion Shares immediately prior to the closing of the Initial Public Offering. The number of Conversion Shares to be issued upon conversion shall be equal to the quotient, obtained by dividing (x) the outstanding principal and unpaid accrued interest due on a Note to be converted on the date of the conversion by (y) the Conversion Price.

(e) Corporate Transaction. In the event of a Corporate Transaction prior to full payment of a Note or the prior conversion of a Note (as provided herein), the greater of (i) an amount equal to two times (2x) the then outstanding principal and accrued interest due on such Note or (ii) an amount equal to the proceeds (including, for the avoidance of doubt, any escrowed or contingent consideration payable to stockholders in such Corporate Transaction) which would be payable assuming all outstanding principal and unpaid accrued interest due on such Note were converted into Conversion Shares immediately prior to the closing of the Corporate Transaction shall be due and payable in full prior to the closing of the Corporate Transaction. The number of Conversion Shares which would be issued upon conversion shall be equal to the quotient, obtained by dividing (x) the outstanding principal and unpaid accrued interest due on a Note to be converted on the date of the conversion by (y) the Conversion Price.

(f) Qualified SPAC. The then outstanding principal and unpaid accrued interest of each Note shall be automatically converted (and each Lender hereby consents to such automatic conversion pursuant to the terms of this Agreement) into Conversion Shares immediately prior to the closing of the Qualified SPAC. The number of Conversion Shares to be issued upon such conversion shall be equal to the quotient obtained by dividing (i) the outstanding principal and unpaid accrued interest on a Note to be converted on the date of conversion by (ii) the applicable Conversion Price.

(g) No Fractional Shares. Upon the conversion of a Note into Conversion Shares, in lieu of any fractional shares to which the holder of the Note would otherwise be entitled, the Company shall pay the Note holder cash equal to such fraction multiplied by the Conversion Price.

(h) Mechanics of Conversion. The Company shall not be required to issue or deliver the Conversion Shares with respect to any Note until (i) the holder of such Note has (A) surrendered such Note to the Company or (B) provided the Company evidence reasonably satisfactory to the Company of the ownership of and the loss, theft, destruction or mutilation of such Note, including but not limited to an indemnity agreement reasonably satisfactory in form and amount to the Company, and (ii) (A) the closing of the applicable Next Equity Financing, Non-Qualified Next Equity Financing pursuant to which such Note is converted, Initial Public Offering, Corporate Transaction or Qualified SPAC, or (B) the Maturity Date in the event such Note converts pursuant to Section 2.2(c). Additionally, before any Note holder shall be entitled to convert such holder's Note into Conversion Shares pursuant to Section 2.2(b), such holder shall give written notice to the Company of the election to convert such Note into Conversion Shares.

3. Closing Mechanics.

3.1 Closing. The closing (the "Closing") of the purchase of the Notes in return for the Consideration paid by each Lender (as set forth on the Schedule of Lenders)

shall take place remotely via teleconference, e-mail or likewise at 10 a.m., on August 31, 2021, or at such other time and place as the Company and Lenders purchasing a majority in interest of the aggregate principal amount of the Notes to be sold at the Closing agree upon orally or in writing. At the Closing, each Lender shall deliver the Consideration to the Company set forth opposite such Lender's name on the Schedule of Lenders and the Company shall deliver to each Lender one or more executed Notes in return for the respective Consideration provided to the Company. In the event that payment by a Lender is made, in whole or in part, by cancellation or exchange of indebtedness, then such Lender shall surrender to the Company for cancellation or exchange at the Closing any evidence of such indebtedness.

3.2 Conditions of Lenders' Obligations at Closing. The obligations of each Lender under Section 3.1 of this Agreement are subject to the fulfillment on or before such Closing of each of the following conditions, the waiver of which shall not be effective against any Lender who does not consent thereto:

(a) Representations and Warranties. The representations and warranties of the Company contained in Section 4 shall be true on and as of the Closing.

(b) Proceedings and Documents. All corporate and other proceedings in connection with the transactions contemplated at the Closing and all documents incident thereto shall be reasonably satisfactory in form and substance to the special counsel for the Lenders, and they shall have received all such counterpart original and certified or other copies of such documents as they may reasonably request.

(c) Board of Directors. On or prior to the Closing, the directors of the Company shall be Robert Hershberg, M.D., Ph.D., Patrick Heron, Jaime Sepulveda, M.D., M.P.H., Ph.D., Susan Silbermann, Julie Gerberding, M.D., M.P.H., Jeryl Hilleman, Shelley Chu, M.D., Ph.D. Elise Wang and Rajeev Venkayya and there shall be one vacancy on the Board.

(d) Management Rights Letter. On or prior to the Closing, the Company and each Lender that has requested one shall have entered into a Management Rights Letter in the forms attached hereto as Exhibit D.

(e) Indemnification Agreement. The Company and each member of the Board shall have entered into an Indemnification Agreement in the form attached hereto as Exhibit E.

(f) Issuance of Notes. Such Lender shall have received from the Company a duly executed Note as required by this Agreement.

3.3 Conditions of the Company's Obligations at Closing. The obligations of the Company to each Lender under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions by that Lender:

(a) Representations and Warranties. The representations and warranties of the Lenders contained in Section 5 shall be true on and as of the Closing.

(b) Payment of Consideration. The Lender shall have delivered the Consideration specified in Section 3.1.

4. Representations and Warranties of the Company. The Company hereby represents and warrants to each Lender that, except as set forth on the Disclosure Schedule attached as Exhibit F to this Agreement, which exceptions shall be deemed to be part of the representations and warranties made hereunder, the following representations are true and complete as of the date of the Closing, except as otherwise indicated. The Disclosure Schedule shall be arranged in sections corresponding to the numbered and lettered sections and subsections contained in this Section 4, and the disclosures in any section or subsection of the Disclosure Schedule shall qualify other sections and subsections in this Section 4 only to the extent it is readily apparent from a reading of the disclosure that such disclosure is applicable to such other sections and subsections.

4.1 Organization, Good Standing and Qualification. The Company is a corporation duly incorporated and organized, validly existing, and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to own and operate its properties and assets and to carry on its business as now conducted. The Company is duly qualified to transact business and is in good standing in each jurisdiction in which the failure to so qualify would have a Material Adverse Effect.

4.2 Capitalization.

(a) The authorized capital of the Company consists, immediately prior to the Closing, of 10,000,000 shares of Common Stock, 5,663,000 of which are issued and outstanding immediately prior to the Closing. All of the outstanding shares of Common Stock have been duly authorized, are fully paid and nonassessable and were issued in compliance with all applicable federal and state securities laws.

(b) The Company has not authorized any shares of Preferred Stock.

(c) 1,766,500 shares of Common Stock are authorized for issuance to employees, consultants and directors pursuant to the HilleVax, Inc. 2021 Equity Incentive Plan, none of which are subject to outstanding option awards.

(d) Section 4.2(d) of the Disclosure Schedule sets forth the capitalization of the Company immediately following the Closing including the number of shares of the following: (i) issued and outstanding Common Stock, including, with respect to restricted Common Stock, vesting schedule and repurchase price; and (ii) warrants or stock purchase rights, if any. Except for (A) the conversion privileges of the Notes to be issued under this Agreement, (B) the rights provided in Section 7.2 of this Agreement, and (C) the securities and rights described in Section 4.2(d) of the Disclosure Schedule, there are no outstanding options, warrants, rights (including conversion or preemptive rights and rights of first refusal or similar rights) or agreements, orally or in writing, to purchase or acquire from the Company any shares of Common Stock, or any securities convertible into or exchangeable for shares of Common Stock. All outstanding shares of the Company's Common Stock and all shares of the Company's Common Stock underlying outstanding options are subject to (i) a right of first refusal in favor of the Company upon any proposed transfer (other than transfers for estate planning purposes); and (ii)

a lock-up or market standoff agreement of not less than one hundred eighty (180) days following the Initial Public Offering pursuant to a registration statement filed with the SEC under the Securities Act.

(e) Unless otherwise set forth in Section 4.2(d) of the Disclosure Schedule, none of the Company's stock purchase agreements contains a provision for acceleration of vesting (or lapse of a repurchase right) or other changes in the vesting provisions or other terms of such agreement or understanding upon the occurrence of any event or combination of events. The Company has never adjusted or amended the exercise price of any stock options previously awarded, whether through amendment, cancellation, replacement grant, repricing, or any other means. The Company has no obligation (contingent or otherwise) to purchase or redeem any of its capital stock.

4.3 Subsidiaries. The Company does not currently own or control, directly or indirectly, any interest in any other corporation, partnership, trust, joint venture, limited liability company, association, or other business entity. The Company is not a participant in any joint venture, partnership or similar arrangement.

4.4 Authorization. Except for the authorization and issuance of the shares issuable, directly or indirectly, in connection with the conversion of the Notes, all corporate action has been taken on the part of the Company, its officers, directors and stockholders necessary for the authorization, execution, delivery and performance of this Agreement and the Notes. Except as may be limited by applicable bankruptcy, insolvency, reorganization, or similar laws relating to or affecting the enforcement of creditors' rights, the Company has taken all corporate action required to make all of the obligations of the Company reflected in the provisions of this Agreement and the Notes, the valid and enforceable obligations they purport to be.

4.5 Compliance with Other Instruments. The Company is not in violation or default (i) of any provisions of its Certificate of Incorporation or Bylaws, (ii) of any instrument, judgment, order, writ or decree, (iii) under any note, indenture or mortgage, (iv) under any lease, agreement, contract or purchase order to which it is a party or by which it is bound that is required to be listed on the Disclosure Schedule, or (v) to its knowledge, of any provision of federal or state statute, rule or regulation applicable to the Company, the violation of which would have a Material Adverse Effect. The execution, delivery and performance of this Agreement and the issuance and delivery of the Notes and the Conversion Shares, and any shares of Common Stock directly or indirectly issued in respect thereof, and the consummation of the transactions contemplated hereby and thereby will not result in any such violation or be in conflict with or constitute, with or without the passage of time and giving of notice, either (i) a default under any such provision, instrument, judgment, order, writ, decree, contract or agreement; or (ii) an event which results in the creation of any lien, charge or encumbrance upon any assets of the Company or the suspension, revocation, forfeiture, or nonrenewal of any material permit or license applicable to the Company.

4.6 Governmental Consents and Filings. Assuming the accuracy of the representations made by the Lenders in Section 5 of this Agreement, no consent, approval, order or authorization of, or registration, qualification, designation,

declaration or filing with, any federal, state or local governmental authority is required on the part of the Company in connection with the consummation of the transactions contemplated by this Agreement, other than a Form D or other qualifications or filings under applicable federal and state securities laws, which qualification or filings will be made on a timely basis.

4.7 Litigation. There is no claim, action, suit, proceeding, arbitration, complaint, charge or investigation pending or to the Company's knowledge, currently threatened in writing (i) against the Company or any officer, director or Key Employee of the Company arising out of their employment or board relationship with the Company; (ii) that questions the validity of this Agreement or the Notes or the right of the Company to enter into them, or to consummate the transactions contemplated hereby or thereby; or (iii) to the Company's knowledge, that would reasonably be expected to have, either individually or in the aggregate, a Material Adverse Effect. Neither the Company nor, to the Company's knowledge, any of its officers, directors or Key Employees is a party or is named as subject to the provisions of any order, writ, injunction, judgment or decree of any court or government agency or instrumentality (in the case of officers, directors or Key Employees, such as would affect the Company). There is no action, suit, proceeding or investigation by the Company pending or which the Company intends to initiate. The foregoing includes, without limitation, actions, suits, proceedings or investigations pending or threatened in writing (or any basis therefor known to the Company) involving the prior employment of any of the Company's employees, their services provided in connection with the Company's business, any information or techniques allegedly proprietary to any of their former employers or their obligations under any agreements with prior employers.

4.8 Intellectual Property. Except as set forth in Section 4.8 of the Disclosure Schedule, the Company owns or possesses all Company Intellectual Property without any known conflict with, or infringement of, the rights of others, including prior employees or consultants, or academic or medical institutions with which any of them may be affiliated now or may have been affiliated in the past. To the Company's knowledge, no product or service marketed or sold (or proposed to be marketed or sold) by the Company violates or will violate any license or infringes or will infringe any intellectual property rights of any other party in the absence of a license to such intellectual property rights. Other than with respect to the Takeda Agreements or commercially available software products under standard end-user object code license agreements, there are no outstanding options, licenses, agreements, claims, encumbrances or shared ownership interests of any kind relating to the Company Intellectual Property, nor is the Company bound by or a party to any options, licenses or agreements of any kind with respect to the patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, information, proprietary rights and processes of any other Person. The Company has not received any communications alleging that the Company has infringed, or by conducting its business, would infringe any of the patents, trademarks, service marks, tradenames, copyrights, trade secrets, mask works or other proprietary rights or processes of any other Person. To the Company's knowledge, no third party is infringing any of the Company Intellectual Property. The Company has obtained and possesses valid licenses to use all of the software programs present on the computers and other software-enabled electronic devices that it owns or leases or that it has otherwise provided to its employees for

their use in connection with the Company's business. To the Company's knowledge, it will not be necessary to use any inventions of any of its employees or consultants (or Persons it currently intends to hire) made prior to their employment by the Company that are not otherwise the subject of the Takeda Agreements, including prior employees or consultants, or academic or medical institutions with which any of them may be affiliated now or may have been affiliated in the past. Each employee and consultant has assigned to the Company all intellectual property rights that he, she or it solely or jointly conceived, reduced to practice, developed or made during the period of his, her or its employment or consulting relationship with the Company that (a) relate, at the time of conception, reduction to practice, development, or making of such intellectual property right, to the Company's business as then conducted or as then proposed to be conducted, (b) were developed on any amount of the Company's time or with the use of any of the Company's equipment, supplies, facilities or information or (c) resulted from the performance of services for the Company. Section 4.8 of the Disclosure Schedule lists all patents, patent applications, registered trademarks, trademark applications, service marks, service mark applications, tradenames, registered copyrights, and licenses to and under any of the foregoing, in each case owned by the Company. The Company has not embedded any open source, copyleft or community source code in any of its products generally available or in development, including but not limited to any libraries or code licensed under any General Public License, Lesser General Public License or similar license arrangement. For purposes of this Section 4.8, the Company shall be deemed to have knowledge of a patent right if the Company has actual knowledge of the patent right or would be found to be on notice of such patent right as determined by reference to United States patent laws. No government funding, facilities of a university, college, other educational institution or research center, was used in the development of any Company Intellectual Property that is owned by the Company. To the Company's knowledge, no Person who was involved in, or who contributed to, the creation or development of any Company Intellectual Property, has performed services for the government, university, college, or other educational institution or research center in a manner that would adversely affect the Company's rights in the Company Intellectual Property.

4.9 Property. The property and assets that the Company owns are free and clear of all mortgages, deeds of trust, liens, loans and encumbrances, except for statutory liens for the payment of current taxes that are not yet delinquent and encumbrances and liens that arise in the ordinary course of business and do not materially impair the Company's ownership or use of such property or assets. With respect to the property and assets it leases, the Company is in compliance with such leases and holds a valid leasehold interest free of any liens, claims or encumbrances other than those of the lessors of such property or assets. The Company does not own any real property.

4.10 Absence of Undisclosed Liabilities. The Company does not have any liability or obligation of any nature, whether accrued, absolute, contingent or otherwise, asserted or unasserted, known or unknown, in any case which has, or is reasonably likely to have, a Material Adverse Effect. The Company has not assumed, guaranteed, endorsed or otherwise become directly or contingently liable on or for any indebtedness of any other Person.

4.11 Valid Issuance of Conversion Shares. The Conversion Shares to be issued, sold and delivered upon conversion of the Notes and any shares of Common Stock

issued or issuable in respect thereof, will be duly and validly issued, fully paid and nonassessable and, based in part upon the representations and warranties of the Lenders in this Agreement, will be issued in compliance with all applicable federal and state securities laws.

4.12 CFIUS. The Company does not produce, design, test, manufacture, fabricate, or develop one or more "critical technologies," as that term is defined at 31 C.F.R. § 800.215.

4.13 Disclosure. The Company has made available to the Lenders all the information reasonably available to the Company that the Lenders have requested for deciding whether to purchase the Notes. No representation or warranty of the Company contained in this Agreement, as qualified by the Disclosure Schedule, and no certificate furnished or to be furnished to the Lenders at the Closing contains any untrue statement of a material fact or, to the Company's knowledge, omits to state a material fact necessary in order to make the statements contained herein or therein not misleading in light of the circumstances under which they were made. It is understood that this representation is qualified by the fact that the Company has not delivered to the Lenders, and has not been requested to deliver, a private placement or similar memorandum or any written disclosure of the types of information customarily furnished to purchasers of securities.

4.14 Absence of Side Letters. Except as set forth on Section 4.14 of the Disclosure Schedule and as contemplated in this Agreement and the Notes, there are no additional agreements, understandings or "side letters" between the Company and any of the Lenders with respect to the transactions contemplated hereby.

4.15 Preclinical Development and Clinical Trials. Except as set forth in Section 4.15 of the Disclosure Schedule, the studies, tests, preclinical development and clinical trials, if any, conducted by or on behalf of the Company are being conducted in all material respects in accordance with all applicable laws and regulations, including the Federal Food, Drug, and Cosmetic Act. Except as set forth in Section 4.15 of the Disclosure Schedule, the Company is not aware of any studies, tests, development or trials the results of which reasonably call into question the results of the studies, tests, development and trials conducted by or on behalf of the Company, and the Company has not received any written notices or correspondence from the U.S. Food and Drug Administration ("FDA") or any other governmental entity or any institutional review board or comparable authority requiring the termination or suspension of any studies, tests, preclinical development or clinical trials conducted by or on behalf of the Company.

4.16 FDA Approvals. The Company possesses all permits, licenses, registrations, certificates, authorizations, orders and approvals from the appropriate federal, state or foreign regulatory authorities necessary to conduct its business as now conducted (collectively, "Permits"), except where the failure to possess such Permits would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has not received any notice of proceedings relating to the suspension, modification, revocation or cancellation of any material Permit. Neither the Company nor, to the Company's knowledge, any officer, employee or agent of the Company has been convicted of any crime or engaged in any conduct that has previously caused or would reasonably be expected to result in (A) disqualification or debarment by the FDA under 21 U.S.C. Sections 335(a) or (b), or any similar

law, rule or regulation of any other governmental entities, (B) debarment, suspension, or exclusion under any federal healthcare programs or by the General Services Administration, or (C) exclusion under 42 U.S.C. Section 1320a-7 or any similar law, rule or regulation of any governmental entities. Neither the Company nor any of its officers, employees, or, to the Company's knowledge, any of its contractors or agents is the subject of any pending or, to the Company's knowledge, threatened investigation by FDA pursuant to its "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" policy as stated at 56 Fed. Reg. 46191 (September 10, 1991) (the "FDA Application Integrity Policy") and any amendments thereto, or by any other similar governmental entity pursuant to any similar policy. Neither the Company nor, to the Company's knowledge, any of its officers, employees, contractors, and agents has committed any act, made any statement or failed to make any statement that would reasonably be expected to provide a basis for FDA to invoke the FDA Application Integrity Policy or for any similar governmental entity to invoke a similar policy.

4.17 FDA Regulation. The Company is and has been in compliance with all applicable laws administered or issued by the FDA or any similar governmental entity, except where the failure to so comply would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

5. Representations, Warranties and Additional Agreements of the Lenders.

5.1 Representations and Warranties of the Lenders. In connection with the transactions provided for herein, each Lender hereby represents and warrants to the Company that, solely with respect to such Lender (and not with respect to any other Lender):

(a) Authorization. This Agreement constitutes such Lender's valid and legally binding obligation, enforceable in accordance with its terms, except as may be limited by (i) applicable bankruptcy, insolvency, reorganization, or similar laws relating to or affecting the enforcement of creditors' rights and (ii) laws relating to the availability of specific performance, injunctive relief or other equitable remedies. Each Lender represents that it has full power and authority to enter into this Agreement.

(b) Purchase Entirely for Own Account. Each Lender acknowledges that this Agreement is made with Lender in reliance upon such Lender's representation to the Company that the Notes, the Conversion Shares, and any Common Stock issuable, directly or indirectly, upon conversion of the Conversion Shares (collectively, the "Securities") will be acquired for investment for Lender's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that such Lender has no present intention of selling, granting any participation in, or otherwise distributing the same. By executing this Agreement, each Lender further represents that such Lender does not have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participations to such person or to any third person, with respect to the Securities.

(c) Disclosure of Information. Each Lender acknowledges that it has received all the information it considers necessary or appropriate for deciding whether to acquire the Securities. Each Lender further represents that it has had an opportunity to ask questions and

receive answers from the Company regarding the terms and conditions of the offering of the Securities.

(d) Investment Experience. Each Lender is an investor in securities of companies in the development stage and acknowledges that it is able to fend for itself, can bear the economic risk of its investment and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment in the Securities. If other than an individual, each Lender also represents it has not been organized solely for the purpose of acquiring the Securities.

(e) Accredited Investor. Each Lender is an "accredited investor" within the meaning of Rule 501 of Regulation D promulgated under the Securities Act, as presently in effect ("Rule 501"). If such Lender has been organized for the purpose of acquiring the Securities, each holder of securities of such Lender, or holder of any right to acquire such securities or any of the Securities, is an "accredited investor" pursuant to Rule 501.

(f) Restricted Securities. Each Lender understands that the Securities are characterized as "restricted securities" under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations such securities may be resold without registration under the Securities Act only in certain limited circumstances. Each Lender represents that it is familiar with Rule 144 and understands the resale limitations imposed thereby and by the Securities Act.

5.2 Further Limitations on Disposition. Without in any way limiting the representations and warranties set forth above, until the end of the applicable market stand-off period contemplated under Section 8.11 (or any similar lock-up period) following the Initial Public Offering, each Lender further agrees not to make any disposition of all or any portion of the Securities unless and until the transferee has agreed in writing for the benefit of the Company to be bound by this Section 5 and Section 8.11 and the transferring Lender has notified the Company of the proposed disposition and has furnished the Company with a detailed statement of the circumstances surrounding the proposed disposition. It is agreed that the Company will not require opinions of counsel for transactions made pursuant to Rule 144.

Lender shall not make any disposition of any of the Securities to any person that would result in the Company being ineligible to rely on Rule 506 of Regulation D in regards to the issuance of the Securities or any subsequent issuance of securities of the Company, as such in either case is in good faith determined by the Company.

Notwithstanding anything herein to the contrary, each Lender may freely transfer the Securities to its Affiliates without restriction.

5.3 Legends. It is understood that the Securities may bear the following legend:

"THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED, OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EFFECTIVE

REGISTRATION STATEMENT UNDER THE ACT OF 1933 OR SUCH TRANSFER IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT."

5.4 Bad Actor Representations and Covenants. Each Lender that is among the Persons identified in Rule 506(d)(1) of Regulation D (a "Covered Person") hereby represents and warrants to the Company that such Lender has not been convicted of any of the felonies or misdemeanors or has been subject to any of the orders, judgments, decrees or other conditions set forth in Rule 506(d) of Regulation D promulgated by the SEC, which are excerpted in their current form on Exhibit B. Each Lender covenants that if it is then a Covered Person to provide immediate written notice to the Company in the event such Lender is convicted of any felony or misdemeanor or becomes subject to any order, judgment, decree or other condition set forth in Rule 506(d) of Regulation D promulgated by the SEC, as may be amended from time to time. Each Lender covenants to provide such information to the Company as the Company may reasonably request in order to comply with the disclosure obligations set forth in Rule 506(e) of Regulation D promulgated by the SEC, as may be amended from time to time.

5.5 Exculpation Among Lenders. Each Lender acknowledges that it is not relying upon any person, firm or corporation, other than the Company, in making its investment or decision to invest in the Company. Each Lender agrees that no Lender nor the respective controlling persons, officers, directors, partners, agents, or employees of any Lender shall be liable to any other Lender for any action heretofore or hereafter taken or omitted to be taken by any of them in connection with the purchase of the Securities.

6. Defaults and Remedies.

6.1 Events of Default. Any of the following events shall be considered an "Event of Default" with respect to each Note:

(a) The Company shall default in the payment of any part of the principal or unpaid accrued interest on the Note, (i) for more than two (2) days after demand for payment therefor by the Requisite Noteholders following the Note becoming due and payable pursuant to the terms and conditions of the Notes, (ii) following the third (3rd) anniversary of the Closing, for more than two (2) days after demand for payment therefor by any Lender pursuant to the terms and conditions of this Agreement, or (iii) after a date fixed by acceleration or otherwise;

(b) The Company shall make an assignment for the benefit of creditors, or shall admit in writing its inability to pay its debts as they become due, or shall file a voluntary petition for bankruptcy, or shall file any petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, dissolution or similar relief under any present or future statute, law or regulation, or shall file any answer admitting the material allegations of a petition filed against the Company in any such proceeding, or shall seek or consent to or acquiesce in the appointment of any trustee, receiver or liquidator of the Company, or of all or any substantial part of the properties of the Company, or the Company or its respective directors or majority stockholders shall take any action looking to the dissolution or liquidation of the Company;

(c) Within thirty (30) days after the commencement of any proceeding against the Company seeking any bankruptcy reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, such proceeding shall not have been dismissed, or within thirty (30) days after the appointment without the consent or acquiescence of the Company of any trustee, receiver or liquidator of the Company or of all or any substantial part of the properties of the Company, such appointment shall not have been vacated;

(d) Within thirty (30) days after the Company becomes involved in litigation that threatens to materially and adversely affect the Company's business, operations, assets, results of operations or prospects, if the Company's involvement has not terminated by such date in a manner that does not and could not reasonably be expected to materially and adversely affect the Company's business, operations, assets, results of operations or prospects;

(e) Any default or defined event of default that has not otherwise been cured or forgiven within fifteen (15) days after written notice to the Company from the applicable lender of such default or defined event of default shall occur under any agreement to which the Company is a party that evidences indebtedness for borrowed money by the Company (excluding trade payables) of $50,000 or more; or

(f) The Company shall fail to observe or perform any other obligation to be observed or performed by it under this Agreement or the Notes within fifteen (15) days after written notice from the Requisite Noteholders to perform or observe such obligation.

6.2 Remedies. Upon the occurrence of an Event of Default under Section 6.1 hereof, at the option and upon the declaration of the Requisite Noteholders (or, following the three year anniversary of the Closing, at the option and upon declaration of any Lender), the entire unpaid principal and accrued and unpaid interest on the Notes shall, without presentment, demand, protest, or notice of any kind, all of which are hereby expressly waived, be forthwith due and payable, and such Requisite Noteholders (or, following the three year anniversary of the Closing, such individual Lender) may, immediately and without expiration of any period of grace, enforce payment of all amounts due and owing under such Notes and exercise any and all other remedies granted to them at law, in equity or otherwise.

7. Covenants of the Company; Rights of the Holders of the Notes.

7.1 Delivery of Financial Statements; Inspection Rights.

(a) The Company shall deliver to each Lender:

(i) as soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company (beginning with the fiscal year ending December 31, 2021), an income statement for such fiscal year and a balance sheet of the Company, and a statement of cash flows for such year, such year-end financial reports to be in reasonable detail, prepared in accordance with generally accepted accounting principles ("GAAP"), and audited and certified by independent public accountants of nationally recognized standing selected by the Company;

(ii) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, an unaudited income statement and statement of cash flows for such fiscal quarter and an unaudited balance sheet as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (A) be subject to normal year-end audit adjustments and (B) not contain all notes thereto that may be required in accordance with GAAP);

(iii) as soon as practicable, but in any event at least thirty (30) days prior to the end of each fiscal year, a budget and business plan for the next fiscal year, prepared on a monthly basis, including balance sheets, income statements and statements of cash flows for such months and, as soon as prepared, any other budgets or revised budgets prepared by the Company;

(iv) as soon as practicable, but in any event within thirty (30) days after the end of each fiscal quarter of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Lenders to calculate their respective percentage ownership in the Company;

(v) such other information relating to the financial condition, business or corporate affairs of the Company as the Requisite Noteholders may from time to time reasonably request; provided, however, that the Company shall not be obligated under this subsection (iv) or any other subsection of Section 7.1 to provide information that (A) it deems in good faith to be a trade secret or similar highly sensitive confidential information or (B) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel; and

(b) Notwithstanding anything else in this Section 7.1 to the contrary, the Company may cease providing the information set forth in this Section 7.1 during the period starting with the date thirty (30) days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Section 7.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

(c) Inspection. The Company shall permit each Lender, at such Lender's expense, to visit and inspect the Company's properties, to examine its books of account and records and to discuss the Company's affairs, finances and accounts with its officers, all at such reasonable times as may be requested by the Lender; provided, however, that the Company shall not be obligated pursuant to this Section 7.1 to provide access to any information that (A) it deems in good faith to be a trade secret or similar confidential information or (B) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

(d) Termination of Information and Inspection Covenants. The covenants set forth in Sections 7.1(a), 7.1(b) and 7.1(c) shall terminate and be of no further force or effect upon the earlier to occur of (i) the consummation of the Initial Public Offering, (ii) when the Company first becomes subject to the periodic reporting requirements of Sections 12(g) or 15(d) of the Exchange Act, whichever event shall first occur, (iii) the Next Equity Financing, (iv) a Non-Qualified Next Equity Financing into which such Lender's Note converts and (v) the consummation of a Corporate Transaction; provided in the case of (iii) or (iv), the Lender receives similar rights under the applicable financing documents for such transaction, and in the case of (v), that the consideration received is either (A) cash or (B) securities of a company registered under, and in compliance with its obligations under the Exchange Act.

7.2 Right of First Offer. Subject to the terms and conditions specified in this Section 7.2, the Company hereby grants to Takeda and each Lender a right of first offer with respect to future sales by the Company of its Shares (as hereinafter defined). For purposes of this Section 7.2, the term "Lender" includes any general partners and Affiliates of a Lender. Takeda and each Lender shall be entitled to apportion the right of first offer hereby granted it among itself and its partners and Affiliates in such proportions as it deems appropriate.

Each time the Company proposes to offer any shares of, or securities convertible into or exchangeable or exercisable for any shares of, its capital stock (including, without limitation, any such shares or securities issued in connection with debt securities) ("Shares"), the Company shall first make an offering of such Shares to Takeda and each Lender in accordance with the following provisions:

(a) The Company shall deliver a notice in accordance with Section 8.5 ("Notice") to Takeda and the Lenders stating (i) its bona fide intention to offer such Shares, (ii) the number of such Shares to be offered and (iii) the price and terms upon which it proposes to offer such Shares.

(b) By written notification received by the Company within ten (10) calendar days after the giving of Notice, Takeda and each Lender may elect to purchase, at the price and on the terms specified in the Notice, up to that portion of such Shares that equals the following: (i) with respect to Takeda, fifteen percent (15%) of such Shares; and (ii) with respect to each Lender, such Lender's respective pro rata portion of eighty five (85%) of such Shares determined in the proportion that the principal outstanding under the Note(s) held by such Lender bears to the total principal outstanding under the Notes held by all the Lenders; provided, that if Takeda does not elect to purchase the full amount of Shares to which it is entitled to purchase under this Section 7.2(b)(i), then each Lender shall have a right to elect to purchase its pro rata portion of any such remaining Shares not purchased by Takeda pursuant to the provisions of this Section 7.2(b)(ii).

(c) If all Shares that Takeda and the Lenders are entitled to obtain pursuant to Section 7.2(b) of this Agreement are not elected to be obtained as provided in Section 7.2(b) of this Agreement, the Company may, during the ninety (90) day period following the expiration of the period provided in Section 7.2(b) of this Agreement, offer the remaining unsubscribed portion of such Shares to any Person or Persons at a price not less than that, and upon terms no more favorable to the offeree than those, specified in the Notice. If the Company does

not enter into an agreement for the sale of the Shares within such period, or if such agreement is not consummated within sixty (60) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such Shares shall not be offered unless first reoffered to Takeda and the Lenders in accordance herewith.

(d) The right of first offer in this Section 7.2 shall not be applicable to (i) the issuance or sale of shares of Common Stock (or options therefor) (appropriately adjusted for any stock split, dividend, combination or other recapitalization) to employees, directors, consultants and other service providers for the primary purpose of soliciting or retaining their services pursuant to plans or agreements approved by the Board; (ii) the issuance of securities in the Initial Public Offering; (iii) the issuance of securities pursuant to the conversion or exercise of convertible or exercisable securities; (iv) the issuance of securities in connection with a bona fide business acquisition by the Company, whether by merger, consolidation, sale of assets, sale or exchange of stock or otherwise; (v) the issuance of Conversion Shares upon conversion of the Notes (but, for the purposes of clarity, not the Equity Securities that trigger the issuance of the Conversion Shares); or (vi) the issuance of stock, warrants or other securities or rights pursuant to any equipment leasing arrangement or debt financing arrangement; provided such issuances are approved by the Board and (except for the Initial Public Offering) are primarily for non-equity financing purposes. In addition to the foregoing, the right of first offer in this Section 7.2 shall not be applicable with respect to any Lender in any subsequent offering of Shares if (i) at the time of such offering, the Lender is not an "accredited investor," as that term is then defined in Rule 501(a) of the Securities Act and (ii) such offering of Shares is otherwise being offered only to accredited investors.

(e) The rights provided in this Section 7.2 may not be assigned or transferred by any Lender; provided, however, that a Lender that is a venture capital fund, private equity investor, investment company or investment advisor may assign or transfer such rights to its Affiliates.

(f) The right of first offer in this Section 7.2, including notice with respect thereto, applicable to Takeda may be waived by Takeda with the written consent of Takeda. The right of first offer in this Section 7.2, including notice with respect thereto, may be waived by all Lenders with the written consent of the Requisite Noteholders; provided, in the event any Lender consents to the waiver of the provisions of this Section 7.2 with respect to any offering of Shares by the Company and actually purchases any such Shares in such offering, then each other Lender who did not consent to such waiver shall be permitted to participate in such offering (which may, at the Company's option, be in a subsequent closing of such offering on substantially the same terms and conditions) on a pro rata basis (based on the level of participation of the Lender purchasing the largest portion of such Lender's pro rata share). Takeda's and the Requisite Noteholders' right to waive the provisions of this Section 7.2 shall be independent of one another.

(g) The covenants set forth in this Section 7.2 shall terminate and be of no further force or effect upon (i) the consummation of the Initial Public Offering, (ii) when the Company first becomes subject to the periodic reporting requirements of Sections 12(g) or 15(d) of the Exchange Act and (iii) upon the consummation of a Corporate Transaction, whichever event shall first occur.

7.3 Rights of Refusal.

(a) Transfer Notice. If at any time a Common Holder proposes to Transfer Equity Securities (a "Selling Common Holder"), then the Selling Common Holder shall promptly give the Company and each Lender written notice of the Selling Common Holder's intention to make the Transfer (the "Transfer Notice"). The Transfer Notice shall include (i) a description of the Equity Securities to be transferred (the "Offered Shares"), (ii) the name(s) and address(es) of the prospective transferee(s), (iii) the purchase price and form of consideration proposed to be paid for the Offered Shares and (iv) the other material terms and conditions upon which the proposed Transfer is to be made. The Transfer Notice shall certify that the Selling Common Holder has received a firm offer from the prospective transferee(s) and in good faith believes a binding agreement for the Transfer is obtainable on the terms set forth in the Transfer Notice. The Transfer Notice shall also include a copy of any written proposal, term sheet or letter of intent or other agreement relating to the proposed Transfer. In the event that the transfer is being made pursuant to the provisions of Section 7.3, the Transfer Notice shall state under which specific clause of Section 7.3 the Transfer is being made.

(b) Company's Right of First Refusal. The Company shall have an option for a period of ten (10) days from delivery of the Transfer Notice in accordance with Section 8.5 to elect to purchase the Offered Shares at the same price and subject to the same material terms and conditions as described in the Transfer Notice. The Company may exercise such purchase option and purchase all or any portion of the Offered Shares by notifying the Selling Common Holder in writing before expiration of such ten (10) day period as to the number of such shares that it wishes to purchase. If the Company gives the Selling Common Holder notice that it desires to purchase such shares, then payment for the Offered Shares shall be made by check or wire transfer against delivery of the Offered Shares to be purchased at a time and place agreed upon between the parties, which time shall be no later than forty-five (45) days after delivery to the Company of the Transfer Notice in accordance with Section 8.5, unless the Transfer Notice contemplated a later closing with the prospective third-party transferee(s) or unless the value of the consideration to be paid for the Offered Shares has not yet been established pursuant to Section 7.3(e)(ii). If the Company fails to purchase any or all of the Offered Shares by exercising the option granted in this Section 7.3(b) within the period provided, the remaining Offered Shares shall be subject to the options granted to the Lenders pursuant to Section 7.3(d).

(c) Additional Transfer Notice. Subject to the Company's option set forth in Section 7.3(b), if at any time the Selling Common Holder proposes a Transfer, then, within five (5) days after the Company has declined to purchase all, or a portion, of the Offered Shares or the Company's option to so purchase the Offered Shares has expired, the Selling Common Holder shall give each Lender an "Additional Transfer Notice" that shall include all of the information and certifications required in a Transfer Notice and shall additionally identify the Offered Shares that the Company has declined to purchase (the "Remaining Shares") and reference the Lenders' rights of first refusal with respect to the proposed Transfer contained in this Agreement.

(d) Lenders' Right of First Refusal.

(i) Each Lender shall have an option for a period of fifteen (15) days from the delivery of the Additional Transfer Notice in accordance with Section 8.5 from the

Selling Common Holder set forth in Section 7.3(c) to elect to purchase its respective pro rata share of the Remaining Shares at the same price and subject to the same material terms and conditions as described in the Additional Transfer Notice. Each Lender may exercise such purchase option and purchase all or any portion of its pro rata share of the Remaining Shares (a "Participating Lender" for the purposes of this Section 7.3(d) and Section 7.3(e)), by notifying the Selling Common Holder and the Company in writing, before expiration of the fifteen (15)-day period as to the number of such shares that it wishes to purchase. Each Lender's pro rata share of the Remaining Shares shall be a fraction of the Remaining Shares, the numerator of which shall be the number of shares of Common Stock either already issued or issuable, directly or indirectly, upon conversion of the Notes owned by such Lender on the date of the Transfer Notice and denominator of which shall be the total number of shares of Common Stock either already issued or issuable, directly or indirectly, upon conversion of the Notes held by all Lenders on the date of the Transfer Notice.

(ii) In the event any Lender elects not to purchase its pro rata share of the Remaining Shares available pursuant to its option under Section 7.3(d)(i) within the time period set forth therein, then the Selling Common Holder shall promptly give written notice (the "Overallotment Notice") to each Participating Lender that has elected to purchase all of its pro rata share of the Remaining Shares (each a "Fully Participating Lender"), which notice shall set forth the number of Remaining Shares not purchased by the other Lenders ("Unsubscribed Shares"), and shall offer the Fully Participating Lenders the right to acquire the Unsubscribed Shares. Each Fully Participating Lender shall have five (5) days after delivery of the Overallotment Notice in accordance with Section 8.5 to deliver a written notice to the Selling Common Holder (the "Participating Lenders Overallotment Notice") of its election to purchase its pro rata share of the Unsubscribed Shares on the same terms and conditions as set forth in the Additional Transfer Notice, which such Participating Lenders Overallotment Notice shall also indicate the maximum number of the Unsubscribed Shares that such Fully Participating Lender will purchase in the event that any other Fully Participating Lender elects not to purchase its pro rata share of the Unsubscribed Shares. For the purposes of determining a Fully Participating Lender's pro rata share of the unsubscribed shares under this Section 7.3(d)(ii), the numerator shall be the same as that used in Section 7.3(d)(i) above and the denominator shall be the total number of shares of Common Stock (including shares of Common Stock issuable, directly or indirectly, upon conversion of the Notes) owned by all Fully Participating Lenders on the date of the Transfer Notice.

(iii) Each Participating Lender shall be entitled to apportion Remaining Shares to be purchased among its partners and Affiliates, provided that such Participating Lender notifies the Selling Common Holder of such allocation.

(e) Payment.

(i) The Participating Lenders shall effect the purchase of the Remaining Shares with payment by check or wire transfer against delivery of the Remaining Shares to be purchased at a time and place agreed upon between the parties, which time shall be no later than sixty (60) days after delivery to the Company of the Transfer Notice in accordance with Section 8.5, unless the Transfer Notice contemplated a later closing with the prospective

third-party transferee(s) or unless the value of the consideration to be paid for the Offered Shares has not yet been established pursuant to Section 7.3(e)(ii).

(ii) Should the purchase price specified in the Transfer Notice or Additional Transfer Notice be payable in a form of consideration other than cash or evidences of indebtedness, the Company (and the Participating Lenders) shall have the right to pay such purchase price in an amount of cash equal to the fair market value of such consideration. If the Selling Common Holder and the Company (or the Participating Lenders) cannot agree on such fair market value within ten (10) days after delivery to the Company of the Transfer Notice (or the delivery of the Additional Transfer Notice to the Lenders), the valuation shall be made by an appraiser of recognized standing selected by the Selling Common Holder and the Company (or a majority-in-interest of the Participating Lenders) or, if they cannot agree on an appraiser within twenty (20) days after delivery to the Company of the Transfer Notice (or the delivery of the Additional Transfer Notice to the Lenders), each shall select an appraiser of recognized standing and those appraisers shall designate a third appraiser of recognized standing, whose appraisal shall be determinative of such value. The cost of such appraisal shall be shared equally by the Selling Common Holder, on the one hand, and the Company (and, to the extent there are any, the Participating Lenders, on the other hand, with that half of the cost to be borne by the Company and the Participating Lenders to be apportioned on a pro rata basis based on the number of shares each such party has expressed an interest in purchasing pursuant to this Section 7.3). If the time for the closing of the Company's purchase or the Participating Lenders' purchase has expired but the determination of the value of the purchase price offered by the prospective transferee(s) has not been finalized, then such closing shall be held on or prior to the fifth business day after such valuation shall have been made pursuant to this Section 7.3(e)(ii).

(f) Exempted Transfers. Notwithstanding the foregoing or anything to the contrary herein, the provisions of this Section 7.3 shall not apply to a transfer of Equity Securities by a Common Holder, either during his or her lifetime or on death by will or intestacy, to his or her spouse, including any life partner or similar statutorily-recognized domestic partner, child (natural or adopted), siblings, or any other direct lineal descendant of such Common Holder (or his or her spouse, including any life partner or similar statutorily-recognized domestic partner) (all of the foregoing collectively referred to as "family members"), or any other person approved by the Board, or to a trust for the benefit of the Common Holder (or such individual) or any of his or her family members, or to a custodian or trustee of any trust, partnership or limited liability company for the benefit of, or the ownership interests of which are owned wholly by such Common Holder or any such family members, or (where the Common Holder is a trust) to any beneficiary of the trust, any family members of any such beneficiary or any other trust established for the benefit of any such beneficiary or family member thereof; provided that in each case the Common Holder shall deliver prior written notice to the Company of such pledge, gift or transfer and such Equity Securities shall at all times remain subject to the terms and restrictions set forth in this Agreement and such transferee shall, as a condition to such Transfer, deliver a counterpart signature page to this Agreement as confirmation that such transferee shall be bound by all the terms and conditions of this Agreement as a Common Holder (but only with respect to the

securities so transferred to the transferee), including the obligations of a Common Holder with respect to Transfers of Equity Securities pursuant to this Section 7.3.

(g) Termination. The covenants set forth in this Section 7.3 shall terminate and be of no further force or effect upon (i) the consummation of the Initial Public Offering, (ii) when the Company first becomes subject to the periodic reporting requirements of Sections 12(g) or 15(d) of the Exchange Act and (iii) upon the consummation of a Corporate Transaction, whichever event shall first occur.

7.4 Drag Along Right.

(a) Actions to be Taken. In the event that the Board, the holders of a majority of the outstanding shares of Common Stock, including the affirmative approval of Frazier, and the Requisite Noteholders (the "Requisite Parties"), approve a Corporate Transaction, then each Common Holder, Takeda and Frazier hereby agrees with respect to all Shares which it own(s) or over which it otherwise exercises voting or dispositive authority:

(i) in the event such transaction is to be brought to a vote at a stockholder meeting, after receiving proper notice of any meeting of stockholders of the Company, to vote on the approval of a Corporate Transaction, to be present, in person or by proxy, as a holder of shares of voting securities, at all such meetings and be counted for the purposes of determining the presence of a quorum at such meetings;

(ii) to vote (in person, by proxy or by action by written consent, as applicable) all Shares in favor of such Corporate Transaction and in opposition to any and all other proposals that could reasonably be expected to delay or impair the ability of the Company to consummate such Corporate Transaction;

(iii) to refrain from exercising any dissenters' rights or rights of appraisal under applicable law at any time with respect to such Corporate Transaction;

(iv) to execute and deliver all related documentation and take such other action in support of the Corporate Transaction as shall reasonably be requested by the Company or the Requisite Parties;

(v) if the Corporate Transaction is structured as a Stock Sale, to sell the same proportion of his, her or its Shares as is being sold by the Requisite Parties, and, except as permitted in Section 7.4(b) below, on the same terms and conditions as the Requisite Parties;

(vi) not to deposit, and to cause their affiliates not to deposit, except as provided in this Agreement, any Shares owned by such Common Holder, Takeda and Frazier or any of their Affiliates in a voting trust or subject any such Shares to any arrangement or agreement with respect to the voting of such Shares, unless specifically requested to do so by the acquirer in connection with the Corporate Transaction; and

(vii) if the consideration to be paid in exchange for the Shares pursuant to this Section 7.4 includes any securities and due receipt thereof by any stockholder would require under applicable law (i) the registration or qualification of such securities or of any person as a broker or dealer or agent with respect to such securities or (ii) the provision to any Common Holder, Takeda and Frazier of any information other than such information as a prudent issuer would generally furnish in an offering made solely to "accredited investors" as defined in Regulation D promulgated under the Securities Act, the Company may cause to be paid to any such Common Holder, Takeda and Frazier in lieu thereof, against surrender of the Shares which would have otherwise been sold by such stockholder, an amount in cash equal to the fair value (as determined in good faith by the Company) of the securities which such Common Holder, Takeda and Frazier would otherwise receive as of the date of the issuance of such securities in exchange for the Shares.

(b) Exceptions. Notwithstanding the foregoing, each Common Holder, Takeda, Frazier and any holder of Common Stock issued upon the conversion of the Notes in accordance with the provisions of this Agreement will not be required to comply with Section 7.4(a) above in connection with any proposed Corporate Transaction (the "Proposed Sale") unless:

(i) any representations and warranties to be made by such Common Holder, Takeda and Frazier in connection with the Proposed Sale are limited to representations and warranties related to authority, ownership and the ability to convey title to such Common Holder's, Takeda's and Frazier's Shares, including, without limitation, representations and warranties that (i) the Common Holder, Takeda and Frazier holds all right, title and interest in and to the Shares such stockholder purports to hold, free and clear of all liens and encumbrances, (ii) the obligations of the Common Holder, Takeda and Frazier in connection with the transaction have been duly authorized, if applicable, (iii) the documents to be entered into by the stockholder have been duly executed by the Common Holder, Takeda and Frazier and delivered to the acquiror and are enforceable against the stockholder in accordance with their respective terms and (iv) neither the execution and delivery of documents to be entered into in connection with the transaction, nor the performance of the Common Holder's, Takeda's and Frazier's obligations thereunder, will cause a breach or violation of the terms of any agreement, law or judgment, order or decree of any court or governmental agency by which such stockholder is subject or bound;

(ii) the Common Holder, Takeda and Frazier shall not be liable for the inaccuracy of any representation or warranty made by any other person in connection with the Proposed Sale, other than the Company (except to the extent that funds may be paid out of an escrow established to cover breach of representations, warranties and covenants of the Company as well as breach by any stockholder of any identical representations, warranties and covenants provided by all stockholders);

(iii) the liability for indemnification, if any, of such Common Holder, Takeda and Frazier in the Proposed Sale and for the inaccuracy of any representations and warranties made by the Company in connection with such Proposed Sale, is several and not joint with any other person (except to the extent that funds may be paid out of an escrow established to cover breach of representations, warranties and covenants of the Company as well as breach by any stockholder of any identical representations, warranties and covenants provided by all

stockholders), and is pro rata in proportion to the amount of consideration paid to such Common Holder, Takeda and Frazier in connection with such Proposed Sale (in accordance with the provisions of the Certificate of Incorporation);

(iv) liability shall be limited to such Common Holder's, Takeda's and Frazier's applicable share (determined based on the respective proceeds payable to each stockholder in connection with such Proposed Sale in accordance with the provisions of the Certificate of Incorporation) of a negotiated aggregate indemnification amount that applies equally to all Common Holder, Takeda and Frazier but that in no event exceeds the amount of consideration otherwise payable to such Common Holder, Takeda and Frazier in connection with such Proposed Sale, except with respect to claims related to fraud by such Common Holder, Takeda and Frazier, the liability for which need not be limited as to such Common Holder, Takeda and Frazier;

(v) upon the consummation of the Proposed Sale, (A) each holder of each class or series of the Company's stock will receive the same form of consideration for their shares of such class or series as is received by other holders in respect of their shares of such same class or series of stock, (B) each holder of a series of Preferred Stock will receive the same amount of consideration per share of such series of Preferred Stock as is received by other holders in respect of their shares of such same series, (C) each holder of Common Stock will receive the same amount of consideration per share of Common Stock as is received by other holders in respect of their shares of Common Stock, and (D) the aggregate consideration receivable by all holders of the Preferred Stock and Common Stock shall be allocated among the holders of Preferred Stock and Common Stock on the basis of the relative liquidation preferences to which the holders of each respective series of Preferred Stock and the holders of Common Stock are entitled in a Corporate Transaction (assuming for this purpose that the Proposed Sale is a Corporate Transaction) in accordance with the Certificate of Incorporation in effect immediately prior to the Proposed Sale;

(vi) subject to subsection 7.4(b)(v) above, requiring the same form of consideration to be available to the holders of any single class or series of capital stock, if any holders of a series or class of capital stock of the Company are given an option as to the form and amount of consideration to be received as a result of the Proposed Sale, all holders of such series or class of capital stock will be given the same option; provided, however, that nothing in this subsection 7.4(b)(vi) shall entitle any holder to receive any form of consideration that such holder would be ineligible to receive as a result of such holder's failure to satisfy any condition, requirement or limitation that is generally applicable to the Company's stockholders;

(vii) no Common Holder that previously was a Lender shall be required to agree to any covenant not to compete or covenant not to solicit customers, employees or suppliers of any party to the Proposed Sale, or any obligation to provide services to the Company, the Person or group of related Persons participating in the Proposed Sale, or any other Person;

(viii) such Common Holder (unless such Common Holder is a Company officer or employee), Takeda and Frazier are not required to agree to any restrictive covenant in connection with the Proposed Sale (including without limitation any covenant not to

compete or covenant not to solicit customers, employees or suppliers of any party to the Proposed Sale); and

(ix) such Common Holder, Takeda and Frazier and their Affiliates are not required to amend, extend or terminate any contractual or other relationship with the Company, the acquirer or their respective Affiliates, except that such Common Holder, Takeda and Frazier may be required to agree to terminate the investment-related documents between or among such Common Holder, Takeda or Frazier, the Company and/or other stockholders of the Company.

(c) Termination. This Section 7.4 shall be effective as of the date of this Agreement and shall continue in effect until and shall terminate upon the earliest to occur of (i) the consummation of the Initial Public Offering, (ii) when the Company first becomes subject to the periodic reporting requirements of Sections 12(g) or 15(d) of the Exchange Act and (iii) upon the consummation of a Corporate Transaction; provided that the provisions of Section 7.4 hereof will continue after the closing of any Corporate Transaction to the extent necessary to enforce the provisions of Section 7.4 with respect to such Corporate Transaction.

7.5 Registration Rights. The Company covenants and agrees as follows:

(a) Request for Registration.

(i) Subject to the conditions of this Section 7.5(a), if the Company shall receive at any time following the earlier of (A) five (5) years after the date of this Agreement or (B) one hundred eighty (180) days after the Initial Public Offering, a written request from the Holders of at least twenty-five percent (25%) of the holders of Registrable Securities then outstanding (for purposes of this Section 7.5(a), the "Initiating Holders") that the Company file a registration statement under the Securities Act covering the registration of Registrable Securities with an anticipated aggregate offering price of at least $10,000,000, then the Company shall, within twenty (20) days of the receipt thereof, give written notice of such request to all Lenders, and subject to the limitations of this Section 7.5(a), use its commercially reasonable efforts to effect, as soon as practicable, the registration under the Securities Act of all Registrable Securities that the Holders request to be registered in a written request received by the Company within twenty (20) days of the mailing of the Company's notice pursuant to this Section 7.5(a)(i).

(ii) If the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 7.5(a), and the Company shall include such information in the written notice referred to in Section 7.5(a)(i). In such event the right of any Holder to include its Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting (unless otherwise mutually agreed by a majority in interest of the Initiating Holders and such Holder) to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by the Company (which underwriter or underwriters shall be reasonably acceptable to those Initiating Holders holding a majority of the Registrable Securities then held by all Initiating Holders).

Notwithstanding any other provision of this Section 7.5(a), if the underwriter advises the Company that marketing factors require a limitation on the number of securities underwritten (including Registrable Securities), then the Company shall so advise all Holders of Registrable Securities that would otherwise be underwritten pursuant hereto, and the number of shares that may be included in the underwriting shall be allocated to the Holders of such Registrable Securities pro rata based on the number of Registrable Securities held by all such Holders (including the Initiating Holders). In no event shall any Registrable Securities be excluded from such underwriting unless all other securities are first excluded. Any Registrable Securities excluded or withdrawn from such underwriting shall be withdrawn from the registration.

(iii) Notwithstanding the foregoing, the Company shall not be required to effect a registration pursuant to this Section 7.5(a):

(A) in any particular jurisdiction in which the Company would be required to execute a general consent to service of process in effecting such registration, unless the Company is already subject to service in such jurisdiction and except as may be required under the Securities Act;

(B) after the Company, within the twelve (12) month period preceding the date of such request, has effected two (2) registrations pursuant to this Section 7.5(a), and such registrations have been declared or ordered effective;

(C) during the period starting with the date sixty (60) days prior to the Company's good faith estimate of the date of the filing of and ending on a date one hundred eighty (180) days following the effective date of a Company-initiated registration subject to Section 7.5(b) below, provided that the Company is actively employing in good faith its commercially reasonable efforts to cause such registration statement to become effective and the Company gives notice to the Initiating Holders of such efforts;

(D) if the Initiating Holders propose to dispose of Registrable Securities that may be registered on Form S-3 pursuant to Section 7.5(c) hereof; or

(E) if the Company shall furnish to Holders requesting a registration statement pursuant to this Section 7.5(a) a certificate signed by the Company's Chief Executive Officer or Chairman of the Board stating that in the good faith judgment of the Board, it would be seriously detrimental to the Company and its stockholders for such registration statement to be effected at such time, in which event the Company shall have the right to defer such filing for a period of not more than ninety (90) days after receipt of the request of the Initiating Holders; provided that such right shall be exercised by the Company not more than once in any twelve (12) month period.

(b) Company Registration.

(i) If (but without any obligation to do so) the Company proposes to register (including for this purpose a registration effected by the Company for stockholders other than the Holders) any of its stock or other securities under the Securities Act in connection with the public offering of such securities (other than a registration relating to a demand

pursuant to Section 7.5(a) of this Agreement, a registration relating solely to the sale of securities of participants in a Company stock plan, a registration relating to a corporate reorganization or transaction under Rule 145 of the Securities Act, a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities, a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered, or a registration relating to the Initial Public Offering), the Company shall, at such time, promptly give each Holder written notice of such registration. Upon the written request of each Holder given within twenty (20) days after mailing of such notice by the Company in accordance with Section 8.5 of this Agreement, the Company shall, subject to the provisions of Section 7.5(b)(iii) of this Agreement, use its commercially reasonable efforts to cause to be registered under the Securities Act all of the Registrable Securities that each such Holder requests to be registered.

(ii) Right to Terminate Registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 7.5(b) prior to the effectiveness of such registration whether or not any Holder has elected to include securities in such registration. The expenses of such withdrawn registration shall be borne by the Company in accordance with Section 7.5(f) hereof.

(iii) Underwriting Requirements. In connection with any offering involving an underwriting of shares of the Company's capital stock, the Company shall not be required under this Section 7.5(b) to include any of the Holders' securities in such underwriting unless they accept the terms of the underwriting as agreed upon between the Company and the underwriters selected by the Company (or by other Persons entitled to select the underwriters) and enter into an underwriting agreement in customary form with such underwriters, and then only in such quantity as the underwriters determine in their sole discretion will not jeopardize the success of the offering by the Company. If the total amount of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the amount of securities sold other than by the Company that the underwriters determine in their sole discretion is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, that the underwriters determine in their sole discretion will not jeopardize the success of the offering. In the event that the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be apportioned pro rata among the selling Holders based on the number of Registrable Securities held by all selling Holders or in such other proportions as shall mutually be agreed to by all such selling Holders. Notwithstanding the foregoing, in no event shall (A) any Registrable Securities be excluded from such offering unless all other stockholders' securities have been first excluded from the offering and (B) the amount of securities of the selling Holders included in the offering be reduced below twenty percent (20%) of the total amount of securities included in such offering, unless such offering is the Initial Public Offering, in which case the selling Holders may be excluded if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the preceding sentence concerning apportionment, for any selling stockholder that is a Holder of Registrable Securities and that is a venture capital fund, partnership or corporation, the affiliated venture

capital funds, partners, members, retired partners and stockholders of such Holder, or the estates and family members of any such partners, members and retired partners and any trusts for the benefit of any of the foregoing Persons shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate amount of Registrable Securities owned by all such related entities and individuals.

(c) Form S-3 Registration. In case the Company shall receive from the Holders of at least twenty percent (20%) of the Registrable Securities (for purposes of this Section 7.5(c), the "S-3 Initiating Holders") a written request or requests that the Company effect a registration on Form S-3 and any related qualification or compliance with respect to all or a part of the Registrable Securities owned by such Holder or Holders, the Company shall:

(i) promptly give written notice of the proposed registration, and any related qualification or compliance, to all other Holders; and

(ii) use its commercially reasonable efforts to effect, as soon as practicable, such registration and all such qualifications and compliances as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Holders' Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any other Holders joining in such request as are specified in a written request given within fifteen (15) days after receipt of such written notice from the Company; provided, however, that the Company shall not be obligated to effect any such registration, qualification or compliance, pursuant to this Section 7.5(c):

(A) if Form S-3 is not available for such offering by the Holders;

(B) if the Holders, together with the holders of any other securities of the Company entitled to inclusion in such registration, propose to sell Registrable Securities and such other securities (if any) at an aggregate price to the public (net of any underwriters' discounts or commissions) of less than $3,000,000;

(C) if the Company shall furnish to all Holders requesting a registration statement pursuant to this Section 7.5(c) a certificate signed by the Company's Chief Executive Officer or Chairman of the Board stating that in the good faith judgment of the Board, it would be seriously detrimental to the Company and its stockholders for such registration statement to be effected at such time, in which event the Company shall have the right to defer such filing for a period of not more than ninety (90) days after receipt of the request of the S-3 Initiating Holders; provided that such right shall be exercised by the Company not more than once in any twelve (12) month period;

(D) if the Company has, within the twelve (12) month period preceding the date of such request, already effected two (2) registrations on Form S-3 pursuant to this Section 7.5(c);

(E) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance;

(F) if the Company, within thirty (30) days of receipt of the request of such S-3 Initiating Holders, gives notice of its bona fide intention to effect the filing of a registration statement with the SEC within one hundred twenty (120) days of receipt of such request (other than a registration effected solely to qualify an employee benefit plan or to effect a business combination pursuant to Rule 145), provided that the Company is actively employing in good faith its commercially reasonable efforts to cause such registration statement to become effective; or

(G) during the period starting with the date thirty (30) days prior to the Company's good faith estimate of the date of the filing of and ending on a date ninety (90) days following the effective date of a Company-initiated registration subject to Section 7.5(b) of this Agreement, provided that the Company is actively employing in good faith its commercially reasonable efforts to cause such registration statement to become effective and the Company gives notice to the Initiating Holders of such efforts.

(iii) If the S-3 Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 7.5(c) and the Company shall include such information in the written notice referred to in Section 7.5(c)(i). The provisions of Section 7.5(a)(ii) of this Agreement shall be applicable to such request (with the substitution of Section 7.5(c) for references to Section 7.5(a)).

(iv) Subject to the foregoing, the Company shall file a registration statement covering the Registrable Securities and other securities so requested to be registered as soon as practicable after receipt of the request or requests of the S-3 Initiating Holders. Registrations effected pursuant to this Section 7.5(c) shall not be counted as requests for registration effected pursuant to Section 7.5(a) of this Agreement.

(d) Obligations of the Company. Whenever required under this Section 7.5 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(i) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective, and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the Registration Statement has been completed;

(ii) prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement;

(iii) furnish to the Holders such number of copies of a prospectus, including a preliminary prospectus and any Free Writing Prospectus, in conformity with the requirements of the Securities Act, and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities owned by them;

(iv) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested by the Holders, provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or jurisdictions;

(v) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of such offering;

(vi) notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus or Free Writing Prospectus (to the extent prepared by or on behalf of the Company) relating thereto is required to be delivered under the Securities Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing, and, at the request of any such Holder, the Company will, as soon as reasonably practicable, file and furnish to all such Holders a supplement or amendment to such prospectus or Free Writing Prospectus (to the extent prepared by or on behalf of the Company) so that, as thereafter delivered to the purchasers of such Registrable Securities, such prospectus will not contain an untrue statement of a material fact or omit to state any fact necessary to make the statements therein not misleading in light of the circumstances under which they were made;

(vii) cause all such Registrable Securities registered pursuant to this Section 7.5 to be listed on a national exchange or trading system and on each securities exchange and trading system on which similar securities issued by the Company are then listed; and

(viii) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration.

Notwithstanding the provisions of this Section 7.5, the Company shall be entitled to postpone or suspend, for a reasonable period of time, the filing, effectiveness or use of, or trading under, any registration statement if the Company shall determine that any such filing or the sale of any securities pursuant to such registration statement would in the good faith judgment of the Board:

(A) materially impede, delay or interfere with any material pending or proposed financing, acquisition, corporate reorganization or other similar transaction involving the Company for which the Board has authorized negotiations;

(B) materially and adversely impair the consummation of any pending or proposed material offering or sale of any class of securities by the Company; or

(C) require disclosure of material nonpublic information that, if disclosed at such time, would be materially harmful to the interests of the Company and its stockholders; provided, however, that during any such period all executive officers and directors of the Company are also prohibited from selling securities of the Company (or any security of any of the Company's subsidiaries or affiliates).

In the event of the suspension of effectiveness of any registration statement pursuant to this Section 7.5(d), the applicable time period during which such registration statement is to remain effective shall be extended by that number of days equal to the number of days the effectiveness of such registration statement was suspended.

(e) Information from Holder. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 7.5 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as shall be reasonably required to effect the registration of such Holder's Registrable Securities.

(f) Expenses of Registration. All expenses other than underwriting discounts and commissions incurred in connection with registrations, filings or qualifications pursuant to Sections 7.5(a) and 7.5(b) of this Agreement, including, without limitation, all registration, filing and qualification fees, printers' and accounting fees, fees and disbursements of counsel for the Company and the reasonable fees and disbursements, not to exceed $50,000, of one counsel for the selling Holders selected by the Holders of a majority of the Registrable Securities to be registered shall be borne by the Company. Notwithstanding the foregoing, the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 7.5(a) of this Agreement if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all participating Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration) unless, in the case of a registration requested under Section 7.5(a) of this Agreement, the Holders of a majority of the Registrable Securities agree to forfeit their right to one demand registration pursuant to Section 7.5(a) of this Agreement; provided, however, that if at the time of such withdrawal, the Holders have learned of a material adverse change in the condition, business or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness following disclosure by the Company of such material adverse change, then the Holders shall not be required to pay any of such expenses and shall retain their rights pursuant to Section 7.5(a) of this Agreement. All expenses incurred in connection with a registration requested pursuant to Section 7.5(c) of this Agreement, including, without limitation, all registration, filing, qualification, printer's and accounting fees and the reasonable fees and disbursements of counsel for the Company, shall be borne by the Company.

(g) Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any such registration as the result of any

controversy that might arise with respect to the interpretation or implementation of this Section 7.5.

(h) Indemnification. In the event any Registrable Securities are included in a registration statement under this Section 7.5:

(i) To the extent permitted by law, the Company will indemnify and hold harmless each Holder, the partners, members, officers, directors and stockholders of each Holder, legal counsel and accountants for each Holder, any underwriter (as defined in the Securities Act) for such Holder and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages or liabilities (joint or several) to which they may become subject under the Securities Act, the Exchange Act, any state securities laws or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities laws, insofar as such losses, claims, damages, or liabilities (or actions or proceedings, whether commenced or threatened, in respect thereof) arise out of or are based upon any of the following statements, omissions or violations (collectively, a "Violation"): (i) any untrue or alleged untrue statement of a material fact contained in such registration statement, including any preliminary prospectus, final prospectus, or Free Writing Prospectus contained therein or any amendments or supplements thereto, any issuer information (as defined in Rule 433 of the Securities Act) filed or required to be filed pursuant to Rule 433(d) under the Securities Act or any other document incident to such registration prepared by or on behalf of the Company or used or referred to by the Company, (ii) the omission or alleged omission of a material fact required to be stated in such registration statement, or necessary to make the statements therein not misleading or (iii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act, any state securities laws or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities laws, and the Company will reimburse each such Holder, underwriter, controlling Person or other aforementioned Person for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability, action or proceeding as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 7.5(h)(i) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability, action or proceeding if such settlement is effected without the consent of the Company (which consent shall not be unreasonably withheld), nor shall the Company be liable in any such case for any such loss, claim, damage, liability, action or proceeding to the extent that it arises out of or is based upon a Violation that occurs in reliance upon, and in conformity with, written information furnished expressly for use in connection with such registration by any such Holder, underwriter, controlling Person or other aforementioned Person.

(ii) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, each of its directors, each of its officers who has signed the registration statement, each Person, if any, who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter, any other Holder selling securities in such registration statement and any controlling Person of any such underwriter or other Holder, against any losses, claims, damages or liabilities (joint or several) to which any of the foregoing Persons may become subject, under the Securities Act, the Exchange Act, any state securities laws or any rule or regulation

promulgated under the Securities Act, the Exchange Act or any state securities laws, insofar as such losses, claims, damages or liabilities (or actions or proceedings, whether commenced or threatened, in respect thereof) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by such Holder expressly for use in connection with such registration; and each such Holder will reimburse any Person intended to be indemnified pursuant to this Section 7.5(h)(ii) for any legal or other expenses reasonably incurred by such Person in connection with investigating or defending any such loss, claim, damage, liability, action or proceeding as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 7.5(h)(ii) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability, action or proceeding if such settlement is effected without the consent of the Holder (which consent shall not be unreasonably withheld), and provided that in no event shall any indemnity under this Section 7.5(h)(ii) exceed the gross proceeds from the offering received by such Holder.

(iii) Promptly after receipt by an indemnified party under this Section 7.5(h) of notice of the commencement of any action or proceeding (including any governmental action or proceeding) for which a party may be entitled to indemnification, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 7.5(h), deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one (1) separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action or proceeding, if prejudicial to its ability to defend such action or proceeding, shall relieve such indemnifying party of any liability to the indemnified party under this Section 7.5(h) to the extent of such prejudice, but the omission to so deliver written notice to the indemnifying party will not relieve such indemnifying party of any liability that it may have to any indemnified party otherwise than under this Section 7.5(h).

(iv) If the indemnification provided for in this Section 7.5(h) is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any loss, liability, claim, damage or expense referred to herein, then the indemnifying party, in lieu of indemnifying such indemnified party hereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such loss, liability, claim, damage or expense in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and the indemnified party on the other hand in connection with the statements or omissions that resulted in such loss, liability, claim, damage or expense, as well as any other relevant equitable considerations; provided, however, that (A) no contribution by any Holder, when combined with any amounts paid by such Holder pursuant to Section 7.5(h)(ii), shall exceed the gross proceeds from the offering received by such Holder and (B) no Person guilty of fraudulent misrepresentation

(within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Section 7.5(h)(iv), when combined with the amounts paid or payable by such Holder pursuant to Section 7.5(h)(ii), exceed the proceeds from the offering received by such Holder (net of any expenses paid by such Holder). The relative fault of the indemnifying party and the indemnified party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

(v) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(vi) The obligations of the Company and Holders under this Section 7.5(h)(ii) shall survive the completion of any offering of Registrable Securities in a registration statement under this Section 7.5 and otherwise.

(i) Reports Under the Exchange Act. With a view to making available to the Holders the benefits of Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company agrees to:

(i) make and keep public information available, as those terms are understood and defined in Rule 144, at all times after the effective date of the Initial Public Offering;

(ii) file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act; and

(iii) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (A) a written statement by the Company that it has complied with the reporting requirements of Rule 144 (at any time after ninety (90) days after the effective date of the first registration statement filed by the Company), the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after it so qualifies), (B) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company and (C) such other information as may be reasonably requested to avail any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration or pursuant to such form.

(j) Assignment of Registration Rights. The rights to cause the Company to register Registrable Securities pursuant to this Section 7.5 may be assigned (but only with all related obligations) by a Holder to a transferee or assignee of such securities that (i) is an Affiliate, subsidiary, parent, partner, limited partner, retired partner, member or stockholder of a

Holder or (ii) is a Holder's family member or trust for the benefit of an individual Holder; provided: (A) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned; (B) such transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement, including, without limitation, the provisions of Section 8.11 of this Agreement; and (C) such assignment shall be effective only if immediately following such transfer the further disposition of such securities by the transferee or assignee is restricted under the Securities Act.

(k) Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Requisite Noteholders, enter into any agreement with any holder or prospective holder of any securities of the Company that would allow such holder or prospective holder (i) to include any of such securities in any registration filed under Section 7.5(a), Section 7.5(b) or Section 7.5(c) of this Agreement, unless under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of such securities will not reduce the amount of the Registrable Securities of the Holders that are included or (ii) to demand registration of their securities.

(l) Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to this Section 7.5, or exercise any other right provided for in this Section 7.5, shall terminate upon the earlier of (i) the consummation of a Corporate Transaction, (ii) such time after the Initial Public Offering at which such Holder can sell all shares held by it in compliance with Rule 144(b)(1)(i) or another similar exemption under the Securities Act that is available for the sale of Holder's shares without limitation, during a three (3)-month period without registration, and (iii) the fifth (5^{th}) anniversary of the Initial Public Offering.

7.6 Voting Provisions Regarding the Board Provisions.

(a) Each Common Holder, Takeda and Frazier agrees to vote, or cause to be voted, all Shares owned by such Common Holder, Takeda and Frazier, or over which such Common Holder, Takeda and Frazier has voting control, from time to time and at all times, in whatever manner as shall be necessary to ensure that the size of the Board shall be set and remain at ten (10) directors. One of the ten director seats will be vacant as of the Closing.

(b) Each Common Holder, Takeda and Frazier agrees to vote, or cause to be voted, all Shares owned by such Common Holder, Takeda and Frazier, or over which such stockholder has voting control, from time to time and at all times, in whatever manner as shall be necessary to ensure that at each annual or special meeting of stockholders at which an election of directors is held or pursuant to any written consent of the stockholders, the following persons shall be elected to the Board:

(i) One (1) individual designated from time to time by Frazier, who shall initially be Patrick Heron;

(ii) One (1) individual designated from time to time by Lightspeed Venture Partners Select IV, L.P. (together with its Affiliates, "LSVP"), who shall initially be Shelley Chu, M.D., Ph.D.;

(iii) One (1) individual designated from time to time by Deerfield Private Design Fund V, L.P. (together with its Affiliates, "Deerfield"), who shall initially be Elise Wang;

(iv) One (1) individual designated from time to time by Takeda or its affiliates, which individual shall initially be Rajeev Venkayya; provided, however, that if such seat is vacant, Takeda or its affiliates shall not have the right to designate a member to the Board to fill such vacant seat pursuant to this Section 7.6(b)(iv) at any time that the Board consists of fewer than five (5) individuals that are not affiliated with Takeda;

(v) One (1) individual designated from time to time by the holders of a majority of the Common Stock, which seat shall initially be vacant;

(vi) The Company's Chief Executive Officer, who shall initially be Robert Hershberg (the "CEO Director"), who shall initially be the Chairman of the Board, provided that if for any reason the CEO Director shall cease to serve as the Chief Executive Officer of the Company, each of the Common Holders, Frazier and Takeda shall promptly vote their respective Shares (A) to remove the former Chief Executive Officer of the Company from the Board if such person has not resigned as a member of the Board; and (B) to elect such person's replacement as Chief Executive Officer of the Company as the new CEO Director; and

(vii) Four (4) individuals not otherwise an Affiliate of the Company or of any Lender who is mutually acceptable to the other members of the Board.

(c) In the absence of any designation from the Persons or groups with the right to designate a director as specified above, the director previously designated by them and then serving shall be reelected if still eligible and willing to serve as provided herein and otherwise, such Board seat shall remain vacant.

(d) Each Common Holder, Takeda and Frazier also agrees to vote, or cause to be voted, all Shares owned by such Common Holder, Takeda and Frazier, or over which such Common Holder, Takeda and Frazier has voting control, from time to time and at all times, in whatever manner as shall be necessary to ensure that:

(i) no director elected pursuant to Sections 7.6(b) or 7.6(c) of this Agreement may be removed from office other than for cause unless (A) such removal is directed or approved by the Person(s) originally entitled to designate or approve such director pursuant to Section 7.6(b); or (B) the Person(s) originally entitled to designate or approve such director pursuant to Section 7.6(b) is no longer so entitled to designate or approve such director;

(ii) any vacancies created by the resignation, removal or death of a director elected pursuant to Sections 7.6(b) or 7.6(c) shall be filled pursuant to the provisions of this Section 7.6; and

(iii) upon the request of any party entitled to designate a director as provided in Section 7.6(b) to remove such director, such director shall be removed.

All Common Holders, Takeda and Frazier agree to execute any written consents required to perform the obligations of this Section 7.6, and the Company agrees at the request of any Person or group entitled to designate directors to call a special meeting of stockholders for the purpose of electing directors.

(e) No Common Holder, nor any Affiliate of any Common Holder, nor Takeda, Frazier nor any Lender shall have any liability as a result of designating a person for election as a director for any act or omission by such designated person in his or her capacity as a director of the Company, nor shall any Common Holder, Takeda, Frazier nor any Lender have any liability as a result of voting for any such designee in accordance with the provisions of this Section 7.6.

(f) The Company agrees to use its best efforts, within the requirements of applicable law, to ensure that the rights granted under this Section 7.6 are effective and that the parties enjoy the benefits of this Section 7.6. Such actions include, without limitation, the use of the Company's best efforts to cause the nomination and election of the directors as provided in this Section 7.6.

(g) Each party acknowledges and agrees that each party hereto will be irreparably damaged in the event any of the provisions of this Section 7.6 are not performed by the parties in accordance with their specific terms or are otherwise breached. Accordingly, it is agreed that each of the Company, the Common Holders, Takeda, Frazier and the Lenders shall be entitled to an injunction to prevent breaches of this Section 7.6, and to specific enforcement of this Section 7.6 and its terms and provisions in any action instituted in any court of the United States or any state having subject matter jurisdiction.

(h) All remedies, either under this Section 7.6 or by law or otherwise afforded to any party, shall be cumulative and not alternative.

(i) This Section 7.6 shall be effective as of the date hereof and shall continue in effect until and shall terminate upon the earliest to occur of (a) the consummation of the Initial Public Offering (other than a registration statement relating either to the sale of securities to employees of the Company pursuant to its stock option, stock purchase or similar plan or an SEC Rule 145 transaction) and (b) the consummation of any other Corporate Transaction.

(j) In the event that after the date of this Agreement, the Company enters into an agreement with any Person to issue shares of capital stock to such Person, then, the Company shall cause such Person, as a condition precedent to entering into such agreement, to become a party to this Agreement by executing an Adoption Agreement in the form attached hereto as Exhibit G, agreeing to be bound by and subject to the terms of this Agreement as a Common Holder and thereafter such person shall be deemed a stockholder for all purposes under this Agreement.

(k) Each transferee or assignee of any Shares subject to this Agreement shall continue to be subject to the terms hereof, and, as a condition precedent to the Company's recognition of such transfer, each transferee or assignee shall agree in writing to be subject to each of the terms of this Agreement by executing and delivering an Adoption Agreement substantially in the form attached hereto as Exhibit G. Upon the execution and delivery of an Adoption Agreement by any transferee, such transferee shall be deemed to be a party hereto as if such transferee were the transferor and such transferee's signature appeared on the signature pages of this Agreement and shall be deemed to be a Common Holder, as applicable. The Company shall not permit the transfer of the Shares subject to this Agreement on its books or issue a new certificate representing any such Shares unless and until such transferee shall have complied with the terms of this Section 7.6(k). Each certificate instrument, or book entry representing the Shares subject to this Section 7.6 if issued on or after the date of this Agreement shall be notated by the Company with a legend reading substantially as follows:

> "THE SHARES REPRESENTED HEREBY ARE SUBJECT TO A NOTE PURCHASE AGREEMENT, AS MAY BE AMENDED FROM TIME TO TIME, (A COPY OF WHICH MAY BE OBTAINED UPON WRITTEN REQUEST FROM THE COMPANY), AND BY ACCEPTING ANY INTEREST IN SUCH SHARES THE PERSON ACCEPTING SUCH INTEREST SHALL BE DEEMED TO AGREE TO AND SHALL BECOME BOUND BY ALL THE PROVISIONS OF THAT NOTE PURCHASE AGREEMENT, INCLUDING CERTAIN RESTRICTIONS ON VOTING, TRANSFER AND OWNERSHIP SET FORTH THEREIN."

The Company, by its execution of this Agreement, agrees that it will cause the certificates instruments, or book entry evidencing the Shares issued after the date hereof to be notated with the legend required by this Section 7.6(k), and it shall supply, free of charge, a copy of this Agreement to any holder of such Shares upon written request from such holder to the Company at its principal office. The parties to this Agreement do hereby agree that the failure to cause the certificates, instruments, or book entry evidencing the Shares to be notated with the legend required by this Section 7.6(k) herein and/or the failure of the Company to supply, free of charge, a copy of this Agreement as provided hereunder shall not affect the validity or enforcement of this Agreement.

(l) In the event of any issuance of Shares or the voting securities of the Company hereafter to any of the Common Holders (including, without limitation, in connection with any stock split, stock dividend, recapitalization, reorganization, or the like), such Shares shall become subject to this Agreement and shall be notated with the legend set forth in Section 7.6(k).

(m) The voting of Shares pursuant to this Agreement may be effected in person, by proxy, by written consent or in any other manner permitted by applicable law. For the avoidance of doubt, voting of the Shares pursuant to the Agreement need not make explicit reference to the terms of this Agreement.

(n) The Company will promptly pay or reimburse the directors for all reasonable out-of-pocket expenses incurred in connection with attending Board or committee meetings of the Company or in performing their duties as directors of the Company (including

expenses incurred in performing their duties as members of committees of the Board); provided, however, that, except as set forth above, the Company shall not compensate any non-employee director appointed by Takeda or its affiliates, other than in connection with performing work relating to the Company at the express request of the Company or the Board.

7.7 Protective Provisions. So long as a majority of the principal amount of the Notes originally issued pursuant to this Agreement remains outstanding, the Company shall not (by amendment, merger, consolidation or otherwise) without (in addition to any other vote required by law or the Certificate of Incorporation) first obtaining the written consent of the Requisite Noteholders:

(a) consummate a Corporate Transaction;

(b) amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws;

(c) authorize or issue any debt security (other than the Notes) in excess of $250,000 in the aggregate;

(d) redeem, purchase or otherwise acquire (or pay into or set aside for a sinking fund for such purpose) any share or shares of Preferred Stock or Common Stock; provided, however, that this restriction shall not apply to the repurchase of shares of Common Stock from employees, officers, directors, consultants or other persons performing services for the Company or any subsidiary pursuant to agreements under which the Company has the option to repurchase such shares upon the occurrence of certain events, such as the termination of employment or service, or pursuant to a right of first refusal;

(e) issue, create or authorize the creation of any security that is senior to the Notes or otherwise more favorable to the purchasers thereof than the terms of the Notes;

(f) change the authorized number of directors of the Company; and

(g) pay or declare any dividend on any shares of capital stock of the Company prior to the repayment or conversion of the Notes in accordance with the terms of this Agreement other than dividends payable on the Common Stock solely in the form of additional shares of Common Stock.

7.8 Directors' and Officers' Insurance. The Company has as of the date hereof or shall within thirty (30) days of the date hereof use its commercially reasonable efforts to obtain from financially sound and reputable insurers directors and officers liability insurance in an amount and on terms and conditions satisfactory to the Board, and will use its commercially reasonable efforts to cause such insurance policy to be maintained until such time as the Board determines that such insurance should be discontinued.

7.9 Observer Rights.

(a) Abingworth Observer Right. As long as Abingworth Bioventures 8 LP ("Abingworth") holds a Note (or securities issued upon the conversion thereof), the Company

shall invite a representative of Abingworth, who shall initially be Andrew Sinclair, to attend all meetings of its Board in a nonvoting observer capacity and, in this respect, shall give such representative copies of all notices, minutes, consents and other materials that it provides to its directors; provided, however, that such representative shall agree to hold in confidence and trust with respect to all information so provided; and, provided further, that the Company reserves the right to withhold any information and to exclude such representative from any meeting or portion thereof if access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel.

(b) RA Capital Observer Right. As long as RA Capital Healthcare Fund, L.P. ("RA Capital") holds a Note (or securities issued upon the conversion thereof), the Company shall invite a representative of RA Capital, who shall initially be Jake Simson, to attend all meetings of its Board in a nonvoting observer capacity and, in this respect, shall give such representative copies of all notices, minutes, consents and other materials that it provides to its directors; provided, however, that such representative shall agree to hold in confidence and trust with respect to all information so provided; and, provided further, that the Company reserves the right to withhold any information and to exclude such representative from any meeting or portion thereof if access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel.

(c) Termination of Observer Rights. The rights described in this Section 7.9 shall terminate and be of no further force or effect upon (i) such time as Abingworth or RA Capital, as applicable, no longer holds a Note (or securities issued upon the conversion thereof) (ii) the consummation of the Initial Public Offering, (iii) when the Company first becomes subject to the periodic reporting requirements of Sections 12(g) or 15(d) of the Exchange Act and (iv) upon the consummation of a Corporate Transaction, whichever event shall first occur. The confidentiality obligations referenced in this Section 7.9 will survive for a period of five (5) years following any such termination.

7.10 Confidentiality. Each Lender agrees, severally and not jointly, to use the same degree of care as such Lender uses to protect its own confidential information for any information obtained pursuant to this Agreement which the Company identifies in writing as being proprietary or confidential and such Lender acknowledges that it will not, unless otherwise required by law or the rules of any national securities exchange, association or marketplace, disclose such information without the prior written consent of the Company except such information that (a) was in the public domain prior to the time it was furnished to such Lender, (b) is or becomes (through no willful improper action or inaction by such Lender) generally available to the public, (c) was in its possession or known by such Lender without restriction prior to receipt from the Company, (d) was rightfully disclosed to such Lender by a third party without restriction or (e) was independently developed without any use of the Company's confidential information. Notwithstanding the foregoing, each Lender that is a limited partnership or limited liability company may disclose such proprietary or confidential information to any former partners or members who retained an economic interest in such Lender, current or prospective partner of the partnership or any subsequent partnership under common investment management, investment advisor, limited partner, general partner, member or management company of such Lender (or any employee or representative of any

of the foregoing) (each of the foregoing Persons, a "Permitted Disclosee") or legal counsel, accountants, consultant or representatives for such Lender. Furthermore, nothing contained herein shall prevent any Lender or any Permitted Disclosee from (i) entering into any business, entering into any agreement with a third party, or investing in or engaging in investment discussions with any other company (whether or not competitive with the Company), provided that such Lender or Permitted Disclosee does not, except as permitted in accordance with this Section 7.10, disclose or otherwise make use of any proprietary or confidential information of the Company in connection with such activities, or (ii) making any disclosures required by law, rule, regulation or court or other governmental order. The Company shall use the same degree of care as it uses to protect its own confidential information for any information obtained pursuant to this Agreement which any such Lender identifies in writing as being proprietary or confidential and the Company acknowledges that it will not, unless otherwise required by law or the rules of any national securities exchange, association or marketplace, disclose such information without the prior written consent of such Lender except such information that (a) was in the public domain prior to the time it was furnished to the Company, (b) is or becomes (through no willful improper action or inaction by the Company) generally available to the public, (c) was in its possession or known by the Company without restriction prior to receipt from such Lender, (d) was rightfully disclosed to the Company by a third party without restriction or (e) was independently developed without any use of such Lender confidential information. The confidentiality obligations set forth in this Section 7.10 will survive for a period of five (5) years following the termination of this Agreement.

8. Miscellaneous.

8.1 Successors and Assigns. Except as otherwise provided herein, the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assigns of the parties; provided, however, the Company may not assign its obligations under this Agreement without the written consent of the Requisite Noteholders. For the avoidance of doubt, a Lender that is a venture capital fund or private equity investor may assign or transfer its rights and obligations under this Agreement to its Affiliates. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

8.2 Governing Law. This Agreement and the Notes shall be governed by and construed under the laws of the State of Delaware as applied to agreements among Delaware residents, made and to be performed entirely within the State of Delaware, without regard to any choice of laws rules that may result in the application of the laws of any other jurisdiction.

8.3 Counterparts; Delivery. This Agreement may be executed by electronic signature and in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one (1) and the same instrument. Counterparts may be delivered via electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other

transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

8.4 Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

8.5 Notices. All notices and other communications given or made pursuant hereto shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed electronic mail or facsimile if sent during normal business hours of the recipient, if not so confirmed, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the respective parties at the following addresses (or at such other addresses as shall be specified by notice given in accordance with this Section 8.5):

If to the Company:

HilleVax, Inc.
601 Union Street, Suite 3200
Seattle, Washington 98101
Attention: Robert Hershberg

With a copy to (which alone shall not constitute sufficient notice):

Latham & Watkins LLP
12670 High Bluff Drive
San Diego, CA 92103
Attention: Cheston J. Larson
Email:
Facsimile No.:

If to Lenders:

At the respective addresses shown on the signature pages hereto.

With a copy to (which alone shall not constitute sufficient notice):

Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP
One Marina Park Drive, Suite 900
Boston, Massachusetts 02210
Attention: Timothy H. Ehrlich
Email:
Facsimile No.:

8.6 Finder's Fee. Each party represents that it neither is nor will be obligated for any finder's fee or commission in connection with this transaction. Each Lender, severally but not jointly, agrees to indemnify and to hold harmless the Company from any liability for any commission or compensation in the nature of a finder's fee (and the costs and expenses of defending against such liability or asserted liability) for which such Lender or any of its officers, partners, employees or representatives is responsible. The Company agrees to indemnify and hold harmless each Lender from any liability for any commission or compensation in the nature of a finder's fee (and the costs and expenses of defending against such liability or asserted liability) for which the Company or any of its officers, employees or representatives is responsible.

8.7 Expenses. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, costs and necessary disbursements in addition to any other relief to which such party may be entitled. Each party hereto shall pay all costs and expenses that it incurs with respect to the negotiation, execution, delivery and performance of this Agreement. At the Closing, the Company shall reimburse the reasonable fees and expenses of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, counsel for the Lenders, not to exceed $70,000.

8.8 Entire Agreement; Amendments and Waivers. This Agreement, the Notes and the other documents expressly delivered pursuant hereto or in connection with the Closing hereunder constitute the full and entire understanding and agreement between the parties with regard to the subjects hereof and thereof. The Company's agreements with each of the Lenders are separate agreements, and the sales of the Notes to each of the Lenders are separate sales. Nonetheless, any term of this Agreement or the Notes may be amended and the observance of any term of this Agreement or the Notes may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the Requisite Noteholders; provided that, following the conversion of the Notes into Equity Securities, any provision of Section 7.5 may be amended or waived with the written consent of the Company and the holders of a majority of the Registrable Securities then outstanding; provided, in the event any Lender consents to the waiver of the provisions of Section 7.2 with respect to any offering of Shares by the Company and actually purchases any such Shares in such offering, then each other Lender who did not consent to such waiver shall be permitted to participate in such offering (which may, at the Company's option, be in a subsequent closing of such offering on substantially the same terms and conditions) on a pro rata basis (based on the level of participation of the Lender purchasing the largest portion of such Lender's pro rata share); provided, further that clause (ii) of Section 7.6(b) and this proviso shall not be amended, waived, modified or terminated without the prior written consent of LSVP; provided, further that clause (iii) of Section 7.6(b) and this proviso shall not be amended, waived, modified or terminated without the prior written consent of Deerfield; and provided, further that Section 8.11 shall not be amended, waived, modified or terminated in a manner adverse to any individual Lender without the prior written consent of such Lender. In addition, notwithstanding anything contained herein to the contrary, (i) no term of this Agreement or the Notes may be amended or waived without the written consent of each Lender if such amendment or waiver materially, adversely and disproportionately affects such Lender

in a manner different than all other Lenders, (ii) Section 1 of the Note held by each Lender shall not be amended or waived with respect to such Lender without the written consent of such Lender, (iii) the outstanding principal and interest amount of the Note held by each Lender shall not be amended or waived with respect to such Lender without the written consent of such Lender, and (iv) Section 1(ff), Section 7.2, Section 7.4 and Section 7.6(b)(iv) of this Agreement shall not be amended or waived with respect to Takeda without the written consent of Takeda. Any waiver or amendment effected in accordance with this Section 8.8 shall be binding upon each party to this Agreement and any holder of any Note purchased under this Agreement at the time outstanding and each future holder of all such Notes.

8.9 Effect of Amendment or Waiver. Each Lender acknowledges that by the operation of Section 8.8 hereof, and subject to the limitations set forth therein, the Requisite Noteholders will have the right and power to diminish or eliminate all rights of such Lender under this Agreement and each Note issued to such Lender.

8.10 Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision shall be excluded from this Agreement and the balance of the Agreement shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

8.11 "Market Stand-Off" Agreement. Each Lender hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the Initial Public Offering and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days) (a) lend, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock held immediately prior to the effectiveness of the registration statement for such offering, or (b) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock held immediately prior to the effectiveness of the registration statement for such offering, whether any such transaction described in clause (a) or (b) above is to be settled by delivery of Common Stock or other securities, in cash or otherwise. The foregoing provisions of this Section 8.11 shall apply only to the Company's Initial Public Offering, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, and shall only be applicable to the Lenders if all officers, directors and greater than one percent (1%) stockholders of the Company enter into similar agreements. The underwriters in connection with the Company's Initial Public Offering are intended third-party beneficiaries of this Section 8.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Lender further agrees to execute such agreements as may be reasonably requested by the underwriters in the Company's Initial Public Offering that are consistent with this Section 8.11 or that are necessary to give further effect thereto. Any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply

to all Lenders subject to such agreements pro rata based on the number of shares subject to such agreements.

In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to the capital stock of the Company of each Lender (and the shares or securities of every other person subject to the foregoing restriction) until the end of such period.

Each Lender agrees that a legend reading substantially as follows shall be placed on all certificates representing all capital stock of the Company of each Lender (and the shares or securities of every other person subject to the restriction contained in this Section 8.11):

> THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A LOCK-UP PERIOD AFTER THE EFFECTIVE DATE OF THE ISSUER'S REGISTRATION STATEMENT FILED UNDER THE SECURITIES ACT, AS AMENDED, AS SET FORTH IN AN AGREEMENT BETWEEN THE COMPANY AND THE ORIGINAL HOLDER OF THESE SECURITIES, A COPY OF WHICH MAY BE OBTAINED AT THE ISSUER'S PRINCIPAL OFFICE. SUCH LOCK-UP PERIOD IS BINDING ON TRANSFEREES OF THESE SHARES.

8.12 Financing Documents. Each Lender understands and agrees that the conversion of the Notes into Conversion Shares may require such Lender's execution of certain agreements in the form agreed to by investors in the Next Equity Financing or Non-Qualified Next Equity Financing relating to the purchase and sale of such securities as well as registration, co-sale, rights of first refusal, rights of first offer and voting rights, if any, relating to such securities; provided, however, that in no event shall conversion be conditioned upon any Lender be required to agree to undertake liability under any compelled voting (i.e., drag along provisions) for any third party (other than the Company) or that exceeds the consideration received or to be received by such party or to grant any proxy with respect to voting of shares.

8.13 MFN Right. In the event that the Company issues convertible notes (or similar convertible instruments) at any time after the date hereof which have terms that are more favorable to the Lenders than the terms of the Notes, such as, but not limited to, a higher interest rate, lower capped valuation or larger discount to the applicable conversion price, but which shall not include any Board representation or observer rights afforded to a specific Lender by reason of the magnitude of their investment (the "MFN Notes"), the Company shall promptly amend the terms of the Notes to provide substantially equivalent terms to the Lender as the MFN Notes without further consideration.

8.14 Exculpation Among Lenders. Each Lender acknowledges that it is not relying upon any person, firm, corporation or stockholder, other than the Company and its officers and directors in their capacities as such, in making its investment or decision to invest in the Company. Each Lender agrees that no other Lender nor the respective controlling persons, officers, directors, partners, agents, stockholders or employees of any other Lender shall be liable for any action heretofore or hereafter taken or omitted to be taken by any of them in connection with the purchase and sale of the Securities.

8.15 Acknowledgement. In order to avoid doubt, it is acknowledged that each Lender shall be entitled to the benefit of all adjustments in the number of shares of Common Stock of the Company directly or indirectly issuable upon conversion of the Notes or as a result of any splits, recapitalizations, combinations or other similar transaction affecting the Common Stock or the Conversion Shares.

8.16 Indemnity; Costs, Expenses and Attorneys' Fees. The Company shall indemnify and hold each Lender harmless from any loss, cost, liability and legal or other expense, including attorneys' fees of such Lender's counsel, which a Lender may directly or indirectly suffer or incur by reason of the failure of the Company to perform any of its obligations under this Agreement, any Note, any agreement executed in connection herewith or therewith, any grant of or exercise of remedies with respect to any collateral at any time securing any obligations evidenced by this Agreement or the Notes, or any Lender's execution or performance of this Agreement or any agreement executed in connection herewith; provided, however, the indemnity agreement contained in this section shall not apply to liabilities which a Lender may directly or indirectly suffer or incur by reason of Lender's own gross negligence or willful misconduct.

8.17 Further Assurance. From time to time, the Company shall use its commercially reasonable efforts to execute and deliver to the Lenders such additional documents to the Lenders as the Requisite Noteholders may reasonably require to carry out the terms of this Agreement and the Notes and any agreements executed in connection herewith or therewith.

8.18 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of State of Delaware and to the jurisdiction of the United States District Court for the District of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of or the United States District Court for the District of Delaware, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the foregoing courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

8.19 Waiver of Jury Trial. TO THE EXTENT EACH MAY LEGALLY DO SO, EACH PARTY HERETO HEREBY EXPRESSLY WAIVES ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION, CAUSE OF ACTION, OR PROCEEDING ARISING UNDER OR WITH RESPECT TO THIS AGREEMENT, OR IN ANY WAY CONNECTED WITH, OR RELATED TO, OR INCIDENTAL TO, THE DEALING OF THE PARTIES HERETO WITH RESPECT TO THIS AGREEMENT, OR THE TRANSACTIONS RELATED THERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND IRRESPECTIVE OF WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE. TO THE EXTENT EACH MAY LEGALLY DO SO, EACH PARTY HERETO HEREBY AGREES THAT ANY SUCH

CLAIM, DEMAND, ACTION, OR PROCEEDING SHALL BE DECIDED BY A COURT TRIAL WITHOUT A JURY AND THAT EITHER PARTY HERETO MAY FILE AN ORIGINAL COUNTERPART OR A COPY OF THIS AGREEMENT WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF ANY OTHER PARTY HERETO TO THE WAIVER OF ITS RIGHT TO TRIAL BY JURY.

8.20 Survival. The representations, warranties, covenants and agreements made herein shall survive the closing of the transactions contemplated hereby.

8.21 Spousal Consent. If any individual Common Holder is married on the date of this Agreement, such Common Holder's spouse shall execute and deliver to the Company a consent of spouse in the form of Exhibit H hereto ("Consent of Spouse"), effective on the date hereof. Notwithstanding the execution and delivery thereof, such consent shall not be deemed to confer or convey to the spouse any rights in such Common Holder's Shares that do not otherwise exist by operation of law or the agreement of the parties. If any individual Common Holder should marry or remarry subsequent to the date of this Agreement, such Common Holder shall within thirty (30) days thereafter obtain his/her new spouse's acknowledgement of and consent to the existence and binding effect of all restrictions contained in this Agreement by causing such spouse to execute and deliver a Consent of Spouse acknowledging the restrictions and obligations contained in this Agreement and agreeing and consenting to the same.

8.22 Limitation of Liability; Freedom to Operate Affiliates.

(a) Other than as set forth below Section 8.22(b), the total liability, in the aggregate, of each Lender, and their respective Affiliates and their respective officers, directors, employees, consultants and agents, for any and all monetary claims, losses, costs or damages, including attorneys' and accountants' fees and expenses and costs of any nature whatsoever or claims or expenses resulting from or in any way related to this Agreement or the Notes from any cause or causes shall be several and not joint with the other Lenders (and no Lender shall have any liability for the actions of any other Lender) and shall not exceed the total Consideration paid to the Company by such Lender for the Notes under this Agreement; provided, however, that this Section 8.22 shall (i) in no way limit the Company's right to equitable relief, including injunctive relief and specific performance from a Lender, (ii) apply to breaches of a Lender's confidentiality obligation, or (iii) limit liability for a Lender's conduct that is judicially determined to be bad faith, fraud or willful misconduct. Nothing in this Agreement or the Notes shall restrict a Lender's freedom to operate any of its Affiliates or to engage in any business (including ones in competition with the Company).

(b) Nothing in Section 8.22(a) shall modify any Lender's confidentiality obligations or the fiduciary duties of any director designated by Lender or the contractual restrictions on any Lender-designated Board observer.

[Signature pages follow.]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

HILLEVAX, INC.

By: /s/ Robert Hershberg
Name: Robert Hershberg
Title: President and Chief Executive Officer

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

FRAZIER LIFE SCIENCES X, L.P.

By: FHMLS X, L.P.
Its general partner

By: FHMLS X, L.L.C.
Its general partner

By: /s/ Patrick Heron
Name: Patrick Heron
Title: Managing Director

Address:

With a copy to:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

LIGHTSPEED VENTURE PARTNERS SELECT IV, L.P.

By: Lightspeed General Partner Select IV, L.P.,
its general partner

By: Lightspeed Ultimate General Partner Select IV,
L.L.C., its general partner

By: /s/ Ravi Mhatre
Duly authorized signatory

Address: 2200 Sand Hill Road
Menlo Park, CA 94025
Email: finance@lsvp.com

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

LIGHTSPEED FRONTIER I-M L.P.

By: Lightspeed Frontier I-M GP LLC,
its general partner

By: /s/ Ravi Mhatre
Name: Ravi Mhatre
Title: Manager

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

LIGHTSPEED FRONTIER I-E L.P.

By: Lightspeed Frontier I-E GP LLC,
its general partner

By: /s/ Barry Eggers
Name: Barry Eggers
Title: Manager

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

LIGHTSPEED FRONTIER I-N L.P.

By: Lightspeed Frontier I-N GP LLC,
its general partner

By: /s/ Peter Nieh
Name: Peter Nieh
Title: Manager

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Healthcare Fund GP, LLC
Its general partner

By: /s/ Peter Kolchinsky
Name: Peter Kolchinsky
Title: Manager

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

RA CAPITAL NEXUS FUND II, L.P.

By: RA Capital Nexus Fund II GP, LLC
Its general partner

By: /s/ Peter Kolchinsky
Name: Peter Kolchinsky
Title: Manager

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

CATALYS PACIFIC FUND, LP

By its general partner: Catalys Pacific Fund GP, L.P.

By its general partner: Catalys Pacific LLC

By: /s/ Brian Taylor Slingsby
Name: Brian Taylor Slingsby, MD, PHD, MPH
Title: Managing Director

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

SAMSARA BIOCAPITAL, L.P.

By: Samsara BioCapital GP, LLC,
General Partner

By: /s/ Srinivas Akkaraju
Name: Srinivas Akkaraju, M.D., Ph.D.
Title: Managing Member

Address:

Email:

436, L.P.

By: 436 GP, LLC,
General Partner

By: /s/ Srinivas Akkaraju
Name: Srinivas Akkaraju, M.D., Ph.D.
Title: Managing Member

Address:

Email:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

DEERFIELD PRIVATE DESIGN FUND V, L.P.

By: Deerfield Mgmt V, L.P.
General Partner

By: J.E. Flynn Capital V, LLC
General Partner

By: /s/ David J. Clark
Name: David J. Clark
Title: Authorized Signatory

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

ABINGWORTH BIOVENTURES 8 LP

Acting by its Manager Abingworth LLP

By: /s/ John Heard
Name: John Heard
Title: Partner, General Counsel

Address:

Attn:
Email:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

PERCEPTIVE LIFE SCIENCES MASTER FUND, LTD.

By: Perceptive Advisors, LLC

By: /s/ James Mannix
Name: James H. Mannix
Title: COO

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

FRANKLIN STRATEGIC SERIES – FRANKLIN BIOTECHNOLOGY DISCOVERY FUND

By: Franklin Advisers, Inc., as Investment Manager

By: /s/ Evan McCulloch
Name: Evan McCulloch
Title: Vice President

Address:

With a copy to:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

FRANKLIN TEMPLETON INVESTMENT FUNDS –
FRANKLIN BIOTECHNOLOGY DISCOVERY FUND

By: Franklin Advisers, Inc., as Investment Manager

By: /s/ Evan McCulloch
Name: Evan McCulloch
Title: Vice President

Address:

With a copy to:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

BIOTECHNOLOGY VALUE FUND, L.P.

By: /s/ Mark Lampert
Name: Mark Lampert
Title: Chief Executive Officer BVF I GP LLC, itself General Partner of Biotechnology Value Fund, L.P.

Address:

BIOTECHNOLOGY VALUE FUND II, L.P.

By: /s/ Mark Lampert
Name: Mark Lampert
Title: Chief Executive Officer BVF II GP LLC, itself General Partner of Biotechnology Value Fund II, L.P.

Address:

BIOTECHNOLOGY VALUE TRADING FUND OS, L.P.

By: /s/ Mark Lampert
Name: Mark Lampert
Title: President BVF Inc., General Partner of BVF Partners L.P., itself sole member of BVF Partners OS Ltd., itself General Partner of Biotechnology Value Trading Fund OS, L.P.

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

GREENSPRING EARLY STAGE II, L.P.

By: Greenspring Early Stage General Partner II, L.P.
its general partner

By: Greenspring Early Stage GP II, LLC
its general partner

By: Greenspring Associates, LLC
its sole member

By: /s/ Eric Thompson
Name: Eric Thompson
Title: Chief Operating Officer

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

GREENSPRING EARLY STAGE II-G, L.P.

By: Greenspring Early Stage General Partner II, L.P.
its general partner

By: Greenspring Early Stage GP II, LLC
its general partner

By: Greenspring Associates, LLC
its sole member

By: /s/ Eric Thompson
Name: Eric Thompson
Title: Chief Operating Officer

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

GREENSPRING EARLY STAGE II-K, L.P.

By: Greenspring Early Stage General Partner II, L.P.
its general partner

By: Greenspring Early Stage GP II, LLC
its general partner

By: Greenspring Associates, LLC
its sole member

By: /s/ Eric Thompson
Name: Eric Thompson
Title: Chief Operating Officer

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

QIMING U.S. HEALTHCARE FUND II, L.P.

By: Qiming U.S. Healthcare GP II, LLC,
its General Partner

By: /s/ Colin Walsh
Name: Colin Walsh
Title: Partner

Address:

with a copy, which shall not constitute notice, to:

DLA Piper LLP (US)

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

RICHARD KING MELLON FOUNDATION

By: /s/ Douglas L. Sisson
Name: Douglas L. Sisson
Title: Treasurer and Vice President

Address:

MELLON FAMILY INVESTMENT COMPANY V

By its General Partner, MFIC V, LLC

By: /s/ Douglas L. Sisson
Name: Douglas L. Sisson
Title: Member

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LENDERS:

SAHSEN VENTURES, LLC

By: /s/ Bryan White
Name: Bryan White
Title: Managing Member

Address:

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

COMMON HOLDERS:

David A. Socks 2013 Revocable Trust

By: /s/ David Socks
Name: David Socks
Title: Trustee

/s/ Robert Hershberg
Robert Hershberg

/s/ Aditya Kohli
Aditya Kohli

Executed as of the date first above written, solely with respect to Section 1(hh), Section 7.2, Section 7.4, Section 7.6 and Section 8.8 of this Agreement and not as a "Party" to this Agreement for any other reason:

TAKEDA:

Takeda Vaccines, Inc.

By: /s/ Rajeev Venkayya
Name: Rajeev Venkayya, MD
Title: President, Global Vaccine Business Unit

SCHEDULE OF LENDERS

CLOSING

Lender	Total Consideration (Principal Balance of Promissory Note)
Frazier Life Sciences X, L.P.	$ 4,520,958.48[1]
Frazier Life Sciences X, L.P.	$ 6,251,152.33[2]
Frazier Life Sciences X, L.P.	$ 25,000,000.00
Lightspeed Venture Partners Select IV, L.P.	$ 9,625,000.00
Lightspeed Frontier I-M L.P.	$ 125,000.00
Lightspeed Frontier I-E L.P.	$ 125,000.00
Lightspeed Frontier I-N L.P.	$ 125,000.00
RA Capital Healthcare Fund, L.P.	$ 12,250,000.00
RA Capital Nexus Fund II, L.P.	$ 5,250,000.00
Deerfield Private Design Fund V, L.P.	$ 15,000,000.00
Abingworth Bioventures 8 LP	$ 12,500,000.00
Perceptive Life Sciences Master Fund, Ltd.	$ 10,000,000.00
Franklin Templeton Investment Funds – Franklin Biotechnology Discovery Fund	$ 4,847,100.00
Franklin Strategic Series – Franklin Biotechnology Discovery Fund	$ 2,652,900.00
Catalys Pacific Fund, LP	$ 7,500,000.00
Samsara BioCapital, L.P.	$ 6,062,500.00
436, L.P.	$ 187,500.00
Biotechnology Value Fund, L.P.	$ 2,681,274.00
Biotechnology Value Fund II, L.P.	$ 2,010,521.00
Biotechnology Value Trading Fund OS, L.P.	$ 308,205.00
Greenspring Early Stage II, L.P.	$ 3,945,414.00

Greenspring Early Stage II-G, L.P.	$ 735,486.00
Greenspring Early Stage II-K, L.P.	$ 319,100.00
Qiming U.S. Healthcare Fund II, L.P.	$ 5,000,000.00
Richard King Mellon Foundation	$ 750,000.00
Mellon Family Investment Company V	$ 750,000.00
Sahsen Ventures, LLC	$ 1,000,000.00
TOTAL	**$139,522,110.81**

(1) The Consideration for this Note is an exchange for the existing convertible notes originally issued by each of MokshaCo, Inc. ($500,000 principal amount), North Bridge V, Inc. (later renamed HilleVax, Inc.)($428,005.51 principal amount) and YamadaCo III, Inc. ($1,286,173.93 principal amount) to Frazier as of the Closing, which convertible notes were assumed by the Company in connection with the merger of MokshaCo, Inc. and YamadaCo III, Inc. with and into the Company in February 2021. Such convertible notes shall be null and void upon the issuance of the Note in the amount of $4,520,958.48, representing the as converted principal and accrued interest on such convertible notes as of the Closing.

(2) The Consideration for this Note is an exchange for the additional convertible notes issued by the Company ($6,250,000 principal amount) to Frazier from April 22, 2021 through July 27, 2021, which shall be null and void upon the issuance of the Note in the amount of $6,251,152.33, representing the principal and accrued interest on such convertible notes as of the Closing.

HILLEVAX, INC.

2021 EQUITY INCENTIVE PLAN

1. ***Purpose***.

The purpose of the Plan is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who make (or are expected to make) important contributions to the Company by providing such persons with equity ownership opportunities and thereby better aligning the interests of such persons with those of the Company's stockholders. Capitalized terms used in the Plan are defined in Section 11 below.

2. ***Eligibility***.

Service Providers are eligible to be granted Awards under the Plan, subject to the limitations described herein.

3. ***Administration and Delegation***.

(a) *Administration.* The Plan will be administered by the Administrator. The Administrator shall have authority to determine which Service Providers will receive Awards, to grant Awards and to set all terms and conditions of Awards (including, but not limited to, vesting, exercise and forfeiture provisions). In addition, the Administrator shall have the authority to take all actions and make all determinations contemplated by the Plan and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Administrator may correct any defect or ambiguity, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem necessary or appropriate to carry the Plan and any Awards into effect, as determined by the Administrator. The Administrator shall make all determinations under the Plan in the Administrator's sole discretion and all such determinations shall be final and binding on all persons having or claiming any interest in the Plan or in any Award.

(b) *Appointment of Committees.* To the extent permitted by Applicable Laws, the Board may delegate any or all of its powers under the Plan to one or more Committees. The Board may abolish any Committee at any time and re-vest in itself any previously delegated authority.

4. ***Stock Available for Awards***.

(a) *Number of Shares.* Subject to adjustment under Section 8 hereof, Awards may be made under the Plan covering up to 2,212,500 shares of Common Stock. If any Award expires or lapses or is terminated, surrendered or canceled without having been fully exercised or is forfeited in whole or in part (including as the result of shares of Common Stock subject to such Award being repurchased by the Company at or below the original issuance price), in any case in a manner that results in any shares of Common Stock covered by such Award not being issued or being so reacquired by the Company, the unused Common Stock covered by such Award shall again be available for the grant of Awards under the Plan. Further, shares of Common Stock delivered (either by actual delivery or attestation) to the Company by a Participant to satisfy the applicable exercise or purchase price of an Award and/or to satisfy any applicable tax withholding obligation (including shares retained by the Company from the Award being exercised or purchased and/or creating the tax obligation) shall be added to the number of shares of Common Stock available for the grant of Awards under the Plan. However, in the case of Incentive Stock Options (as hereinafter defined), the foregoing provisions shall be subject to any

limitations under the Code. Shares of Common Stock issued under the Plan may consist in whole or in part of authorized but unissued shares, shares purchased on the open market or treasury shares.

(b) *Substitute Awards*. In connection with a merger or consolidation of an entity with the Company or the acquisition by the Company of property or stock of an entity, the Administrator may grant Awards in substitution for any options or other stock or stock-based awards granted prior to such merger or consolidation by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Administrator deems appropriate in the circumstances, notwithstanding any limitations on Awards contained in the Plan. Substitute Awards shall not count against the overall share limit set forth in Section 4(a) hereof, except as may be required by reason of Section 422 of the Code.

5. ***Stock Options***.

(a) *General.* The Administrator may grant Options to any Service Provider, subject to the limitations on Incentive Stock Options described below. The Administrator shall determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including conditions relating to Applicable Laws, as it considers necessary or advisable.

(b) *Incentive Stock Options.* The Administrator may grant Options intended to qualify as Incentive Stock Options only to employees of the Company, any of the Company's present or future "parent corporations" or "subsidiary corporations" as defined in Sections 424(e) or (f) of the Code, respectively, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code. All Options intended to qualify as Incentive Stock Options shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. Neither the Company nor the Administrator shall have any liability to a Participant, or any other party, (i) if an Option (or any part thereof) which is intended to qualify as an Incentive Stock Option fails to qualify as an Incentive Stock Option or (ii) for any action or omission by the Administrator that causes an Option not to qualify as an Incentive Stock Option, including without limitation, the conversion of an Incentive Stock Option to a Non-Qualified Stock Option or the grant of an Option intended as an Incentive Stock Option that fails to satisfy the requirements under the Code applicable to an Incentive Stock Option. Any Option that is intended to qualify as an Incentive Stock Option, but fails to so qualify for any reason, including without limitation, the portion of any Option becoming exercisable in excess of the $100,000 limitation described in Treasury Regulation Section 1.422-4, shall be treated as a Non-Qualified Stock Option for all purposes.

(c) *Exercise Price.* The Administrator shall establish the exercise price of each Option and specify the exercise price in the applicable Award Agreement. The exercise price shall be not less than 100% of the Fair Market Value on the date the Option is granted. In the case of an Incentive Stock Option granted to an employee who, at the time of grant of the Option, owns (or is treated as owning under Section 424 of the Code) stock representing more than 10% of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Sections 424(e) or 424(f) of the Code, respectively), the per share exercise price shall be no less than 110% of the Fair Market Value on the date the Option is granted.

(d) *Duration of Options.* Each Option shall be exercisable at such times and subject to such terms and conditions as the Administrator may specify in the applicable Award Agreement, provided that the term of any Option shall not exceed ten years. In the case of an Incentive Stock Option granted to an employee who, at the time of grant of the Option, owns (or is treated as owning under Section 424 of the Code) stock representing more than 10% of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Sections 424(e) or 424(f) of the Code, respectively), the term of the Option shall not exceed five years.

(e) *Exercise of Option; Notification of Disposition.* Options may be exercised by delivery to the Company of a written notice of exercise, in a form approved by the Administrator (which may be an electronic form), signed by the person authorized to exercise the Option, together with payment in full (i) as specified in Section 5(f) hereof for the number of shares for which the Option is exercised and (ii) as specified in Section 9(e) hereof for any applicable withholding taxes. Unless otherwise determined by the Administrator, an Option may not be exercised for a fraction of a share of Common Stock. If an Option is designated as an Incentive Stock Option, the Participant shall give prompt notice to the Company of any disposition or other transfer of any shares of Common Stock acquired from the Option if such disposition or transfer is made (i) within two years from the grant date with respect to such Option or (ii) within one year after the transfer of such shares to the Participant (other than any such disposition made in connection with a Change in Control). Such notice shall specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by the Participant in such disposition or other transfer.

(f) *Payment Upon Exercise.* Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for in cash, by wire transfer of immediately available funds or by check, payable to the order of the Company, or, subject to Section 10(h), any Company insider trading policy (including, without limitation, any blackout periods) and Applicable Laws, by:

(i) if the Company is a Publicly Listed Company, unless the Administrator otherwise determines, (A) delivery of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to pay the exercise price, or (B) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to pay the exercise price, provided in either case, that such amount is paid to the Company at such time as may be required by the Administrator;

(ii) to the extent permitted by the Administrator, delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their Fair Market Value, provided (A) such method of payment is then permitted under Applicable Laws, (B) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Company at any time, and (C) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;

(iii) to the extent permitted by the Administrator, surrendering shares of Common Stock then issuable upon exercise of the Option valued at their Fair Market Value on the date of exercise;

(iv) to the extent permitted by the Administrator, delivery of a promissory note of the Participant to the Company on terms determined by the Administrator;

(v) to the extent permitted by the Administrator, delivery of property of any other kind which constitutes good and valuable consideration as determined by the Administrator; or

(vi) to the extent permitted by the Administrator, any combination of the above permitted forms of payment (including cash or check).

(g) *Early Exercise of Options*. The Administrator may provide in the terms of an Award Agreement that the Service Provider may exercise an Option in whole or in part prior to the full vesting of the Option in exchange for unvested shares of Restricted Stock with respect to any unvested

portion of the Option so exercised. Shares of Restricted Stock acquired upon the exercise of any unvested portion of an Option shall be subject to such terms and conditions as the Administrator shall determine.

6. ***Restricted Stock; Restricted Stock Units***.

(a) *General*. The Administrator may grant Restricted Stock, or the right to purchase Restricted Stock, to any Service Provider, subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price from the Participant (or to require forfeiture of such shares if issued at no cost) in the event that conditions specified by the Administrator in the applicable Award Agreement are not satisfied prior to the end of the applicable restriction period or periods established by the Administrator for such Award. In addition, the Administrator may grant to Service Providers Restricted Stock Units, which may be subject to vesting and forfeiture conditions during applicable restriction period or periods, as set forth in an applicable Award Agreement.

(b) *Terms and Conditions for All Restricted Stock and Restricted Stock Unit Awards*. The Administrator shall determine and set forth in the applicable Award Agreement the terms and conditions applicable to each Restricted Stock and Restricted Stock Unit Award, including the conditions for vesting and repurchase (or forfeiture) and the issue price, in each case, if any.

(c) *Additional Provisions Relating to Restricted Stock*.

(i) *Dividends*. Participants holding shares of Restricted Stock will be entitled to all ordinary cash dividends paid with respect to such shares to the extent such dividends have a record date that is on or after the date on which the Participant to whom such Restricted Shares are granted becomes the record holder of such Restricted Shares, unless otherwise provided by the Administrator in the applicable Award Agreement. In addition, unless otherwise provided by the Administrator, if any dividends or distributions are paid in shares, or consist of a dividend or distribution to holders of Common Stock of property other than an ordinary cash dividend, the shares or other property will be subject to the same restrictions on transferability and forfeitability as the shares of Restricted Stock with respect to which they were paid. Each dividend payment will be made as provided in the applicable Award Agreement, but in no event later than the end of the calendar year in which the dividends are paid to stockholders of that class of stock or, if later, the 15th day of the third month following the later of (A) the date the dividends are paid to stockholders of that class of stock, and (B) the date the dividends are no longer subject to forfeiture.

(ii) *Stock Certificates*. The Company may require that any stock certificates issued in respect of shares of Restricted Stock be deposited in escrow by the Participant, together with a stock power endorsed in blank, with the Company (or its designee).

(d) *Additional Provisions Relating to Restricted Stock Units*.

(i) *Settlement*. Upon the vesting of a Restricted Stock Unit, the Participant shall be entitled to receive from the Company one share of Common Stock or an amount of cash or other property equal to the Fair Market Value of one share of Common Stock on the settlement date, as the Administrator shall determine and as provided in the applicable Award Agreement. The Administrator may provide that settlement of Restricted Stock Units shall occur upon or as soon as reasonably practicable after the vesting of the Restricted Stock Units or shall instead be deferred, on a mandatory basis or at the election of the Participant, in a manner that complies with Section 409A.

(ii) *Voting Rights*. A Participant shall have no voting rights with respect to any Restricted Stock Units unless and until shares are delivered in settlement thereof.

(iii) *Dividend Equivalents*. To the extent provided by the Administrator, a grant of Restricted Stock Units may provide a Participant with the right to receive Dividend Equivalents. Dividend Equivalents may be paid currently or credited to an account for the Participant, may be settled in cash and/or shares of Common Stock and may be subject to the same restrictions on transfer and forfeitability as the Restricted Stock Units with respect to which the Dividend Equivalents are paid, as determined by the Administrator, subject, in each case, to such terms and conditions as the Administrator shall establish and set forth in the applicable Award Agreement.

7. ***Other Stock-Based Awards***.

Other Stock-Based Awards may be granted hereunder to Participants, including, without limitation, Awards entitling Participants to receive shares of Common Stock to be delivered in the future. Such Other Stock-Based Awards shall also be available as a form of payment in the settlement of other Awards granted under the Plan, as stand-alone payments and/or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of Common Stock, cash or other property, as the Administrator shall determine. Subject to the provisions of the Plan, the Administrator shall determine the terms and conditions of each Other Stock-Based Award, including any purchase price, transfer restrictions, vesting conditions and other terms and conditions applicable thereto, which shall be set forth in the applicable Award Agreement.

8. ***Adjustments for Changes in Common Stock and Certain Other Events***.

(a) In the event that the Administrator determines that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), reorganization, merger, consolidation, combination, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange or other disposition of assets of the Company, or exchange of Common Stock or other securities of the Company, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, or other similar corporate transaction or event, as determined by the Administrator, affects the Common Stock such that an adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award, then the Administrator may, in such manner as it may deem equitable, adjust any or all of:

(i) the number and kind of shares of Common Stock (or other securities or property) with respect to which Awards may be granted or awarded (including, but not limited to, adjustments of the limitations in Section 4 hereof on the maximum number and kind of shares which may be issued);

(ii) the number and kind of shares of Common Stock (or other securities or property) subject to outstanding Awards;

(iii) the grant or exercise price with respect to any Award; and

(iv) the terms and conditions of any Awards (including, without limitation, any applicable financial or other performance "targets" specified in an Award Agreement).

(b) In the event of any transaction or event described in Section 8(a) hereof (including without limitation any Change in Control) or any unusual or nonrecurring transaction or event

affecting the Company or the financial statements or financial condition of the Company, or any change in any Applicable Laws or accounting principles, the Administrator, on such terms and conditions as it deems appropriate, either by the terms of the Award or by action taken prior to or after the occurrence of such transaction or event and either automatically or upon the Participant's request, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to (i) prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award granted or issued under the Plan, (ii) to facilitate such transaction or event or (iii) give effect to such changes in Applicable Laws or accounting principles**:**

(i) To provide for the cancellation of any such Award in exchange for either an amount of cash or other property with a value equal to the amount that could have been obtained upon the exercise or settlement of such Award or realization of the Participant's rights had such Award been currently exercisable, payable and fully vested, as applicable; provided that, if the amount that could have been obtained upon the exercise or settlement of such Award or realization of the Participant's rights, in any case, is equal to or less than zero, then such Award may be terminated without payment;

(ii) To provide that such Award shall vest and, to the extent applicable, be exercisable as to all shares covered thereby, notwithstanding anything to the contrary in the Plan or the provisions of such Award;

(iii) To provide that such Award be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by awards covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and applicable exercise or purchase price, in all cases, as determined by the Administrator;

(iv) To make adjustments in the number and type of shares of Common Stock (or other securities or property) subject to outstanding Awards, and/or in the terms and conditions of (including the grant or exercise price), and the criteria included in, outstanding Awards which may be granted in the future;

(v) To replace such Award with other rights or property selected by the Administrator; and/or

(vi) To provide that the Award will terminate and cannot vest, be exercised or become payable after the applicable event.

(c) Notwithstanding the provisions of Section 8(b) above, if a Change in Control occurs and a Participant's Awards are not continued, converted, assumed, or replaced with a substantially similar award by (i) the Company, or (ii) a successor entity or its parent or subsidiary (an "***Assumption***"), and provided that the Participant has not had a Termination of Service, then, immediately prior to the Change in Control, such Awards shall become fully vested, exercisable and/or payable, as applicable, and all forfeiture, repurchase and other restrictions on such Awards shall lapse, in which case, such Awards shall be canceled upon the consummation of the Change in Control in exchange for the right to receive the Change in Control consideration payable to other holders of Common Stock (A) which may be on such terms and conditions as apply generally to holders of Common Stock under the Change in Control documents (including, without limitation, any escrow, earn-out or other deferred consideration provisions) or such other terms and conditions as the Administrator may provide, and (B) determined by reference to the number of shares subject to such Awards and net of any applicable exercise price; provided that to the extent that any Awards constitute "nonqualified deferred compensation" that may not

be paid upon the Change in Control under Section 409A without the imposition of taxes thereon under Section 409A, the timing of such payments shall be governed by the applicable Award Agreement (subject to any deferred consideration provisions applicable under the Change in Control documents); and provided, further, that if the amount to which a Participant would be entitled upon the settlement or exercise of such Award at the time of the Change in Control is equal to or less than zero, then such Award may be terminated without payment. The Administrator shall determine whether an Assumption of an Award has occurred in connection with a Change in Control.

(d) In connection with the occurrence of any Equity Restructuring, and notwithstanding anything to the contrary in this Section 8, the Administrator will equitably adjust each outstanding Award, which adjustments may include adjustments to the number and type of securities subject to each outstanding Award and/or the exercise price or grant price thereof, if applicable, the grant of new Awards to Participants, and/or the making of a cash payment to Participants, as the Administrator deems appropriate to reflect such Equity Restructuring. The adjustments provided under this Section 8(d) shall be nondiscretionary and shall be final and binding on the affected Participant and the Company; provided that whether an adjustment is equitable shall be determined by the Administrator.

(e) In the event of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of Common Stock or the share price of the Common Stock, including any Equity Restructuring, or if necessary to comply with Applicable Laws or the Code, or for reasons of administrative convenience, the Administrator may, in its sole discretion, refuse to permit the exercise of any Award during a period of up to thirty days prior to the consummation of any such transaction.

(f) Except as expressly provided in the Plan or pursuant to action of the Administrator under the Plan, no Participant shall have any rights by reason of any subdivision or consolidation of shares of stock of any class, the payment of any dividend, any increase or decrease in the number of shares of stock of any class or any dissolution, liquidation, merger, or consolidation of the Company or any other corporation. Except as expressly provided in the Plan or pursuant to action of the Administrator under the Plan, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number of shares of Common Stock subject to an Award or the grant or exercise price of any Award. The existence of the Plan, any Award Agreements and the Awards granted hereunder shall not affect or restrict in any way the right or power of the Company to make or authorize (i) any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, (ii) any merger, consolidation dissolution or liquidation of the Company or sale of Company assets or (iii) any sale or issuance of securities, including without limitation, securities with rights superior to those of the Common Stock or which are convertible into or exchangeable for Common Stock. The Administrator may treat Participants and Awards (or portions thereof) differently under this Section 8.

9. ***General Provisions Applicable to Awards.***

(a) *Transferability of Awards.* Except as the Administrator may otherwise determine or provide in an Award Agreement or otherwise, in any case in accordance with Applicable Laws, Awards, including any interest therein, may not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution, and, during the life of the Participant, shall be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees.

(b) *Documentation.* Each Award shall be evidenced in an Award Agreement, which may be in such form (written, electronic or otherwise) as the Administrator shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.

(c) *Discretion.* Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award to a Participant need not be identical, and the Administrator need not treat Participants or Awards (or portions thereof) uniformly.

(d) *Termination of Status.* The Administrator shall determine the effect on an Award of the disability, death, retirement, authorized leave of absence or any other change or purported change in a Participant's Service Provider status and the extent to which, and the period during which, the Participant, the Participant's legal representative, conservator, guardian or Designated Beneficiary may exercise rights under the Award, if applicable.

(e) *Withholding.* Each Participant shall pay to the Company, or make provision satisfactory to the Administrator for payment of, any taxes required by law to be withheld in connection with Awards to such Participant no later than the date of the event creating the tax liability. The Company may deduct an amount sufficient to satisfy such tax obligations based on the applicable statutory withholding rates (or such other rate as may be determined by the Company after considering any accounting consequences or costs) from any payment of any kind otherwise due to a Participant. In the absence of a contrary determination by the Company (or, with respect to withholding pursuant to clause (ii) below with respect to Awards held by individuals subject to Section 16 of the Exchange Act, a contrary determination by the Administrator), all tax withholding obligations will be calculated based on the minimum applicable statutory withholding rates. Subject to Section 10(h), any Company insider trading policy (including blackout periods) and Applicable Laws, Participants may satisfy such tax obligations (i) in cash, by wire transfer of immediately available funds, by check made payable to the order of the Company, provided that the Company may limit the use of the foregoing payment forms if one or more of the payment forms below is permitted, (ii) to the extent permitted by the Administrator, in whole or in part by delivery of shares of Common Stock, including shares delivered by attestation and shares retained from the Award creating the tax obligation, valued at their Fair Market Value on the date of delivery, (iii) if there is a public market for shares of Common Stock at the time the tax obligations are satisfied, unless the Company otherwise determines, (A) delivery (including electronically or telephonically to the extent permitted by the Company) of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to satisfy the tax obligations, or (B) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to satisfy the tax withholding; provided that such amount is paid to the Company at such time as may be required by the Administrator, or (iv) to the extent permitted by the Company, any combination of the foregoing payment forms approved by the Administrator. Notwithstanding any other provision of the Plan, the number of shares of Common Stock which may be so withheld or surrendered pursuant to clause (ii) of the immediately preceding sentence shall be limited to the number of shares of Common Stock which have a Fair Market Value on the date of withholding or surrender no greater than the aggregate amount of such liabilities based on the maximum individual statutory tax rate in the applicable jurisdiction at the time of such withholding (or such other rate as may be required to avoid the liability classification of the applicable award under generally accepted accounting principles in the United States of America)); provided, however, that, any such shares of Common Stock delivered or retained shall be rounded up to the nearest whole share to the extent rounding up to the nearest whole share does not result in the liability classification of the applicable Award under generally accepted accounting principles in the United States of America. If any tax withholding obligation will be satisfied under clause (ii) above by the Company's retention of shares of

Common Stock from the Award creating the tax obligation and there is a public market for the shares of Common Stock at the time the tax obligation is satisfied, the Company may elect to instruct any brokerage firm determined acceptable to the Company for such purpose to sell on the applicable Participant's behalf some or all of the shares of Common Stock retained and to remit the proceeds of the sale to the Company or its designee, and each Participant's acceptance of an Award under the Plan will constitute the Participant's authorization to the Company and instruction and authorization to such brokerage firm to complete the transactions described in this sentence.

(f) *Amendment of Award; Repricing.* The Administrator may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or settlement, and converting an Incentive Stock Option to a Non-Qualified Stock Option. The Participant's consent to such action shall be required unless (i) the Administrator determines that the action, taking into account any related action, would not materially and adversely affect the Participant, or (ii) the change is permitted under Section 8 and 10(f) hereof. Notwithstanding the foregoing or anything in the Plan to the contrary, the Administrator may, without the approval of the stockholders of the Company, reduce the exercise price per share of outstanding Options or Stock Appreciation Rights or cancel outstanding Options or Stock Appreciation Rights in exchange for cash, other Awards or Options or Stock Appreciation Rights with an exercise price per share that is less than the exercise price per share of the original Options or Stock Appreciation Rights; provided the exercise price per share of such Options or Stock Appreciation Rights is no less than 100% of the Fair Market Value on the date of such action.

(g) *Conditions on Delivery of Stock.* The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and any applicable stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Administrator deems necessary or appropriate to satisfy the requirements of any Applicable Laws. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is determined by the Administrator to be necessary to the lawful issuance and sale of any securities hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained.

(h) *Acceleration.* The Administrator may at any time provide that any Award shall become vested and/or exercisable in full or in part, free of some or all restrictions or conditions, or otherwise realizable in full or in part, as the case may be.

10. ***Miscellaneous***.

(a) *No Right To Employment or Other Status.* No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan or any Award, except as expressly provided in an applicable Award Agreement.

(b) *No Rights As Stockholder; Certificates.* Subject to the provisions of the applicable Award Agreement, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares. Notwithstanding any other provision of the Plan, unless

otherwise determined by the Administrator or required by any Applicable Laws, the Company shall not be required to deliver to any Participant certificates evidencing shares of Common Stock issued in connection with any Award and instead such shares of Common Stock may be recorded in the books of the Company (or, as applicable, its transfer agent or stock plan administrator). The Company may place legends on stock certificates issued under the Plan deemed necessary or appropriate by the Administrator in order to comply with Applicable Laws.

(c) *Effective Date and Term of Plan.* The Plan shall become effective on the date on which it is adopted by the Board. No Awards shall be granted under the Plan after the completion of ten years from the earlier of (i) the date on which the Plan was adopted by the Board or (ii) the date the Plan was approved by the Company's stockholders, but Awards previously granted may extend beyond that date in accordance with the terms of the Plan.

(d) *Amendment of Plan.* The Administrator may amend, suspend or terminate the Plan or any portion thereof at any time; provided that no amendment of the Plan shall materially and adversely affect (as determined by the Administrator) any Award outstanding at the time of such amendment without the consent of the affected Participant. Awards outstanding under the Plan at the time of any suspension or termination of the Plan shall continue to be governed in accordance with the terms of the Plan and the applicable Award Agreement, as in effect prior to such suspension or termination. The Board shall obtain stockholder approval of any Plan amendment to the extent necessary to comply with Applicable Laws.

(e) *Provisions for Foreign Participants*. The Administrator may modify Awards granted to Participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Plan to address differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

(f) *Section 409A*.

(i) *General*. The Company intends that all Awards be structured in compliance with, or to satisfy an exemption from, Section 409A, such that no adverse tax consequences, interest, or penalties under Section 409A apply in connection with any Awards. Notwithstanding anything herein or in any Award Agreement to the contrary, the Administrator may, without a Participant's prior consent, amend this Plan and/or Awards, adopt policies and procedures, or take any other actions (including amendments, policies, procedures and actions with retroactive effect) as are necessary or appropriate to preserve the intended tax treatment of Awards under the Plan, including without limitation, any such actions intended to (A) exempt this Plan and/or any Award from the application of Section 409A, and/or (B) comply with the requirements of Section 409A, including without limitation any such regulations, guidance, compliance programs and other interpretative authority that may be issued after the date of grant of any Award. The Company makes no representations or warranties as to the tax treatment of any Award under Section 409A or otherwise. The Company shall have no obligation under this Section 10(f) or otherwise to take any action (whether or not described herein) to avoid the imposition of taxes, penalties or interest under Section 409A with respect to any Award and shall have no liability to any Participant or any other person if any Award, compensation or other benefits under the Plan are determined to constitute non-compliant, "nonqualified deferred compensation" subject to the imposition of taxes, penalties and/or interest under Section 409A.

(ii) *Separation from Service*. With respect to any Award that constitutes "nonqualified deferred compensation" under Section 409A, any payment or settlement of such Award that is to be made upon a termination of a Participant's Service Provider relationship shall, to the extent necessary to avoid the imposition of taxes under Section 409A, be made only upon

the Participant's "separation from service" (within the meaning of Section 409A), whether such "separation from service" occurs upon or subsequent to the termination of the Participant's Service Provider relationship. For purposes of any such provision of this Plan or any Award Agreement relating to any such payments or benefits, references to a "termination," "termination of employment" or like terms shall mean "separation from service."

(iii) *Payments to Specified Employees*. Notwithstanding any contrary provision in the Plan or any Award Agreement, any payment(s) of "nonqualified deferred compensation" that are otherwise required to be made under an Award to a "specified employee" (as defined under Section 409A and determined by the Administrator) as a result of his or her "separation from service" shall, to the extent necessary to avoid the imposition of taxes under Code Section 409A(a)(2)(B)(i), be delayed until the expiration of the six-month period immediately following such "separation from service" (or, if earlier, until the date of death of the specified employee) and shall instead be paid (in a manner set forth in the Award agreement) on the day that immediately follows the end of such six-month period or as soon as administratively practicable thereafter (without interest). Any payments of "nonqualified deferred compensation" under such Award that are, by their terms, payable more than six months following the Participant's "separation from service" shall be paid at the time or times such payments are otherwise scheduled to be made.

(g) *Limitations on Liability*. Notwithstanding any other provisions of the Plan, no individual acting as a director, officer, other employee or agent of the Company will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan or any Award, nor will such individual be personally liable with respect to the Plan because of any contract or other instrument he or she executes in his or her capacity as an Administrator, director, officer, other employee or agent of the Company. The Company will indemnify and hold harmless each director, officer, other employee and agent of the Company to whom any duty or power relating to the administration or interpretation of the Plan has been or will be granted or delegated, against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the Administrator's approval) arising out of any act or omission to act concerning this Plan unless arising out of such person's own fraud or bad faith.

(h) *Lock-Up Period*. The Company may, at the request of any representative of the underwriters or otherwise, in connection with any registration of the offering of any securities of the Company under the Securities Act, prohibit Participants from, directly or indirectly, selling or otherwise transferring any shares of Common Stock or other securities of the Company during a period of up to one hundred eighty days following the effective date of a registration statement of the Company filed under the Securities Act.

(i) *Right of First Refusal*.

(i) Before any shares of Common Stock held by a Participant or any permitted transferee (each, a "***Holder***") may be sold, pledged, assigned, hypothecated, transferred, or otherwise disposed of (each, a "***Transfer***"), the Company or its assignee(s) shall have a right of first refusal to purchase the shares of Common Stock proposed to be Transferred on the terms and conditions set forth in this Section 10(i) (the "***Right of First Refusal***"). In the event that the Company's charter, bylaws and/or a stockholders' agreement applicable to the shares of Common Stock contain a right of first refusal with respect to the shares of Common Stock, such right of first refusal shall apply to the shares of Common Stock to the extent such provisions are more restrictive than the Right of First Refusal set forth in this Section 10(i) and

the Right of First Refusal set forth in this Section 10(i) shall not in any way restrict the operation of the Company's charter, bylaws or the operation of any applicable stockholders' agreement.

(ii) In the event any Holder desires to Transfer any shares of Common Stock, the Holder shall deliver to the Company a written notice (the "***Notice***") stating: (A) the Holder's bona fide intention to sell or otherwise Transfer such shares of Common Stock; (B) the name of each proposed purchaser or other transferee ("***Proposed Transferee***"); (C) the number of shares of Common Stock to be Transferred to each Proposed Transferee; and (D) the price for which the Holder proposes to Transfer the shares of Common Stock (the "***Offered Price***"), and the Holder shall offer such shares of Common Stock at the Offered Price to the Company or its assignee(s).

(iii) Within twenty-five days after receipt of the Notice, the Company and/or its assignee(s) may elect in writing to purchase all, but not less than all, of the shares of Common Stock proposed to be Transferred to any one or more of the Proposed Transferees by delivery of a written exercise notice to the Holder (a "***Company Notice***"). The purchase price ("***Purchase Price***") for the shares of Common Stock repurchased under this Section 10(i) shall be the Offered Price.

(iv) Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check or wire transfer), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof, within five days after delivery of the Company Notice or in the manner and at the times mutually agreed to by the Company and the Holder. Should the Offered Price specified in the Notice be payable in property other than cash, the Company or its assignee shall have the right to pay the purchase price in the form of cash equal in amount to the value of such property, as determined by the Administrator.

(v) If all or a portion of the shares of Common Stock proposed in the Notice to be Transferred are not purchased by the Company and/or its assignee(s) as provided in this Section 10(i), then the Holder may sell or otherwise Transfer such shares of Common Stock to that Proposed Transferee at the Offered Price or at a higher price; provided that such sale or other Transfer is consummated within sixty days after the date of the Notice; and provided, further, that any such sale or other Transfer is effected in accordance with any Applicable Laws and the Proposed Transferee agrees in writing that the provisions of this Plan and the applicable Award Agreement and any other applicable agreements governing the shares of Common Stock to be Transferred shall continue to apply to the shares of Common Stock in the hands of such Proposed Transferee. If the shares of Common Stock described in the Notice are not Transferred to the Proposed Transferee within such sixty-day period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal, as provided herein, before any shares of Common Stock held by the Holder may be sold or otherwise Transferred.

(vi) Anything to the contrary contained in this Section 10(i) notwithstanding and to the extent permitted by the Administrator, the Transfer of any or all of the shares of Common Stock during a Participant's lifetime or upon a Participant's death by will or intestacy to the Participant's Immediate Family or a trust for the benefit of the Participant's Immediate Family shall be exempt from the Right of First Refusal. As used herein, "***Immediate Family***" shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister or stepchild (whether or not adopted). In such case, the transferee or other recipient shall receive and hold the shares of Common Stock so Transferred subject to the provisions of this Plan (including the Right of First Refusal), the applicable Award Agreement and any other applicable agreements governing the shares of Common Stock to be Transferred, and there shall be no further Transfer

of such shares of Common Stock except in accordance with the terms of this Section 10(i) (or otherwise as expressly provided under the Plan).

(vii) The Right of First Refusal shall terminate as to all shares of Common Stock if the Company becomes a Publicly Listed Company upon such occurrence.

(j) *Data Privacy*. As a condition of receipt of any Award, each Participant explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of personal data as described in this paragraph by and among, as applicable, the Company and its subsidiaries and affiliates for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan. The Company and its subsidiaries and affiliates may hold certain personal information about a Participant, including but not limited to, the Participant's name, home address and telephone number, date of birth, social security or insurance number or other identification number, salary, nationality, job title(s), any shares of stock held in the Company or any of its subsidiaries and affiliates, details of all Awards, in each case, for the purpose of implementing, managing and administering the Plan and Awards (the "***Data***"). The Company and its subsidiaries and affiliates may transfer the Data amongst themselves as necessary for the purpose of implementation, administration and management of a Participant's participation in the Plan, and the Company and its subsidiaries and affiliates may each further transfer the Data to any third parties assisting the Company in the implementation, administration and management of the Plan. These recipients may be located in the Participant's country, or elsewhere, and the Participant's country may have different data privacy laws and protections than the recipients' country. Through acceptance of an Award, each Participant authorizes such recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing the Participant's participation in the Plan, including any requisite transfer of such Data as may be required to a broker or other third party with whom the Company or the Participant may elect to deposit any shares of Common Stock. The Data related to a Participant will be held only as long as is necessary to implement, administer, and manage the Participant's participation in the Plan. A Participant may, at any time, view the Data held by the Company with respect to such Participant, request additional information about the storage and processing of the Data with respect to such Participant, recommend any necessary corrections to the Data with respect to the Participant or refuse or withdraw the consents herein in writing, in any case without cost, by contacting his or her local human resources representative. The Company may cancel Participant's ability to participate in the Plan and, in the Administrator's discretion, the Participant may forfeit any outstanding Awards if the Participant refuses or withdraws his or her consents as described herein. For more information on the consequences of refusal to consent or withdrawal of consent, Participants may contact their local human resources representative.

(k) *Severability*. In the event any portion of the Plan or any action taken pursuant thereto shall be held illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining parts of the Plan, and the Plan shall be construed and enforced as if the illegal or invalid provisions had not been included, and the illegal or invalid action shall be null and void.

(l) *Governing Documents*. In the event of any contradiction between the Plan and any Award Agreement or any other written agreement between a Participant and the Company or any Subsidiary of the Company that has been approved by the Administrator, the terms of the Plan shall govern, unless it is expressly specified in such Award Agreement or other written document that a specific provision of the Plan shall not apply.

(m) *Governing Law*. The provisions of the Plan and all Awards made hereunder shall be governed by and interpreted in accordance with the laws of the State of Delaware, disregarding choice-of-law principles of the law of any state that would require the application of the laws of a jurisdiction other than such state.

(n) *Submission to Jurisdiction; Waiver of Jury Trial*. By accepting an Award, each Participant irrevocably and unconditionally consents to submit to the exclusive jurisdiction of the courts of the State of Delaware and of the United States of America, in each case located in the State of Delaware, for any action arising out of or relating to the Plan (and agrees not to commence any litigation relating thereto except in such courts), and further agrees that service of any process, summons, notice or document by U.S. registered mail to the address contained in the records of the Company shall be effective service of process for any litigation brought against it in any such court. By accepting an Award, each Participant irrevocably and unconditionally waives any objection to the laying of venue of any litigation arising out of Plan or Award hereunder in the courts of the State of Delaware or the United States of America, in each case located in the State of Delaware, and further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such litigation brought in any such court has been brought in an inconvenient forum. By accepting an Award, each Participant irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any and all rights to trial by jury in connection with any litigation arising out of or relating to the Plan or any Award hereunder.

(o) *Restrictions on Shares; Claw-Back Provisions*. Awards and shares of Common Stock acquired in respect of Awards shall be subject to such terms and conditions as the Administrator shall determine, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements. Such terms and conditions may be additional to those contained in the Plan and may, as determined by the Administrator, be contained in the applicable Award Agreement or in an exercise notice, stockholders' agreement or in such other agreement as the Administrator shall determine, in each case in a form determined by the Administrator. The issuance of such shares of Common Stock shall be conditioned on the Participant's consent to such terms and conditions and the Participant's entering into such agreement or agreements. All Awards (including any proceeds, gains or other economic benefit actually or constructively received by Participant upon any receipt or exercise of any Award or upon the receipt or resale of any shares of Common Stock underlying the Award) shall be subject to the provisions of any claw-back policy implemented by the Company, including, without limitation, any claw-back policy adopted to comply with the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act and any rules or regulations promulgated thereunder, to the extent set forth in such claw-back policy and/or in the applicable Award Agreement. A Participant shall, as a condition to receiving an Award, agree to execute such further instruments and to take such further action as the Company requests to carry out the purposes and intent of the Plan and any Award, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements in accordance with Section 10(o) of the Plan.

(p) *Titles and Headings*. The titles and headings of the Sections in the Plan are for convenience of reference only and, in the event of any conflict, the text of the Plan, rather than such titles or headings, shall control.

(q) *Conformity to Securities Laws*. Participant acknowledges that the Plan is intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the Securities and Exchange Commission thereunder, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan and all Awards granted hereunder shall be administered only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by Applicable Laws, the Plan and all Award

Agreements shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

11. ***Definitions***. As used in the Plan, the following words and phrases shall have the following meanings:

(a) "***Administrator***" means the Board or a Committee to the extent that the Board's powers or authority under the Plan have been delegated to such Committee.

(b) "***Applicable Laws***" means the requirements relating to the administration of equity incentive plans under U.S. federal and state securities, tax and other applicable laws, rules and regulations, the applicable rules of any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws and rules of any foreign country or other jurisdiction where Awards are granted or issued under the Plan.

(c) *"**Award***" means, individually or collectively, a grant under the Plan of Options, Restricted Stock, Restricted Stock Units or Other Stock-Based Awards.

(d) *"**Award Agreement***" means a written agreement evidencing an Award, which agreements may be in electronic medium and shall contain such terms and conditions with respect to an Award as the Administrator shall determine, consistent with and subject to the terms and conditions of the Plan.

(e) *"**Board***" means the Board of Directors of the Company.

(f) "***Cause***," with respect to a Participant, means "Cause" (or any term of similar effect) as defined in such Participant's employment agreement with the Company if such an agreement exists and contains a definition of Cause (or term of similar effect), or, if no such agreement exists or such agreement does not contain a definition of Cause (or term of similar effect), then Cause shall include, but not be limited to: (i) the Participant's unauthorized use or disclosure of confidential information or trade secrets of the Company or any material breach of a written agreement between the Participant and the Company, including without limitation a material breach of any employment, confidentiality, non-compete, non-solicit or similar agreement; (ii) the Participant's commission of, indictment for or the entry of a plea of guilty or *nolo contendere* by the Participant to, a felony under the laws of the United States or any state thereof or any crime involving dishonesty or moral turpitude (or any similar crime in any jurisdiction outside the United States); (iii) the Participant's gross negligence or willful misconduct or the Participant's willful or repeated failure or refusal to substantially perform assigned duties; (iv) any act of fraud, embezzlement, material misappropriation or dishonesty committed by the Participant against the Company; or (v) any acts, omissions or statements by a Participant which the Company reasonably determines to be materially detrimental or damaging to the reputation, operations, prospects or business relations of the Company.

(g) "***Change in Control***" means (i) a merger or consolidation of the Company with or into any other corporation or other entity or person, (ii) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets, or (iii) any other transaction, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (A) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of

the voting securities of the Company immediately prior to the merger or consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (B) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (C) an initial public offering of any of the Company's securities or any other transaction or series of related transactions principally for bona fide equity financing purposes; (D) a reincorporation of the Company solely to change its jurisdiction; or (E) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction. Notwithstanding the foregoing, if a Change in Control would give rise to a payment or settlement event with respect to any Award that constitutes "nonqualified deferred compensation," the transaction or event constituting the Change in Control must also constitute a "change in control event" (as defined in Treasury Regulation §1.409A-3(i)(5)) in order to give rise to the payment or settlement event for such Award, to the extent required by Section 409A.

(h) "***Code***" means the Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

(i) "***Committee***" means one or more committees or subcommittees of the Board, which may be comprised of one or more directors and/or executive officers of the Company, in either case, to the extent permitted in accordance with Applicable Laws.

(j) "***Common Stock***" means the common stock of the Company.

(k) "***Company***" means HilleVax, Inc., a Delaware corporation, or any successor thereto. Except where the context otherwise requires, the term "Company" includes any of the Company's present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Code and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a significant interest, as determined by the Administrator.

(l) "***Consultant***" means any person, including any advisor, engaged by the Company or a parent or subsidiary of the Company to render services to such entity if: (i) the consultant or adviser renders bona fide services to the Company; (ii) the services rendered by the consultant or advisor are not in connection with the offer or sale of securities in a capital-raising transaction and do not directly or indirectly promote or maintain a market for the Company's securities; and (iii) the consultant or advisor is a natural person, or such other advisor or consultant as is approved by the Administrator.

(m) "***Designated Beneficiary***" means the beneficiary or beneficiaries designated, in a manner determined by the Administrator, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death or incapacity In the absence of an effective designation by a Participant, "Designated Beneficiary" shall mean the Participant's estate.

(n) "***Director***" means a member of the Board.

(o) "***Disability***" means a permanent and total disability within the meaning of Section 22(e)(3) of the Code, as it may be amended from time to time.

(p) "***Dividend Equivalents***" means a right granted to a Participant pursuant to Section 6(d)(3) hereof to receive the equivalent value (in cash or shares of Common Stock) of dividends paid on shares of Common Stock.

(q) "***Employee***" means any person, including officers and Directors, employed by the Company (within the meaning of Section 3401(c) of the Code) or any parent or subsidiary of the Company.

(r) "***Equity Restructuring***" means, as determined by the Administrator, a non-reciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split, spin-off or recapitalization through a large, nonrecurring cash dividend, that affects the shares of Common Stock (or other securities of the Company) or the share price of Common Stock (or other securities of the Company) and causes a change in the per share value of the Common Stock underlying outstanding Awards.

(s) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended.

(t) "***Fair Market Value***" means, as of any date, the value of Stock determined as follows: (i) if the Common Stock is listed on any established stock exchange, its Fair Market Value shall be the closing sales price for such Common Stock as quoted on such exchange for such date, or if no sale occurred on such date, the first market trading day immediately prior to such date during which a sale occurred, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; (ii) if the Common Stock is not traded on a stock exchange but is quoted on a national market or other quotation system, the last sales price on such date, or if no sales occurred on such date, then on the date immediately prior to such date on which sales prices are reported, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or (iii) in the absence of an established market for the Common Stock, the Fair Market Value thereof shall be determined by the Administrator.

(u) "***Good Reason***" with respect to a Participant, means "Good Reason" (or any term of similar effect) as defined in such Participant's employment or consulting agreement with the Company if such an agreement exists and contains a definition of Good Reason (or term of similar effect), or, if no such agreement exists or such agreement does not contain a definition of Good Reason (or term of similar effect), then Good Reason shall mean the occurrence of any of the following circumstances without the Participant's express prior written consent: (i) a material diminution in the Particpant's base compensation, unless reductions comparable in amount and duration are concurrently made for all other similarly-situated employees of the Company; or (ii) a relocation of the Participant's place of employment by more than 50 miles, provided that such change, reduction or relocation is effected by the Company (or its parent or subsidiary employing the Participant) without the Participant's consent. Notwithstanding the foregoing, a Participant may not resign his or her employment with Good Reason unless: (x) the Participant provides the Company with at least 30 days prior written notice of his or her intent to resign for Good Reason (which notice is provided not later than 60 days following the occurrence of the event constituting Good Reason and contains reasonable detail regarding the basis for asserting Good Reason) and (y) the Company has not remedied the violation(s) within the 30 day period, and such resignation must occur within 90 days of the end of such remedy period.

(v) "***Incentive Stock Option***" means an "incentive stock option" as defined in Section 422 of the Code.

(w) "***Non-Qualified Stock Option***" means an Option that is not intended to be or otherwise does not qualify as an Incentive Stock Option.

(x) "***Option***" means an option to purchase Common Stock.

(y) "***Other Stock-Based Awards***" means other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property.

(z) "***Participant***" means a Service Provider who has been granted an Award under the Plan.

(aa) "***Plan***" means this HilleVax, Inc. 2021 Equity Incentive Plan.

(bb) "***Publicly Listed Company***" means that the Company or its successor (i) is required to file periodic reports pursuant to Section 12 of the Exchange Act and (ii) the Common Stock is listed on one or more National Securities Exchanges (within the meaning of the Exchange Act) or is quoted on NASDAQ or a successor quotation system.

(cc) "***Restricted Stock***" means Common Stock awarded to a Participant pursuant to Section 6 hereof that is subject to certain vesting conditions and other restrictions.

(dd) "***Restricted Stock Unit***" means an unfunded, unsecured right to receive, on the applicable settlement date, one share of Common Stock or an amount in cash or other consideration determined by the Administrator equal to the value thereof as of such payment date, which right may be subject to certain vesting conditions and other restrictions.

(ee) "***Section 409A***" means Section 409A of the Code and all regulations, guidance, compliance programs and other interpretative authority thereunder.

(ff) "***Securities Act***" means the Securities Act of 1933, as amended from time to time.

(gg) "***Service Provider***" means an Employee, Consultant or Director.

(hh) "***Termination of Service***" means the date the Participant ceases to be a Service Provider.

HILLEVAX, INC.

2021 EQUITY INCENTIVE PLAN

CALIFORNIA SUPPLEMENT

The Administrator has adopted this supplement for purposes of satisfying the requirements of Section 25102(o) of the California Corporations Code and the regulations issued thereunder ("***Section 25102(o)***"). Notwithstanding anything to the contrary contained in the Plan and except as otherwise determined by the Administrator, the provisions set forth in this supplement shall apply to all Awards granted under the Plan to a Participant who is a resident of the State of California on the date of grant (a "***California Participant***") and which are intended to be exempt from registration in California pursuant to Section 25102(o). This supplement shall not apply to Awards granted to California Participants or after the date on which the Company becomes a Publicly Listed Company. Definitions in the Plan are applicable to this supplement.

1. ***Limitation on Securities Issuable under the Plan***. The amount of securities issued pursuant to the Plan shall not exceed the amounts permitted under section 260.140.45 of the California Code of Regulations to the extent applicable.

2. ***Additional Limitations On Options***.

(a) *Maximum Duration of Options.* No Options granted to California Participants will be granted for a term in excess of 10 years.

(b) *Minimum Exercise Period Following Termination.* Unless a California Participant's Service Provider relationship is terminated for Cause, in the event of termination of such Participant's Service Provider relationship, to the extent required by Applicable Laws, he or she shall have the right to exercise an Option, to the extent that he or she was otherwise entitled to exercise such Option on the date employment terminated, as follows: (i) at least six months from the date of termination, if termination was caused by such Participant's death or Disability and (ii) at least 30 days from the date of termination, if termination was caused other than by such Participant's death or Disability.

3. ***Additional Limitations For Restricted Stock Awards, Restricted Stock Units and Other Stock-Based Awards***. The terms of all Awards granted to California Participants shall comply, to the extent applicable, with Section 260.140.41 and Section 260.140.42 of the California Code of Regulations.

4. ***Adjustments***. The Administrator will make such adjustments to an Award held by a California Participant as may be required by Section 260.140.41 or Section 260.140.42 of the California Code of Regulations.

5. ***Additional Requirement To Provide Information To California Participants***. To the extent required by Section 260.140.46 of the California Code of Regulations, the Company shall provide to each California Participant and to each California Participant who acquires Common Stock pursuant to the Plan, not less frequently than annually, copies of annual financial statements (which need not be audited). The Company shall not be required to provide such statements to key persons whose duties in connection with the Company assure their access to equivalent information. In addition, this information requirement shall not apply to the Plan to the extent that it complies with all conditions of Rule 701 of the Securities Act ("***Rule 701***") as determined by the Administrator; provided that for purposes of

determining such compliance, any registered domestic partner shall be considered a "family member" as that term is defined in Rule 701.

6. ***Stockholder Approval; Additional Limitations On Timing Of Awards***. The Plan will be submitted for the approval of the Company's stockholders within twelve (12) months after the date of the Board's adoption of the Plan. Awards may be granted or awarded prior to such stockholder approval; provided that no Award granted to a California Participant shall become exercisable, vested or realizable, as applicable to such Award, unless the Plan has been approved by the Company's stockholders within twelve months before or after the date the Plan was adopted by the Administrator; and provided, further, that if such approval has not been obtained at the end of said twelve-month period, all Awards previously granted or awarded under the Plan to California Participants shall thereupon be canceled and become null and void.

AMENDMENT NO. 1
TO THE
HILLEVAX, INC. 2021 EQUITY INCENTIVE PLAN

THIS AMENDMENT NO. 1 TO THE HILLEVAX, INC. 2021 EQUITY INCENTIVE PLAN (this "Amendment"), dated as of March 8, 2021, is made and adopted by HILLEVAX, INC., a Delaware corporation (the "Company"). Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Plan (as defined below).

RECITALS

WHEREAS, the Company has adopted the HilleVax, Inc. 2021 Equity Incentive Plan (the "Plan");

WHEREAS, the Company desires to amend the Plan as set forth below;

WHEREAS, pursuant to Section 10(d) of the Plan, the Plan may be amended by the Board of Directors of the Company; and

WHEREAS, the Board of Directors of the Company has approved this Amendment pursuant to resolutions adopted on March 8, 2021.

NOW, THEREFORE, in consideration of the foregoing, the Company hereby amends the Plan as follows:

1. The first sentence of Section 4(a) of the Plan is hereby amended to read as follows:

"Subject to adjustment under Section 8 hereof, Awards may be made under the Plan covering up to 1,881,500 shares of Common Stock."

2. This Amendment shall be and is hereby incorporated in and forms a part of the Plan. All other terms and provisions of the Plan shall remain unchanged except as specifically modified herein. The Plan, as amended by this Amendment, is hereby ratified and confirmed.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

I hereby certify that the foregoing Amendment was duly adopted by the Board of Directors of HilleVax, Inc. on March 8, 2021.

By: /s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

AMENDMENT NO. 2
TO THE
HILLEVAX, INC. 2021 EQUITY INCENTIVE PLAN

THIS AMENDMENT NO. 2 TO THE HILLEVAX, INC. 2021 EQUITY INCENTIVE PLAN (this "Amendment"), dated as of April 19, 2021, is made and adopted by HILLEVAX, INC., a Delaware corporation (the "Company"). Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Plan (as defined below).

RECITALS

WHEREAS, the Company has adopted the HilleVax, Inc. 2021 Equity Incentive Plan (the "Plan");

WHEREAS, the Company desires to amend the Plan as set forth below;

WHEREAS, pursuant to Section 10(d) of the Plan, the Plan may be amended by the Board of Directors of the Company; and

WHEREAS, the Board of Directors of the Company has approved this Amendment pursuant to resolutions adopted on April 19, 2021.

NOW, THEREFORE, in consideration of the foregoing, the Company hereby amends the Plan as follows:

1. The first sentence of Section 4(a) of the Plan is hereby amended to read as follows:

"Subject to adjustment under Section 8 hereof, Awards may be made under the Plan covering up to 1,836,500 shares of Common Stock."

2. This Amendment shall be and is hereby incorporated in and forms a part of the Plan. All other terms and provisions of the Plan shall remain unchanged except as specifically modified herein. The Plan, as amended by this Amendment, is hereby ratified and confirmed.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

I hereby certify that the foregoing Amendment was duly adopted by the Board of Directors of HilleVax, Inc. on April 19, 2021.

By: /s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

AMENDMENT NO. 3
TO THE
HILLEVAX, INC. 2021 EQUITY INCENTIVE PLAN

THIS AMENDMENT NO. 3 TO THE HILLEVAX, INC. 2021 EQUITY INCENTIVE PLAN (this "Amendment"), dated as of May 12, 2021, is made and adopted by HILLEVAX, INC., a Delaware corporation (the "Company"). Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Plan (as defined below).

RECITALS

WHEREAS, the Company has adopted the HilleVax, Inc. 2021 Equity Incentive Plan (the "Plan");

WHEREAS, the Company desires to amend the Plan as set forth below;

WHEREAS, pursuant to Section 10(d) of the Plan, the Plan may be amended by the Board of Directors of the Company; and

WHEREAS, the Board of Directors of the Company has approved this Amendment pursuant to resolutions adopted on May 12, 2021.

NOW, THEREFORE, in consideration of the foregoing, the Company hereby amends the Plan as follows:

1. The first sentence of Section 4(a) of the Plan is hereby amended to read as follows:

"Subject to adjustment under Section 8 hereof, Awards may be made under the Plan covering up to 1,796,500 shares of Common Stock."

2. This Amendment shall be and is hereby incorporated in and forms a part of the Plan. All other terms and provisions of the Plan shall remain unchanged except as specifically modified herein. The Plan, as amended by this Amendment, is hereby ratified and confirmed.

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I hereby certify that the foregoing Amendment was duly adopted by the Board of Directors of HilleVax, Inc. on May 12, 2021.

By: /s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

AMENDMENT NO. 4
TO THE
HILLEVAX, INC. 2021 EQUITY INCENTIVE PLAN

THIS AMENDMENT NO. 4 TO THE HILLEVAX, INC. 2021 EQUITY INCENTIVE PLAN (this "Amendment"), dated as of July 2, 2021, is made and adopted by HILLEVAX, INC., a Delaware corporation (the "Company"). Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Plan (as defined below).

RECITALS

WHEREAS, the Company has adopted the HilleVax, Inc. 2021 Equity Incentive Plan (the "Plan");

WHEREAS, the Company desires to amend the Plan as set forth below;

WHEREAS, pursuant to Section 10(d) of the Plan, the Plan may be amended by the Board of Directors of the Company; and

WHEREAS, the Board of Directors of the Company has approved this Amendment pursuant to resolutions adopted on July 2, 2021.

NOW, THEREFORE, in consideration of the foregoing, the Company hereby amends the Plan as follows:

1. The first sentence of Section 4(a) of the Plan is hereby amended to read as follows:

"Subject to adjustment under Section 8 hereof, Awards may be made under the Plan covering up to 1,766,500 shares of Common Stock."

2. This Amendment shall be and is hereby incorporated in and forms a part of the Plan. All other terms and provisions of the Plan shall remain unchanged except as specifically modified herein. The Plan, as amended by this Amendment, is hereby ratified and confirmed.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

I hereby certify that the foregoing Amendment was duly adopted by the Board of Directors of HilleVax, Inc. on July 2, 2021.

By: /s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

HILLEVAX, INC.

2021 EQUITY INCENTIVE PLAN

STOCK OPTION GRANT NOTICE AND
STOCK OPTION AGREEMENT

HilleVax, Inc. (the "***Company***"), pursuant to its 2021 Equity Incentive Plan (as amended from time to time, the "***Plan***"), hereby grants to Participant an Option to purchase the number of shares of the Company's Common Stock (referred to herein as "***Shares***") set forth below. This Option is subject to all of the terms and conditions as set forth herein and in the Stock Option Agreement attached hereto as Exhibit A (the "***Agreement***") and the Plan, each of which is incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Stock Option Grant Notice ("***Grant Notice***") and the Agreement.

Participant:	*[Insert Participant Name]*
Grant Date:	*[Insert Grant Date]*
Vesting Commencement Date:	*[Insert Vesting Commencement Date]*
Exercise Price per Share:	$*[Insert Exercise Price Per Share]*
Total Exercise Price:	$*[Insert Aggregate Exercise Price on Grant Date]*
Total Number of Shares Subject to Option:	*[Insert Number of Shares]*
Expiration Date:	*[Insert Tenth Anniversary of Grant Date]*
Type of Option:	☐ Incentive Stock Option ☐ Non-Qualified Stock Option
Vesting Schedule:	[25% of the total number of Shares subject to the Option shall vest one year after the Vesting Commencement Date, and 1/48th of the total number of Shares subject to the Option shall vest on the last day of each one-month period of Participant's service as a Service Provider thereafter, so that all of the Shares subject to the Option shall be vested on the 4th anniversary of the Vesting Commencement Date.]

By his or her signature and the Company's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Agreement and this Grant Notice. Participant has reviewed the Agreement, the Plan and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice, the Agreement and the Plan. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator of the Plan upon any questions arising under the Plan or the Agreement.

HILLEVAX, INC.		**PARTICIPANT**	
By:	_____	By:	_____
Print Name:	_____	Print Name:	_____
Title:	_____	State of Residence:	_____

EXHIBIT A

TO STOCK OPTION GRANT NOTICE

STOCK OPTION AGREEMENT

Pursuant to the Grant Notice to which this Agreement is attached, the Company has granted to Participant an Option under the Plan to purchase the number of Shares indicated in the Grant Notice.

1. ***Grant of Option***. In consideration of Participant's past and/or continued employment with or service to the Company or a parent or subsidiary of the Company and for other good and valuable consideration, effective as of the Grant Date set forth in the Grant Notice, the Company irrevocably grants to Participant an Option to purchase any part or all of an aggregate of the number of Shares set forth in the Grant Notice at the Exercise Price per Share set forth in the Grant Notice, upon the terms and conditions set forth in the Plan and this Agreement. Unless designated as a Non-Qualified Stock Option in the Grant Notice, the Option shall be an Incentive Stock Option to the maximum extent permitted by law.

2. ***Vesting***. The Option shall become vested and exercisable in such amounts and at such times as are set forth in the vesting schedule in the Grant Notice (the "***Vesting Schedule***"), except that any Share as to which the Option would be fractionally vested will be accumulated and will vest and become exercisable only when a whole Share has accumulated. The installments provided for in the vesting schedule are cumulative. Unless otherwise determined by the Administrator, any portion of the Option that has not become vested and exercisable on or prior to the date Participant incurs a Termination of Service shall be forfeited on the date of Participant's Termination of Service and shall not thereafter become vested, except as may be otherwise provided by the Administrator or as set forth in another written agreement between the Company and Participant.

3. ***Exercise***.

(a) *Duration of Exercisability.* Any vested portion of the Option may be exercised in whole or in part at any time prior to the time when the Option or portion thereof becomes unexercisable under Section 4.

(b) *Person Eligible to Exercise*. During the lifetime of Participant, only Participant may exercise the Option or any portion thereof. After the death of Participant, any exercisable portion of the Option may, prior to the time when the Option becomes unexercisable under Section 4, be exercised by Participant's personal representative or by any person empowered to do so under the deceased Participant's will or under the then Applicable Laws of descent and distribution.

(c) *Manner of Exercise*. The Option, or any exercisable portion thereof, may be exercised solely by delivery to the Secretary of the Company or the Secretary's office, or such other place as may be determined by the Administrator, of all of the following prior to the time when the Option or such portion thereof becomes unexercisable under Section 4:

(i) An exercise notice in substantially in the form attached as Exhibit B to the Grant Notice (or such other form as is prescribed by the Administrator, which may be an electronic form) (the "***Exercise Notice***") signed by Participant or any other person then entitled to exercise the Option or portion thereof, stating that the Option or portion thereof is thereby exercised, such Exercise Notice complying with all applicable rules established by the Administrator; and

(ii) Subject to Section 5(f) of the Plan, full payment for the Shares with respect to which the Option or portion thereof is exercised by:

(A) Cash, wire transfer of immediately available funds or check, payable to the order of the Company; or

(B) With the consent of the Administrator, surrendering shares of Common Stock then issuable upon exercise of the Option valued at their Fair Market Value on the date of exercise; or

(C) If the Company is a Publicly Listed Company, unless the Administrator otherwise determines, through the (A) delivery of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to pay the exercise price, or (B) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to pay the exercise price, provided in either case, that such amount is paid to the Company at such time as may be required by the Administrator; or

(D) With the consent of the Administrator, any other form of payment permitted under Section 5(f) of the Plan; or

(E) Any combination of the above permitted forms of payment; and

(iii) Subject to Section 9(e) of the Plan, full payment for any applicable withholding taxes in cash, by wire transfer of immediately available funds or by check or in any form of consideration permitted by the Administrator for the payment of the exercise price pursuant to Section 3(c)(ii) above or pursuant to Section 3(d) below; and

(iv) In the event the Option or portion thereof shall be exercised pursuant to Section 3(b) by any person or persons other than Participant, appropriate proof of the right of such person or persons to exercise the Option.

(d) *Tax Withholding*. The Company shall have the authority and the right to deduct or withhold, or require Participant to remit to the Company, an amount sufficient to satisfy federal, state, local and foreign taxes (including Participant's employment tax obligation) required by Applicable Law to be withheld with respect to any taxable event concerning Participant arising as a result of the Option or otherwise under this Agreement, including, without limitation, the authority to deduct such amounts from other compensation payable to Participant by the Company.

(e) *Fractional Shares*. The Option may only be exercised for whole shares of Common Stock. Any fractional Shares shall be rounded down to the nearest whole share.

(f) *Special Tax Consequences*. If the Option is intended to be an Incentive Stock Option, Participant acknowledges that, to the extent that the aggregate fair market value (determined as of the time the Option is granted) of all Shares with respect to which Incentive Stock Options, including, without limitation, the Option, are first exercisable for the first time by Participant in any calendar year exceeds $100,000 (or such other limitation as imposed by Section 422(d) of the Code), the Option and such other options (or the applicable portion thereof) shall be treated as not qualifying under Section

422 of the Code but rather shall be considered Non-Qualified Stock Options. Participant further acknowledges that the rule set forth in the preceding sentence shall be applied by taking Options and other "incentive stock options" into account in the order in which they were granted. Participant acknowledges that amendments or modifications made to the Option pursuant to the Plan that would cause the Option to become a Non-Qualified Stock Option will not materially or adversely affect Participant's rights under the Option, and that any such amendment or modification shall not require Participant's consent. Participant also acknowledges that if the Option is exercised more than three months after Participant's Termination of Service as an employee of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Sections 424(e) or 424(f) of the Code, respectively), other than by reason of death or Disability, the Option will be taxed as a Non-Qualified Stock Option.

4. ***Expiration of Option***. The Option may not be exercised to any extent by anyone after the first to occur of the following events:

(a) The Expiration Date set forth in the Grant Notice;

(b) If the Option is an Incentive Stock Option and Participant is an Employee who, at the time of grant of the Option, owns (or is treated as owning under Section 424 of the Code) stock representing more than 10% of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Sections 424(e) or 424(f) of the Code, respectively), the date that is five years following the Grant Date;

(c) The expiration of three months following the date of Participant's Termination of Service, unless such Termination of Service occurs by reason of Participant's death or Disability or Participant's discharge by the Company for Cause;

(d) The expiration of one year following the date of Participant's Termination of Service by reason of Participant's death or Disability;

(e) The date of Participant's Termination of Service as a result of Participant's discharge by the Company for Cause; or

(f) With respect to any unvested portion of the Option, the date that is thirty days following Participant's Termination of Service for any reason other than as a result of Participant's discharge by the Company for Cause, or such shorter period as may be determined by the Administrator.

5. ***Transferability***. The Option shall not be sold, assigned, transferred, pledged or otherwise encumbered by Participant, either voluntarily or by operation of law, except by will or the laws of descent and distribution, and, during the life of the Participant, the Option shall be exercisable only by the Participant.

6. ***Restrictive Legends and Stop-Transfer Orders***.

(a) *Legends*. Participant understands and agrees that the Company shall cause any certificates issued evidencing the Shares to have the legends set forth below or legends substantially equivalent thereto, together with any other legends that may be required by Applicable Laws:

> THE SHARES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED ("ACT"), NOR HAVE THEY BEEN REGISTERED OR

QUALIFIED UNDER THE SECURITIES LAWS OF ANY STATE. NO TRANSFER OF SUCH SECURITIES WILL BE PERMITTED UNLESS A REGISTRATION STATEMENT UNDER THE ACT IS IN EFFECT AS TO SUCH TRANSFER, THE TRANSFER IS MADE IN ACCORDANCE WITH RULE 144 UNDER THE ACT, OR IN THE OPINION OF COUNSEL (WHICH MAY BE COUNSEL FOR THE COMPANY) REGISTRATION UNDER THE ACT IS UNNECESSARY IN ORDER FOR SUCH TRANSFER TO COMPLY WITH THE ACT AND WITH APPLICABLE STATE SECURITIES LAWS.

THE SHARES REPRESENTED BY THIS CERTIFICATE MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY. SUCH TRANSFER RESTRICTIONS ARE BINDING ON TRANSFEREES OF THESE SHARES.

(b) *Stop Transfer Orders*. Participant agrees that, in order to ensure compliance with the restrictions referred to in the Plan and this Agreement, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) *Impermissible Transfers Void*. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred. Any transfer or attempted transfer of the Option not in accordance with the terms of this Agreement shall be void.

7. ***Taxes***. Participant understands that Participant may suffer adverse tax consequences as a result of Participant's purchase or disposition of the Shares. Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the purchase or disposition of the Shares and that Participant is not relying on the Company for any tax advice. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Participant understands that Participant (and not the Company) shall be responsible for Participant's tax liability that may arise as a result of the transactions contemplated by this Agreement.

8. ***Miscellaneous***.

(a) *No Right To Employment or Other Status.* No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan or this Agreement.

(b) *Notices*. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal executive offices, and any notice to be given to Participant shall be addressed to Participant at the most-recent physical or email address for Participant listed in the Company's personnel records. By a

notice given pursuant to this Section 8(b), either party may hereafter designate a different address for notices to be given to that party. Any notice which is required to be given to Participant shall, if Participant is then deceased, be given to the person entitled to exercise his or her Option by written notice under this Section 8(b). Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

(c) *Successors and Assigns*. The Company may assign any of its rights under this Agreement and the Exercise Notice to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

(d) *Severability*. In the event any portion of the Plan or this Agreement or any action taken pursuant thereto shall be held illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining parts of the Plan and this Agreement, and the Plan and this Agreement shall be construed and enforced as if the illegal or invalid provisions had not been included, and the illegal or invalid action shall be null and void.

(e) *Entire Agreement; Governing Documents*. The Plan, the Grant Notice and this Agreement (including all Exhibits thereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof. In the event of any contradiction between the Plan and this Agreement or any other written agreement between a Participant and the Company that has been approved by the Administrator, the terms of the Plan shall govern. Participant hereby agrees to execute such further instruments and to take such further action as the Company requests to carry out the purposes and intent of this Agreement and the Plan, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements in accordance with Section 10(o) of the Plan.

(f) *Governing Law*. The provisions of the Plan and all Awards made thereunder, including the Option, shall be governed by and interpreted in accordance with the laws of the State of Delaware, disregarding choice-of-law principles of the law of any state that would require the application of the laws of a jurisdiction other than such state.

(g) *Titles and Headings*. The titles and headings of the Sections in this Agreement are for convenience of reference only and, in the event of any conflict, the text of this Agreement, rather than such titles or headings, shall control.

EXHIBIT B

TO STOCK OPTION GRANT NOTICE

FORM OF EXERCISE NOTICE

Effective as of today, _____, _____, the undersigned *(*"***Participant***") hereby elects to exercise Participant's option to purchase _____ Shares of HilleVax, Inc. (the "***Company***") under and pursuant to the HilleVax, Inc. 2021 Equity Incentive Plan (the "***Plan***") and the Stock Option Grant Notice and Stock Option Agreement dated _____, ____ (the "***Agreement***"). Capitalized terms used herein without definition shall have the meanings given in the Agreement.

Grant Date:	_____
Number of Shares as to which Option is Exercised:	_____
Exercise Price per Share:	$_____
Total Exercise Price:	$_____
Certificate to be issued in name of:	_____
Cash Payment delivered herewith:	$_____ (Representing the full Exercise Price for the Shares, as well as any applicable withholding tax)

Type of Option: ☐ Incentive Stock Option ☐ Non-Qualified Stock Option

1. ***Representations of Participant***. Participant acknowledges that Participant has received, read and understood the Plan and the Agreement. Participant agrees to abide by and be bound by their terms and conditions.

2. ***Tax Consultation***. Participant understands that Participant may suffer adverse tax consequences as a result of Participant's purchase or disposition of the Shares. Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the purchase or disposition of the Shares and that Participant is not relying on the Company for any tax advice. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Participant understands that Participant (and not the Company) shall be responsible for Participant's tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

3. ***Participant Representations***. Participant hereby makes the following certifications and representations with respect to the Shares listed above:

(a) Participant is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Shares. Participant is acquiring these Shares for investment for Participant's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act.

(b) Participant acknowledges and understands that the Shares constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature

of Participant's investment intent as expressed herein. Participant understands that the Shares must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Participant further acknowledges and understands that the Company is under no obligation to register the Shares. Participant understands that the certificate evidencing the Shares will be imprinted with a legend which prohibits the transfer of the Shares unless they are registered or such registration is not required in the opinion of counsel satisfactory to the Company and any other legend required under Applicable Laws.

(c) Participant is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. In the event the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, ninety days thereafter (or such longer period as any market stand-off agreement may require) the securities exempt under Rule 701 may be resold, subject to the satisfaction of certain of the conditions specified by Rule 144.

(d) In the event that the Company does not qualify under Rule 701 at the time of grant of the Option, then the securities may be resold in certain limited circumstances subject to the provisions of Rule 144.

(e) Participant further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Participant understands that no assurances can be given that any such other registration exemption will be available in such event.

4. ***Further Instruments***. Participant hereby agrees to execute such further instruments and to take such further action as the Company requests to carry out the purposes and intent of this Agreement and the Plan, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements in accordance with Section 10(o) of the Plan.

5. ***Notices***. Any notice required or permitted hereunder shall be given in accordance with the provisions set forth in Section 8(b) of the Agreement.

6. ***Entire Agreement***. The Plan and Agreement are incorporated herein by reference. This Notice, the Plan and the Agreement constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

ACCEPTED BY: **HILLEVAX, INC.**		**SUBMITTED BY** **PARTICIPANT:**	
By:		By:	
Print Name:		Print Name:	
Title:			

HILLEVAX, INC.

2021 EQUITY INCENTIVE PLAN

RESTRICTED STOCK GRANT NOTICE AND
RESTRICTED STOCK AGREEMENT

HilleVax, Inc. (the "***Company***"), pursuant to its 2021 Equity Incentive Plan (the "***Plan***"), hereby grants to Participant the number of shares of the Company's Common Stock (referred to herein as "***Shares***") set forth below. This Restricted Stock award (this "***Award***") is subject to all of the terms and conditions as set forth herein and in the Restricted Stock Agreement attached hereto as Exhibit A (the "***Agreement***") and the Plan, each of which is incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Restricted Stock Grant Notice ("***Grant Notice***") and the Agreement.

Participant:	_____
Grant Date:	_____
Vesting Commencement Date:	_____
Total Number of Shares of Restricted Stock:	_____
Vesting Schedule:	The Shares shall vest and be released from the "***Forfeiture Restriction***" (as defined in Section 2(a) of the Agreement) as follows: [*To be specified in individual agreements*]

By his or her signature and the Company's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Agreement and this Grant Notice. Participant has reviewed the Agreement, the Plan and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice, the Agreement and the Plan. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator of the Plan upon any questions arising under the Plan or the Agreement. Participant shall also execute and deliver to the Company the stock assignment duly endorsed in blank, attached to this Grant Notice as Exhibit B (the "***Stock Assignment***"). If Participant is married, his or her spouse has signed the Consent of Spouse attached to this Grant Notice as Exhibit C.

HILLEVAX, INC.

By: _____
Print Name: _____
Title: _____

PARTICIPANT

By: _____
Print Name: _____
State of Residence: _____

EXHIBIT A

TO RESTRICTED STOCK GRANT NOTICE

RESTRICTED STOCK AGREEMENT

Pursuant to the Grant Notice to which this Agreement is attached, the Company has granted to Participant the number of Shares indicated in the Grant Notice.

1. ***Grant of Restricted Stock.***

(a) *Grant of Restricted Stock.* In consideration of Participant's past and/or continued employment with or service to the Company or a parent or subsidiary of the Company and for other good and valuable consideration, which the Administrator has determined exceeds the par value per Share, effective as of the Grant Date set forth in the Grant Notice, the Company irrevocably grants to Participant the Shares set forth in the Grant Notice, upon the terms and conditions set forth in the Plan and this Agreement.

(b) *Issuance of Shares.* On the Grant Date, the Company shall issue the Shares to Participant and shall (i) cause a share certificate or certificates representing the Shares to be registered in the name of Participant, or (ii) cause such Shares to be held in book entry form. If a share certificate is issued, it shall be delivered to and held in custody by the Company and shall bear the restrictive legends required by Section 4(a) below. If the Shares are held in book entry form, then such entry will reflect that the Shares are subject to the restrictions of this Agreement.

(c) *Rights as a Stockholder*. Except as otherwise provided herein, upon issuance of the Shares by the Company to Participant (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), Participant shall have all the rights of a stockholder with respect to said Shares, including the right to receive any cash or stock dividends or other distributions paid to or made with respect to the Shares, subject to the restrictions described in the following sentence, which restrictions shall lapse when the Unreleased Shares are released from the Forfeiture Restriction as set forth in Section 2. Unless otherwise provided by the Administrator, if any dividends or distributions are paid in cash or shares, or consist of a dividend or distribution to holders of Common Stock of property, the cash, shares or other property paid or made with respect to Unreleased Shares will be retained in custody by the Company (without interest) (the "***Retained Distributions***") and subject to the same forfeiture and transferability restrictions as the Unreleased Shares with respect to which they were paid or made and shall automatically be forfeited to the Company for no consideration in the event of the forfeiture of the Unreleased Shares with respect to which they were paid pursuant to the Forfeiture Restriction. Any Retained Distributions held by the Company that were paid on those Unreleased Shares as to which the Forfeiture Restriction and transfer restrictions lapse or are removed shall also be released to Participant at the time of such lapse or removal. In no event shall a Retained Distribution be paid with respect to Unreleased Shares later than the end of the calendar year in which the corresponding dividends or distributions are paid to holders of Common Stock or, if later, the 15th day of the third month following the later of (a) the date the dividends or distributions are paid to holders of Common Stock and (b) the date the Unreleased Shares with respect to which the Retained Distributions are paid vest. Participant shall enjoy rights as a stockholder until such time as Participant disposes of the Shares or the Company and/or its assignee(s) exercises the Right of First Refusal under the Plan. Upon such exercise, Participant shall have no further rights as a holder of the Shares except the right to receive payment for the Shares so purchased in accordance with the provisions of the Plan and this Agreement, and Participant shall forthwith cause the certificate(s), if any issued, evidencing the Shares so purchased to be surrendered to the Company for transfer or cancellation.

2. ***Restrictions on Shares***.

(a) *Forfeiture Restriction*. Subject to the provisions of Section 2(b) below, in the event of Participant's Termination of Service for any reason, all of the Shares which, from time to time, have not yet been released from the Forfeiture Restriction (together with and any Retained Distributions paid thereon pursuant to Section 1(c) and held by the Company, the "***Unreleased Shares***") shall thereupon be forfeited immediately and without any further action by the Company (the "***Forfeiture Restriction***"). Upon the occurrence of such forfeiture, the Company shall become the legal and beneficial owner of the Unreleased Shares, and all rights and interests therein or relating thereto, and the Company shall have the right to retain and transfer to its own name the number of Unreleased Shares being forfeited by Participant. The Unreleased Shares shall be held by the Company in accordance with Section 3 until the Shares are forfeited as provided in this Section 2(a), until such Unreleased Shares are fully released from the Forfeiture Restriction, or until such time as this Agreement no longer is in effect. Participant hereby authorizes and directs the Secretary of the Company, or such other person designated by the Administrator, to transfer the Unreleased Shares which have been forfeited pursuant to this Section 2(a) from Participant to the Company.

(b) *Release of Shares from Forfeiture Restriction*. The Shares shall be released from the Forfeiture Restriction in accordance with the vesting schedule set forth in the Grant Notice. As soon as administratively practicable following the release of any Shares from the Forfeiture Restriction, the Company shall, as applicable, either deliver to Participant the certificate or certificates representing such Shares in the Company's possession belonging to Participant, or, if the Shares are held in book entry form, then the Company shall remove the notations on the book form. Participant (or the beneficiary or personal representative of Participant in the event of Participant's death or incapacity, as the case may be) shall deliver to the Company any representations or other documents or assurances as the Company or its representatives deem necessary or advisable in connection with any such delivery.

(c) *Transferability*. Except as otherwise permitted by the Administrator, the Unreleased Shares shall not be sold, assigned, transferred, pledged or otherwise encumbered by Participant, either voluntarily or by operation of law, except by will or the laws of descent and distribution.

3. ***Escrow***. To insure the availability for delivery of the Unreleased Shares in the event of the application of the Forfeiture Restriction, Participant appoints the Secretary of the Company, or such other person designated by the Administrator from time to time as escrow agent, as its attorney-in-fact to sell, assign and transfer unto the Company, such Unreleased Shares, if any, forfeited pursuant to the Forfeiture Restriction, together with any Retained Distributions paid thereon pursuant to Section 1(c) and held by the Company, and shall deliver and deposit with the Secretary of the Company, or such other person designated by the Administrator from time to time, the share certificate(s) representing the Shares, together with the Stock Assignment. The Unreleased Shares and Stock Assignment (and any Retained Distributions) shall be held by the Secretary, or such other person designated by the Administrator from time to time, in escrow, until the Shares are forfeited as provided in Section 2(a), until such Shares are fully released from the Forfeiture Restriction or until such time as this Agreement no longer is in effect. Upon release of the Unreleased Shares from the Forfeiture Restriction, the escrow agent shall as soon as reasonably practicable deliver to Participant the certificate or certificates representing such Shares in the escrow agent's possession belonging to Participant, and the escrow agent shall be discharged of all further obligations hereunder. The Company, or its designee, shall not be liable for any act it may do or omit to do with respect to holding the Shares (or any Retained Distributions) in escrow and while acting in good faith and in the exercise of its judgment.

4. ***Restrictive Legends and Stop-Transfer Orders***.

(a) *Legends*. Participant understands and agrees that the Company shall cause any certificates issued evidencing the Shares to have the legends set forth below or legends substantially equivalent thereto, together with any other legends that may be required by Applicable Laws:

> THE SHARES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED ("ACT"), NOR HAVE THEY BEEN REGISTERED OR QUALIFIED UNDER THE SECURITIES LAWS OF ANY STATE. NO TRANSFER OF SUCH SECURITIES WILL BE PERMITTED UNLESS A REGISTRATION STATEMENT UNDER THE ACT IS IN EFFECT AS TO SUCH TRANSFER, THE TRANSFER IS MADE IN ACCORDANCE WITH RULE 144 UNDER THE ACT, OR IN THE OPINION OF COUNSEL (WHICH MAY BE COUNSEL FOR THE COMPANY) REGISTRATION UNDER THE ACT IS UNNECESSARY IN ORDER FOR SUCH TRANSFER TO COMPLY WITH THE ACT AND WITH APPLICABLE STATE SECURITIES LAWS.
>
> THE SHARES REPRESENTED BY THIS CERTIFICATE MAY BE SUBJECT TO FORFEITURE PURSUANT TO, AND MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH, THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY. SUCH FORFEITURE AND/OR TRANSFER RESTRICTIONS ARE BINDING ON TRANSFEREES OF THESE SHARES.

(b) *Stop Transfer Orders*. Participant agrees that, in order to ensure compliance with the restrictions referred to in the Plan and this Agreement, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) *Impermissible Transfers Void*. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred. Any transfer or attempted transfer of the Shares not in accordance with the terms of this Agreement shall be void.

5. ***Taxes***.

(a) *Tax Consequences of Award*. Participant understands that Participant may suffer adverse tax consequences as a result of Participant's receipt of, vesting in or disposition of the Shares. Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the receipt of the Shares and that Participant is not relying on the Company for any tax advice. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Participant understands that Participant (and not the Company) shall be responsible for Participant's tax liability that may arise as a result of the transactions contemplated by this Agreement.

(b) *Section 83(b) Election for Unreleased Shares*. Participant acknowledges that, unless an election is filed by Participant with the Internal Revenue Service and, if necessary, the proper state taxing authorities, within thirty days of the receipt of the Unreleased Shares, electing pursuant to Section 83(b) of the Code (and similar state tax provisions if applicable) to be taxed currently on their Fair Market Value on the date of issuance, there will be a recognition of taxable income to the Participant equal to the Fair Market Value of the Unreleased Shares at the time the Forfeiture Restriction lapses. Participant represents that Participant has consulted any tax consultant(s) Participant deems advisable in connection with the purchase of the Shares or the filing of the election under Section 83(b) of the Code and similar tax provisions.

PARTICIPANT ACKNOWLEDGES THAT IT IS PARTICIPANT'S SOLE RESPONSIBILITY AND NOT THE COMPANY'S TO TIMELY FILE THE ELECTION UNDER SECTION 83(B) OF THE CODE, AND THE COMPANY AND ITS REPRESENTATIVES SHALL HAVE NO OBLIGATION OR AUTHORITY TO MAKE THIS FILING ON PARTICIPANT'S BEHALF.

(b) *Tax Withholding*. The Company shall have the authority and the right to deduct or withhold, or require Participant to remit to the Company, an amount sufficient to satisfy federal, state, local and foreign taxes (including Participant's employment tax obligation) required by Applicable Law to be withheld with respect to any taxable event concerning Participant arising as a result of the grant or vesting of the Shares or otherwise under this Agreement, including, without limitation, the authority to deduct such amounts from other compensation payable to Participant by the Company.

6. ***Participant Representations***. Participant hereby makes the following certifications and representations with respect to the Shares listed above:

(a) Participant is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Shares. Participant is acquiring these Shares for investment for Participant's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act.

(b) Participant acknowledges and understands that the Shares constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Participant's investment intent as expressed herein. Participant understands that the Shares must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Participant further acknowledges and understands that the Company is under no obligation to register the Shares. Participant understands that the certificate evidencing the Shares will be imprinted with a legend which prohibits the transfer of the Shares unless they are registered or such registration is not required in the opinion of counsel satisfactory to the Company and any other legend required under Applicable Laws.

(c) Participant is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. In the event the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, ninety days thereafter (or such longer period as any market stand-off agreement may require) the securities exempt under Rule 701 may be resold, subject to the satisfaction of certain of the conditions specified by Rule 144.

(d) In the event that the Company does not qualify under Rule 701 at the time of issuance of the Shares, then the securities may be resold in certain limited circumstances subject to the provisions of Rule 144.

(e) Participant further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Participant understands that no assurances can be given that any such other registration exemption will be available in such event.

7. ***Miscellaneous***.

(a) *No Right To Employment or Other Status.* No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with Participant free from any liability or claim under the Plan or this Agreement.

(b) *Notices*. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal executive offices, and any notice to be given to Participant shall be addressed to Participant at the most-recent physical or email address for Participant listed in the Company's personnel records. By a notice given pursuant to this Section 7(b), either party may hereafter designate a different address for notices to be given to that party. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

(c) *Successors and Assigns*. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

(d) *Severability*. In the event any portion of the Plan or this Agreement or any action taken pursuant hereto shall be held illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining parts of the Plan and this Agreement, and the Plan and this Agreement shall be construed and enforced as if the illegal or invalid provisions had not been included, and the illegal or invalid action shall be null and void.

(e) *Entire Agreement; Governing Documents*. The Plan, the Grant Notice and this Agreement (including all Exhibits thereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof. In the event of any contradiction between the Plan and this Agreement or any other written agreement between a Participant and the Company that has been approved by the Administrator, the terms of the Plan shall govern. Participant hereby agrees to execute such further instruments and to take such further action as the Company requests to carry out the purposes and intent of this Agreement and the Plan, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that

shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements in accordance with Section 10(o) of the Plan.

(f) *Governing Law*. The provisions of the Plan and all Awards made thereunder, including the Shares, shall be governed by and interpreted in accordance with the laws of the State of Delaware, disregarding choice-of-law principles of the law of any state that would require the application of the laws of a jurisdiction other than such state.

(g) *Titles and Headings*. The titles and headings of the Sections in this Agreement are for convenience of reference only and, in the event of any conflict, the text of this Agreement, rather than such titles or headings, shall control.

EXHIBIT B

TO STOCK OPTION GRANT NOTICE

STOCK ASSIGNMENT

[*See instructions below*]

FOR VALUE RECEIVED I, , hereby sell, assign and transfer unto the shares of the Common Stock of HilleVax, Inc. registered in my name on the books of said corporation represented by Certificate No. and do hereby irrevocably constitute and appoint to transfer the said stock on the books of the within named corporation with full power of substitution in the premises.

This Assignment Separate from Certificate may be used only in accordance with the Restricted Stock Grant Notice and Restricted Stock Agreement between HilleVax, Inc. and the undersigned dated .

Dated: _____, ____

Signature: _____
[Name]

INSTRUCTIONS: Please do not fill in any blanks other than the signature line. The purpose of this assignment is to enable the Company to enforce the Forfeiture Restriction, as set forth in the Restricted Stock Grant Notice and Restricted Stock Agreement, without requiring additional signatures on the part of Participant.

EXHIBIT C

TO RESTRICTED STOCK GRANT NOTICE

CONSENT OF SPOUSE

I, , spouse of , have read and approve the foregoing Restricted Stock Grant Notice and Restricted Stock Agreement dated , between my spouse and HilleVax, Inc. In consideration of issuing to my spouse the shares of the Common Stock of HilleVax, Inc. set forth in the Restricted Stock Grant Notice and Restricted Stock Agreement, I hereby appoint my spouse as my attorney-in-fact in respect to the exercise of any rights under the Restricted Stock Grant Notice and Restricted Stock Agreement and agree to be bound by the provisions of the Restricted Stock Grant Notice and Restricted Stock Agreement insofar as I may have any rights in said Agreement or any shares issued pursuant thereto under the community property laws or similar laws relating to marital property in effect in the state of our residence as of the date of the signing of the Restricted Stock Grant Notice and Restricted Stock Agreement.

Dated: _____, ____ Signature of Spouse: _____

HilleVax, Inc.

February 8, 2021

Robert Hershberg

Re: Employment Offer Letter

Dear Mr. Hershberg:

HilleVax, Inc. (the "***Company***") is pleased to offer you a position on the terms set forth in this letter (this "***Agreement***"), effective as of February 8, 2021.

- **DUTIES.** You shall serve and shall perform such duties as are customarily associated with the position of President and Chief Executive Officer and such other duties as are assigned to you by the Board of Directors of the Company (the "***Board***"). You shall perform your services from your home office in Seattle, Washington. This is an exempt position. You shall devote at least seventy percent (70%) of your working time and attention to the business affairs of the Company.
- **COMPENSATION.** Your initial compensation will be as follows:
  - **BASE SALARY.** You will receive an annual base salary of $500,000 for all hours worked, less taxes, authorized withholdings and other legally required deductions; provided, however, that upon the closing of the Transactions (as defined below), your annual base salary will be adjusted to $400,000. You will be paid in accordance with the Company's customary payroll procedures as established and modified from time-to-time.
  - **ANNUAL BONUS.** In addition to your base salary, you may be eligible to earn, for each fiscal year of the Company ending during the term of your employment with the Company, an annual cash performance bonus under the Company's bonus plan, as approved from time to time by the Board. Your target annual bonus will be thirty-five percent (35%) of your base salary actually paid for the year to which such annual bonus relates. Your actual annual bonus will be determined on the basis of your and/or the Company's attainment of financial or other performance criteria established by the Board or its designee in accordance with the terms and conditions of such bonus plan. You must be employed by the Company on the date of payment of such annual bonus in order to be eligible to receive such annual bonus. You hereby acknowledge and agree that nothing contained herein confers upon you any right to an annual bonus in any year, and that whether the Company pays you an annual bonus and the amount of any such annual bonus will be determined by the Company in its sole discretion. Your annual bonus for 2021 will be prorated to reflect the portion of the year following the closing of the Transactions.
  - **BENEFITS.** You shall be eligible to participate in all of the employee benefit plans or programs the Company generally makes available to similarly situated employees, pursuant to the terms and conditions of such plans. You will also be entitled to vacation and/or paid time off each year in accordance with Company

policy and all holidays observed by the Company each year. The Company reserves the right to change compensation and benefits provided to its employees from time to time in its discretion.

- **WITHHOLDING.** All amounts payable to you will be subject to appropriate payroll deductions and withholdings.
- **TRANSACTIONS**. For purposes of this Agreement, the "***Transactions***" means both (a) the closing of the Company's proposed license agreement to be entered into between the Company and Takeda Pharmaceutical Company Limited, or any of its affiliates, related to Takeda's norovirus vaccine candidate (coded by Takeda Pharmaceutical Company Limited as TAK-214) (the "***License Agreement***") and (b) the consummation by the Company of an equity or debt financing resulting in gross proceeds to the Company of at least $75,000,000 (the "***Financing***").

- **EXPENSES.** You will be entitled to reimbursement for all ordinary and reasonable out-of-pocket business expenses which are reasonably incurred by you in furtherance of the Company's business, with appropriate documentation and in accordance with the Company's standard policies.

- **SEVERANCE.**
  - **ACCRUED OBLIGATIONS.** If your employment terminates for any reason, you are entitled to your fully earned but unpaid base salary, through the date such termination is effective at the rate then in effect, and all other amounts or benefits to which you are entitled under any compensation, retirement or benefit plan of the Company at the time of your termination of employment in accordance with the terms of such plans, including, without limitation, any accrued but unpaid paid time off and any continuation of benefits required by applicable law (the "***Accrued Obligation***s").
  - **NON-CIC SEVERANCE BENEFITS.** In addition to your Accrued Obligations, subject to your continued compliance with the Proprietary Information and Inventions Assignment Agreement, as described below, and the effectiveness of your Release, as defined below, if, following the closing of the Transactions, your employment is involuntarily terminated by the Company without Cause (and other than by reason of your death or disability) or you resign for Good Reason (either such termination, a "***Qualifying Termination***"), and such Qualifying Termination does not occur during the Change in Control Period (as defined below), you shall be entitled to receive, as the sole severance benefits to which you are entitled, the benefits provided below (the "***Non-CIC Severance Benefits***"):
    - An amount equal to 9 months' base salary (at the rate in effect immediately prior to the date of your termination of employment, or in the case of a material diminution in your base salary which would give rise to Good Reason for your resignation, the base salary in effect prior to such material diminution), which amount will be paid over a period of 9 months following your termination of employment in accordance with the Company's standard payroll practices, with the first such installment occurring on the first regularly-scheduled payroll date following the date your Release becomes effective (which first installment will include any

installments that would have occurred prior to such date but for the fact your Release was not yet effective);

- An amount equal to your Target Bonus for the calendar year in which your termination date occurs, prorated for the portion of the calendar year in which your termination date occurs that has elapsed prior to such termination, plus any unpaid annual bonus for the calendar year prior to the year in which your Qualifying Termination occurs, to the extent you are entitled to such bonus and if such bonus has not already been paid, which amount(s) will be paid in a lump sum on the first regularly- scheduled payroll date following the date your Release becomes effective, but in no event more than 75 days following your termination date;

- For the 9 month period beginning on the date of your termination of employment (or, if earlier, (a) the date on which the applicable continuation period under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("***COBRA***") expires, or (b) the date on which you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self- employment) (such period, the "***COBRA Coverage Period***"), if you and/or your eligible dependents who were covered under the Company's health insurance plans as of the date of your termination of employment elect to have COBRA coverage and are eligible for such coverage, the Company shall pay for or reimburse you on a monthly basis for an amount equal to the monthly premium you and/or your covered dependents, as applicable, are required to pay for continuation coverage pursuant to COBRA for you and/or your eligible dependents, as applicable, who were covered under the Company's health plans as of the date of your termination of employment (calculated by reference to the premium as of the date of your termination of employment) less (ii) the amount you would have had to pay to receive group health coverage for you and/or your covered dependents, as applicable, based on the cost sharing levels in effect on the date of your termination of employment. If any of the Company's health benefits are self-funded as of the date of your termination of employment, or if the Company cannot provide the foregoing benefits in a manner that is exempt from Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"), or that is otherwise compliant with applicable law (including, without limitation, Section 2716 of the Public Health Service Act), instead of providing the payments or reimbursements as set forth above, the Company shall instead pay to you the foregoing monthly amount as a taxable monthly payment for the COBRA Coverage Period (or any remaining portion thereof). You shall be solely responsible for all matters relating to continuation of coverage pursuant to COBRA, including, without limitation, the election of such coverage and the timely payment of premiums. You shall notify the Company immediately if you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self-employment; and

- Notwithstanding anything else set forth herein, in the Company's equity plan or in any award agreement, such number of the unvested Stock

Awards (as defined below) then held by you will vest on the effective date of your Release as would have vested during the 9-month period following your Qualifying Termination had you remained employed by the Company during such period. The foregoing provisions are hereby deemed to be a part of each Stock Award and to supersede any less favorable provision in any agreement or plan regarding such Stock Award, and shall be in addition to the accelerated vesting of the Founders' Shares under the Stock Restriction Agreement.

- **CIC SEVERANCE BENEFITS.** In addition to your Accrued Obligations, subject to your continued compliance with the Proprietary Information and Inventions Assignment Agreement, as described below, and the effectiveness of your Release, if your Qualifying Termination occurs following the closing of the Transactions and during the Change in Control Period, you shall be entitled to receive, as the sole severance benefits to which you are entitled and in lieu of any Non-CIC Severance Benefits, the benefits provided below (the "***CIC Severance Benefits***") (and for the avoidance of doubt: (a) in no event will you be entitled to both the Non-CIC Severance Benefits and the CIC Severance Benefits, and (b) if the Company has commenced providing the Non-CIC Severance Benefits to you prior to the date that you become eligible to receive the CIC Severance Benefits, the Non-CIC Severance Benefits previously provided to you shall reduce the CIC Severance Benefits provided below by the amount of such Non-CIC Severance Benefits already provided to you):
    - An amount equal to 12 months' base salary (at the rate in effect immediately prior to the date of your termination of employment, or in the case of a material diminution in your base salary which would give rise to Good Reason for your resignation, the base salary in effect prior to such material diminution), which amount will be paid over a period of 12 months following your termination of employment in accordance with the Company's standard payroll practices, with the first such installment occurring on the first regularly-scheduled payroll date following the date your Release becomes effective (which first installment will include any installments that would have occurred prior to such date but for the fact your Release was not yet effective);
    - An amount equal to your Target Bonus for the calendar year in which your termination date occurs, prorated for the portion of the calendar year in which your termination date occurs that has elapsed prior to such termination, plus any unpaid annual bonus for the calendar year prior to the year in which your Qualifying Termination occurs, to the extent you are entitled to such bonus and if such bonus has not already been paid, which amount(s) will be paid in a lump sum on the first regularly- scheduled payroll date following the date your Release becomes effective, but in no event more than 75 days following your termination date;
    - For the 12 month period beginning on the date of your termination of employment (or, if earlier, (a) the date on which the applicable continuation period under COBRA expires, or (b) the date on which you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self-employment) (such period,

the "***CIC COBRA Coverage Period***"), if you and/or your eligible dependents who were covered under the Company's health insurance plans as of the date of your termination of employment elect to have COBRA coverage and are eligible for such coverage, the Company shall pay for or reimburse you on a monthly basis for an amount equal to (i) the monthly premium you and/or your covered dependents, as applicable, are required to pay for continuation coverage pursuant to COBRA for you and/or your eligible dependents, as applicable, who were covered under the Company's health plans as of the date of your termination of employment (calculated by reference to the premium as of the date of your termination of employment) less (ii) the amount you would have had to pay to receive group health coverage for you and/or your covered dependents, as applicable, based on the cost sharing levels in effect on the date of your termination of employment. If any of the Company's health benefits are self-funded as of the date of your termination of employment, or if the Company cannot provide the foregoing benefits in a manner that is exempt from Section 409A of Code, or that is otherwise compliant with applicable law (including, without limitation, Section 2716 of the Public Health Service Act), instead of providing the payments or reimbursements as set forth above, the Company shall instead pay to you the foregoing monthly amount as a taxable monthly payment for the CIC COBRA Coverage Period (or any remaining portion thereof). You shall be solely responsible for all matters relating to continuation of coverage pursuant to COBRA, including, without limitation, the election of such coverage and the timely payment of premiums. You shall notify the Company immediately if you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self-employment; and

- Notwithstanding anything else set forth herein, in the Company's equity plan or in any award agreement, any unvested Stock Awards then held by you will vest on the effective date of your Release. The foregoing provisions are hereby deemed to be a part of each Stock Award and to supersede any less favorable provision in any agreement or plan regarding such Stock Award, and shall be in addition to the accelerated vesting of the Founders' Shares under the Stock Restriction Agreement.

- As a condition to your receipt of any post-termination payments and benefits pursuant to the preceding paragraphs, you shall execute and not revoke a separation agreement containing a release of all claims in favor of the Company, a post-termination non-competition covenant generally consistent with Section 6.1(a) of the Proprietary Information and Inventions Assignment Agreement, and other customary terms (the "***Release***"), in a form reasonably acceptable to the Company in order to effectuate a valid general release of claims. In the event the Release does not become effective within the 60-day period following the date of your termination of employment, you will not be entitled to the aforesaid payments and benefits.

- For purposes of this Agreement, "***Cause***" means any of the following: (a) your commission of an act of fraud, embezzlement or dishonesty, or the commission of some other illegal act by you, that has a demonstrable adverse impact on the

Company or any successor or affiliate thereof; (b) your conviction of, or plea of "guilty" or "no contest" to, a non-vehicular felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (c) any intentional, unauthorized use or disclosure by you of confidential information or trade secrets of the Company or any successor or affiliate thereof; (d) your gross negligence, insubordination or material violation of any duty of loyalty to the Company or any successor or affiliate thereof, or any other demonstrable material misconduct on your part; (e) your ongoing and repeated failure or refusal to perform or neglect of your duties as required by this Agreement or your ongoing and repeated failure or refusal to comply with the reasonable and lawful instructions given to you by the Board, which failure, refusal or neglect continues for 15 days following your receipt of written notice from the Board stating with specificity the nature of such failure, refusal or neglect; provided that it is understood that this clause (e) shall not permit the Company to terminate your employment for Cause solely because of (i) your failure to meet specified performance objectives or achieve a specific result or outcome, or (ii) Company's dissatisfaction with the quality of services provided by you in the good faith performance of your duties to the Company; or (f) your willful, material breach of any material Company policy or any material provision of this Agreement or the Proprietary Information and Inventions Assignment Agreement. Prior to the determination that "Cause" under clauses (d), (e) or (f) has occurred, the Company shall (i) provide to you in writing, in reasonable detail, the reasons for the determination that such "Cause" exists, (ii) other than with respect to clause (e) above which specifies the applicable period of time for you to remedy your breach, afford you a reasonable opportunity to remedy any such breach, (iii) provide you an opportunity to be heard prior to the final decision to terminate your employment hereunder for such "Cause" and (iv) make any decision that such "Cause" exists in good faith. The foregoing definition shall not in any way preclude or restrict the right of the Company or any successor or affiliate thereof to discharge or dismiss you for any other acts or omissions, but such other acts or omissions shall not be deemed, for purposes of this Agreement, to constitute grounds for termination for Cause.

- For purposes of this Agreement, "***Change in Control***" shall mean (a) a merger or consolidation of the Company with or into any other corporation or other entity or person, (b) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets, or (c) any other transaction, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (i) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the merger or consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (ii) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the

Company's assets to an affiliate of the Company; (iii) an initial public offering of any of the Company's securities or any other transaction or series of related transactions principally for bona fide equity financing purposes; (iv) a reincorporation of the Company solely to change its jurisdiction; (v) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction; or (vi) the closing of the Transactions. If a Change in Control would give rise to a payment or settlement event with respect to any payment or benefit that constitutes "nonqualified deferred compensation," the transaction or event constituting the Change in Control must also constitute a "change in control event" (as defined in Treasury Regulation §1.409A-3(i)(5)) in order to give rise to the payment or settlement event for such payment or benefit, to the extent required by Section 409A.

- For purposes of this Agreement, "***Change in Control Period***" means the 24 months following a Change in Control.
- For purposes of this Agreement, "***Good Reason***" means any of the following without your written consent: (a) a material diminution in your authority, duties or responsibilities, including a requirement that you report to a corporate officer in lieu of the Board; (b) a material diminution in your base compensation (and you and the Company agree that any diminution of 10% or more shall be considered material for this purpose, regardless of whether such diminution occurs due to a single reduction or a series of reductions in your base compensation), unless such a reduction is imposed across-the-board to senior management of the Company; (c) a material change in the geographic location at which you must perform your duties (and you and the Company agree that a relocation of the geographic location at which you must perform your duties to a location that increases your one-way commute from your residence by more than 50 miles as compared to your principal place of employment prior to such relocation shall be considered material for this purpose); or (d) any other action or inaction that constitutes a material breach by the Company or any successor or affiliate of its obligations to you under this Agreement or the Stock Restriction Agreement. You must provide written notice to the Company of the occurrence of any of the foregoing events or conditions without your written consent within 6 months of the occurrence of such event. The Company or any successor or affiliate shall have a period of 30 days to cure such event or condition after receipt of written notice of such event from you. Your termination of employment by reason of resignation from employment with the Company for Good Reason must occur within 30 days following the expiration of the foregoing 30-day cure period.
- For purposes of this Agreement, "***Stock Awards***" means all stock options, restricted stock and such other awards granted pursuant to the Company's stock option and equity incentive award plans or agreements and any shares of stock issued upon exercise thereof (other than any shares (the "***Founders' Shares***") the vesting of which is governed by that certain Stock Restriction Agreement dated February 8, 2021, between you and the Company (the "***Stock Restriction Agreement***")). For the avoidance of doubt, your Qualifying Termination under this Agreement shall constitute a Qualifying Termination for purposes of the

Stock Restriction Agreement.

- To the extent applicable, this Agreement shall be interpreted in accordance with Section 409A of the Code and Department of Treasury regulations and other interpretive guidance issued thereunder. The intent of the parties is that payments and benefits under this Agreement comply with, or be exempt from Section 409A of the Code and, accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in compliance with such intention. To the extent that any provision in this Agreement is ambiguous as to its compliance with or exemption from Section 409A of the Code, the provision shall be read in such a manner that no payments payable under this Agreement shall be subject to an "additional tax" as defined in Section 409A(a)(1)(B) of the Code. For purposes of Section 409A of the Code, any right to a series of installment payments under this Agreement shall be treated as a right to a series of separate payments. For purposes of this Agreement, all references to your "termination of employment" shall mean your "separation from service" (as defined in Treasury Regulation Section 1.409A-1(h)) ("***Separation from Service***"). If you are a "specified employee" (as defined in Section 409A of the Code), as determined by the Company in accordance with Section 409A of the Code, on the date of your Separation from Service, to the extent that the payments or benefits under this Agreement are "non-qualified deferred compensation" subject to Section 409A of the Code and the delayed payment or distribution of all or any portion of such amounts to which you are entitled under this Agreement is required in order to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code, then such portion deferred pursuant to this paragraph shall be paid or distributed to you in a lump sum on the earlier of (a) the date that is 6 months and one day following your Separation from Service, (b) the date of your death or (c) the earliest date as is permitted under Section 409A of the Code. Any remaining payments due under this Agreement shall be paid as otherwise provided herein.
- To the extent that the payments or benefits under this Agreement are "non- qualified deferred compensation" subject to Section 409A of the Code, if the period during which you may deliver the Release required hereunder spans two calendar years, the payment of your post-termination benefits shall occur (or commence) on the later of (a) January 1 of the second calendar year, or (b) the first regularly-scheduled payroll date following the date your Release becomes effective.
- Any reimbursement of expenses or in-kind benefits payable under this Agreement shall be made in accordance with Treasury Regulation Section 1.409A-3(i)(1)(iv) and shall be paid on or before the last day of your taxable year following the taxable year in which you incurred the expenses. The amount of expenses reimbursed or in-kind benefits payable in one year shall not affect the amount eligible for reimbursement or in-kind benefits payable in any other taxable year of yours, and your right to reimbursement for such amounts shall not be subject to liquidation or exchange for any other benefit.

- **COMPANY POLICIES AND PROPRIETARY INFORMATION AND INVENTIONS ASSIGNMENT AGREEMENT.** As an employee of the Company, you shall be expected to abide by all of the Company's policies and procedures and the Company's employee handbook, if any. As a condition of your

employment, you agree to execute and abide by the terms of the Company's form of the Proprietary Information and Inventions Assignment Agreement, which shall survive termination of your employment with the Company and the termination of the Proprietary Information and Inventions Assignment Agreement. You acknowledge that a remedy at law for any breach or threatened breach by you of the provisions of the Proprietary Information and Inventions Assignment Agreement would be inadequate, and you therefore agree that the Company shall be entitled to injunctive relief in case of any such breach or threatened breach. The Company may modify, revoke, suspend or terminate any of the terms, plans, policies and/or procedures described in the employee handbook, if any, or as otherwise communicated to you, in whole or part, at any time, with or without notice.

- **EMPLOYMENT TERMS.** As a condition to your employment with the Company, you are required to (a) sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and (b) provide satisfactory proof of your identity as required by United States law.

- **OTHER AGREEMENTS.** You represent and agree that your performance of your duties for the Company shall not violate any agreements, obligations or understandings that you may have with any third party or prior employer. Without limiting the foregoing, you represent and agree that you are not bound by any non-compete or non-solicitation agreement or any other type of agreement that would prohibit your employment with the Company. You agree not to make any unauthorized disclosure or use, on behalf of the Company, of any confidential information belonging to any of your former employers. You also represent that you are not in unauthorized possession of any materials containing a third party's confidential and proprietary information. While employed by the Company, you will not engage in any business activity in competition with the Company nor make preparations to do so. In the event that you wish to undertake a business activity outside the scope of your employment by the Company, which activity you believe entails no conflict with the Company's activities, you agree to inform the Company of your intentions before the initiation of such outside business activity, and you furthermore agree to abide by the Company's decision as to whether or not there is no conflict. If, in the Company's sole determination, a conflict exists or is likely to develop, you agree not to undertake such outside business activity. Notwithstanding the foregoing, the Company expressly acknowledges and agrees to your continued services to Frazier Healthcare Partners and its other portfolio companies, and NSTG, Cajal Neuroscience, Adaptive Biotechnologies, Fate Therapeutics, Silverback Therapeutics, GuideTX, Nanostring Technologies, Recursion Pharmaceuticals, Danaher Corporation, Dragonfly Therapeutics, and Variant Bio, and further acknowledges and agrees that such continued services will not violate the terms of this Agreement.

- **AT-WILL EMPLOYMENT.** Your employment with the Company will be "at-will" at all times, including after your introductory, probationary period, meaning that either you or the Company will be entitled to terminate your employment at any time and for any reason, with or without cause. Any contrary representations that may have been made to you are superseded by this offer. This Agreement in no way represents a fixed-term employment contract. This is the full and complete agreement between you and the Company on this term. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and a duly authorized officer of the Company.

- **NON-INTERFERENCE.** While employed by the Company, and for one (1) year immediately following the date on which you terminate employment or otherwise cease providing services to the Company, you agree not to interfere with the business of the Company by (a) soliciting or attempting to solicit any employee or consultant of the Company to terminate such employee's or consultant's employment or service in order to become an employee, consultant or independent contractor to or for any other person or entity or (b) soliciting or attempting to solicit any vendor, supplier, customer or other person

or entity either directly or indirectly, to direct his, her or its purchase of the Company's products and/or services to any person, firm, corporation, institution or other entity in competition with the business of the Company. The foregoing restrictions shall not apply with respect to the bona fide hiring and firing of Company personnel to the extent such acts are part of your duties for Company. Your duties under this paragraph shall survive termination of your employment with the Company and the termination of this Agreement.

- **REASONABLENESS OF TERMS.** You agree that the terms contained in the "Other Agreements" and "Non-Interference" paragraphs above are reasonable in all respects and that the restrictions contained therein are designed to protect the Company against unfair competition. In the event a court determines that any of the terms or provisions of this Agreement are unreasonable, the court may limit the application of any provision or term, or modify any provision or term, and proceed to enforce this Agreement as so limited or modified.

- **GOVERNING LAW; JURISDICTION AND VENUE.** This Agreement, for all purposes, shall be construed in accordance with the laws of the State of Washington without regard to conflicts-of-law principles. Any action or proceeding by either party to enforce this Agreement shall be brought only in any state or federal court located in King County, Washington. The parties hereby irrevocably submit to the exclusive jurisdiction of such courts and waive the defense of inconvenient forum to the maintenance of any such action or proceeding in such venue.

- **SEVERABILITY.** Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

- **SUCCESSORS AND ASSIGNS.** This Agreement is intended to bind and inure to the benefit of and be enforceable by you and the Company, and their respective successors, assigns, heirs, executors and administrators, except that you may not assign any of your duties hereunder and you may not assign any of your rights hereunder, without the written consent of the Company, which shall not be withheld unreasonably.

- **ENTIRE AGREEMENT.** This Agreement and the Proprietary Information and Inventions Assignment Agreement constitute the complete, final and exclusive embodiment of the entire agreement between you and the Company with respect to the terms and conditions of your employment specified herein and therein. This Agreement may not be amended or modified except by a written instrument signed by you and a duly authorized officer of the Company.

If you choose to accept this Agreement under the terms described above, please acknowledge your acceptance of our offer by returning a signed copy of this letter and the Proprietary Information and Inventions Assignment Agreement to our attention.

Sincerely,

HilleVax, Inc.

/s/ David Socks

Name: David Socks
Title: Chief Financial Officer and Chief Business Officer

Agreed and Accepted:

I have read and understood this Agreement and hereby acknowledge, accept and agree to the terms as set forth above and further acknowledge and agree that no other commitments were made to me as part of my employment offer except as specifically set forth herein.

/s/ Robert Hershberg Date: February 8, 2021

Robert Hershberg

Attachments: Proprietary Information and Inventions Assignment Agreement

HilleVax, Inc.

May 12, 2021

Aditya Kohli, Ph.D.

Re: Amended and Restated Employment Offer Letter

Dear Dr. Kohli:

HilleVax, Inc. (the "***Company***") is pleased to continue to offer you a position on the terms set forth in this amended and restated offer letter (this "***Agreement***"). This Agreement is entered into effective March 1, 2021 and amends and restates in its entirety the offer letter between the Company and you that was dated February 8, 2021.

- **DUTIES.** You shall serve and shall perform such duties as are customarily associated with the position of Chief Operating Officer, including oversight and management of the Company's manufacturing, quality, regulatory and asset development functions, and such other duties as are assigned to you by your supervisor, the Chief Executive Officer of the Company (the "***Supervising Officer***"). You shall perform your services from your home office in Los Altos Hills, California. This is an exempt position. You shall devote at least seventy percent (70%) of your working time and attention to the business affairs of the Company.
- **COMPENSATION.** Your initial compensation will be as follows:
  - **BASE SALARY.** You will receive an annual base salary of $200,000 for all hours worked, less taxes, authorized withholdings and other legally required deductions; provided, however, Effective March 1, 2021, your annual base salary will be adjusted to $400,000. You will be paid in accordance with the Company's customary payroll procedures as established and modified from time-to-time.
  - **ANNUAL BONUS.** In addition to your base salary, you may be eligible to earn, for each fiscal year of the Company ending during the term of your employment with the Company, an annual cash performance bonus under the Company's bonus plan, as approved from time to time by the Board. Your target annual bonus will be thirty-five percent (35%) of your base salary actually paid for the year to which such annual bonus relates. Your actual annual bonus will be determined on the basis of your and/or the Company's attainment of financial or other performance criteria established by the Board or its designee in accordance with the terms and conditions of such bonus plan. You must be employed by the Company on the date of payment of such annual bonus in order to be eligible to receive such annual bonus. You hereby acknowledge and agree that nothing contained herein confers upon you any right to an annual bonus in any year, and that whether the Company pays you an annual bonus and the amount of any such annual bonus will be determined by the Company in its sole discretion. Your annual bonus for 2021 will be prorated to reflect the portion of the year following the closing of the Transactions.

- **BENEFITS.** You shall be eligible to participate in all of the employee benefit plans or programs the Company generally makes available to similarly situated employees, pursuant to the terms and conditions of such plans. You will also be entitled to vacation and/or paid time off each year in accordance with Company policy and all holidays observed by the Company each year. The Company reserves the right to change compensation and benefits provided to its employees from time to time in its discretion.
- **WITHHOLDING.** All amounts payable to you will be subject to appropriate payroll deductions and withholdings.
- **TRANSACTIONS**. For purposes of this Agreement, the "***Transactions***" means both (a) the closing of the Company's proposed license agreement to be entered into between the Company and Takeda Pharmaceutical Company Limited, or any of its affiliates, related to Takeda's norovirus vaccine candidate (coded by Takeda Pharmaceutical Company Limited as TAK-214) (the "***License Agreement***") and (b) the consummation by the Company of an equity or debt financing resulting in gross proceeds to the Company of at least $75,000,000 (the "***Financing***").

- **EXPENSES.** You will be entitled to reimbursement for all ordinary and reasonable out-of-pocket business expenses which are reasonably incurred by you in furtherance of the Company's business, with appropriate documentation and in accordance with the Company's standard policies.

- **SEVERANCE.**
  - **ACCRUED OBLIGATIONS.** If your employment terminates for any reason, you are entitled to your fully earned but unpaid base salary, through the date such termination is effective at the rate then in effect, and all other amounts or benefits to which you are entitled under any compensation, retirement or benefit plan of the Company at the time of your termination of employment in accordance with the terms of such plans, including, without limitation, any accrued but unpaid paid time off and any continuation of benefits required by applicable law (the "***Accrued Obligation***s").
  - **NON-CIC SEVERANCE BENEFITS.** In addition to your Accrued Obligations, subject to your continued compliance with the Proprietary Information and Inventions Assignment Agreement, as described below, and the effectiveness of your Release, as defined below, if, following the closing of the Transactions, your employment is involuntarily terminated by the Company without Cause (and other than by reason of your death or disability) or you resign for Good Reason (either such termination, a "***Qualifying Termination***"), and such Qualifying Termination does not occur during the Change in Control Period (as defined below), you shall be entitled to receive, as the sole severance benefits to which you are entitled, the benefits provided below (the "***Non-CIC Severance Benefits***"):
    - An amount equal to 9 months' base salary (at the rate in effect immediately prior to the date of your termination of employment, or in the case of a material diminution in your base salary which would give rise to Good Reason for your resignation, the base salary in effect prior to such material diminution), which amount will be paid over a period of 9 months

following your termination of employment in accordance with the Company's standard payroll practices, with the first such installment occurring on the first regularly-scheduled payroll date following the date your Release becomes effective (which first installment will include any installments that would have occurred prior to such date but for the fact your Release was not yet effective);

- An amount equal to your Target Bonus for the calendar year in which your termination date occurs, prorated for the portion of the calendar year in which your termination date occurs that has elapsed prior to such termination, plus any unpaid annual bonus for the calendar year prior to the year in which your Qualifying Termination occurs, to the extent you are entitled to such bonus and if such bonus has not already been paid, which amount(s) will be paid in a lump sum on the first regularly- scheduled payroll date following the date your Release becomes effective, but in no event more than 75 days following your termination date;

- For the 9 month period beginning on the date of your termination of employment (or, if earlier, (a) the date on which the applicable continuation period under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("***COBRA***") expires, or (b) the date on which you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self- employment) (such period, the "***COBRA Coverage Period***"), if you and/or your eligible dependents who were covered under the Company's health insurance plans as of the date of your termination of employment elect to have COBRA coverage and are eligible for such coverage, the Company shall pay for or reimburse you on a monthly basis for an amount equal to the monthly premium you and/or your covered dependents, as applicable, are required to pay for continuation coverage pursuant to COBRA for you and/or your eligible dependents, as applicable, who were covered under the Company's health plans as of the date of your termination of employment (calculated by reference to the premium as of the date of your termination of employment) less (ii) the amount you would have had to pay to receive group health coverage for you and/or your covered dependents, as applicable, based on the cost sharing levels in effect on the date of your termination of employment. If any of the Company's health benefits are self-funded as of the date of your termination of employment, or if the Company cannot provide the foregoing benefits in a manner that is exempt from Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"), or that is otherwise compliant with applicable law (including, without limitation, Section 2716 of the Public Health Service Act), instead of providing the payments or reimbursements as set forth above, the Company shall instead pay to you the foregoing monthly amount as a taxable monthly payment for the COBRA Coverage Period (or any remaining portion thereof). You shall be solely responsible for all matters relating to continuation of coverage pursuant to COBRA, including, without limitation, the election of such coverage and the timely payment of premiums. You shall notify the Company immediately if you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or

self-employment; and

- Notwithstanding anything else set forth herein, in the Company's equity plan or in any award agreement, such number of the unvested Stock Awards (as defined below) then held by you will vest on the effective date of your Release as would have vested during the 9-month period following your Qualifying Termination had you remained employed by the Company during such period. The foregoing provisions are hereby deemed to be a part of each Stock Award and to supersede any less favorable provision in any agreement or plan regarding such Stock Award, and shall be in addition to the accelerated vesting of the Founders' Shares under the Stock Restriction Agreement.

- **CIC SEVERANCE BENEFITS.** In addition to your Accrued Obligations, subject to your continued compliance with the Proprietary Information and Inventions Assignment Agreement, as described below, and the effectiveness of your Release, if your Qualifying Termination occurs following the closing of the Transactions and during the Change in Control Period, you shall be entitled to receive, as the sole severance benefits to which you are entitled and in lieu of any Non-CIC Severance Benefits, the benefits provided below (the "***CIC Severance Benefits***") (and for the avoidance of doubt: (a) in no event will you be entitled to both the Non-CIC Severance Benefits and the CIC Severance Benefits, and (b) if the Company has commenced providing the Non-CIC Severance Benefits to you prior to the date that you become eligible to receive the CIC Severance Benefits, the Non-CIC Severance Benefits previously provided to you shall reduce the CIC Severance Benefits provided below by the amount of such Non-CIC Severance Benefits already provided to you):

  - An amount equal to 12 months' base salary (at the rate in effect immediately prior to the date of your termination of employment, or in the case of a material diminution in your base salary which would give rise to Good Reason for your resignation, the base salary in effect prior to such material diminution), which amount will be paid over a period of 12 months following your termination of employment in accordance with the Company's standard payroll practices, with the first such installment occurring on the first regularly-scheduled payroll date following the date your Release becomes effective (which first installment will include any installments that would have occurred prior to such date but for the fact your Release was not yet effective);

  - An amount equal to your Target Bonus for the calendar year in which your termination date occurs, prorated for the portion of the calendar year in which your termination date occurs that has elapsed prior to such termination, plus any unpaid annual bonus for the calendar year prior to the year in which your Qualifying Termination occurs, to the extent you are entitled to such bonus and if such bonus has not already been paid, which amount(s) will be paid in a lump sum on the first regularly- scheduled payroll date following the date your Release becomes effective, but in no event more than 75 days following your termination date;

  - For the 12 month period beginning on the date of your termination of

employment (or, if earlier, (a) the date on which the applicable continuation period under COBRA expires, or (b) the date on which you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self-employment) (such period, the "***CIC COBRA Coverage Period***"), if you and/or your eligible dependents who were covered under the Company's health insurance plans as of the date of your termination of employment elect to have COBRA coverage and are eligible for such coverage, the Company shall pay for or reimburse you on a monthly basis for an amount equal to (i) the monthly premium you and/or your covered dependents, as applicable, are required to pay for continuation coverage pursuant to COBRA for you and/or your eligible dependents, as applicable, who were covered under the Company's health plans as of the date of your termination of employment (calculated by reference to the premium as of the date of your termination of employment) less (ii) the amount you would have had to pay to receive group health coverage for you and/or your covered dependents, as applicable, based on the cost sharing levels in effect on the date of your termination of employment. If any of the Company's health benefits are self-funded as of the date of your termination of employment, or if the Company cannot provide the foregoing benefits in a manner that is exempt from Section 409A of Code, or that is otherwise compliant with applicable law (including, without limitation, Section 2716 of the Public Health Service Act), instead of providing the payments or reimbursements as set forth above, the Company shall instead pay to you the foregoing monthly amount as a taxable monthly payment for the CIC COBRA Coverage Period (or any remaining portion thereof). You shall be solely responsible for all matters relating to continuation of coverage pursuant to COBRA, including, without limitation, the election of such coverage and the timely payment of premiums. You shall notify the Company immediately if you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self- employment; and

- Notwithstanding anything else set forth herein, in the Company's equity plan or in any award agreement, any unvested Stock Awards then held by you will vest on the effective date of your Release. The foregoing provisions are hereby deemed to be a part of each Stock Award and to supersede any less favorable provision in any agreement or plan regarding such Stock Award, and shall be in addition to the accelerated vesting of the Founders' Shares under the Stock Restriction Agreement.

- As a condition to your receipt of any post-termination payments and benefits pursuant to the preceding paragraphs, you shall execute and not revoke a separation agreement containing a release of all claims in favor of the Company, a post-termination non-competition covenant generally consistent with Section 6.1(a) of the Proprietary Information and Inventions Assignment Agreement, and other customary terms (the "***Release***"), in a form reasonably acceptable to the Company in order to effectuate a valid general release of claims. In the event the Release does not become effective within the 60-day period following the date of your termination of employment, you will not be entitled to the aforesaid payments and benefits.

- For purposes of this Agreement, "***Cause***" means any of the following: (a) your commission of an act of fraud, embezzlement or dishonesty, or the commission of some other illegal act by you, that has a demonstrable adverse impact on the Company or any successor or affiliate thereof; (b) your conviction of, or plea of "guilty" or "no contest" to, a non-vehicular felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (c) any intentional, unauthorized use or disclosure by you of confidential information or trade secrets of the Company or any successor or affiliate thereof; (d) your gross negligence, insubordination or material violation of any duty of loyalty to the Company or any successor or affiliate thereof, or any other demonstrable material misconduct on your part; (e) your ongoing and repeated failure or refusal to perform or neglect of your duties as required by this Agreement or your ongoing and repeated failure or refusal to comply with the reasonable and lawful instructions given to you by the Board, which failure, refusal or neglect continues for 15 days following your receipt of written notice from the Board stating with specificity the nature of such failure, refusal or neglect; provided that it is understood that this clause (e) shall not permit the Company to terminate your employment for Cause solely because of (i) your failure to meet specified performance objectives or achieve a specific result or outcome, or (ii) Company's dissatisfaction with the quality of services provided by you in the good faith performance of your duties to the Company; or (f) your willful, material breach of any material Company policy or any material provision of this Agreement or the Proprietary Information and Inventions Assignment Agreement. Prior to the determination that "Cause" under clauses (d), (e) or (f) has occurred, the Company shall (i) provide to you in writing, in reasonable detail, the reasons for the determination that such "Cause" exists, (ii) other than with respect to clause (e) above which specifies the applicable period of time for you to remedy your breach, afford you a reasonable opportunity to remedy any such breach, (iii) provide you an opportunity to be heard prior to the final decision to terminate your employment hereunder for such "Cause" and (iv) make any decision that such "Cause" exists in good faith. The foregoing definition shall not in any way preclude or restrict the right of the Company or any successor or affiliate thereof to discharge or dismiss you for any other acts or omissions, but such other acts or omissions shall not be deemed, for purposes of this Agreement, to constitute grounds for termination for Cause.

- For purposes of this Agreement, "***Change in Control***" shall mean (a) a merger or consolidation of the Company with or into any other corporation or other entity or person, (b) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets, or (c) any other transaction, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (i) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the

merger or consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (ii) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (iii) an initial public offering of any of the Company's securities or any other transaction or series of related transactions principally for bona fide equity financing purposes; (iv) a reincorporation of the Company solely to change its jurisdiction; (v) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction; or (vi) the closing of the Transactions. If a Change in Control would give rise to a payment or settlement event with respect to any payment or benefit that constitutes "nonqualified deferred compensation," the transaction or event constituting the Change in Control must also constitute a "change in control event" (as defined in Treasury Regulation §1.409A-3(i)(5)) in order to give rise to the payment or settlement event for such payment or benefit, to the extent required by Section 409A.

- For purposes of this Agreement, "***Change in Control Period***" means the 24 months following a Change in Control.
- For purposes of this Agreement, "***Good Reason***" means any of the following without your written consent: (a) a material diminution in your authority, duties or responsibilities, including a requirement that you report to a corporate officer other than the Chief Executive Officer; (b) a material diminution in your base compensation (and you and the Company agree that any diminution of 10% or more shall be considered material for this purpose, regardless of whether such diminution occurs due to a single reduction or a series of reductions in your base compensation), unless such a reduction is imposed across-the-board to senior management of the Company; (c) a material change in the geographic location at which you must perform your duties (and you and the Company agree that a relocation of the geographic location at which you must perform your duties to a location that increases your one-way commute from your residence by more than 50 miles as compared to your principal place of employment prior to such relocation shall be considered material for this purpose); or (d) any other action or inaction that constitutes a material breach by the Company or any successor or affiliate of its obligations to you under this Agreement or the Stock Restriction Agreement. You must provide written notice to the Company of the occurrence of any of the foregoing events or conditions without your written consent within 6 months of the occurrence of such event. The Company or any successor or affiliate shall have a period of 30 days to cure such event or condition after receipt of written notice of such event from you. Your termination of employment by reason of resignation from employment with the Company for Good Reason must occur within 30 days following the expiration of the foregoing 30-day cure period.
- For purposes of this Agreement, "***Stock Awards***" means all stock options, restricted stock and such other awards granted pursuant to the Company's stock option and equity incentive award plans or agreements and any shares of stock issued upon exercise thereof (other than any shares (the "***Founders' Shares***")

the vesting of which is governed by that certain Restricted Stock Grant Notice and Restricted Stock Agreement dated February 8, 2021, between you and the Company (the "***Stock Restriction Agreement***")). For the avoidance of doubt, your Qualifying Termination under this Agreement shall constitute a Qualifying Termination for purposes of the Stock Restriction Agreement.

- To the extent applicable, this Agreement shall be interpreted in accordance with Section 409A of the Code and Department of Treasury regulations and other interpretive guidance issued thereunder. The intent of the parties is that payments and benefits under this Agreement comply with, or be exempt from Section 409A of the Code and, accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in compliance with such intention. To the extent that any provision in this Agreement is ambiguous as to its compliance with or exemption from Section 409A of the Code, the provision shall be read in such a manner that no payments payable under this Agreement shall be subject to an "additional tax" as defined in Section 409A(a)(1)(B) of the Code. For purposes of Section 409A of the Code, any right to a series of installment payments under this Agreement shall be treated as a right to a series of separate payments. For purposes of this Agreement, all references to your "termination of employment" shall mean your "separation from service" (as defined in Treasury Regulation Section 1.409A-1(h)) ("***Separation from Service***"). If you are a "specified employee" (as defined in Section 409A of the Code), as determined by the Company in accordance with Section 409A of the Code, on the date of your Separation from Service, to the extent that the payments or benefits under this Agreement are "non-qualified deferred compensation" subject to Section 409A of the Code and the delayed payment or distribution of all or any portion of such amounts to which you are entitled under this Agreement is required in order to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code, then such portion deferred pursuant to this paragraph shall be paid or distributed to you in a lump sum on the earlier of (a) the date that is 6 months and one day following your Separation from Service, (b) the date of your death or (c) the earliest date as is permitted under Section 409A of the Code. Any remaining payments due under this Agreement shall be paid as otherwise provided herein.
- To the extent that the payments or benefits under this Agreement are "non- qualified deferred compensation" subject to Section 409A of the Code, if the period during which you may deliver the Release required hereunder spans two calendar years, the payment of your post-termination benefits shall occur (or commence) on the later of (a) January 1 of the second calendar year, or (b) the first regularly-scheduled payroll date following the date your Release becomes effective.
- Any reimbursement of expenses or in-kind benefits payable under this Agreement shall be made in accordance with Treasury Regulation Section 1.409A-3(i)(1)(iv) and shall be paid on or before the last day of your taxable year following the taxable year in which you incurred the expenses. The amount of expenses reimbursed or in-kind benefits payable in one year shall not affect the amount eligible for reimbursement or in-kind benefits payable in any other taxable year of yours, and your right to reimbursement for such amounts shall not be subject to liquidation or exchange for any other benefit.

- **COMPANY POLICIES AND PROPRIETARY INFORMATION AND INVENTIONS ASSIGNMENT AGREEMENT.** As an employee of the Company, you shall be expected to abide by all of the Company's policies and procedures and the Company's employee handbook, if any. As a condition of your employment, you agree to execute and abide by the terms of the Company's form of the Proprietary Information and Inventions Assignment Agreement, which shall survive termination of your employment with the Company and the termination of the Proprietary Information and Inventions Assignment Agreement. You acknowledge that a remedy at law for any breach or threatened breach by you of the provisions of the Proprietary Information and Inventions Assignment Agreement would be inadequate, and you therefore agree that the Company shall be entitled to injunctive relief in case of any such breach or threatened breach. The Company may modify, revoke, suspend or terminate any of the terms, plans, policies and/or procedures described in the employee handbook, if any, or as otherwise communicated to you, in whole or part, at any time, with or without notice.

- **EMPLOYMENT TERMS.** As a condition to your employment with the Company, you are required to (a) sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and (b) provide satisfactory proof of your identity as required by United States law.

- **OTHER AGREEMENTS.** You represent and agree that your performance of your duties for the Company shall not violate any agreements, obligations or understandings that you may have with any third party or prior employer. Without limiting the foregoing, you represent and agree that you are not bound by any non-compete or non-solicitation agreement or any other type of agreement that would prohibit your employment with the Company. You agree not to make any unauthorized disclosure or use, on behalf of the Company, of any confidential information belonging to any of your former employers. You also represent that you are not in unauthorized possession of any materials containing a third party's confidential and proprietary information. While employed by the Company, you will not engage in any business activity in competition with the Company nor make preparations to do so. In the event that you wish to undertake a business activity outside the scope of your employment by the Company, which activity you believe entails no conflict with the Company's activities, you agree to inform the Company of your intentions before the initiation of such outside business activity, and you furthermore agree to abide by the Company's decision as to whether or not there is no conflict. If, in the Company's sole determination, a conflict exists or is likely to develop, you agree not to undertake such outside business activity. Notwithstanding the foregoing, the Company expressly acknowledges and agrees to your continued services to Frazier Healthcare Partners, Phathom Pharmaceuticals, Inc. and its other portfolio companies and further acknowledges and agrees that such continued services will not violate the terms of this Agreement.

- **AT-WILL EMPLOYMENT.** Your employment with the Company will be "at-will" at all times, including after your introductory, probationary period, meaning that either you or the Company will be entitled to terminate your employment at any time and for any reason, with or without cause. Any contrary representations that may have been made to you are superseded by this offer. This Agreement in no way represents a fixed-term employment contract. This is the full and complete agreement between you and the Company on this term. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and a duly authorized officer of the Company.

- **NON-INTERFERENCE.** While employed by the Company, and for one (1) year immediately following the date on which you terminate employment or otherwise cease providing services to the Company, you agree not to interfere with the business of the Company by (a) soliciting or attempting to solicit any employee or consultant of the Company to terminate such employee's or consultant's

employment or service in order to become an employee, consultant or independent contractor to or for any other person or entity or (b) soliciting or attempting to solicit any vendor, supplier, customer or other person or entity either directly or indirectly, to direct his, her or its purchase of the Company's products and/or services to any person, firm, corporation, institution or other entity in competition with the business of the Company. The foregoing restrictions shall not apply with respect to the bona fide hiring and firing of Company personnel to the extent such acts are part of your duties for Company. Your duties under this paragraph shall survive termination of your employment with the Company and the termination of this Agreement.

- **REASONABLENESS OF TERMS.** You agree that the terms contained in the "Other Agreements" and "Non-Interference" paragraphs above are reasonable in all respects and that the restrictions contained therein are designed to protect the Company against unfair competition. In the event a court determines that any of the terms or provisions of this Agreement are unreasonable, the court may limit the application of any provision or term, or modify any provision or term, and proceed to enforce this Agreement as so limited or modified.

- **GOVERNING LAW; JURISDICTION AND VENUE.** This Agreement, for all purposes, shall be construed in accordance with the laws of the State of California without regard to conflicts-of-law principles. Any action or proceeding by either party to enforce this Agreement shall be brought only in any state or federal court located in Santa Clara County, California. The parties hereby irrevocably submit to the exclusive jurisdiction of such courts and waive the defense of inconvenient forum to the maintenance of any such action or proceeding in such venue.

- **SEVERABILITY.** Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

- **SUCCESSORS AND ASSIGNS.** This Agreement is intended to bind and inure to the benefit of and be enforceable by you and the Company, and their respective successors, assigns, heirs, executors and administrators, except that you may not assign any of your duties hereunder and you may not assign any of your rights hereunder, without the written consent of the Company, which shall not be withheld unreasonably.

- **ENTIRE AGREEMENT.** This Agreement and the Proprietary Information and Inventions Assignment Agreement constitute the complete, final and exclusive embodiment of the entire agreement between you and the Company with respect to the terms and conditions of your employment specified herein and therein. This Agreement may not be amended or modified except by a written instrument signed by you and a duly authorized officer of the Company.

If you choose to accept this Agreement under the terms described above, please acknowledge your acceptance of our offer by returning a signed copy of this letter and the Proprietary Information and Inventions Assignment Agreement to our attention.

Sincerely,

HilleVax, Inc.

/s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

Agreed and Accepted:

I have read and understood this Agreement and hereby acknowledge, accept and agree to the terms as set forth above and further acknowledge and agree that no other commitments were made to me as part of my employment offer except as specifically set forth herein.

/s/ Aditya Kohli Date: 5/13/2021
Aditya Kohli, Ph.D.

Attachments: Proprietary Information and Inventions Assignment Agreement

HilleVax, Inc.

May 12, 2021

David Socks

Re: Amended and Restated Employment Offer Letter

Dear Mr. Socks:

HilleVax, Inc. (the "***Company***") is pleased to continue to offer you a position on the terms set forth in this amended and restated offer letter (this "***Agreement***"). This Agreement is entered into effective March 1, 2021 and amends and restates in its entirety the offer letter between the Company and you that was dated February 8, 2021.

- **DUTIES.** You shall serve and shall perform such duties as are customarily associated with the position of Chief Financial Officer, Chief Business Officer and Treasurer, including oversight and management of the Company's accounting, finance, investor relations, corporate communications, business development, and strategy functions, and such other duties as are assigned to you by your supervisor, the Chief Executive Officer of the Company (the "***Supervising Officer***"). You shall perform your services from your home office in Encinitas, California. This is an exempt position. You shall devote at least seventy percent (70%) of your working time and attention to the business affairs of the Company.
- **COMPENSATION.** Your initial compensation will be as follows:
  - **BASE SALARY.** You will receive an annual base salary of $200,000 for all hours worked, less taxes, authorized withholdings and other legally required deductions; provided, however, Effective March 1, 2021, your annual base salary will be adjusted to $400,000. You will be paid in accordance with the Company's customary payroll procedures as established and modified from time-to-time.
  - **ANNUAL BONUS.** In addition to your base salary, you may be eligible to earn, for each fiscal year of the Company ending during the term of your employment with the Company, an annual cash performance bonus under the Company's bonus plan, as approved from time to time by the Board. Your target annual bonus will be thirty-five percent (35%) of your base salary actually paid for the year to which such annual bonus relates. Your actual annual bonus will be determined on the basis of your and/or the Company's attainment of financial or other performance criteria established by the Board or its designee in accordance with the terms and conditions of such bonus plan. You must be employed by the Company on the date of payment of such annual bonus in order to be eligible to receive such annual bonus. You hereby acknowledge and agree that nothing contained herein confers upon you any right to an annual bonus in any year, and that whether the Company pays you an annual bonus and the amount of any such annual bonus will be determined by the Company in its sole discretion. Your annual bonus for 2021 will be prorated to reflect the portion of the year following the closing of the Transactions.

- **BENEFITS.** You shall be eligible to participate in all of the employee benefit plans or programs the Company generally makes available to similarly situated employees, pursuant to the terms and conditions of such plans. You will also be entitled to vacation and/or paid time off each year in accordance with Company policy and all holidays observed by the Company each year. The Company reserves the right to change compensation and benefits provided to its employees from time to time in its discretion.
- **WITHHOLDING.** All amounts payable to you will be subject to appropriate payroll deductions and withholdings.
- **TRANSACTIONS**. For purposes of this Agreement, the "***Transactions***" means both (a) the closing of the Company's proposed license agreement to be entered into between the Company and Takeda Pharmaceutical Company Limited, or any of its affiliates, related to Takeda's norovirus vaccine candidate (coded by Takeda Pharmaceutical Company Limited as TAK-214) (the "***License Agreement***") and (b) the consumption by the Company of an equity or debt financing resulting in gross proceeds to the Company of at least $75,000,000 (the "***Financing***").

- **EXPENSES.** You will be entitled to reimbursement for all ordinary and reasonable out-of-pocket business expenses which are reasonably incurred by you in furtherance of the Company's business, with appropriate documentation and in accordance with the Company's standard policies.

- **SEVERANCE**.
  - **ACCRUED OBLIGATIONS.** If your employment terminates for any reason, you are entitled to your fully earned but unpaid base salary, through the date such termination is effective at the rate then in effect, and all other amounts or benefits to which you are entitled under any compensation, retirement or benefit plan of the Company at the time of your termination of employment in accordance with the terms of such plans, including, without limitation, any accrued but unpaid paid time off and any continuation of benefits required by applicable law (the "***Accrued Obligation***s").
  - **NON-CIC SEVERANCE BENEFITS.** In addition to your Accrued Obligations, subject to your continued compliance with the Proprietary Information and Inventions Assignment Agreement, as described below, and the effectiveness of your Release, as defined below, if, following the closing of the Transactions, your employment is involuntarily terminated by the Company without Cause (and other than by reason of your death or disability) or you resign for Good Reason (either such termination, a "***Qualifying Termination***"), and such Qualifying Termination does not occur during the Change in Control Period (as defined below), you shall be entitled to receive, as the sole severance benefits to which you are entitled, the benefits provided below (the "***Non-CIC Severance Benefits***"):
    - An amount equal to 9 months' base salary (at the rate in effect immediately prior to the date of your termination of employment, or in the case of a material diminution in your base salary which would give rise to Good Reason for your resignation, the base salary in effect prior to such material diminution), which amount will be paid over a period of 9 months

following your termination of employment in accordance with the Company's standard payroll practices, with the first such installment occurring on the first regularly-scheduled payroll date following the date your Release becomes effective (which first installment will include any installments that would have occurred prior to such date but for the fact your Release was not yet effective);

- An amount equal to your Target Bonus for the calendar year in which your termination date occurs, prorated for the portion of the calendar year in which your termination date occurs that has elapsed prior to such termination, plus any unpaid annual bonus for the calendar year prior to the year in which your Qualifying Termination occurs, to the extent you are entitled to such bonus and if such bonus has not already been paid, which amount(s) will be paid in a lump sum on the first regularly- scheduled payroll date following the date your Release becomes effective, but in no event more than 75 days following your termination date;

- For the 9 month period beginning on the date of your termination of employment (or, if earlier, (a) the date on which the applicable continuation period under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("***COBRA***") expires, or (b) the date on which you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self- employment) (such period, the "***COBRA Coverage Period***"), if you and/or your eligible dependents who were covered under the Company's health insurance plans as of the date of your termination of employment elect to have COBRA coverage and are eligible for such coverage, the Company shall pay for or reimburse you on a monthly basis for an amount equal to the monthly premium you and/or your covered dependents, as applicable, are required to pay for continuation coverage pursuant to COBRA for you and/or your eligible dependents, as applicable, who were covered under the Company's health plans as of the date of your termination of employment (calculated by reference to the premium as of the date of your termination of employment) less (ii) the amount you would have had to pay to receive group health coverage for you and/or your covered dependents, as applicable, based on the cost sharing levels in effect on the date of your termination of employment. If any of the Company's health benefits are self-funded as of the date of your termination of employment, or if the Company cannot provide the foregoing benefits in a manner that is exempt from Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"), or that is otherwise compliant with applicable law (including, without limitation, Section 2716 of the Public Health Service Act), instead of providing the payments or reimbursements as set forth above, the Company shall instead pay to you the foregoing monthly amount as a taxable monthly payment for the COBRA Coverage Period (or any remaining portion thereof). You shall be solely responsible for all matters relating to continuation of coverage pursuant to COBRA, including, without limitation, the election of such coverage and the timely payment of premiums. You shall notify the Company immediately if you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or

self-employment; and

- Notwithstanding anything else set forth herein, in the Company's equity plan or in any award agreement, such number of the unvested Stock Awards (as defined below) then held by you will vest on the effective date of your Release as would have vested during the 9-month period following your Qualifying Termination had you remained employed by the Company during such period. The foregoing provisions are hereby deemed to be a part of each Stock Award and to supersede any less favorable provision in any agreement or plan regarding such Stock Award, and shall be in addition to the accelerated vesting of the Founders' Shares under the Stock Restriction Agreement.

- **CIC SEVERANCE BENEFITS.** In addition to your Accrued Obligations, subject to your continued compliance with the Proprietary Information and Inventions Assignment Agreement, as described below, and the effectiveness of your Release, if your Qualifying Termination occurs following the closing of the Transactions and during the Change in Control Period, you shall be entitled to receive, as the sole severance benefits to which you are entitled and in lieu of any Non-CIC Severance Benefits, the benefits provided below (the "***CIC Severance Benefits***") (and for the avoidance of doubt: (a) in no event will you be entitled to both the Non-CIC Severance Benefits and the CIC Severance Benefits, and (b) if the Company has commenced providing the Non-CIC Severance Benefits to you prior to the date that you become eligible to receive the CIC Severance Benefits, the Non-CIC Severance Benefits previously provided to you shall reduce the CIC Severance Benefits provided below by the amount of such Non-CIC Severance Benefits already provided to you):

  - An amount equal to 12 months' base salary (at the rate in effect immediately prior to the date of your termination of employment, or in the case of a material diminution in your base salary which would give rise to Good Reason for your resignation, the base salary in effect prior to such material diminution), which amount will be paid over a period of 12 months following your termination of employment in accordance with the Company's standard payroll practices, with the first such installment occurring on the first regularly-scheduled payroll date following the date your Release becomes effective (which first installment will include any installments that would have occurred prior to such date but for the fact your Release was not yet effective);

  - An amount equal to your Target Bonus for the calendar year in which your termination date occurs, prorated for the portion of the calendar year in which your termination date occurs that has elapsed prior to such termination, plus any unpaid annual bonus for the calendar year prior to the year in which your Qualifying Termination occurs, to the extent you are entitled to such bonus and if such bonus has not already been paid, which amount(s) will be paid in a lump sum on the first regularly- scheduled payroll date following the date your Release becomes effective, but in no event more than 75 days following your termination date;

  - For the 12 month period beginning on the date of your termination of

employment (or, if earlier, (a) the date on which the applicable continuation period under COBRA expires, or (b) the date on which you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self-employment) (such period, the "***CIC COBRA Coverage Period***"), if you and/or your eligible dependents who were covered under the Company's health insurance plans as of the date of your termination of employment elect to have COBRA coverage and are eligible for such coverage, the Company shall pay for or reimburse you on a monthly basis for an amount equal to (i) the monthly premium you and/or your covered dependents, as applicable, are required to pay for continuation coverage pursuant to COBRA for you and/or your eligible dependents, as applicable, who were covered under the Company's health plans as of the date of your termination of employment (calculated by reference to the premium as of the date of your termination of employment) less (ii) the amount you would have had to pay to receive group health coverage for you and/or your covered dependents, as applicable, based on the cost sharing levels in effect on the date of your termination of employment. If any of the Company's health benefits are self-funded as of the date of your termination of employment, or if the Company cannot provide the foregoing benefits in a manner that is exempt from Section 409A of Code, or that is otherwise compliant with applicable law (including, without limitation, Section 2716 of the Public Health Service Act), instead of providing the payments or reimbursements as set forth above, the Company shall instead pay to you the foregoing monthly amount as a taxable monthly payment for the CIC COBRA Coverage Period (or any remaining portion thereof). You shall be solely responsible for all matters relating to continuation of coverage pursuant to COBRA, including, without limitation, the election of such coverage and the timely payment of premiums. You shall notify the Company immediately if you become eligible to receive the equivalent or increased healthcare coverage by means of subsequent employment or self- employment; and

- Notwithstanding anything else set forth herein, in the Company's equity plan or in any award agreement, any unvested Stock Awards then held by you will vest on the effective date of your Release. The foregoing provisions are hereby deemed to be a part of each Stock Award and to supersede any less favorable provision in any agreement or plan regarding such Stock Award, and shall be in addition to the accelerated vesting of the Founders' Shares under the Stock Restriction Agreement.

- As a condition to your receipt of any post-termination payments and benefits pursuant to the preceding paragraphs, you shall execute and not revoke a separation agreement containing a release of all claims in favor of the Company, a post-termination non-competition covenant generally consistent with Section 6.1(a) of the Proprietary Information and Inventions Assignment Agreement, and other customary terms (the "***Release***"), in a form reasonably acceptable to the Company in order to effectuate a valid general release of claims. In the event the Release does not become effective within the 60-day period following the date of your termination of employment, you will not be entitled to the aforesaid payments and benefits.

- For purposes of this Agreement, "***Cause***" means any of the following: (a) your commission of an act of fraud, embezzlement or dishonesty, or the commission of some other illegal act by you, that has a demonstrable adverse impact on the Company or any successor or affiliate thereof; (b) your conviction of, or plea of "guilty" or "no contest" to, a non-vehicular felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (c) any intentional, unauthorized use or disclosure by you of confidential information or trade secrets of the Company or any successor or affiliate thereof; (d) your gross negligence, insubordination or material violation of any duty of loyalty to the Company or any successor or affiliate thereof, or any other demonstrable material misconduct on your part; (e) your ongoing and repeated failure or refusal to perform or neglect of your duties as required by this Agreement or your ongoing and repeated failure or refusal to comply with the reasonable and lawful instructions given to you by the Board, which failure, refusal or neglect continues for 15 days following your receipt of written notice from the Board stating with specificity the nature of such failure, refusal or neglect; provided that it is understood that this clause (e) shall not permit the Company to terminate your employment for Cause solely because of (i) your failure to meet specified performance objectives or achieve a specific result or outcome, or (ii) Company's dissatisfaction with the quality of services provided by you in the good faith performance of your duties to the Company; or (f) your willful, material breach of any material Company policy or any material provision of this Agreement or the Proprietary Information and Inventions Assignment Agreement. Prior to the determination that "Cause" under clauses (d), (e) or (f) has occurred, the Company shall (i) provide to you in writing, in reasonable detail, the reasons for the determination that such "Cause" exists, (ii) other than with respect to clause (e) above which specifies the applicable period of time for you to remedy your breach, afford you a reasonable opportunity to remedy any such breach, (iii) provide you an opportunity to be heard prior to the final decision to terminate your employment hereunder for such "Cause" and (iv) make any decision that such "Cause" exists in good faith. The foregoing definition shall not in any way preclude or restrict the right of the Company or any successor or affiliate thereof to discharge or dismiss you for any other acts or omissions, but such other acts or omissions shall not be deemed, for purposes of this Agreement, to constitute grounds for termination for Cause.
- For purposes of this Agreement, "***Change in Control***" shall mean (a) a merger or consolidation of the Company with or into any other corporation or other entity or person, (b) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets, or (c) any other transaction, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (i) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the

merger or consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (ii) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (iii) an initial public offering of any of the Company's securities or any other transaction or series of related transactions principally for bona fide equity financing purposes; (iv) a reincorporation of the Company solely to change its jurisdiction; (v) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction; or (vi) the closing of the Transactions. If a Change in Control would give rise to a payment or settlement event with respect to any payment or benefit that constitutes "nonqualified deferred compensation," the transaction or event constituting the Change in Control must also constitute a "change in control event" (as defined in Treasury Regulation §1.409A-3(i)(5)) in order to give rise to the payment or settlement event for such payment or benefit, to the extent required by Section 409A.

- For purposes of this Agreement, "***Change in Control Period***" means the 24 months following a Change in Control.
- For purposes of this Agreement, "***Good Reason***" means any of the following without your written consent: (a) a material diminution in your authority, duties or responsibilities, including a requirement that you report to a corporate officer other than the Chief Executive Officer; (b) a material diminution in your base compensation (and you and the Company agree that any diminution of 10% or more shall be considered material for this purpose, regardless of whether such diminution occurs due to a single reduction or a series of reductions in your base compensation), unless such a reduction is imposed across-the-board to senior management of the Company; (c) a material change in the geographic location at which you must perform your duties (and you and the Company agree that a relocation of the geographic location at which you must perform your duties to a location that increases your one-way commute from your residence by more than 50 miles as compared to your principal place of employment prior to such relocation shall be considered material for this purpose); or (d) any other action or inaction that constitutes a material breach by the Company or any successor or affiliate of its obligations to you under this Agreement or the Stock Restriction Agreement. You must provide written notice to the Company of the occurrence of any of the foregoing events or conditions without your written consent within 6 months of the occurrence of such event. The Company or any successor or affiliate shall have a period of 30 days to cure such event or condition after receipt of written notice of such event from you. Your termination of employment by reason of resignation from employment with the Company for Good Reason must occur within 30 days following the expiration of the foregoing 30-day cure period.
- For purposes of this Agreement, "***Stock Awards***" means all stock options, restricted stock and such other awards granted pursuant to the Company's stock option and equity incentive award plans or agreements and any shares of stock issued upon exercise thereof (other than any shares (the "***Founders' Shares***")

the vesting of which is governed by that certain Stock Restriction Agreement dated February 8, 2021, between you and the Company (the "***Stock Restriction Agreement***")). For the avoidance of doubt, your Qualifying Termination under this Agreement shall constitute a Qualifying Termination for purposes of the Stock Restriction Agreement.

- To the extent applicable, this Agreement shall be interpreted in accordance with Section 409A of the Code and Department of Treasury regulations and other interpretive guidance issued thereunder. The intent of the parties is that payments and benefits under this Agreement comply with, or be exempt from Section 409A of the Code and, accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in compliance with such intention. To the extent that any provision in this Agreement is ambiguous as to its compliance with or exemption from Section 409A of the Code, the provision shall be read in such a manner that no payments payable under this Agreement shall be subject to an "additional tax" as defined in Section 409A(a)(1)(B) of the Code. For purposes of Section 409A of the Code, any right to a series of installment payments under this Agreement shall be treated as a right to a series of separate payments. For purposes of this Agreement, all references to your "termination of employment" shall mean your "separation from service" (as defined in Treasury Regulation Section 1.409A-1(h)) ("***Separation from Service***"). If you are a "specified employee" (as defined in Section 409A of the Code), as determined by the Company in accordance with Section 409A of the Code, on the date of your Separation from Service, to the extent that the payments or benefits under this Agreement are "non-qualified deferred compensation" subject to Section 409A of the Code and the delayed payment or distribution of all or any portion of such amounts to which you are entitled under this Agreement is required in order to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code, then such portion deferred pursuant to this paragraph shall be paid or distributed to you in a lump sum on the earlier of (a) the date that is 6 months and one day following your Separation from Service, (b) the date of your death or (c) the earliest date as is permitted under Section 409A of the Code. Any remaining payments due under this Agreement shall be paid as otherwise provided herein.
- To the extent that the payments or benefits under this Agreement are "non- qualified deferred compensation" subject to Section 409A of the Code, if the period during which you may deliver the Release required hereunder spans two calendar years, the payment of your post-termination benefits shall occur (or commence) on the later of (a) January 1 of the second calendar year, or (b) the first regularly-scheduled payroll date following the date your Release becomes effective.
- Any reimbursement of expenses or in-kind benefits payable under this Agreement shall be made in accordance with Treasury Regulation Section 1.409A-3(i)(1)(iv) and shall be paid on or before the last day of your taxable year following the taxable year in which you incurred the expenses. The amount of expenses reimbursed or in-kind benefits payable in one year shall not affect the amount eligible for reimbursement or in-kind benefits payable in any other taxable year of yours, and your right to reimbursement for such amounts shall not be subject to liquidation or exchange for any other benefit.

- **COMPANY POLICIES AND PROPRIETARY INFORMATION AND INVENTIONS ASSIGNMENT AGREEMENT.** As an employee of the Company, you shall be expected to abide by all of the Company's policies and procedures and the Company's employee handbook, if any. As a condition of your employment, you agree to execute and abide by the terms of the Company's form of the Proprietary Information and Inventions Assignment Agreement, which shall survive termination of your employment with the Company and the termination of the Proprietary Information and Inventions Assignment Agreement. You acknowledge that a remedy at law for any breach or threatened breach by you of the provisions of the Proprietary Information and Inventions Assignment Agreement would be inadequate, and you therefore agree that the Company shall be entitled to injunctive relief in case of any such breach or threatened breach. The Company may modify, revoke, suspend or terminate any of the terms, plans, policies and/or procedures described in the employee handbook, if any, or as otherwise communicated to you, in whole or part, at any time, with or without notice.

- **EMPLOYMENT TERMS.** As a condition to your employment with the Company, you are required to (a) sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and (b) provide satisfactory proof of your identity as required by United States law.

- **OTHER AGREEMENTS.** You represent and agree that your performance of your duties for the Company shall not violate any agreements, obligations or understandings that you may have with any third party or prior employer. Without limiting the foregoing, you represent and agree that you are not bound by any non-compete or non-solicitation agreement or any other type of agreement that would prohibit your employment with the Company. You agree not to make any unauthorized disclosure or use, on behalf of the Company, of any confidential information belonging to any of your former employers. You also represent that you are not in unauthorized possession of any materials containing a third party's confidential and proprietary information. While employed by the Company, you will not engage in any business activity in competition with the Company nor make preparations to do so. In the event that you wish to undertake a business activity outside the scope of your employment by the Company, which activity you believe entails no conflict with the Company's activities, you agree to inform the Company of your intentions before the initiation of such outside business activity, and you furthermore agree to abide by the Company's decision as to whether or not there is no conflict. If, in the Company's sole determination, a conflict exists or is likely to develop, you agree not to undertake such outside business activity. Notwithstanding the foregoing, the Company expressly acknowledges and agrees to your continued services to Frazier Healthcare Partners, Phathom Pharmaceuticals, Inc. and its other portfolio companies and further acknowledges and agrees that such continued services will not violate the terms of this Agreement.

- **AT-WILL EMPLOYMENT.** Your employment with the Company will be "at-will" at all times, including after your introductory, probationary period, meaning that either you or the Company will be entitled to terminate your employment at any time and for any reason, with or without cause. Any contrary representations that may have been made to you are superseded by this offer. This Agreement in no way represents a fixed-term employment contract. This is the full and complete agreement between you and the Company on this term. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and a duly authorized officer of the Company.

- **NON-INTERFERENCE.** While employed by the Company, and for one (1) year immediately following the date on which you terminate employment or otherwise cease providing services to the Company, you agree not to interfere with the business of the Company by (a) soliciting or attempting to solicit any employee or consultant of the Company to terminate such employee's or consultant's

employment or service in order to become an employee, consultant or independent contractor to or for any other person or entity or (b) soliciting or attempting to solicit any vendor, supplier, customer or other person or entity either directly or indirectly, to direct his, her or its purchase of the Company's products and/or services to any person, firm, corporation, institution or other entity in competition with the business of the Company. The foregoing restrictions shall not apply with respect to the bona fide hiring and firing of Company personnel to the extent such acts are part of your duties for Company. Your duties under this paragraph shall survive termination of your employment with the Company and the termination of this Agreement.

- **REASONABLENESS OF TERMS.** You agree that the terms contained in the "Other Agreements" and "Non-Interference" paragraphs above are reasonable in all respects and that the restrictions contained therein are designed to protect the Company against unfair competition. In the event a court determines that any of the terms or provisions of this Agreement are unreasonable, the court may limit the application of any provision or term, or modify any provision or term, and proceed to enforce this Agreement as so limited or modified.

- **GOVERNING LAW; JURISDICTION AND VENUE.** This Agreement, for all purposes, shall be construed in accordance with the laws of the State of California without regard to conflicts-of-law principles. Any action or proceeding by either party to enforce this Agreement shall be brought only in any state or federal court located in San Diego County, California. The parties hereby irrevocably submit to the exclusive jurisdiction of such courts and waive the defense of inconvenient forum to the maintenance of any such action or proceeding in such venue.

- **SEVERABILITY.** Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

- **SUCCESSORS AND ASSIGNS.** This Agreement is intended to bind and inure to the benefit of and be enforceable by you and the Company, and their respective successors, assigns, heirs, executors and administrators, except that you may not assign any of your duties hereunder and you may not assign any of your rights hereunder, without the written consent of the Company, which shall not be withheld unreasonably.

- **ENTIRE AGREEMENT.** This Agreement and the Proprietary Information and Inventions Assignment Agreement constitute the complete, final and exclusive embodiment of the entire agreement between you and the Company with respect to the terms and conditions of your employment specified herein and therein. This Agreement may not be amended or modified except by a written instrument signed by you and a duly authorized officer of the Company.

If you choose to accept this Agreement under the terms described above, please acknowledge your acceptance of our offer by returning a signed copy of this letter and the Proprietary Information and Inventions Assignment Agreement to our attention.

Sincerely,

HilleVax, Inc.

/s/ Robert Hershberg
Name: Robert Hershberg
Title: Chief Executive Officer

Agreed and Accepted:

I have read and understood this Agreement and hereby acknowledge, accept and agree to the terms as set forth above and further acknowledge and agree that no other commitments were made to me as part of my employment offer except as specifically set forth herein.

/s/ David Socks Date: 5/13/2021
David Socks

Attachments: Proprietary Information and Inventions Assignment Agreement

Exhibit 10.8

1 May 2021

EMPLOYMENT AGREEMENT

between

HilleVax GmbH in Formation
c/o Lenz & Staehelin Aktiengesellschaft
Brandschenkstrasse 24
8027 Zurich

(the "**Company**")

and

Astrid Borkowski

(the "**Employee**")

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1. Position and Responsibilities

The Employee is employed as Chief Medical Officer of the Company.

The Company has the right to assign other duties and responsibilities to the Employee which are in accordance with the Employee's education and skills.

The principal place of work is Zurich. Based on her position as Chief Medical Officer, the Employee will be required to perform some of her functions and activities in a place other than the principal place of work. In particular, the Employee agrees to perform some of her services at the offices of the Company's parent entity, Hillevax, Inc. (the "**Parent**") in the Greater Boston area in Massachusetts, USA, where she is expected to work approximately two weeks out of every month.

2. Reporting

The Employee shall report to the chief executive officer of HilleVax, Inc. (the "**Chief Executive Officer**").

3. Conflicts of Interests

The Employee shall not engage in any activities which might lead to a conflict of interests with respect to her position with the Company or the Parent.

In particular, the Employee shall refrain from operating, working for, or participating in any business which competes with the Company or the Parent.

Investments in companies competing or doing business with the Company are subject to the prior consent of the Parent.

4. Start Date and Term

The employment relationship starts on May 1, 2021. However, this Agreement will automatically expire if both (a) the license agreement to be entered into by the Parent and Takeda Pharmaceutical Company Limited, or any of its affiliates, related to Takeda's norovirus vaccine candidate (coded by Takeda Pharmaceutical Company Limited as TAK-214) (the "**License Agreement**") and (b) the consummation by the Parent of an equity or debt financing resulting in gross proceeds to the Parent of at least $75,000,000 (the "**Financing**" and together with the closing of the License Agreement, the "**Transactions**") have not occurred on or before June 30, 2021 (condition subsequent). The Company will inform the Employee without undue delay once the closing of the Transactions has occurred.

Subject to the automatic termination as outlined above, this Agreement is concluded for an indefinite term. It may be terminated by either party upon nine months' notice, effective as of the end of the month.

5. Probation Period

The probation period shall be three months.

During the probation period, this Agreement may be terminated by either party upon seven days' notice.

6. Working Hours, Part-Time Activities

The Employee shall devote her full working capacity exclusively to the Company.

The Employee shall not engage in any professional part-time activities, whether or not remunerated, without prior written consent of the Parent.

Other part-time activities require the written consent of the Parent if they involve the use of the Company's infrastructure and/or personnel.

7. Base Salary

The Employees gross base salary amounts to CHF 355,000 per year, payable in 12 monthly installments at the end of each month. This amount includes all compensation for overtime.

8. Discretionary Annual Bonus

The Employee may receive an annual target bonus of 30 % of the annual base salary. The terms regarding eligibility and payment of any bonus shall be in the absolute discretion of the board of directors of the Company.

9. Equity Incentive Plan

The Employee was granted a number of shares of the Parent's common stock equal to 1% of the outstanding capital stock of Parent (fully diluted) as of the date of grant (the "**Shares**"). The Shares were granted pursuant to, and are subject to the terms and conditions of, a restricted stock agreement made as of March 8, 2021 between the Parent and the Employee (the "**Restricted Stock Agreement**"). In particular, the Shares are subject to repurchase by the Parent in the constellations and pursuant to the terms as set out in the Restricted Stock Agreement (the "**Repurchase Option**"). In accordance therewith, the Shares will be released from the Repurchase Option over a four year schedule, with 25% of the Shares being released on the first anniversary of the Restriction Commencement Date, as defined in the Restricted Stock Agreement, and the remaining portion of the Shares being released in 36 monthly instalments thereafter. For the avoidance of doubt, none of the shares subject to the Restricted Stock Award will be released if this Agreement expires as a result of the condition subsequent defined in Section 4 above.

10. Expenses

The Company shall cover all reasonable expenses (travel and hotel expenses, expenses for client invitations etc.) which arise in connection with the Employee's activities for the Company. The reimbursement of expenses is made against presentation of the relevant receipts.

11. Social Security Contributions

The Employee and the Company shall each pay half of the contributions for AHV (Old Age and Survivors' Insurance), IV (Invalidity Insurance), EO (Loss of Earnings) and ALV (Unemployment Insurance). The Employee's contributions are deducted by the Company from her gross salary.

12. Pension Plan

The Employee shall participate in the Company's pension plan. The contributions and the benefits are determined by the rules and regulations of the pension plan, which will be established by the Company in due course. The Employee's contributions are deducted by the Company from her gross salary.

13. Illness

In case of the Employee's inability to perform her duties under this Agreement due to illness, the Employee shall receive her salary according to the terms and conditions of the insurance for loss of earnings due to illness. The Company shall bear the costs for the insurance premiums.

If an insurance for loss of earnings due to illness has not been entered into, the continuation of pay is determined by Art. 324a of the Swiss Code of Obligations.

14. Accident

The Employee is insured for occupational as well as non-occupational accidents. The Company shall bear the costs for the insurance premiums.

15. Maternity Leave

During maternity leave, the Company shall pay to the Employee the compensation for a period of 16 weeks.

The Employee's compensation entitlement is determined in accordance with the Federal Law on Loss of Earnings and any relevant cantonal regulations.

16. Vacation

The Employee is entitled to 4 weeks of paid vacation (20 working days) per year.

The vacation dates shall be subject to the prior approval of the Chief Executive Officer.

17. Confidentiality, Trade Secrets

Due to her position within the Company, the Employee will have access to manufacturing and business secrets as well as to the Company's customer data. All manufacturing or trade secrets including customer base, technical, organizational and financial information and all other information directly or indirectly related to the business of the Company or to the business of any customer of the Company, which is disclosed to the Employee by the Company or any of its employees and of which the Employee becomes aware during the employment with the Company, shall be treated as confidential information. At all times, both during the employment and after the termination thereof, the Employee shall keep such information confidential and shall refrain from disclosing it or using it in any way for her own benefit or for the benefit of any person other than the Company.

18. Intellectual Property Rights

Inventions, designs, developments and improvements which the Employee makes in performing her services for the Company and in fulfillment of her contractual duties or to which the Employee contributes belong to the Company, regardless of their protectability.

Inventions and designs which the Employee makes in performing her services for the Company but not in performing her contractual duties or to which the Employees contributes are assigned to the Company without further formalities. The Employee shall inform the Company of such inventions or designs. The Company shall inform the Employee in writing within 6 months whether it wishes to keep the rights to the invention or the design or to release them to the Employee. In case that the invention or the design is not released to the Employee, the Company shall pay her an appropriate compensation within the meaning of Art. 332 (4) of the Swiss Code of Obligations.

Any copyrights (drafts, models, plans, drawings, texts) which the Employee creates in performing her services for the Company, whether or not in performing her contractual duties, including the right to uses not yet known at this time, are transferred completely and exclusively to the Company.

The Employee agrees to immediately inform the Company in writing about the creation of all intellectual property rights of the kind mentioned in paragraphs 1 to 3 above. The Employee further agrees to issue all statements and provide all documents the Company may require to claim, enforce and/or exercise the afore-mentioned rights.

19. Non-Competition

During the term of employment and for a period of one year immediately following the termination of such employment (the "**Non-Competition Restricted Period**"), the Employee will not in the territory of Switzerland and Germany, directly or indirectly, for her own benefit or for the benefit of any other individual or entity other than the Company: (i) operate, conduct, or engage in, or prepare to operate, conduct, or engage in the business; (ii) own, finance, or invest in (except as the holder of not more than one percent of the outstanding stock of a publicly-held company) any business, or (iii) participate in, render services to, or assist any person or entity that engages in or is preparing to engage in the business in any capacity (whether as an employee, consultant, contractor, partner, officer, director, or otherwise) (x) which involves the same or similar types of services that the Employee performed for the Company at any time during the last two years of her employment with the Company or (y) in which the Employee could reasonably be expected to use or disclose confidential information.

In case of violation of this non-competition clause, the Employee shall pay to the Company liquidated damages in an amount of 50% of the annual base salary for each instance of violation. The payment of liquidated damages shall not discharge the Employee from observing this non-competition undertaking.

In addition to the payment of liquidated damages and further damages incurred by the Company, the Company shall have the right to request Employee, by way of specific performance, to cease any activity which violates this non-competition provision and to apply to the courts for provisional measures (injunctive relief).

20. Compensation for Non-Compete

For the term of the post-contractual non-compete according to Section 19 the Company shall pay to the Employee a monthly compensation equal to 100 % of her monthly gross salary.

The Company may at any time until the last day of employment waive compliance with the post-contractual non-compete. In this case no compensation will be owed to the Employee. Following the termination date the Company may only waive compliance with the non-compete subject to a notice period of three months.

The Company shall have the right to deduct from its compensation any income which the Employee receives during the non-compete as salary or from any self-employed activity. For this

purpose, the Employee upon request of the Company shall disclose and document her income either from a new employment or from any self-employed activity. If the Employee fails to comply with such request, she shall forego the right to any compensation, but shall remain bound by the non-compete.

During the term of any breach of the post-contractual non-compete, the Company shall be released from its obligation to make any compensation payment. The Employee shall reimburse the Company for any compensation that she received wrongfully.

21. Non-Solicitation

The Employee shall for the term of one year following the termination if this Agreement not solicit any customers of the Company or of any affiliated group company to do business, provided that such business is identical, similar or otherwise competitive to the business of the Company or the Parent.

The Employee shall for a period of one year following the termination of this Agreement not solicit any employee of the Company to exercise an activity for the Employee or a third party which is identical or similar to the activities she exercised in the employ of the Company.

In case of violation of this non-solicitation provision, the Employee shall pay to the Company liquidated damages in an amount of 50% of the annual base salary for each breach. The payment of liquidated damages shall not discharge the Employee from complying with this non-solicitation provision.

In addition to the payment of liquidated damages and further damages incurred by the Company, the Company shall have the right to request the Employee, by way of specific performance, to cease any activity which is in breach of this non-solicitation provision and to apply to the courts for provisional measures (injunctive relief).]

22. Data Transfer

The Company is part of an international group of companies. For purposes of properly administrating HR related data within the group, it may be necessary for the Company to transmit personnel data to group companies or third party service providers within or outside Switzerland. The Employee expressly agrees to the transfer by the Company of her personnel data to any group company or any third party service provider that needs to access such data irrespective of whether it is based within or outside Switzerland.

23. Miscellaneous

Amendments to this Agreement shall only be valid if made in writing.

24. Applicable Law

This Agreement is subject to Swiss law.

25. Annexes

The agreements and regulations attached to this Agreement, as amended from time to time, form an integral part of this Agreement.

Place, Date: Cambridge, Massachusetts, USA 02139

HilleVax GmbH in Formation

/s/ Paul Bavier
Name: Paul Bavier
Function: General Counsel and Secretary

Place, Date: Gladenbach, 5th May 2021

/s/ Astrid Borkowski
Astrid Borkowski

Exhibit 10.12

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE PHATHOM PHARMACEUTICALS, INC. HAS DETERMINED THE INFORMATION (I) IS NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM TO PHATHOM PHARMACEUTICALS, INC. IF PUBLICLY DISCLOSED.

LICENSE AGREEMENT

BY AND BETWEEN

TAKEDA VACCINES, INC.

AND

HILLEVAX, INC.

LICENSE AGREEMENT

This License Agreement (this "Agreement") is made effective as of July 2, 2021 (the "Effective Date") by and between Takeda Vaccines, Inc., a company incorporated under the laws of Delaware having its principal place of business at 75 Sidney Street, Cambridge, Massachusetts 02139, U.S.A. ("Takeda"), and HilleVax, Inc., a company incorporated under the laws of Delaware having its principal place of business at 601 Union Street, Suite 3200, Seattle, Washington, 98101, U.S.A. ("Licensee"). Licensee and Takeda are sometimes referred to herein individually as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, Takeda is a pharmaceutical company engaged in the research, development and commercialization of products useful in the amelioration, treatment or prevention of human diseases and conditions;

WHEREAS, Licensee was recently formed for the purposes of engaging in the research and development, and if successful, commercialization of vaccine products; and

WHEREAS, Licensee wishes to be granted, and Takeda desires to grant, a license in the Territory (as defined below) under certain patents, patent applications, know-how, and other proprietary information for the further development of the Compound and Product and commercialization of the Product (as those terms are defined below).

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements set forth below, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1 – DEFINITIONS

1.1 "Affiliate" means, with respect to a particular Party, a person, corporation, partnership, or other entity that controls, is controlled by or is under common control with such Party. For the purposes of this definition, the word "control" (including, with correlative meaning, the terms "controlled by" or "under the common control with") means the actual power, either directly or indirectly through one or more intermediaries, to direct or cause the direction of the management and policies of such entity, whether by the ownership of fifty percent (50%) or more of the voting stock of such entity, or by contract or otherwise.

1.2 "Ancillary Agreements" means the Clinical Supply Agreement attached hereto as Exhibit C, any other Clinical Supply Agreement entered into pursuant to Section 5.6, and any Commercial Supply Agreement entered into pursuant to Section 5.7, and any Transitional Services Agreement.

1.3 "Applicable Law" means all applicable statutes, ordinances, regulations, rules, or orders of any kind whatsoever of any Governmental Authority, including the U.S. Food, Drug and Cosmetic Act, (21 U.S.C. §301 et seq.) (the "FFDCA"), Prescription Drug Marketing Act, the Generic Drug Enforcement Act of 1992 (21 U.S.C. §335a et seq.), U.S. Patent Act (35 U.S.C. §1 et seq.), Federal Civil False Claims Act (31 U.S.C. §3729 et seq.), and the Anti-Kickback Statute (42 U.S.C.

§1320a-7b et seq.), all as amended from time to time, together with any rules, regulations, and compliance guidance promulgated thereunder.

1.4 "Bankruptcy Laws" has the meaning set forth in Section 13.5(b).

1.5 "Bayh-Doyle Act" means the Patent and Trademark Law Amendments Act of 1980, as amended, codified at 35 U.S.C. §§ 200-212, as well as any regulations promulgated pursuant thereto, including 37 C.F.R. Part 401, and any successor statutes or regulations.

1.6 "Biosimilar Product" means, with respect to any Product, on a Product-by-Product basis and country-by-country basis, a biologic product (a) for which the licensing, approval, or marketing authorization relies in whole or in part on a prior approval, licensing or marketing authorization granted such Product; (b) that is "biosimilar" to such Product, as the term "biosimilar" is defined in 42 U.S.C. § 262(i)(2); and (c) that has been licensed by the FDA or other Regulatory Authority outside of the United States by reference to such Product, as set forth at 42 USC 262(k)(4) or other analogous applicable Law outside of the United States. A Product licensed, marketed, sold, manufactured, or produced by or on behalf of either Party or its Affiliates (or any (Sub)licensees or distributors in their capacity as (Sub)licensee or distributor for such Party or any of its Affiliates) will not constitute a Biosimilar Product.

1.7 "BLA" means (a) a Biologics License Application as defined in the United States Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 301 et seq., as amended from time to time, together with any rules, regulations and requirements promulgated thereunder (including all additions, supplements, extensions, and modifications thereto), including any amendments thereto, or (b) any corresponding foreign application, including, with respect to the European Union, a Marketing Authorization Application filed with the EMA pursuant to the Centralized Approval Procedure or with the applicable Regulatory Authority of a country in Europe with respect to the mutual recognition or any other national approval procedure, including any amendments thereto.

1.8 "Breaching Party" has the meaning set forth in Section 13.2(a).

1.9 "Business Day" means a day other than Saturday, Sunday or any other day on which commercial banks located in the State of New York, U.S., or Japan, are authorized or obligated by Applicable Law to close.

1.10 "Calendar Quarter" means the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31; provided, however, that (a) the first Calendar Quarter of the Term shall extend from the Effective Date to the end of the first complete Calendar Quarter thereafter; and (b) the last Calendar Quarter of the Term shall end upon the expiration or termination of this Agreement.

1.11 "Calendar Year" means the twelve (12)-month period ending on December 31; provided however, that (a) the first Calendar Year of the Term shall begin on the Effective Date and end on December 31, 2021; and (b) the last Calendar Year of the Term shall end on the date of expiration or termination of this Agreement.

1.12 "Change of Control" means any of the following: (a) the acquisition by a Third Party, directly or indirectly, of the beneficial ownership of any voting security of a Party, or increase in

\the percentage ownership of such Third Party in the voting securities of a Party through stock redemption, cancellation or other recapitalization, where immediately after such acquisition or increase such Third Party is, directly or indirectly, the beneficial owner of voting securities representing fifty percent (50%) or more of the total voting power of all of the then-outstanding voting securities of a Party; (b) the consummation of a merger, consolidation, recapitalization, reorganization, amalgamation, arrangement, share exchange, tender or exchange offer, private purchase, business combination or other transaction of a Party, other than any such transaction which would result in stockholders or equity holders of a Party, or an Affiliate of a Party, immediately prior to such transaction coming to own not more than fifty percent (50%) of the outstanding securities of the surviving entity (or its parent entity) immediately following such transaction; (c) the stockholders or equity holders of a Party approve a plan of complete liquidation of a Party, or an agreement for the sale or disposition by a Party of all or a substantial portion of a Party's assets, other than to an Affiliate; or (d) the exclusive license sale or other transfer to a Third Party of all or substantially all of a Party's assets which relate to this Agreement.

1.13 "Claim" has the meaning set forth in Section 15.1.

1.14 "Clinical Supply Agreement" means the Clinical Supply Agreement attached hereto as Exhibit C, as such Clinical Supply Agreement may be modified or amended in accordance with the terms thereof.

1.15 "Clinical Trial" means any human clinical study or trial of a Product in the Field.

1.16 "Commercialization" means all activities undertaken in support of the promotion, marketing, sale and distribution (including importing, exporting, transporting, customs clearance, warehousing, invoicing, handling and delivering products to customers) of products. "Commercialize" means to engage in Commercialization activities.

1.17 "Commercialization Plan" means a plan prepared by the applicable Party pursuant to Section 7.2 containing an overview of the general strategy and a high-level budget for Commercializing the Products in the Field in such Party's respective territory.

1.18 "Commercially Reasonable Efforts" means, with respect to the efforts to be expended, or considerations to be undertaken, by a Party or its Affiliate with respect to any objective, activity or decision to be undertaken hereunder, reasonable, good faith efforts to accomplish such objective, activity or decision as a similarly situated pharmaceutical company would normally use to accomplish a similar objective, activity or decision under similar circumstances, it being understood and agreed that with respect to the Development, Manufacture, seeking and obtaining Regulatory Approval, or Commercialization of the Compound or a Product, such Party and its Affiliates may take into account, without limitation: (a) issues of efficacy, safety, and expected and actual approved labeling, (b) the expected and actual competitiveness of alternative products sold by Third Parties in the marketplace in the relevant territory, (c) the expected and actual product profile of the Compound or Product, (d) the expected and actual patent and other proprietary position of the Product in the relevant territory, (e) the likelihood of Regulatory Approval and/or pricing approval in the relevant territory given the regulatory structure involved, including regulatory or data exclusivity, (f) the expected and actual profitability and return on investment of

the Compound or Product, taking into consideration amounts owed hereunder, and (g) all other relevant scientific, technical, regulatory and commercial factors.

1.19 "Common Stock" shall have the meaning set forth in Section 2.2(a).

1.20 "Commercial Supply Agreement" shall have the meaning set forth in Section 5.7.

1.21 "Company Core Data Sheet" or "CCDS" means, a document prepared by the Marketing Authorization Holder containing, in addition to safety information, material related to indications, dosing, pharmacology and other information concerning the Product (see GVP Annex IV, ICH-E2C(R2) Guideline).

1.22 "Competing Product" shall mean, other than any Product, any vaccine product that includes any norovirus virus-like particles and that is being developed for or is approved for the prevention or minimization of symptoms caused by norovirus infection.

1.23 "Compound" means the combination of GI.1 and GII.4 norovirus VLPs coded as of the Effective Date by Takeda as TAK-214 and any derivatives thereof, including any analogs, prodrugs, sequence variations, mutations, chemical and/or posttranslational modifications thereof, including only one of the GI.1 or GII.4 VLPs or combinations of one or both GI.1 and GII.4 VLPs with other VLPs or non-VLP antigens capable of eliciting an immune response to prevent or minimize disease and/or infections caused by norovirus.

1.24 "Confidential Information" means all non-public or proprietary Information disclosed by a Party to the other Party under this Agreement, without regard as to whether any of such Information is marked "confidential" or "proprietary," or disclosed in oral, written, graphic, or electronic form. Confidential Information shall include the terms and conditions of this Agreement.

1.25 "Control" (and other correlative terms) means, with respect to any Information, Patent, Trademark or other intellectual property right, ownership or possession by a Party, or, where expressly provided, its Affiliates, of the ability (without taking into account any rights granted by one Party to the other Party under the terms of this Agreement) to grant access, a license or a sublicense to such Information, Patent, Trademark or other intellectual property right without violating the terms of any agreement or other arrangement [(***)] with, or necessitating the consent of, any Third Party [(***)], at such time that the Party would be first required under this Agreement to grant the other Party such access, license or sublicense; [***].

1.26 "Cure Period" has the meaning set forth in Section 13.2(a).

1.27 "Detectible Defect" has the meaning set forth in the Clinical Supply Agreement.

1.28 "Development" means all (i) non-clinical and clinical development activities, including toxicology, pharmacology, and other non-clinical efforts, statistical analysis, the performance of Clinical Trials, including the Manufacturing of the Product for use in the Clinical Trials, and (ii) other activities reasonably necessary in order to obtain or maintain, Regulatory Approval of the Product in the Field. When used as a verb, "Develop" means to engage in Development activities.

1.29 "Development Plan" means a detailed written plan prepared by Licensee for the Development activities to which such plan relates, and which plan shall (a) identify the Development objectives, projected timeline and activities to be conducted pursuant to this Agreement with respect to the Product during the Term; and (b) contain a reasonably detailed budget identifying the anticipated expenses associated with such Development activities. "Development Plan" includes the "Initial Development Plan".

1.30 "Disclosing Party" has the meaning set forth in Section 11.1.

1.31 "Dispute" or "Disputes" has the meaning set forth in Section 14.1.

1.32 "Drug Product" has the meaning set forth in the Clinical Supply Agreement.

1.33 "EMA" means the European Medicines Agency or any successor agency or authority having substantially the same function.

1.34 "Existing Commercial Sublicensee" has the meaning set forth in Section 4.3(d).

1.35 "Exploit" or "Exploitation" means to research, make, import, export, distribute, use, sell, or offer for sale, including to Develop, Commercialize, register, modify, enhance, improve, hold, keep (whether for disposal or otherwise), transport, distribute, promote, market, or otherwise dispose of, or to have performed any of the foregoing.

1.36 "FDA" means the U.S. Food and Drug Administration, or any successor agency thereto.

1.37 "FFDCA" means the Federal Food, Drug and Cosmetic Act under United States Code, Title 21, as amended.

1.38 "Field" means all human uses.

1.39 "First Commercial Sale" means, on a country-by-country basis, the first sale of a Product by a Party, its Affiliates or its (Sub)licensees to an end user or prescriber for use, consumption or resale of the Product in a country in such Party's respective territory in the Field where Regulatory Approval of the Product has been obtained.

1.40 "Force Majeure" means any event beyond the reasonable control of the affected Party including embargoes; war or acts of war, including terrorism; insurrections, riots, or civil unrest; strikes, lockouts or other labor disturbances; epidemics, fire, floods, earthquakes or other acts of nature; or acts, omissions or delays in acting by any governmental authority (including the refusal of the competent government agencies to issue required Regulatory Approvals due to reasons other than the affected Party's negligence or willful misconduct or any other cause within the reasonable control of the affected Party), and failure of plant or machinery (provided that such failure could not have been prevented by the exercise of skill, diligence, and prudence that would be reasonably and ordinarily expected from a skilled and experienced person engaged in the same type of undertaking under the same or similar circumstances). In addition, a Force Majeure may include reasonable measures affirmatively taken by a Party or its Affiliates to respond to any epidemic, pandemic, or spread of infectious disease (including the COVID-19 pandemic), such as requiring

employees to stay home, closures of facilities, delays of Clinical Trials, or cessation of activities in response to an epidemic or other Force Majeure event.

1.41 "Fully-Diluted Capitalization" means the outstanding shares of Common Stock of Licensee on a fully diluted basis, including (i) outstanding shares of preferred stock (on an as-converted basis), (ii) outstanding vested and unvested stock options (on an as-exercised basis) and all shares of Common Stock held in reserve in any of the Company's equity incentive plans that are not then yet allocated for outstanding and unexercised stock options, (iii) outstanding warrants (on an as-exercised basis), and (iv) other outstanding convertible securities (on an as-converted basis).

1.42 "GAAP" means generally accepted accounting principles in the U.S.

1.43 "Generic Competition Percentage" means, with respect to a particular Product in a particular country, all units of the Biosimilar Product(s) for such Product sold in such country divided by the sum of: (a) all units of such Product sold in such country, plus (b) all units of all Biosimilar Product(s) sold in such country, where, in each case, the number of units of a Product and each Biosimilar Product sold shall be based on the [***].

1.44 "Good Clinical Practices" or "GCP" means the then-current standards, practices and procedures promulgated or endorsed by the FDA as set forth in the guidelines adopted by the International Conference on Harmonization ("ICH"), titled "Guidance for Industry E6 Good Clinical Practice: Consolidated Guidance," (or any successor document) including related regulatory requirements imposed by the FDA and comparable regulatory standards, practices and procedures promulgated by the EMA or other Regulatory Authority applicable to the Territory, as they may be updated from time to time.

1.45 "Good Laboratory Practices", "GLP", or "cGLP" means the then-current standards, practices and procedures promulgated or endorsed by the FDA as set forth in 21 C.F.R. Part 58 (or any successor statute or regulation), including related regulatory requirements imposed by the FDA and comparable regulatory standards, practices and procedures promulgated by the EMA or other Regulatory Authority applicable to the Territory, as they may be updated from time to time, including applicable guidelines promulgated under the ICH.

1.46 "Governmental Authority" means any multi-national, federal, state, local, municipal or other government authority of any nature (including any governmental division, subdivision, department, agency, bureau, branch, office, commission, council, court or other tribunal).

1.47 "IFRS" means International Financial Reporting Standards.

1.48 "IND" means an Investigational New Drug application as defined in the FFDCA, as amended, and applicable regulations promulgated hereunder by the FDA, or any corresponding foreign application for a clinical trial authorization for a product filed with a Regulatory Authority in any other regulatory jurisdiction outside the U.S., the filing of which is necessary to commence or conduct clinical testing of a pharmaceutical product in humans in such jurisdiction.

1.49 "Indemnitee" shall have the meaning set forth in Section 15.3(a).

1.50 "Indemnifying Party" shall have the meaning set forth in Section 15.3(a).

1.51 "Information" means information, inventions, concepts, compounds, compositions, formulations, formulas, practices, procedures, processes, methods, knowledge, know-how, trade secrets, technology, techniques, designs, drawings, correspondence, computer programs, documents, apparatus, results, strategies, regulatory documentation, information and submissions pertaining to, or made in association with, filings with any Government Authority or patent office, data, including pharmacological, toxicological, non-clinical and clinical data, analytical and quality control data, manufacturing data and descriptions, patent and legal data, market data, financial data or descriptions, devices, assays, chemical formulations, specifications, material, product samples and other samples, physical, chemical and biological materials and compounds, and the like, in written, electronic, oral or other tangible or intangible form, now known or hereafter developed, whether or not patentable.

1.52 "Information Sharing Committee" shall have the meaning set forth in Section 12.1.

1.53 "Initial Development Plan" means the initial Development Plan for the Product attached to this Agreement as Exhibit A.

1.54 "Initiation" means the first dosing of a human subject in a Clinical Trial of a Product by Licensee, its Affiliate, or its (Sub)licensee.

1.55 "Inventions" means any and all inventions, discoveries and developments, whether or not patentable, made, conceived and/or reduced to practice in the course of performance of activities under this Agreement whether made, conceived and/or reduced to practice solely by, or on behalf of, Takeda, Licensee, the Parties jointly, or any Affiliate of the same.

1.56 "Involved Employee" has the meaning set forth in Section 10.3(d).

1.57 "Joint Know-How" means all Information and Inventions jointly created by Licensee and Takeda under this Agreement and during the Term that is necessary or useful to Exploit the Compound or Product in the Field. Joint Know-How excludes any Information or Inventions contained within a Joint Patent.

1.58 "Joint Intellectual Property" means, collectively, Joint Know-How and Joint Patents.

1.59 "Joint Inventions" shall have the meaning set forth in Section 9.1.

1.60 "Joint Patents" means all Patents covering or claiming any Joint Invention.

1.61 "Knowledge" means, as applied to a Party, that such Party [***].

1.62 "Knowledge Group" means, with respect to each Party, [***] of such Party or any Affiliates of such Party.

1.63 "Labeling" means, to the extent required by the applicable Regulatory Approval, all labels and other written, printed, or graphic matters (1) upon any article or any of its containers or wrappers, or (2) accompanying such an article, including healthcare professional Prescribing Information (e.g. US PI, EU SmPC), medication guides, patient information leaflets and artworks

(including mock-ups of the outer and immediate packaging), packaging, web sites, and other promotional materials.

1.64 "Licensee Indemnitee" shall have the meaning set forth in Section 15.2.

1.65 "Licensee Intellectual Property" means, collectively, Licensee Know-How and Licensee Patents.

1.66 "Licensee Know-How" means collectively (i) any Information Controlled by Licensee or its Affiliates (other than Takeda Know-How licensed to Licensee) as of the Effective Date that are necessary to Exploit a Compound or Product in the Field and (ii) any Information which first become Controlled by Licensee or its Affiliates after the Effective Date that are directed to a Compound or Product in the Field, including any Information disclosed by Licensee to Takeda under Section 12.2. Licensee Know-How excludes any Information contained within a Licensee Patent.

1.67 "Licensee Japan Development Activities" means the following Development activities to be performed by Licensee, each as set forth in the Initial Development Plan and further qualified in Section 5.4: (i) an immunogenicity Phase 1 Clinical Trial in Japanese healthy volunteers designed to meet PMDA criteria, (ii) the inclusion of Japanese subjects in Japan in Licensee's Phase 3 Clinical Trial (Phase 3 portion if Licensee conducts Phase 2b /Phase 3 Clinical Trials), and (iii) the inclusion of Japanese subjects in any immuno-bridging Clinical Trial.

1.68 "Licensee Patents" means all Patents Controlled by Licensee or its Affiliates, as of the Effective Date or during the Term (other than Takeda Patents licensed to Licensee) that are necessary or reasonably useful to Exploit Compounds or Products in the Field. There are no Licensee Patents as of the Effective Date and accordingly there are no Licensee Patents listed in Exhibit B as of the Effective Date. Licensee shall update Exhibit B from [***] to include future Licensee Patents and provide a copy thereof to Takeda.

1.69 "Licensee Royalty Term" means, on a country-by-country and Product-by-Product basis, the period commencing on the First Commercial Sale of a Product by Licensee, its Affiliates or (Sub)licensees in such country in the Territory and continuing until the later of:

(a) the expiration of the last to expire Valid Claim in a Takeda Compound Patent or Joint Patent covering the composition of matter, Manufacture or approved use of the Compound or such Product in such country;

(b) the expiration of the applicable Regulatory Exclusivity in such country; or

(c) [***] after First Commercial Sale of such Product by Licensee, its Affiliates or (Sub)licensees in such country.

1.70 "Licensee Third Party License" has the meaning set forth in Section 8.7(a).

1.71 "Licensee Third Party Royalties" shall have the meaning set forth in Section 8.7(a).

1.72 "Life Technologies Agreement" means the SF9 Cell Line License Agreement effective as of November 21, 2013 between Life Technologies Corporation and Takeda Vaccines (Montana), Inc.

1.73 "Life Technologies Assignment Agreement" means the Assignment Agreement attached hereto as Exhibit L.

1.74 "Losses" shall have the meaning set forth in Section 15.1.

1.75 "MAA" or "Marketing Authorization Application" means an application for Regulatory Approval filed with the EMA.

1.76 "Marketing Authorization Holder" or "MAH" means the Person that owns the applicable Regulatory Approval.

1.77 "Manufacture" or "Manufacturing" means all activities related to the manufacturing of the Compound or the Product, or any ingredient thereof, including manufacturing for Development and Commercialization, labeling, packaging, in-process and finished Product testing, release of the Compound or the Product or any ingredient thereof, quality assurance activities related to manufacturing and release of the Compound or the Product, ongoing stability tests and regulatory activities related to any of the foregoing.

1.78 "Net Sales" means, with respect to any Product, the gross amounts invoiced and/or received (whichever is the first to occur) by a Party, its Affiliates and (Sub)licensees for sales of such Product to Third Parties, less the following deductions, to the extent such deductions are paid, incurred or otherwise taken, reasonable and customary, provided to Third Parties, and actually allowed with respect to such sales:

(a) [***];

(b) [***];

(c) [***];

(d) [***]; and

(e) [***].

Notwithstanding the foregoing, amounts received or invoiced by such Party, its Affiliates or (Sub)licensees for the sale of such Product among such Party, its Affiliates or (Sub)licensees for resale shall not be included in the computation of Net Sales hereunder. In any event, any amounts received or invoiced by such Party, its Affiliates or (Sub)licensees shall be accounted for only once. For purposes of determining Net Sales, a Product shall be deemed to be sold when recorded by such Party, its (Sub)licensee or Affiliate in accordance with GAAP or IFRS, as the case may be. Net Sales shall be accounted for in accordance with standard accounting practices, as practiced by such Party, its Affiliates, or its respective (Sub)licensees in the relevant country, but in any event in accordance with GAAP or IFRS, as consistently applied in such country (except that notwithstanding any GAAP or IFRS guidance to the contrary, pursuant to subsection (d) above,

sales taxes and that portion of the annual fee on prescription drug manufacturers imposed by the Patient Protection and Affordable Care Act, Pub. L. No. 111-148 (as amended) may be deducted from Net Sales). For clarity, a particular deduction may only be accounted for once in the calculation of Net Sales. Net Sales shall exclude any samples of a Product transferred or disposed of at no cost for promotional, Development or educational purposes.

The Net Sales of any Product sold as a component of a combination or bundled product that consists of (i) a Product (or the Compound) together with (ii) one or more other active products or compounds for the treatment or prevention of diseases other than those caused by norovirus (a "Combination Product") shall be calculated as follows:

(x) [***];

(y) [***]; and

(z) [***].

1.79 "Non-Breaching Party" has the meaning set forth in Section 13.2(a).

1.80 "Patents" means all: (a) patents, including any utility or design patent; (b) patent applications, including provisionals, substitutions, divisionals, continuations, continuations in-part or renewals; (c) patents of addition, restorations, extensions, supplementary protection certificates, registration or confirmation patents, patents resulting from post-grant proceedings, re-issues and re-examinations; (d) other patents or patent applications claiming priority directly or indirectly to: (i) any such specified patent or patent application specified in (a) through (c), or (ii) any patent or patent application from which a patent or patent application specified in (a) through (c) claim direct or indirect priority; (e) inventor's certificates; (f) other rights issued from a Governmental Authority similar to any of the foregoing specified in (a) through (e), including but not limited to utility models; and (g) in each of (a) through (f), whether such patent, patent application or other right arises in the U.S. or any other jurisdiction in the world.

1.81 "Person" means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, incorporated association, joint venture or similar entity or organization, including a government or political subdivision, department or agency of a government.

1.82 "Phase 1 Clinical Trials" means a Clinical Trial of a Product with the endpoint of determining initial tolerance, safety, or immunogenicity information in single dose, single ascending dose, multiple dose and/or multiple ascending dose regimens, as more fully described in U.S. federal regulation 21 C.F.R. § 312.21(a) and its equivalents in other jurisdictions.

1.83 "Phase 2 Clinical Trial" means a Clinical Trial of a Product on human subjects, including possibly dose-ranging studies or "proof-of concept" efficacy studies, the principal purposes of which are to make a preliminary determination that such product is safe for its intended use and to obtain sufficient information about such product's efficacy or dose-response information to permit the design of further Clinical Trials.

1.84 "Phase 3 Clinical Trial" means a pivotal Clinical Trial of a pharmaceutical product, with a defined dose or a set of defined doses, which trial is designed to ascertain efficacy and safety of such product, in a manner that is generally consistent with 21 CFR § 312.21(c), as amended (or its successor regulation), and its equivalents in other jurisdictions, for the purpose of enabling the preparation and submission of a BLA with the FDA or any other applicable Regulatory Authority.

1.85 "PMDA" means the Pharmaceuticals and Medical Devices Agency of Japan.

1.86 "Product" means any pharmaceutical product, including all forms, presentations, strengths, doses and formulations (including any method of delivery), containing a Compound (a) alone or (b) in combination with at least one other active ingredient (including other VLPs) to prevent or minimize disease and/or infections caused by norovirus.

1.87 "Product BLA" means any BLA filed anywhere in the world which seeks Regulatory Approval for a Product in the Field, including any supplements or amendments thereto.

1.88 "Product Complaint" means all Information that has come to the attention of either Party, its Affiliates or its (Sub)licensees, concerning any dissatisfaction regarding a Product of such a nature and magnitude that it is required under Applicable Law to be collected, maintained and reported to a Regulatory Authority, including reports of actual or suspected product tampering, contamination, mislabeling or inclusion of improper ingredients.

1.89 "Product IND" means any IND filed anywhere in the world pertaining to a Product, including any supplements or amendments thereto.

1.90 "Product Infringement" has the meaning set forth in Section 9.5(b)(i).

1.91 "Product Trademarks" means the Trademark(s) to be used by Licensee or its Affiliates or its (Sub)licensees for the Exploitation of Products in the Field in the Territory and any registrations thereof or any pending applications relating thereto in the Territory (excluding, in any event, any trademarks, service marks, names or logos that include any corporate name or logo of the Parties or their Affiliates).

1.92 "Qualified Financing" means a financing resulting in gross aggregate cash proceeds to Licensee of at least $[***], either through the issuance of (i) convertible notes, or (ii) Series A preferred stock, in either case consistent with the terms of the Side Letter Agreement between the Parties dated on or about the Effective Date.

1.93 "Receiving Party" shall have the meaning set forth in Section 11.1.

1.94 "Regulatory Approval" means all approvals (including supplement, amendment, or pre- and post-approval), licenses, registrations or authorizations of any national, regional, state or local Regulatory Authority, department, bureau, commission, council or other Governmental Authority, that are necessary for the Commercialization of the Product in a country or countries (but excluding approval of any application for pricing or reimbursement for the Product by any Governmental Authority).

1.95 "Regulatory Authority" means any applicable Governmental Authority involved in granting Regulatory Approval, including in the U.S., the FDA and any other applicable Governmental Authority having jurisdiction over the approval of a Compound or a Product.

1.96 "Regulatory Exclusivity" means any exclusive marketing rights or data protection or other exclusivity rights conferred by any Regulatory Authority with respect to a Product in a country or jurisdiction, other than a Patent right, including, in the United States, orphan drug exclusivity, pediatric exclusivity, rights conferred in the U.S. under the Drug Price Competition and Patent Term Restoration Act, 21 U.S.C. 355, as amended (the "Hatch-Waxman Act").

1.97 "Regulatory Materials" means all regulatory applications, submissions, notifications, registrations, Regulatory Approvals or other submissions, including any written correspondence or meeting minutes, made to, made with, or received from a Regulatory Authority that are necessary or reasonably desirable in order to Develop, Manufacture, market, sell or otherwise Commercialize a Product in the Field. Regulatory Materials include the Product INDs and the Product BLAs, and amendments and supplements thereto.

1.98 "Royalty Term" means the Licensee Royalty Term or the Takeda Royalty Term, as applicable.

1.99 "Sole Inventions" shall have the meaning set forth in Section 9.1.

1.100 "(Sub)licensees" of a Party shall mean any Third Party that has been granted a license or sublicense by such Party (or such Party's Affiliates or other (Sub)licensees) to Exploit the Compound or any Product. For the sake of clarity, (a) Takeda, its Affiliates, and any Third Party to which Takeda and/or its Affiliates grants such a license or sublicense shall not be deemed a (Sub)licensee of Licensee (unless, and only to the extent that, such Third Party is granted such a licensee or sublicense by Licensee, its Affiliates, or (Sub)licensee, including after expansion of the Territory pursuant to Section 7.1(b), as applicable), and (b) Licensee, its Affiliates, and any Third Party to which Licensee and/or its Affiliates grants such a license or sublicense shall not be deemed a (Sub)licensee of Takeda (unless, and only to the extent that, such Third Party is granted such a licensee or sublicense by Takeda, its Affiliates, or (Sub)licensee, including after termination of this Agreement, as applicable).

1.101 "TAK-214" means the product under development as of the Effective Date by Takeda and coded by Takeda as TAK-214, which is an intramuscular norovirus bivalent virus-like particle ("VLP") vaccine adjuvanted with Aluminum Hydroxide [Al(OH)3] and contains two norovirus VLPs, one containing a GI.1 genogroup sequence (GI.1VLP) and the other containing a GII.4 genogroup sequence (Takeda's GII.4 VLP has a composite sequence based on three different GII.4 norovirus genotypes and is referred to as GII.4c).

1.102 "Takeda Compound Patents" means (a) the Patents set forth on Exhibit D as of the Effective Date and listed as Takeda Compound Patents therein, and any provisionals, substitutions, divisionals, continuations, continuations in-part, renewals, registration or confirmation patents, patents resulting from post-grant proceedings, re-issues, re-examinations, patents of addition, restorations, extensions, or supplementary protection certificates of such Patents, and (b) all other Patents Controlled by Takeda or its Affiliates as of the Effective Date or during the Term which

[***] claim the composition of matter of, formulation of, or a method of making or using the Compound or Product. Takeda shall update Exhibit D from time to time as necessary to include future Takeda Compound Patents and provide a copy thereof to Licensee.

1.103 "Takeda Fiscal Year" means the twelve (12) month period commencing on April 1 ending on March 31; provided, however, that (a) the first Takeda Fiscal Year of the Term shall begin on the Effective Date and end on March 31, 2022; and (b) the last Takeda Fiscal Year of the Term shall end on the date of expiration or termination of this Agreement.

1.104 "Takeda General Patents" means (a) the Patents set forth on Exhibit D as of the Effective Date and listed as Takeda General Patents therein, (b) any provisionals, substitutions, divisionals, continuations, continuations in-part, renewals, registration or confirmation patents, patents resulting from post-grant proceedings, re-issues, re-examinations, patents of addition, restorations, extensions, or supplementary protection certificates of the patents in subsection (a) above, [***], (c) all other Patents that claim any [***] useful to Exploit the Compound or Product [***], and (d) all other Patents Controlled by Takeda or its Affiliates as of the Effective Date or during the Term that are not Takeda Compound Patents, but that (i) are necessary to Exploit the Compound or Product in the Field in the Territory, or (ii) claim the composition of matter of, formulation of, or a method of making or using the Compound or Product. [***]. The Takeda General Patents as of the Effective Date are set forth in Exhibit D. Takeda shall update Exhibit D from time to time as necessary to include future Takeda General Patents and provide a copy thereof to Licensee. For the avoidance of doubt, for the purpose of this Agreement, patents having been assigned Takeda's internal case number P20930 (US 10,501,500 and equivalents thereof, as listed in Exhibit D) are deemed Takeda General Patents, not Takeda Compound Patents.

1.105 "Takeda Indemnitee" shall have the meaning set forth in Section 15.1.

1.106 "Takeda Intellectual Property" means, collectively, Takeda Know-How and Takeda Patents. For the sake of clarity, Takeda Intellectual Property does not include any rights granted to Takeda under the Life Technologies Agreement.

1.107 "Takeda Know-How" means collectively (a) any Information Controlled by Takeda or its Affiliates (other than Licensee Know-How licensed to Takeda) as of the Effective Date that are necessary to Exploit a Compound or Product in the Field and (b) any Information which first become Controlled by Takeda or its Affiliates after the Effective Date that are directed to a Compound or Product in the Field, including any Information disclosed by Takeda to Licensee under Section 12.2. Takeda Know-How excludes any (i) Information contained within a Takeda Patent, and (ii) any Information licensed to Takeda under the Life Technologies Agreement.

1.108 "Takeda Patents" means the Takeda Compound Patents and the Takeda General Patents.

1.109 "Takeda Product Trademark" and "Takeda Product Trademarks" (collectively "Takeda Product Trademark(s)") means the Trademark or Trademarks to be owned and used by Takeda or its Affiliates or its (Sub)licensees for the Exploitation of Products in the Field outside the Territory and any registrations thereof or any pending applications relating thereto (excluding, in any event, any trademarks, service marks, names or logos that include any corporate name or logo of the

Parties or their Affiliates). Notwithstanding anything to the contrary in this Agreement, Takeda Product Trademarks will not include any Product Trademarks.

1.110 "Takeda Royalty Term" means, on a country-by-country and Product-by-Product basis, the period commencing on the First Commercial Sale of a Product by Takeda, its Affiliates or (Sub)licensees in such country outside of the Territory and continuing until the later of:

(a) the expiration of the last to expire Valid Claim in a Licensee Patent or Joint Patent covering the composition of matter, Manufacture or approved use of the Compound or such Product in such country;

(b) the expiration of the applicable Regulatory Exclusivity in such country; or

(c) [***] after First Commercial Sale of such Product by Takeda, its Affiliates or (Sub)licensees in such country.

1.111 "Takeda Third Party License" has the meaning set forth in Section 8.7(e).

1.112 "Takeda Third Party Royalties" shall have the meaning set forth in Section 8.7(e).

1.113 "Tax" or "Taxes" shall mean any form of tax or taxation, levy, duty, charge, social security charge, contribution or withholding of whatever nature (including any related fine, penalty, surcharge or interest) imposed by, or payable to, any government, state or municipality, or any local, state, federal or other fiscal, revenue, customs, or excise authority, body or official.

1.114 "Territory" means worldwide, excluding Japan. Pursuant to Section 7.1(b), the Territory may be expanded to be worldwide. In such event, "Territory" will mean worldwide effective as of the effective date of such expansion pursuant to Section 7.1(b).

1.115 "Term" shall have the meaning set forth in Section 13.1.

1.116 "Third Party" means a Person other than Takeda and Licensee and their respective Affiliates.

1.117 "Top-Line Data" means, with respect to a Clinical Trial, a summary of demographic data, the data for the primary endpoint(s), the data for any secondary endpoint(s), if such secondary endpoint(s) are applicable, and a summary of safety data, in each case which are based on an unblinded, locked database and wherein all data are collected in a 21 CFR 11 validated database with a complete audit trail.

1.118 "Trademark" means (a) any word, name, symbol, color, designation or device or any combination thereof that functions as a source identifier, including any trademark, trade dress, brand mark, service mark, trade name, brand name, logo, business symbol or domain names, whether or not registered, or any application, renewal, extension, or modification thereto; and (b) all goodwill associated therewith.

1.119 "Transfer Plan" means the transfer plan set forth in Exhibit E.

1.120 "Transitional Services Agreement" means any Transitional Services Agreement entered into between the Parties after the Effective Date.

1.121 "Up-Front Shares" shall have the meaning set forth in Section 2.2(a).

1.122 "U.S. Government Rights" means collectively, any and all rights the federal government of the United States or any agency thereof may have to Takeda Intellectual Property conceived, discovered, developed, or otherwise made under the Takeda U.S. Government Contracts listed in Exhibit N.

1.123 "Valid Claim" means (a) a claim of an issued and unexpired Patent included within the Takeda Patents, the Licensee Patents or the Joint Patents, to the extent such claim has not been revoked, held invalid or unenforceable by a patent office, court or other governmental agency of competent jurisdiction in a final order, from which no further appeal can be taken, and which claim has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination or disclaimer; or (b) a claim of any patent application (where such claim was filed in good faith and where no reasonable arguments against patentability of such claim are known) within the Takeda Patents, the Licensee Patents or the Joint Patents, to the extent such claim has not been canceled, withdrawn, or abandoned or pending for more than [***] from its earliest priority date. A claim of a Patent licensed to a Party under this Agreement will not cease to be considered a Valid Claim for the purpose of this Agreement if the revocation of such claim or such claim being held invalid or unenforceable is caused by any action of such Party or any of its Affiliates or (Sub)licensees.

1.124 "VLPs" means virus-like particles.

1.125 "Warrant" shall have the meaning set forth in Section 2.2(b).

ARTICLE 2 – UP-FRONT EQUITY AND WARRANTS

2.1 **Up-Front Equity and Warrant**.

(a) **Up-Front Equity**. In partial consideration for Licensee's rights in and to the Takeda Intellectual Property licensed hereunder and other rights granted hereunder, on or before the Effective Date, Licensee will issue and deliver to Takeda Five Hundred Thousand (500,000) shares (the "Up-Front Shares") of Common Stock, par value $0.0001 ("Common Stock"), which represents **[***] of the Fully-Diluted Capitalization calculated immediately prior to the closing of the Qualified Financing (and, for the avoidance of doubt, excluding any Series A preferred stock and any convertible promissory notes that are converted into the securities issued in the Qualified Financing). To implement the issuance of the Up-Front Shares, the Parties shall execute and deliver to one another a Stock Issuance Agreement in the form attached hereto as Exhibit F. The Up-Front Shares shall be of the same class as the initial founders' shares of Common Stock issued to Frazier Life Sciences X, L.P. (the "Frazier Up-Front Shares").

(b) **Warrant Coverage.** In partial consideration for Licensee's rights in and to the Takeda Intellectual Property licensed hereunder and other rights granted hereunder, on the Effective Date, Licensee will issue to Takeda a warrant to purchase additional shares of Common Stock with an exercise price equal to the par value of $0.0001 per share, in the form attached hereto

as Exhibit G (the "Warrant"). The number of shares of Common Stock subject to the Warrant shall be equal to [***] of the Fully-Diluted Capitalization calculated immediately prior to the closing of the Qualified Financing (and, for the avoidance of doubt, excluding any Series A preferred stock and any convertible promissory notes that are converted into the securities issued in the Qualified Financing). The Warrant will be exercisable by Takeda on a cashless, net-exercise basis as more particularly set forth in the Warrant.

(c) **Additional Warrant Coverage; Minimum IPO Ownership**. In partial consideration for Licensee's rights in and to the Takeda Intellectual Property licensed hereunder and other rights granted hereunder, in the event that the shares of Common Stock issued to Takeda pursuant to Section 2.1(a) and issued or issuable upon cashless, net exercise of the Warrant issued pursuant to Section 2.1(b) together represent less than [***] of the Fully-Diluted Capitalization calculated immediately prior to the earlier of a Licensee Change of Control or the closing of the first underwritten initial public offering of the Common Stock (including, for the avoidance of doubt, any Series A preferred stock and any shares of Common Stock issued upon conversion of convertible promissory notes that are issued in the Qualified Financing, but excluding shares of Common Stock newly issued in such initial public offering itself) then Licensee shall issue an additional Warrant to Takeda upon such Licensee Change of Control or the closing of such initial public offering. The number of shares of Common Stock subject to such additional Warrant shall be calculated such that the additional shares issuable upon cashless, net exercise of such additional Warrant, together with the shares of Common Stock issued to Takeda pursuant to Section 2.1(a) and issued or issuable upon cashless, net exercise of the Warrant issued pursuant to Section 2.1(b), represent an aggregate of [***] of the Fully-Diluted Capitalization calculated immediately prior to, as applicable, such Licensee Change of Control or the closing of the first underwritten initial public offering of the Common Stock (including, for the avoidance of doubt, any shares of Common Stock issued upon any conversion of convertible promissory notes and any Series A preferred stock that are issued in the Qualified Financing, but excluding shares of Common Stock newly issued in such initial public offering itself).

(d) **Exercise of Warrant**. The Warrants will be exercisable as set forth therein.

(e) **Ancillary Documents**. Takeda shall be required to enter into any agreements related to the Common Stock that Frazier Life Sciences X, L.P. is required to enter into in connection with the Qualified Equity Financing related to the Frazier Up-Front Shares.

(f) **No Partnership Interest**. Licensee and Takeda hereby acknowledge they do not intend to create a partnership interest for Takeda under U.S. tax laws by reason of Licensee's issuance of the Warrant.

ARTICLE 3 – FINANCIAL STATEMENTS

3.1 **Licensee Financial Statements**. Licensee shall provide Takeda with [***].

ARTICLE 4 – LICENSES AND ASSIGNMENT

4.1 **Licenses from Takeda to Licensee**. Subject to the terms and conditions of this Agreement and subject to any U.S. Government Rights, Takeda on behalf of itself and its Affiliates hereby

grants to Licensee (a) an exclusive (even as to Takeda and its Affiliates), nontransferable (except as provided in Section 16.4), royalty-bearing license, with the right to grant sublicenses solely in accordance with Section 4.3, under the Takeda Intellectual Property and Takeda's rights to the Joint Intellectual Property, solely to Commercialize Products in the Field in the Territory, (b) a non-exclusive, nontransferable (except as provided in Section 16.4) license, with the right to grant sublicenses solely in accordance with Section 4.3, under the Takeda Intellectual Property and Takeda's rights to the Joint Intellectual Property, to Develop Compounds and Products anywhere in the world (subject to Takeda's prior written consent, not to be unreasonably withheld, conditioned or delayed, with respect to any Clinical Trials outside of the Territory, which Takeda hereby grants with respect to the Licensee Japan Development Activities) and Manufacture Compounds and Products anywhere in the world, in each case, solely (i) for the Exploitation of Compounds and Products in the Field in the Territory, (ii) to perform the Licensee Japan Development Activities, or (iii) to supply Product to Takeda pursuant to any Clinical Supply Agreement or Commercial Supply Agreement, and (c) a worldwide, non-exclusive, fully paid-up, royalty-free, non-transferable (except as provided in Section 16.4) license, with the right to sublicense through multiple tiers, under Takeda's rights to the Joint Intellectual Property, to Exploit compounds (other than the Compound) and products (other than the Product and other norovirus vaccines, including Competing Products). Notwithstanding any language to the contrary, Takeda retains (x) the right to Develop and Manufacture Compound and Product anywhere in the world, including inside the Territory (subject to Licensee's prior written consent, not to be unreasonably withheld, conditioned or delayed, with respect to any Clinical Trials in the Territory), (y) the exclusive right to Commercialize the Compound and Product outside of the Territory, and (z) the exclusive right to Commercialize the Compound and Product outside of the Field. Except to the extent prohibited or required by Applicable Law, the Licensee shall be responsible, [***], for all recordals of the licenses granted to it under this Agreement, including all filing and other actions required to make such recordals, [***].

4.2 **Licenses and Grant-Back Sub-Licenses from Licensee to Takeda**.

(a) Subject to the terms and conditions of this Agreement, Licensee hereby grants to Takeda (i) a limited, non-exclusive, non-transferable (except as provided in Section 16.4), fully paid-up, royalty-free, license, with the right to grant sublicenses solely in accordance with Section 4.3, under the Licensee Intellectual Property and Licensee's rights to the Joint Intellectual Property that is necessary or useful to enable Takeda to Develop and Manufacture the Compound and Products anywhere in the world (but with respect to Clinical Trials inside the Territory, subject to the second sentence of Section 4.1) solely for Commercialization of Products in the Field outside the Territory and to perform its obligations under this Agreement, (ii) a limited, exclusive, non-transferable (except as provided in Section 16.4), royalty-bearing license, with the right to grant sublicenses solely in accordance with Section 4.3, under the Licensee Intellectual Property and Licensee's rights to the Joint Intellectual Property, to (1) Commercialize Products outside of the Territory and (2) Commercialize Products outside of the Field, (iii) a worldwide, non-exclusive, fully paid-up, royalty-free, non-transferable (except as provided in Section 16.4) license, with the right to further sublicense through multiple tiers, under Licensee's rights to the Joint Intellectual Property, to Exploit compounds (other than the Compound) and products (other than the Product and other norovirus vaccines, including Competing Products), and (iv) an exclusive nontransferable (except as provided in Section 16.4) license, with the right to grant sublicenses

solely in accordance with Section 4.3 to use the Product Trademark(s) solely for Commercialization of a Product in the Field outside of the Territory.

(b) Subject to the terms and conditions of this Agreement, Licensee hereby grants back to Takeda a limited, exclusive, fully paid-up, royalty-free, non-transferable (except as provided in Section 16.4) sublicense, with the right to further sublicense solely in accordance with Section 4.3, under the Takeda Intellectual Property and Takeda's rights to the Joint Intellectual Property solely as, and to the extent necessary or useful, to enable Takeda in the Field in the Territory, to exercise its express rights and perform its obligations under this Agreement and the Ancillary Agreements.

4.3 **Sublicensing**.

(a) [***], Licensee shall have the right to grant sublicenses to Commercialize the Product in the Field in the Territory, through multiple tiers, under the rights granted to Licensee under Section 4.1, to its Affiliates and to one or more Third Parties. Licensee shall have the right to grant sublicenses to its rights to Develop and Manufacture the Compound and Product (i) to its Affiliates, with the right to sublicense in accordance with this Section 4.3(a), (ii) to any Third Party to whom Licensee, in accordance with the previous sentence, has granted a sublicense to Commercialize the Product in the Field in the Territory, and (iii) to one or more vendors, contract research organizations and the like to the extent necessary or useful to Develop and/or Commercialize the Product in accordance with Licensee's express rights under this Agreement; provided that the right to grant sublicenses to Takeda General Patents shall be limited to the extent needed for manufacturing the Compound and Product for Exploitation in the Field in the Territory.

(b) Takeda shall have the right to grant one or more licenses or sublicenses, as the case may be, under the rights granted to Takeda under Section 4.2, (i) to its Affiliates, with the right to sublicense in accordance with this Section 4.3(b), (ii) to any Third Party, provided that Takeda and its Affiliates may not sublicense all or substantially all Commercialization rights to the Product outside of the Territory without Licensee's prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed, and (iii) to one or more vendors, contract research organizations and the like, to the extent necessary or useful to Develop and/or Commercialize the Product in accordance with Takeda's express rights under this Agreement.

(c) Each sublicense shall refer to and be subordinate to this Agreement and, except to the extent the Parties otherwise agree in writing, any such sublicense must be consistent in all material respects with the terms and conditions of this Agreement. Each Party shall remain responsible for the performance of this Agreement and the performance of its (Sub)licensees hereunder.

(d) Upon an early termination of Licensee's license rights under this Agreement [***]. [***].

4.4 **No Implied Licenses**. No license or other right is or shall be created or granted hereunder by implication, estoppel, or otherwise. All licenses and rights are or shall be granted only as expressly provided in this Agreement. All rights not expressly granted by a Party under this Agreement are reserved by the Party and may not be used by the other Party for any purpose.

4.5 **Exports and Restrictions on Competition**.

(a) **Exports**. Licensee shall neither, and shall cause its Affiliates and (Sub)licensees to neither, whether directly or indirectly through a Third Party, (i) sell or promote a Product outside of the Field or outside of the Territory, nor (ii) export or distribute a Product outside of the Territory other than for Exploitation in the Field in the Territory.

(b) **Competing Product Activities.** During the Term, each Party shall not, and shall cause its Affiliates not to, whether directly or indirectly through a Third Party (including any (Sub)licensee), without the other Party's prior written consent, Commercialize any Competing Product anywhere in the world.

4.6 **Assignment of Life Technologies Agreement.** On the Effective Date the Parties shall execute the Life Technologies Assignment Agreement, which shall be effective as of the Effective Date. Notwithstanding any language to the contrary, except for the previous sentence, none of the terms of this Agreement, including Article 10, shall apply with respect to the Life Technologies Agreement, including any rights or licenses thereunder to Information or other intellectual property. Takeda shall have obtained from Life Technologies an acknowledgement for such assignment in the form set forth on Exhibit M.

4.7 **Government Rights and Reservation.** Licensee acknowledges and agrees that the rights under this Agreement are subject to certain rights required to be granted to the Government of the United States of America. These U.S. Government Rights include, without limitation, a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced throughout the world for or on behalf of the United States the Takeda Intellectual Property generated, developed, or "made" under the Takeda Government Contracts listed in the leftmost column of the table included in Exhibit N (the "Takeda Government Contracts"). For clarity, these U.S. Government Rights do not include rights to [***].

ARTICLE 5 – DEVELOPMENT AND SUPPLY

5.1 **Overview of Product Development**. Each Party's Development of the Compound and the Product in the Field in or for its respective territory and Licensee's performance of the Licensee Japan Development Activities shall be conducted in a manner consistent with the principle of seeking and maintaining Regulatory Approvals in the Field in such Party's respective territory (and in Japan with respect to Licensee's performance of the Licensee Japan Development Activities) that include the appropriate Labeling for the Product in light of the clinical data. [***], Licensee shall notify Takeda so that Licensee and Takeda can discuss in good faith whether such data support conducting immuno-bridging Clinical Trials to obtain Regulatory Approval of the Product for non-infant (including children up to 18 years old, adults and older adults 65 years of age and older) populations. After such discussions between the Parties, Licensee shall determine whether the clinical data support conducting such immuno-bridging Clinical Trials, provided that Licensee will consider in good faith any comments of Takeda with respect to such determination. If Licensee determines that the clinical data support conducting such immuno-bridging Clinical Trials, then as soon as is reasonably practical after making such determination, Licensee shall seek advice from the key Regulatory Authorities (*e.g.;* FDA, EMA, and PMDA) regarding the acceptability of immune-bridging Clinical Trials to obtain Regulatory Approval of the Product for

non-infant (including children up to 18 years old, adults and older adults 65 years of age and older) populations (the "Immuno-Bridging Regulatory Authority Consultations"). Licensee shall (1) notify Takeda in advance any Immuno-Bridging Regulatory Authority Consultations, (2) consider in good faith any advice provided by Takeda with respect to any Immuno-Bridging Regulatory Authority Consultations, (3) unless prohibited by the PMDA, allow Takeda to attend any such meetings (including telephone and web meetings) with the PMDA regarding Immuno-Bridging Regulatory Authority Consultations, and (4) keep Takeda informed in a timely manner of any communications from or to the applicable Regulatory Authority regarding all Immuno-Bridging Regulatory Authority Consultations.

5.2 **Licensee and Takeda Development**. Licensee (itself or through its Affiliates or (Sub)licensees) shall be solely responsible for: (a) all of Licensee's, and its Affiliates' and their respective (Sub)licensees' and Third Party contractors' activities related to the Development of the Compound and the Product in the Field for Commercialization in the Territory; and (b) all expenses, including Third Party expenses, related to such Development activities. In addition, Licensee shall, [***], conduct the Licensee Japan Development Activities in accordance with this Agreement and the Initial Development Plan, as the Licensee Japan Development Activities may be amended pursuant to Section 5.4. If Takeda determines that any other Development activities (including Clinical Trials) other than the Licensee Japan Development Activities are needed or helpful to obtain Regulatory Approval in Japan, then Takeda shall notify Licensee. Unless the Parties agree otherwise in writing, Takeda shall be responsible for the performance of such other Development activities which are needed or helpful to obtain Regulatory Approval in Japan. Except for the Licensee Japan Development Activities or as otherwise expressly agreed by the Parties in writing, Takeda (itself or through its Affiliates or (Sub)licensees) shall be solely responsible for: (i) all of Takeda's, and its Affiliates' and their respective (Sub)licensees' and Third Party contractors' activities related to the Development of the Compound and the Product in the Field for Commercialization outside of the Territory; and (ii) all expenses, including Third Party expenses, related to such Development activities.

5.3 **Development Efforts**. Licensee shall use Commercially Reasonable Efforts to Develop the Compound and the Product in order to Commercialize the Product in the Field in the Territory, including Development for non-infant (including children up to 18 years old, adults and older adults 65 years of age and older) populations. Based on the results of the Immuno-Bridging Regulatory Authority Consultations, Licensee shall, after discussions with Takeda and in good faith taking into consideration Takeda's comments and suggestions provided during such discussions, have the right to determine whether to pursue immune-bridging Clinical Trials as a pathway to seek Regulatory Approval in the Territory of the Product for non-infant (including children up to 18 years old, adults and older adults 65 years of age and older) populations, provided that when making such determination Licensee shall take into account Japan as if it were part of the Licensee's Territory.

5.4 **Development Plan**.

(a) **Initial Development Plan and Updates.** The Initial Development Plan is set forth in Exhibit A. [***], Licensee shall update and amend, as appropriate, the then-current Development Plan and shall provide a copy of a proposed updated and amended Development Plan to Takeda. Licensee shall provide Takeda with an opportunity to review and

comment on the proposed updated and amended Development Plan. Licensee shall consider in good faith any such comments of Takeda when finalizing the updated and amended Development Plan. [***] after finalizing the updated and amended Development Plan, Licensee shall provide a copy thereof to Takeda. The Development Plan will include the Licensee Japan Development Activities. Notwithstanding any language to the contrary, without Takeda's prior written consent, Licensee may neither update nor amend any of the Licensee Japan Development Activities in any updated or amended Development Plan.

(b) **Phase 1 Clinical Trials and Materials.** Unless the Parties otherwise agree in writing, Licensee shall conduct, in accordance with Initial Development Plan, the immunogenicity Phase 1 Clinical Trial in Japanese healthy volunteers designed to meet PMDA criteria; provided that if the PMDA requires in such immunogenicity Phase 1 Clinical Trial the use of a formulation of Product that is different from whichever formulation of Product that Licensee utilizes for its pediatric Phase 2/Phase 3 Clinical Trials Takeda supplies Licensee at Takeda's cost sufficient supply of such different PMDA required formulation of Product as reasonably required for the performance of such immunogenicity Phase 1 Clinical Trial unless otherwise agreed by the Parties.

(c) **Phase 1 Clinical Trials Cost and Time Overruns**. Licensee shall [***] notify Takeda if Licensee, in good faith, anticipates that (i) Licensee will incur more than [***], or (ii) despite Licensee's use of Commercially Reasonable Efforts (as if Japan were part of the Territory), Licensee will not be able to complete such immunogenicity Phase 1 Clinical Trial prior to [***]. In any notice of an anticipated Phase 1 Cost Overrun, Licensee shall identify the additional costs and expenses Licensee in good faith expects to be incurred by Licensee in order to complete such immunogenicity Phase 1 Clinical Trial (including as evidenced by proposals from Third Party contractors to the extent available). After Takeda's receipt of any such notice of an anticipated Phase 1 Cost Overrun, Takeda shall have the option, in its sole discretion, of either agreeing to reimburse Licensee for such identified additional costs and expenses or declining to reimburse Licensee for such costs and expenses. If Takeda does not provide written notice to Licensee that Takeda elects to reimburse Licensee for such identified additional costs and expenses within [***] after Takeda's receipt of any such notice of an anticipated Phase 1 Cost Overrun, then Takeda will be deemed to have elected to decline to reimburse Licensee for such identified additional costs and expenses. In any notice of an anticipated Phase 1 Time Overrun, Licensee shall include the additional details regarding the causes of the anticipated Phase 1 Time Overrun and the expected timing to complete such immunogenicity Phase 1 Clinical Trial. After Takeda's receipt of any such notice of a Phase 1 Time Overrun, Takeda and Licensee shall in good faith discuss whether to make any amendments to the Licensee Japan Development Activities, including to extend the time period for such immunogenicity Phase 1 Clinical Trial. Notwithstanding anything to the contrary in this Agreement, Licensee shall not be required to perform such immunogenicity Phase 1 Clinical Trial if (x) Licensee provides a notice of an anticipated Phase 1 Cost Overrun in accordance with this section and Takeda elects to decline to reimburse Licensee for the additional costs and expenses set forth in such notice, or (y) despite Licensee's use of Commercially Reasonable Efforts (as if Japan were part of the Territory) such immunogenicity Phase 1 Clinical Trial cannot be completed prior to the second anniversary of the first activation of a clinical site for such immunogenicity Phase 1 Clinical Trial unless the Parties mutually agree to amend the Licensee Japan Development Activities to extend the time period for completing the immunogenicity Phase 1 Clinical Trial.

(d) **Inclusion of Japanese Subjects in Phase 3 and Immuno-bridging Trials.** Licensee will use Commercially Reasonable Efforts (as if Japan were part of the Licensee's Territory) to include in (i) Licensee's Phase 3 Clinical Trial (Phase 3 portion if Licensee conducts Phase 2b /Phase 3 Clinical Trials) for the Product, the number of Japanese subjects suggested by the PMDA after consultations with the PMDA, and (ii) any immuno-bridging Clinical Trial conducted by Licensee for the Product, the number of Japanese subjects suggested by the PMDA after consultations with the PMDA; provided that inclusion of such Japanese subjects in either such Clinical Trial does not materially delay or adversely impact the conduct of Licensee's Development of the Product for the Territory. As set forth in Section 6.1(b), Takeda shall timely provide necessary assistance reasonably requested by Licensee in connection with the Licensee Japan Development Activities. Takeda will reimburse Licensee for [***].

(e) **Inability to Perform Licensee Japan Development Activities.** In the event that Licensee in good faith believes that it cannot perform one or more of the Licensee Japan Development Activities, Licensee shall [***] notify Takeda of the activity Licensee believes it cannot perform and the reasons therefor. After receipt of any such notice, Takeda and Licensee shall discuss in good faith such matter including whether to make any amendments to the Licensee Japan Development Activities. Notwithstanding any language to the contrary, Licensee's providing of such notice shall in no way relieve Licensee of its obligations to perform the Licensee Japan Development Activities in accordance with the terms of this Agreement.

5.5 **Transfer of Information and Assistance**. In accordance with the Transfer Plan set forth in Exhibit E, Takeda will (i) after consummation of the Qualified Financing, transfer any currently existing Product INDs and other regulatory authorizations for the Compound in the Territory, (ii) after consummation of the Qualified Financing, transfer any regulatory authorizations, if any, currently held by Takeda in Japan that Licensee and Takeda mutually agree (such agreement not to be unreasonably withheld, conditioned or delayed) are required by Licensee in order for Licensee to perform the Licensee Japan Development Activities, (iii) transfer to Licensee the existing technical and clinical Information for the Compound and Product identified on Exhibit E at no charge, and (iv) provide reasonable assistance from and access to Takeda employees with relevant knowledge related to the Compound and Product, including technical transfer of the manufacturing process and assays to Licensee or its Third Party manufacturer. Takeda shall provide Licensee, without charge, up to a total aggregate of [***] of assistance and access described in subsection (iv) above. Once such total aggregate [***] has been reached, Takeda shall not have any obligation to provide any additional assistance or access and accordingly any additional reasonable requests for support made by Licensee may be provided at Takeda's sole discretion and, if provided by Takeda, [***]. Except as expressly provided under the Transfer Plan, Takeda shall not be obligated to provide a technical transfer of the current Manufacturing process for the Compound or Product to Licensee or its designated Third Party manufacturer. Notwithstanding anything to the contrary, the time limitations and hourly charges set forth in this Section 5.5, above, shall not apply with respect to the performance of any of Takeda's obligations expressly set forth in this Agreement (other than the transfer, assistance and access described in this Section 5.5, above). In addition to any Information disclosed pursuant to Article 12, during the Term, (i) at either Party's reasonable request, the other Party will cooperate with the requesting Party to transfer any technical and clinical data for the Compound and Product developed after the

Effective Date, (ii) each Party will have the right to access and, in accordance with the terms of this Agreement, use such data, and, in accordance with Section 6.3, to reference the other Party's Regulatory Materials, for use in connection with the Exploitation of the Compound and Product in such Party's respective territory, and (iii) Licensee shall also provide Takeda with all necessary Information in Licensee's or any of its Affiliate's Control that is requested by Takeda and that is needed to support Regulatory Material filing requirements outside the Territory.

5.6 **Clinical Supply Agreement**. In accordance with the Clinical Supply Agreement attached as Exhibit C and the Quality Agreement set forth in the Clinical Supply Agreement, Takeda may supply the specific quantity of Clinical Trial materials set forth therein to Licensee, for use in the pediatric Phase 2 Clinical Trials and the Phase 1 Clinical Trial in healthy Japanese subjects set forth in the Initial Development Plan, and [***]. Takeda's inability to supply the same as set forth in the Clinical Supply Agreement shall not constitute a breach of Takeda's obligations under this Agreement or any of the Ancillary Agreements. Licensee shall be solely responsible for the Manufacture and supply of any and all additional quantities of Product needed by Licensee, including all additional Clinical Trial materials and Product for Commercialization. If Takeda is required to or elects to perform any additional Clinical Trials outside the Territory beyond the Licensee Japan Development Activities, then the Parties shall use good faith efforts to enter into a supply agreement whereby Licensee would supply Takeda with the quantity of Clinical Trial materials needed for such additional Clinical Trials. The terms of any such supply agreement shall be negotiated in good faith by the Parties based upon reasonable and customary terms typically associated with supply of Clinical Trial materials utilizing, as appropriate, terms from the Clinical Supply Agreement attached hereto as Exhibit C .

5.7 **Commercial Supply**.

(a) If requested by Takeda, the Parties shall use good faith efforts to enter into a supply agreement governing the supply of Product by Licensee (directly or indirectly through its Affiliate(s) or its Third Party manufacturer) to Takeda for Commercialization in the Field outside of the Territory (the "Commercial Supply Agreement"). The terms of any such Commercial Supply Agreement shall be negotiated in good faith by the Parties based upon reasonable and customary terms typically associated with supply of pharmaceutical products for Commercialization, including reasonable and customary forecasting and ordering provisions, the Product pricing as set forth in Section 5.7(b), an obligation of Licensee to ensure that Licensee (including through its Affiliate(s) or any Third Party manufacturer) will have sufficient capacity and capability to supply Product both for Licensee for the Territory and for any amounts forecasted by Takeda pursuant to the terms of the Commercial Supply Agreement, and an obligation for Takeda to reimburse Licensee for any reasonable incremental direct costs incurred by Licensee, including any Third Party Manufacturer expenses, in connection with capital expenditures and other Manufacturing related activities required in order to meet any amounts forecasted by Takeda pursuant to the terms of the Commercial Supply Agreement (other than any cost and expenses included in the Product price in the Commercial Supply Agreement or previously reimbursed pursuant to Section 5.7(c)).

(b) The Product price in the Commercial Supply Agreement shall be as follows: (i) [***], or (ii) [***].

(c) Prior to execution of the Commercial Supply Agreement, subject to this Section 5.7(c) below, Licensee will ensure that Licensee (including through its Affiliates or any Third Party manufacturer) will have sufficient capacity and capability to supply Product both for Licensee for the Territory and for any amounts reasonably estimated by Takeda for Takeda's sale outside of the Territory; provided that Takeda has provided Licensee with a non-binding good-faith estimate of Takeda's Product requirements for sale outside of the Territory (the "Takeda Product Estimate") and, in accordance with this Section 5.7(c) below, Takeda reimburses Licensee, within [***] after receipt of an invoice therefor, for [***]. The Takeda Product Estimate shall include (i) the estimated [***] quantity of Product required in the [***]. Takeda shall provide the first Takeda Product Estimate approximately [***] prior to Takeda's anticipated Product BLA filing date in Japan and may update the Takeda Product Estimate not more than [***]. If, prior to execution of the Commercial Supply Agreement, it is necessary for Licensee to incur such costs and expenses [***] in order to meet such Takeda Product Estimate, then Licensee shall notify Takeda of any such costs and expenses expected to be incurred by Licensee, and Takeda shall have the option of either, within [***] after such notification, (A) agreeing to reimburse Licensee for such costs and expenses (in which case Licensee shall ensure that Licensee (including through its Affiliate(s) or any such Third Party) has sufficient capacity and capability to meet such Takeda Product Estimate) or (B) declining to reimburse Licensee for such costs and expenses (in which case Licensee shall have no obligation to ensure that Licensee (including through its Affiliates or any such Third Party) has sufficient capacity and capability to meet such Takeda Product Estimate). For the sake of clarity, (1) unless and until a Commercial Supply Agreement is executed by the Parties, Licensee shall not be under any obligation to supply Product to Takeda for Commercialization, and (2) the Commercial Supply Agreement shall not require Takeda to reimburse any such costs and expenses incurred by Licensee that Takeda has previously paid Licensee hereunder pursuant to the immediately previous sentence.

5.8 **Records; Disclosure of Data and Results**.

(a) In conformity with standard pharmaceutical industry practices and the terms and conditions of this Agreement, each Party shall prepare and maintain, or shall cause to be prepared and maintained, complete and accurate written records of its Development of the Products, for a minimum of [***], Licensee shall provide to Takeda a reasonably detailed report consisting of (a) an update on the progress of Licensee's Development and Commercialization activities, including (i) key achievements or milestones to date in the reporting period, and (ii) studies that were run or are in process and (b) a summary of the planned Development and Commercialization activities for the upcoming [***], such as anticipated commercial launches in various countries and other commercial milestones. At least [***] prior to the start of each [***], commencing with the first [***], and ending with the [***] in which Regulatory Approval has been obtained for a Product in Japan, Takeda shall provide to Licensee a reasonably detailed report consisting of (x) an update on the progress of Takeda's Development and Commercialization activities, including (i) key achievements or milestones to date in the reporting period, and (ii) studies that were run or are in process and (y) [***].

(b) As set forth in the Transfer Plan, Takeda will transfer possession and/or responsibility of certain records to Licensee, including records currently maintained in Third Party storage facilities. [***].

5.9 **Materials Transfer.** In order to facilitate the Development activities contemplated by this Agreement, after consummation of the Qualified Financing, Takeda shall make available (at the Takeda location where currently located or transfer ownership for materials not in Takeda's possession) to Licensee the biological materials or chemical compounds set forth on Exhibit O and any additional materials mutually agreed upon by the Parties after the Effective Date (collectively, **"Materials"**) for use by Licensee in furtherance of such Development activities. All such Materials will be used only in furtherance of the Development activities conducted in accordance with this Agreement, will not be used or delivered to or for the benefit of any Third Party, except to or for subcontractors, without the prior written consent of Takeda, and will be used in compliance with all Applicable Law. The Materials supplied under this Agreement must be used with prudence and appropriate caution in any experimental work because not all of their characteristics may be known. With respect to any Materials made available to Licensee, if requested by Takeda, Licensee shall provide a portion of such Materials to Takeda if Licensee would still have sufficient remaining quantity for its Development activities. [***.]

5.10 **Transitional Services Agreement**. The Parties shall use good faith efforts to negotiate and finalize a Transitional Services Agreement within [***] after the Effective Date.

ARTICLE 6 – REGULATORY

6.1 **Regulatory Materials and Assistance**.

(a) Licensee shall have the sole right and responsibility, and shall exercise Commercially Reasonable Efforts, to prepare, obtain, and maintain, as applicable, the Regulatory Materials in the Territory, including the Product INDs and other submissions, and to conduct communications with the relevant Regulatory Authorities, related to or needed for the Commercialization of Product in the Field in the Territory. Licensee shall have the sole responsibility, and shall exercise Commercially Reasonable Efforts (as if Japan were part of the Licensee's Territory), to prepare, obtain, and maintain, as applicable, the Regulatory Materials in Japan, including the Product INDs and other submissions (but excluding any Product BLA), and to conduct communications with the PMDA, in each case related to and as needed to conduct Licensee Japan Development Activities, provided that with respect to any such Regulatory Materials in Japan, Licensee shall (1) keep Takeda informed in a timely manner, compliant with the reporting requirements of the PMDA, of the notification of any action by, or notification or other information which it receives from the PMDA to any such Regulatory Materials, (2) allow Takeda to review any such Clinical Trial protocols and other Regulatory Materials and shall consider in good faith any such comments of Takeda when finalizing any such Clinical Trial protocols and other Regulatory Materials, and (3) unless prohibited by the PMDA, allow Takeda to attend meetings (including telephone and web meetings) with the PMDA. Takeda or its applicable Affiliate or (Sub)licensees, or any of their Third Party contractors, will be solely responsible for all Regulatory Materials, including the Product INDs, for (i) any Clinical Trials conducted by Takeda in the Territory consented to by Licensee pursuant to the second sentence of Section 4.1, (ii) Takeda's, or any of its Affiliates or (Sub)licensees' or any of their Third Party contractors' non-clinical Development or Manufacturing activities in the Territory, and (iii) the

conduct of any Development activities (other than the Licensee Japan Development Activities) outside of the Territory. Except with respect to any Clinical Trials conducted by Takeda in the Territory consented to by Licensee pursuant to the second sentence of Section 4.1, all Product INDs generated after the Effective Date with respect to the Product in the Field in the Territory under this Agreement shall be owned by, and shall be the sole property and held in the name of, Licensee or its designee. Except with respect to (x) any Clinical Trials conducted by Licensee outside of the Territory consented to by Takeda pursuant to subsection (b) of the first sentence of Section 4.1, and (y) any Clinical Trials conducted by Licensee in Japan for the Licensee Japan Development Activities, all Product INDs generated after the Effective Date with respect to the Product in the Field outside of the Territory under this Agreement shall be owned by, and shall be the sole property and held in the name of, Takeda or its designee. All Product INDs for any Clinical Trials conducted by Licensee in Japan with respect to the Licensee Japan Development Activities shall be owned by, and shall be the sole property and held in the name of Licensee or its designee (the "Licensee Japan INDs"), but may be transferred to Takeda pursuant to Section 6.1(c).

(b) Takeda shall provide advice as reasonably requested by Licensee in connection with any regulatory activities that are required to be performed in order to conduct the Licensee Japan Development Activities outside of the Territory, and otherwise reasonably cooperate with Licensee pursuant to Section 6.6 in connection with any meetings with Regulatory Authorities outside of the Territory.

(c) Takeda shall have the sole and exclusive right to submit Product BLAs outside of the Territory. Licensee shall provide any assistance reasonably requested by Takeda in preparing the filing of any such Product BLAs, including (i) providing any necessary or reasonably useful documents or data utilized in Licensee's (or any of its Affiliates' or (Sub)licensees') Product BLAs as soon as reasonably practical after such documents or data, respectively, become available, and (ii) assisting Takeda with responding to any requests for information from the PMDA in accordance with Section 6.6. If Takeda determines that it is necessary or helpful to own the Licensee Japan INDs for purposes of submitting any INDs, conducting other Development Activities, including Clinical Trials, or submitting a Product BLA in Japan, then it shall notify Licensee and Licensee shall thereafter cooperate with Takeda to transfer ownership thereof to Takeda as promptly as possible, at Takeda's cost, taking into account any impact of such transfer on Licensee's ability to perform the Licensee Japan Development Activities.

6.2 **Regulatory Expenses**. Except with respect to (a) any Clinical Trials conducted by Takeda in the Territory consented to by Licensee pursuant to the second sentence of Section 4.1, (b) Takeda's, and any of its Affiliates and (Sub)licensees, and any of their Third Party contractors' other Development or Manufacturing activities in the Territory, and (c) any Product IND filing costs required for the performance of the Licensee Japan Development Activities, Licensee shall bear all expenses incurred related to the preparation, maintenance, formatting and filing of the Regulatory Materials in the Field in the Territory and for the Licensee Japan Development Activities in Japan. Except with respect to (i) any Clinical Trials conducted by Licensee outside of the Territory consented to by Takeda pursuant to subsection (b) of the first sentence of Section 4.1, (ii) the Licensee Japan Development Activities (except as otherwise provided in the proceeding sentence), and (iii) Licensee's, and any of its Affiliates and (Sub)licensees, and any of their Third Party contractors' other Development or Manufacture activities outside of the Territory, Takeda shall bear all expenses incurred related to the preparation, maintenance, formatting and

filing of the Regulatory Materials outside the Territory. Takeda shall reimburse Licensee for any Product IND filing costs required for the performance of the Licensee Japan Development Activities within [***] after receipt of an invoice therefor.

6.3 **Rights of Reference to Regulatory Materials**. Each Party hereby grants to the other Party a right of reference to all Regulatory Materials filed by such Party, its Affiliates or (Sub)licensee for the Products solely for the purpose of seeking, obtaining and maintaining Regulatory Approvals for, and the Commercialization of, the Products in such other Party's respective territory.

6.4 **Labeling Information Exchange/Labeling Agreement**. If requested by either Party, the Parties shall in good faith negotiate the terms of a Labeling agreement that includes methods and/or procedures for sharing information related to Labeling and the management of Labeling information, including CCDS. If the Parties mutually agree upon such a Labeling agreement it shall be attached hereto as Exhibit H. Subject to any limitations in any such Labeling Agreement, Licensee shall be solely responsible for the review and approval of all Labeling for the Product in the Territory.

6.5 **Pharmacovigilance and Drug Safety Agreement**. Within [***] of the Effective Date of this Agreement, the Parties will enter into a mutually acceptable pharmacovigilance agreement (PVA) setting forth in detail the Parties' respective obligations with regards to safety data exchange and pharmacovigilance for the Product. The Parties agree to revise the PVA 1) prior to commencement of any Takeda-sponsored Development Activities in Japan, if Takeda determines such Development Activities are necessary in addition to the Licensee Japan Development Activities, as described in Section 5.2 and 2) for post-marketing surveillance purposes at an appropriate time before the First Commercial Sale of the Product by either Party, its Affiliates, or any of its (Sub)licensees anywhere in the world. In the event of a conflict between any of the provisions of the PVA and this Agreement in matters of a business, financial or legal nature, the terms of this Agreement shall prevail. For matters of pharmacovigilance, the terms of the PVA shall prevail.

6.6 **Regulatory Authority Communications Received by a Party**.

Each Party shall keep the other Party informed in a timely manner, compliant with the reporting requirements of Regulatory Authorities in their respective territories (and with respect to the Licensee Japan Development Activities, Licensee shall keep Takeda informed in a timely manner, compliant with reporting requirements of the PMDA), of the notification of any action by, or notification or other information which it receives from any Regulatory Authority which: (a) raises any material concerns regarding the safety or efficacy of a Compound or a Product; (b) indicates or suggests a potential material liability of either Party to Third Parties in connection with a Product; (c) is reasonably likely to lead to a recall or market withdrawal of a Product; or (d) relates to expedited and periodic reports of adverse events with respect to a Product, or Product Complaints, and which may have a material impact on obtaining or maintaining Regulatory Approval or the continued Commercialization of a Product, as then conducted. Each Party shall reasonably cooperate with and assist the other Party in complying with regulatory obligations and communications, including by providing to such other Party, in a timely manner after a request, Information and documentation in such Party's possession as may be necessary or helpful for such

other Party to prepare a response to an inquiry from a Regulatory Authority, and by having no more than two (2) of its employees or representatives participate in any meeting with a Regulatory Authority at such other Party's reasonable request and expense. Each Party shall provide the other Party in a timely manner with a copy of all correspondence received from a Regulatory Authority specifically regarding the matters referred to above.

6.7 **Audit**.

(a) If a Regulatory Authority desires to conduct an inspection or audit of any Licensee facility or any Affiliate or Third Party facility under contract with Licensee with regard to a Product, then Licensee shall notify Takeda as soon as practicably possible after receipt of such notification of such audit or inspection and provide copies of any materials provided to it by the applicable Regulatory Authority; provided, that Licensee shall not be required to notify Takeda of audits or inspections that are of a routine nature or that do not relate to a Product, except where such audits result in communications or actions of such Regulatory Authority which have an impact upon the Product. In addition, if a Regulatory Authority conducts an unannounced inspection or audit of any Licensee facility or any Affiliate or Third Party facility under contract with Licensee with regard to a Product, then Licensee shall notify Takeda within twenty-four (24) hours of commencement of such audit or inspection. Licensee shall cooperate, and shall use reasonable efforts to cause the contract facility to cooperate, with such Regulatory Authority and Takeda during such inspection or audit. Following receipt of the inspection or audit observations of such Regulatory Authority, Licensee shall [***] provide Takeda with a copy of the inspection or audit report and also provide Takeda with copies of any written communications received from Regulatory Authorities with respect to such facilities in a timely manner after receipt, to the extent such written communications relate to Products or the Manufacture thereof, and shall prepare the response to any such observations. Licensee shall provide Takeda with a copy of any proposed response to such communications and shall implement Takeda's reasonable comments with respect to such proposed response. Licensee agrees to conform its activities under this Agreement to any commitments made in such a response.

(b) If a Regulatory Authority in the Territory desires to conduct a GCP inspection or audit of any Takeda facility or any Affiliate or Third Party facility under contract with Takeda, in each case with regard to any Takeda Clinical Trial Information provided to Licensee under this Agreement that Licensee has submitted to such Regulatory Authority in the Territory in order to obtain Regulatory Approval of the Product, then Takeda shall notify Licensee as soon as practicably possible after receipt of such notification of such audit or inspection and provide copies of any materials provided to it by the applicable Regulatory Authority; provided, that Takeda shall not be required to notify Licensee of audits or inspections that are of a routine nature or that do not relate to Licensee's Regulatory Approval of a Product, except where such audits result in communications or actions of such Regulatory Authority which have an impact upon Licensee's Regulatory Approval for Product in the Territory. In addition, if a Regulatory Authority in the Territory conducts an unannounced GCP inspection or audit of any Takeda facility or any Affiliate or Third Party facility under contract with Takeda, in each case with regard to any Takeda Clinical Trial Information provided to Licensee under this Agreement that Licensee has submitted to such Regulatory Authority in the Territory in order to obtain Regulatory Approval of a Product, then Takeda shall notify Licensee within [***] of commencement of such audit or inspection. Takeda shall cooperate, and shall use reasonable efforts to cause the contract facility to cooperate, with

such Regulatory Authority during such inspection or audit. Following receipt of the inspection or audit observations of such Regulatory Authority, Takeda shall [***] provide Licensee with a copy of the inspection or audit report and also provide Licensee with copies of any written communications received from Regulatory Authorities with respect to such facilities in a timely manner after receipt, to the extent such written communications relate to any Takeda Clinical Trial Information provided to Licensee under this Agreement that Licensee has submitted to such Regulatory Authority in order to obtain Regulatory Approval for a Product, and shall prepare the response to any such observations. Takeda shall provide Licensee with a copy of any proposed response to such communications and shall consider in good faith including Licensee's reasonable comments with respect to such proposed response.

ARTICLE 7 – COMMERCIALIZATION

7.1 **Commercialization Efforts**.

(a) Licensee (itself or through its Affiliates and (Sub)licensees) shall use Commercially Reasonable Efforts to Commercialize the Product in the Field in the Territory throughout the Term.

(b) If (i) prior to receipt of Regulatory Approval for a Product in Japan, Takeda has neither performed (neither directly itself, nor indirectly through its Affiliates, any of their (Sub)licenesees or subcontractors, or through Licensee) any Clinical Trials nor any material regulatory activities with respect to the Product for Japan for [***], other than due to Force Majeure or Licensee's failure to perform its obligations under this Agreement, the Commercial Supply Agreement, or any other Ancillary Agreement, including the Licensee Japan Development Activities, or (ii) after receipt of Regulatory Approval for a Product in Japan, Takeda does not use Commercially Reasonable Efforts to Commercialize the Product in the Field in Japan, then Licensee shall provide Takeda written notice thereof. If within [***] after Takeda's receipt of such notice issued by Licensee in accordance with this Section 7.1(b), Takeda, as applicable, (A) with respect to subsection (i) above, neither commences performing (neither directly itself, nor indirectly through its Affiliates, any of their (Sub)licenesees or subcontractors, or through Licensee) any Clinical Trials nor any material regulatory activities with respect to the Product for Japan, or (ii) with respect to subsection (ii) above, does not commence using Commercially Reasonable Efforts to Commercialize the Product in the Field in Japan, then the Territory will be expanded to be worldwide, effective as of the end of such [***] period and the terms of Section 13.7 shall apply. After receipt of any such notice, pursuant to Article 14 Takeda may also dispute whether Licensee had the right to issue such notice, and if Takeda does dispute such notice, then notwithstanding the previous sentence, the Territory shall not be expanded to be worldwide during the pendency of such dispute.

7.2 **Commercialization Plan and Activities**. Commencing [***] in advance of the expected First Commercial Sale of a Product in the Territory, Licensee shall submit a Commercialization Plan for the Territory to the Information Sharing Committee for review and discussion. Thereafter, Licensee shall submit an updated Commercialization Plan for the Territory to the Information Sharing Committee for review and discussion at least [***] during the Term. Commencing [***] in advance of the expected First Commercial Sale of a Product outside the Territory, Takeda shall submit a Commercialization Plan for outside the Territory to the Information Sharing Committee for review and discussion. Thereafter, Takeda shall submit an updated Commercialization Plan

for outside the Territory to the Information Sharing Committee for review and discussion at least [***] during the Term. Each Commercialization Plan must include at least the information set forth in Exhibit K. Licensee, itself and/or through its (Sub)licensees, will be solely responsible for all Commercialization activities in the Field in the Territory, including the marketing, strategy, pricing, promotion, physician targeting, reimbursement, branding, Manufacturing (except in the instance wherein Takeda supplies Licensee with Clinical Trial materials as set forth in the Clinical Supply Agreement), supply, distribution and sale of the Product in the Field in the Territory in accordance with Licensee's Commercial Plan. Licensee shall be solely responsible for the review and approval of all promotional materials used in the Territory to ensure compliance with Applicable Law, including submission, where appropriate, to the FDA and other applicable Regulatory Authorities. Takeda, itself and/or through its Affiliates and/or (Sub)licensees, will be solely responsible for all Commercialization activities in the Field outside the Territory, including the marketing, strategy, pricing, promotion, physician targeting, reimbursement, branding, Manufacturing (except for Licensee's Manufacturing obligations set forth in any Commercial Supply Agreement, and if needed, Clinical Supply Agreement whereby Licensee supplies Takeda with Clinical Trial Materials), supply, distribution and sale of the Product in the Field outside the Territory in accordance with Takeda's Commercial Plan. Takeda shall be solely responsible for the review and approval of all promotional materials used in the Territory to ensure compliance with Applicable Law, including submission, where appropriate, to the PMDA.

7.3 **Commercialization Expenses**. Licensee shall bear all expenses incurred related to the Commercialization of Products in the Field in the Territory, including, but not limited to, the marketing, strategy, pricing, promotion, physician targeting, reimbursement, branding, Manufacturing, supply, distribution and sale of the Product in the Field in the Territory. Takeda shall bear all expenses incurred related to the Commercialization of Products in the Field outside the Territory, including the marketing, strategy, pricing, promotion, physician targeting, reimbursement, branding, Manufacturing, supply, distribution and sale of the Product in the Field outside the Territory.

7.4 **Commercialization Reports**. Upon the First Commercial Sale of the Product in the Territory, Licensee will provide Takeda [***] progress reports on Commercialization activities for the Product in the Territory in the form attached hereto as Exhibit I. [***], Takeda will provide Licensee [***] progress reports on Commercialization activities for the Product outside the Territory in the form attached hereto as Exhibit I.

ARTICLE 8 – PAYMENT

8.1 **Upfront Cash Payment**. In partial consideration for Licensee's rights in and to the Takeda Intellectual Property licensed hereunder and other rights granted hereunder Licensee shall pay to Takeda, or Takeda's designated Affiliate, a one-time upfront fee of [***] within [***] after the consummation of a Qualified Financing. As further partial consideration for Licensee's rights in and to the Takeda Intellectual Property licensed hereunder and other rights granted hereunder Licensee shall pay to Takeda, or Takeda's designated Affiliate, an additional one-time upfront fee of [***] (the "Additional Up-Front Fee") if [***] or more of the proceeds from the Qualified Financing was derived through the issuance of convertible notes. Licensee shall pay to Takeda, or Takeda's designated Affiliate, the Additional Up-Front Fee within [***] after receipt of an invoice therefor, provided that Takeda may not deliver such invoice unless and until (i) one lot of

Drug Product is released (in accordance with the Quality Agreement set forth in the Clinical Supply Agreement) and bulk packaged and Takeda notifies Licensee (which notice may be by e-mail) of the same, and (ii) Licensee applies (which shall be in Licensee's sole discretion) to any Regulatory Authority to utilize such Drug Product for Clinical Trial purposes (in which event Licensee shall [***] notify Takeda of the same). Such upfront payment(s) shall be non-refundable and non-creditable against any other payments made by Licensee hereunder. Notwithstanding the previous sentence, Licensee shall not be required to pay the Additional Up-Front Fee if all of the following conditions are met: (i) Licensee, in accordance with Section 8(A) of the Clinical Supply Agreement, has notified Takeda of one or more Detectable Defects with respect to such lot of Drug Product, (ii) if requested to do so by Takeda, pursuant to Section 8(C) of the Clinical Supply Agreement, Licensee shall, within [***] of such request by Takeda, provide samples of any Drug Product alleged to be defective and copies of written reports or investigations performed to date by or on behalf of Licensee on such Drug Product, (iii) Takeda agrees that such lot of Drug Product contained such Detectable Defect(s) or a Third Party independent laboratory determines in accordance with Section 8(D) of the Clinical Supply Agreement that such lot of Drug Product contained such Detectable Defect(s), and (iv) the number of prefilled syringes in such lot of Drug Product rejected by Takeda prior to release by Takeda plus the number of prefilled syringes that were released by Takeda but are subsequently determined either by agreement of Licensee and Takeda or by a Third Party independent laboratory pursuant to Section 8(D) of the Clinical Supply Agreement to contain Detectable Defects exceeds [***] of the total number of prefilled syringes manufactured for such lot.

8.2 **Milestones**. In partial consideration for Licensee's rights in and to the Takeda Intellectual Property licensed hereunder and other rights granted to Licensee hereunder, Licensee shall owe to Takeda one-time milestone payments upon the first achievement of each of the events set forth in the table in this Section 8.2 below. Licensee shall [***] notify Takeda in writing following the achievement of each milestone event described below. Thereafter, Takeda shall submit to Licensee an invoice for the corresponding milestone payment set forth below. Within [***] of Licensee's receipt of any such invoice, Licensee shall remit the applicable milestone payment to Takeda. Each milestone payment by Licensee pursuant to this Section 8.2 shall be payable only once, regardless of the number of times that such milestone event is achieved for the Products. All amounts listed in are in U.S. Dollars. For clarity, the total amount payable to Takeda under this Section 8.2 if all sales milestone events are achieved is $[***].

Milestones	Payment Amount
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]
[***]	$[***]

In the event two (2) or more Net Sales Milestone events are achieved in the same Calendar Year, Licensee shall pay to Takeda each milestone payment corresponding to the respective milestone event. For the avoidance of doubt, the total aggregate Net Sales by Licensee, its Affiliates and (Sub)licensees of all Products in the Field in the Territory in the applicable Calendar Year period shall be used in determining whether the Net Sales milestones have been achieved.

8.3 **Royalties**.

(a) **Licensee's Royalty Obligations.** Subject to Sections 8.5-8.8 below, and during the applicable Licensee Royalty Term, in partial consideration for Licensee's rights in and to the Takeda Intellectual Property and other rights granted to Licensee hereunder, Licensee shall pay to Takeda a running royalty at the following incremental royalty rates, on total aggregate Net Sales of the Product by Licensee, its Affiliates and (Sub)licensees in the Territory during each Calendar Year.

Net Sales in the Territory	Royalty Rate
[***]	[***]%
[***]	[***]%
[***]	[***]%

(b) **Takeda's Royalty Obligations.** Subject to Sections 8.5-8.8 below, and during the applicable Takeda Royalty Term, in partial consideration for Takeda's rights in and to the Licensee Intellectual Property and other rights granted to Takeda hereunder, Takeda shall pay to Licensee a running royalty at the following incremental royalty rates, on total aggregate Net Sales of the Product by Takeda, its Affiliates or (Sub)licensees outside the Territory during each Takeda Fiscal Year.

(i) If Takeda is not required (as determined by Takeda in good faith), in order to obtain the first Regulatory Approval of the Product for Japan, to perform any additional Clinical Trials beyond the Licensee Japan Development Activities, then Takeda will pay to Licensee the following royalties on total aggregate Net Sales of the Product by Takeda, its Affiliates and (Sub)licensees outside the Territory during the applicable Takeda Royalty Term.

Net Sales outside of the Territory	Royalty Rate
[***]	[***]%
[***]	[***]%
[***]	[***]%

(ii) If Takeda is required (as determined by Takeda in good faith), in order to obtain the first Regulatory Approval of the Product for Japan, to perform any additional Clinical Trials beyond the Licensee Japan Development Activities, then Takeda will pay to Licensee the following royalties on total aggregate Net Sales of the Product by Takeda, its Affiliates and (Sub)licensees outside the Territory during the applicable Takeda Royalty Term.

Net Sales outside of the Territory	Royalty Rate
[***]	[***]%
[***]	[***]%
[***]	[***]%

8.4 **Royalty Term**. Royalties under Section 8.3 shall be payable on Net Sales on a Product-by-Product and country-by-country basis beginning upon the First Commercial Sale of each Product in a country in the applicable Party's respective territory until the expiration of the applicable Royalty Term in such country (at which time sales in such country shall be excluded from all calculations of aggregate Net Sales hereunder).

8.5 **Royalty Reduction for Generic Competition**. Subject to the limitation set forth in Section 8.8, the royalty rates set forth in Section 8.3 for Net Sales in such country (after any previous reduction(s), if any, made pursuant to Section 8.6) shall be reduced, on a country-by-country basis by [***] at the end of the first to occur Calendar Quarter during which the Generic Competition Percentage in such country during such time period is greater than or equal to [***].

8.6 **Royalty Reduction for Patent Expiry**. Subject to the limitation set forth in Section 8.8, during the applicable Royalty Term with respect to any Product being Commercialized in the United States, following expiration of the last to expire Valid Claim in a Takeda Patent published in the FDA's Purple Book, the royalty rates for such Product set forth in Section 8.3 for Net Sales (after any previous reduction(s), if any, made pursuant to this Section 8.5) shall be reduced by [***] of the original royalty percentage amount until the end of the Royalty Term (*e.g.;* [***]).

8.7 **Payment for Third Party Licenses**.

(a) During the Term, Licensee will have the right, following reasonable consultation with Takeda, to negotiate and obtain a license under one or more Patents (other than any license granted in settlement of any litigation as contemplated under Section 9.6) from one or more Third Parties (each such Third Party license is referred to herein as a "Licensee Third Party License") if in the absence of a license under such Third Party Patents, the Exploitation of the applicable Compound or Product in the Field in the Territory in a manner consistent with Licensee's obligation to use Commercially Reasonable Efforts to Develop and Commercialize the Compound and the Product under this Agreement would, in Licensee's good faith assessment, upon advice of legal counsel, bear a high risk to infringe such Third Party Patents. Except as set forth in Section 8.7(c) or to the extent of any Claim for which Takeda provides indemnification under Section 15.2,

or as the Parties may otherwise agree in writing, Licensee shall bear any payments associated with any royalties owed to any Third Party for such a Third Party License (collectively, the "Licensee Third Party Royalties").

(b) In the event that Takeda disputes Licensee's determination that any Licensee Third Party Royalties are properly subject to the royalty offset provided under this Section 8.7 or Licensee's allocation of any such Licensee Third Party Royalties to a Product, Takeda may by written notice to Licensee require that such dispute be resolved in accordance with Article 14; provided that Licensee shall have the right to take royalty reductions pursuant to this Section 8.7 pending resolution of any such dispute; provided further, that if any such dispute is resolved in favor of Takeda, then within [***] of such resolution, Licensee shall pay to Takeda any adjustment in royalties due pursuant to this Section 8.7 as required by such resolution.

(c) Subject to the limitation set forth in Section 8.8, Licensee may credit up to [***] of the amount of any Licensee Third Party Royalties paid by Licensee under a Licensee Third Party License pursuant to Section 8.7(a), or paid under any license granted in settlement of any claim of infringement of any Third Party claim of infringement under Section 9.6, against royalties payable to Takeda under Section 8.3. Licensee may take such credit during the Calendar Quarter for which royalties are payable hereunder; provided, that in no event will such credit reduce the royalties payable to Takeda for such Calendar Quarter by more than [***].

(d) This Section 8.7 shall not apply to any Licensee Third Party Royalties payable by Licensee or any of its Affiliates or (Sub)licensees under any license or other agreement or understanding, written or oral, between Licensee or any of its Affiliates or (Sub)licensees, on the one hand, and any Third Party, on the other hand, in existence as of the Effective Date.

(e) During the Term, Takeda will have the right, following reasonable consultation with Licensee, to negotiate and obtain a license under one or more Patents (other than any license granted in settlement of any litigation as contemplated under Section 9.6) from one or more Third Parties (each such Third Party license is referred to herein as a "Takeda Third Party License") if in the absence of a license under such Third Party Patents, the Exploitation of the applicable Compound or Product in the Field outside the Territory in a manner consistent with Takeda's obligation to use Commercially Reasonable Efforts to Commercialize the Product under this Agreement would, in Takeda's good faith assessment, upon advice of legal counsel, bear a high risk to infringe such Third Party Patents. Except as set forth in Section 8.7(g) or to the extent of any Claim for which Licensee provides indemnification under Section 15.1, or as the Parties may otherwise agree in writing, Takeda shall bear any payments associated with any royalties owed to any Third Party for such a Third Party License (collectively, the "Takeda Licensee Third Party Royalties").

(f) In the event that Licensee disputes Takeda's determination that any Takeda Third Party Royalties are properly subject to the royalty offset provided under this Section 8.7 or Takeda's allocation of any such Takeda Third Party Royalties to a Product, Licensee may by written notice to Takeda require that such dispute be resolved in accordance with Article 14; provided that Takeda shall have the right to take royalty reductions pursuant to this Section 8.7 pending resolution of any such dispute; provided further, that if any such dispute is resolved in

favor of Licensee, then within [***] of such resolution, Takeda shall pay to Licensee any adjustment in royalties due pursuant to this Section 8.7 as required by such resolution.

(g) Subject to the limitation set forth in Section 8.8, Takeda may credit up to [***] of the amount of any Takeda Third Party Royalties paid by Takeda under a Takeda Third Party License pursuant to Section 8.7(e), or paid under any license granted in settlement of any claim of infringement of any Third Party claim of infringement under Section 9.6, against royalties payable to Licensee under Section 8.3. Takeda may take such credit during the Calendar Quarter for which royalties are payable hereunder; provided, that in no event will such credit reduce the royalties payable to Licensee for such Calendar Quarter by more than [***].

(h) This Section 8.7 shall not apply to any Takeda Third Party Royalties payable by Takeda or any of its Affiliates or (Sub)licensees under any license or other agreement or understanding, written or oral, between Takeda or any of its Affiliates or (Sub)licensees, on the one hand, and any Third Party, on the other hand, in existence as of the Effective Date.

8.8 **Limitation on Royalty Reductions**. Notwithstanding anything contained in this Agreement to the contrary, the reductions and offsets to royalties provided in Sections 8.5, 8.6, and 8.7 may not, individually or in the aggregate, reduce the royalties payable with respect to Net Sales of any Product sold by (a) Licensee, its Affiliates and its and their (Sub)licensees in any country during a Calendar Quarter during the applicable Licensee Royalty Term by more than [***] of the original royalty percentage amount owed to Takeda pursuant to Section 8.3(a) (*i.e.,* [***]) or (b) Takeda, its Affiliates and its and their (Sub)licensees in any country during a Calendar Quarter during the applicable Takeda Royalty Term by more than [***] of the original royalty percentage amount owed to Licensee pursuant to Section 8.3(b)(i) (*i.e.,* [***]) or pursuant to Section 8.3(b)(ii) ([*i.e.,* [***]).

8.9 **Manner of Payment**. No later than [***], each Party shall provide the other Party with a written report containing such Party's reasonable good faith estimate of the following information for the Calendar Quarter in order to allow such other Party to comply with internal accounting procedures: the amount of total aggregate gross sales (U.S. dollars) of the Products by such Party, its Affiliates, and its (Sub)licensees, an itemized calculation of Net Sales by such Party, its Affiliates, or its (Sub)licensees showing deductions, to the extent practicable, provided for in the definition of "Net Sales," a calculation of the royalty payment due on such sales, an accounting of the number of units and prices for the Products sold, the application of the reductions, if any, made in accordance with this Article 8, and any information required by such other Party for the purpose of calculating royalties. Within [***] following the end of each Calendar Quarter, each Party shall provide the other Party with a report containing the actual (not estimated) information described above in respect of such Calendar Quarter for such other Party's review and confirmation within [***] from receipt. In the event that either Party determines that the calculation of Net Sales for a Calendar Quarter deviates from the amounts previously reported to such Party for any reason (such as, on account of additional amounts collected or Product returns), the Parties shall reasonably cooperate to reconcile any such deviations to the extent necessary under applicable legal or financial reporting requirements. Within the later of (a) [***] from the end of the Calendar Quarter, or (b) [***] following the receiving Party's written confirmation of the applicable quarterly report, the paying Party shall pay all amounts due to the other Party pursuant to this Article 8 with respect to Net Sales for such Calendar Quarter.

8.10 **Exchange Rate**. All amounts due to either Party hereunder will be expressed in U.S. Dollars. The rate of exchange to be used in computing the amount of currency equivalent in U.S. Dollars owed to a Party under this Agreement will be the exchange rate used by such Party in its financial reporting in accordance with GAAP or IFRS.

8.11 **Taxes**.

(a) **Withholding Tax**. The amounts payable pursuant to this Agreement ("Payments") shall not be reduced on account of any Taxes unless required by Applicable Law. The paying Party shall deduct and withhold from the Payments any Taxes that it is required by Applicable Law to deduct or withhold. Notwithstanding the foregoing, if the Party receiving such Payment is entitled under any applicable tax treaty to a reduction of rate of, or the elimination of, or recovery of, applicable withholding tax, it may deliver to the paying Party or the appropriate Governmental Authority the prescribed forms necessary to reduce the applicable rate of withholding or to relieve the paying Party of its obligation to withhold tax. In such case the paying Party shall apply the reduced rate of withholding, or not withhold, as the case may be, provided that paying Party is in receipt of evidence, in a form reasonably satisfactory to it, for example the receiving Party's delivery of all applicable documentation at least [***] prior to the time that the Payments are due. If, in accordance with the foregoing, the paying Party withholds any amount, it shall pay to the receiving Party the balance when due, make timely payment to the proper taxing authority of the withheld amount, and send the receiving Party proof of such payment within [***] following that payment.

(b) **Assignment**. If Licensee assigns its rights and obligations hereunder to an Affiliate or Third Party in compliance with Section 16.4 and if such Affiliate or Third Party shall be required by Applicable Law to withhold any additional Taxes from or in respect of any amount payable under this Agreement as a result of such assignment, then any such amount payable under this Agreement shall be increased to take into account the additional Taxes withheld as may be necessary so that, after making all required withholdings, the payee Party receives an amount equal to the sum it would have received as of the Effective Date. For the avoidance of doubt, if Takeda assigns its right and obligations under this Agreement in compliance with Section 16.4, Takeda shall not be entitled to any additional payments with respect to Taxes arising as a result of Takeda's assignment.

8.12 **Audit**. Each Party shall maintain complete and accurate records in sufficient detail to permit the other Party to confirm the accuracy of the calculation of royalty and other payments under this Agreement. Upon reasonable prior notice, such records shall be available during regular business hours for a period of [***] from the end of the Calendar Year or Takeda Fiscal Year, as applicable, to which they pertain for examination at such other Party's expense, and not more often [***], by an independent certified public accountant selected by such other Party and reasonably acceptable to such Party, for the sole purpose of verifying the accuracy of the financial reports furnished by such Party pursuant to this Agreement. Any such auditor shall not disclose such Party's Confidential Information, except to the extent such disclosure is necessary to verify the accuracy of the financial reports furnished by such Party or the amount of payments due to such other Party under this Agreement during the prior [***]. Any amounts shown to be owed to such other Party but unpaid shall be paid within [***] from the accountant's report, plus interest (as set forth in Section 8.13) from the original due date. Any amounts shown to have been overpaid shall

be refunded within [***] from the accountant's report. The auditing Party shall bear the full expense of such audit unless such audit discloses an underpayment by the audited Party of more than [***] of the amount due, in which case such audited Party shall bear the full expense of such audit.

8.13 **Manner of Payment, Late Payment**. All payments due to a Party hereunder shall be made in U.S. Dollars by wire transfer of immediately available funds into an account designated by such Party. If a Party does not receive payment of any sum due to it on or before the due date, simple interest shall thereafter accrue on the sum due to until the date of payment at the per annum rate of [***] over the then-current prime rate quoted by Citibank in New York City or the maximum rate allowable by Applicable Law, whichever is lower.

ARTICLE 9 – INTELLECTUAL PROPERTY MATTERS

9.1 **Ownership of Inventions**. Inventorship shall be determined in accordance with U.S. patent laws. Each Party shall own any Inventions made solely by its own employees, agents, or independent contractors in the course of conducting any activities under this Agreement, together with all intellectual property rights therein (the "Sole Inventions"). The Parties shall jointly own any Inventions that are made jointly by employees, agents, or independent contractors of each Party in the course of performing activities under this Agreement, together with all intellectual property rights therein (the "Joint Inventions").

9.2 **Disclosure of Inventions**.

(a) Each Party shall promptly disclose to the other Party any Inventions that such Party believes are patentable Joint Inventions.

(b) Takeda shall inform Licensee of any Sole Inventions discovered or generated by its employees, agents or independent contractors, and all Information relating to such Inventions to the extent necessary for the use of such Invention in the Exploitation of a Product in the Field in the Territory and, to the extent patentable, for the preparation, filing and maintenance of any Patent with respect to such invention in accordance with Section 9.3.

(c) Licensee shall inform Takeda of any Sole Inventions discovered or generated by its employees, agents or independent contractors, and all Information relating to such Inventions to the extent necessary for the use of such Invention in the Exploitation of a Product in the Field outside the Territory and, to the extent patentable, for the preparation, filing and maintenance of any Patent with respect to such Invention in accordance with Section 9.3.

9.3 **Prosecution of Patents**.

(a) **Takeda General Patents**. Takeda shall continue to have the sole right and authority to prepare, file, prosecute and maintain the Takeda General Patents at its own expense on a worldwide basis.

(b) **Licensee Patents**. Except as otherwise provided in this Section 9.3(b), Licensee shall have the sole right and authority to prepare, file, prosecute and maintain the Licensee Patents on a worldwide basis at its own expense. Licensee shall provide Takeda a reasonable opportunity

to review and comment on material communications from any patent authority outside of the Territory regarding the Licensee Patents and drafts of any material filings or responses to be made to such patent authorities in advance of submitting such filings or responses. Licensee shall consider Takeda's comments regarding such communications and drafts in good faith. In the event that Licensee elects not to continue the prosecution or maintenance of a Licensee Patent in any country outside of the Territory, then Licensee shall provide Takeda with written notice of such determination within a period of time reasonably necessary to allow Takeda to determine its interest in such Licensee Patent(s) (which notice from Licensee shall be given no later than [***] prior to any final deadline for any pending action or response that may be due with respect to such Licensee Patent(s) with the applicable patent authority). In the event Takeda provides written notice expressing its interest in assuming responsibility for all costs and responsibility associated with the prosecution and maintenance of such Licensee Patent in such country, Licensee will provide any assistance reasonably requested by Licensee associated with the prosecution and maintenance of such Licensee Patent. In such circumstances, Licensee shall and hereby does grant to Takeda an exclusive license to all of its right, title and interest in the relevant Licensee Patent.

(c) **Takeda Compound Patents and Joint Patents**.

(i) Except as otherwise provided in this Section 9.3(c)(i), Licensee shall have the sole right and responsibility to prepare, file, prosecute and maintain the Takeda Compound Patents and the Joint Patents in the Territory at its own expense. The Parties shall confer and mutually agree to a filing strategy, including the jurisdictions in which to file a patent application, and Licensee shall provide Takeda a reasonable opportunity to review and comment on material communications from any patent authority in the Territory regarding the Takeda Compound Patents and the Joint Patents and drafts of any material filings or responses to be made to such patent authorities in advance of submitting such filings or responses. Licensee shall consider Takeda's comments regarding such communications and drafts in good faith. Any claim amendment of a Takeda Compound Patent that will limit claims such that a Compound or Product would no longer be covered by such Takeda Compound Patent will require Takeda's consent. In the event that Licensee elects not to continue the prosecution or maintenance of a Takeda Compound Patent or Joint Patent in any country in the Territory or, with Takeda´s consent as provided in this Section 9.3(c)(i), elects to amend the claims of any Takeda Compound Patent such that a Compound or Product would no longer be covered by such Takeda Compound Patent, then Licensee shall provide Takeda with written notice of such determination within a period of time reasonably necessary to allow Takeda to determine its interest in such Takeda Compound Patent or Joint Patent (which notice from Licensee shall be given no later than [***] prior to any final deadline for any pending action or response that may be due with respect to such Takeda Compound Patent or Joint Patent with the applicable patent authority). In the event Takeda provides written notice expressing its interest assuming responsibility for all costs and responsibility associated with the prosecution and maintenance of such Takeda Compound Patent or Joint Patent in such country, Licensee will provide any assistance reasonably requested by Takeda associated with the prosecution and maintenance of such Takeda Compound Patent or Joint Patent. In such circumstances with respect to a Joint Patent, Licensee shall and hereby does grant to Takeda an exclusive license to all of its right, title and interest in the relevant Joint Patent in such country. In such circumstances with respect to a Takeda Compound Patent, unless the Parties otherwise mutually agree, Licensee's license to such Takeda Compound Patent will cease to exist without further notice.

(ii) Except as otherwise provided in this Section 9.3(c)(ii), Takeda shall have the sole right and responsibility to prepare, file, prosecute and maintain equivalents outside the Territory of the Takeda Compound Patents and of the Joint Patents outside the Territory at its own expense. With regard to such patents and patent applications, the Parties shall confer and mutually agree to a filing strategy, and Takeda shall provide Licensee a reasonable opportunity to review and comment on material communications from any patent authority regarding such patents and patent applications and drafts of any material filings or responses to be made to such patent authorities in advance of submitting such filings or responses. Takeda shall consider Licensee's comments regarding such communications and drafts in good faith. Any claim amendment of any such patent application that will limit claims such that a Compound or Product would no longer be covered by such patent application will require Licensee's consent. In the event that Takeda elects not to continue the prosecution or maintenance of such patent or patent application outside the Territory, then Takeda shall provide Licensee with written notice of such determination within a period of time reasonably necessary to allow Licensee to determine its interest in such patent or patent application (which notice from Takeda shall be given no later than [***] prior to any final deadline for any pending action or response that may be due with respect to such patent or patent application with the applicable patent authority). In the event Licensee provides written notice expressing its interest assuming responsibility for all costs and responsibility associated with the prosecution and maintenance of such patent or patent application outside the Territory, Takeda will provide any assistance reasonably requested by Licensee associated with the prosecution and maintenance of such patent or patent application. In such circumstances with respect to such patent or patent application, Takeda shall and hereby does grant to Licensee an exclusive license to all of its right, title and interest in such patent or patent application.

(d) **Cooperation in Prosecution**. Each Party shall provide the other Party reasonable assistance and cooperation in the Patent prosecution efforts provided above in this Section 9.3 (including with respect to equivalents outside the Territory of the Takeda Compound Patents and of the Joint Patents), including providing any necessary powers of attorney and executing any other required documents or instruments for such prosecution, as well as further actions as set forth below.

(i) The Parties shall respectively prepare, file, maintain and prosecute the Takeda Compound Patents, Licensee Patents, Joint Patents and Japanese equivalents of the Takeda Compound Patents and of the Joint Patents as set forth in this Section 9.3. As used herein, "prosecution" of such Patents shall include all communication, payment of due official fees and other interaction with any patent office or patent authority having jurisdiction over a patent application in connection with pre-grant proceedings.

(ii) All communications between the Parties relating to the preparation, filing, prosecution or maintenance of the Takeda Patents, the Licensee Patents, the Joint Patents, and equivalents outside the Territory thereof, including copies of any draft or final documents or any communications received from or sent to patent offices or patenting authorities with respect to such Patents and equivalents outside the Territory, shall be considered Confidential Information and subject to the confidentiality provisions of Article 11 to the extent they are not publicly accessible from the relevant patent authority.

(iii) Assignments to Licensee Patents and Joint Patents shall be effected as follows: (1) employees or agents of Licensee that are named as inventors on Licensee Patents shall assign their interest in such Patents to Licensee; and (2) employees or agents of Takeda or Licensee that are named as inventors on Joint Patents shall assign their interest in such Patents to their respective employer.

(iv) For decisions regarding patent term extensions, in the Territory with respect to extensions pursuant to 35 U.S.C. §156 et. seq. and in other jurisdictions pursuant to supplementary protection certificates, and in all jurisdictions with respect to any other extensions that are now or become available in the future, wherever applicable, for the Takeda Compound Patents, Licensee Patents or Joint Patents that cover the Product, Licensee will consult Takeda no later than [***] after the first submission of a market authorization request for the Product anywhere within the Territory, and will consider Takeda´s recommendations in good faith. The final decision regarding such patent term extension shall rest with Licensee, and Licensee, at its sole cost and expense, shall have the sole right and responsibility to apply for such patent term extension. Takeda shall cooperate with Licensee to provide necessary information and assistance, as Licensee may reasonably request, in obtaining patent term extension or supplemental protection certificates in any country in the Territory where applicable to a Takeda Compound Patent, Licensee Patent and Joint Patent.

9.4 **Purple Book Listing**. Subject to Section 9.3, Licensee shall be solely responsible for listing and maintaining all appropriate Takeda Compound Patents, Licensee Patents and Joint Patents in the Purple Book in the United States, the Patent List in Canada or the equivalent in other countries in the Territory, [***]. Upon request of Licensee, Takeda shall cooperate with Licensee to file appropriate information with the FDA for listing any Takeda Compound Patents and any Joint Patents in the Purple Book in the United States, the Patent List in Canada or the equivalent in other countries in the Territory.

9.5 **Infringement of Patents by Third Parties**.

(a) **Notification**. Each Party shall promptly notify the other Party in writing of any existing, alleged or threatened infringement of the Takeda Patents, Joint Patents or Licensee Patents (or of any equivalent outside the Territory of any of the foregoing) in the Field of which it becomes aware, and shall provide all Information in such Party's possession or control demonstrating such infringement.

(b) **Infringement Action**.

(i) "Product Infringement" shall mean any Third Party engaged in any existing, alleged or threatened infringement of any Takeda Compound Patent, Licensee Patent or Joint Patent related to the making, using, importing, offering for sale or selling a Product in the Field. Licensee shall have the first right, but not the obligation, to bring an appropriate suit or other action against any Product Infringement in the Territory, subject to Section 9.5(b)(ii) through 9.5(b)(iv), below. Takeda shall have the first right, but not the obligation, to bring an appropriate suit or other action against any Product Infringement outside of the Territory, subject to Section 9.5(b)(ii) through 9.5(b)(iv), below.

(ii) Each Party shall notify the other Party of its election to take any action in accordance with Section 9.5(b)(i) within [***] before any time limit set forth in an Applicable Law or regulation, including the time limits set forth under the Hatch-Waxman Act (21 U.S.C. § 355). In the event a Party does not so elect, such Party shall so notify the other Party in writing, and the other Party shall have the right, but not the obligation, to commence a suit or take action to enforce the applicable Takeda Compound Patent, Licensee Patent or Joint Patent against such Third Party at its own expense. If one Party elects to bring suit or take action against the Product Infringement, then the other Party shall have the right, prior to commencement of the trial, suit or action, to join any such suit or action.

(iii) Each Party shall provide to the Party enforcing any such rights under this Section 9.5(b) reasonable assistance in such enforcement, at such enforcing Party's request and expense, including joining such action as a party plaintiff if required by Applicable Law to pursue such action. Each Party shall confer upon the other Party any authority, as a licensee under such the applicable Patents, necessary for such other Party to enforce those Patents pursuant to Section 9.5(b)(i) and (ii). The enforcing Party shall keep the other Party regularly informed of the status and progress of such enforcement efforts, shall reasonably consider the other Party's comments on any such efforts, including determination of litigation strategy, filing of important papers to the competent court, which consent shall not be unreasonably withheld, conditioned or delayed.

(iv) Subject to this Section 9.5(b)(iv), the enforcing Party shall be [***].

(c) **Settlement**. [***].

(d) **Allocation of Proceeds**. If either Party recovers monetary damages from any Third Party in a suit or action brought under Sections 9.5(b), or 9.5(c), or any royalties from a license agreement with a Third Party related to any alleged Product Infringement, whether such damages or royalties result from the infringement of Takeda Compound Patents, Licensee Patents or Joint Patents, such recovery shall be allocated first to the reimbursement of any expenses incurred by the Parties in such litigation, action or license, and any remaining amounts shall be split as follows: [***].

9.6 **Infringement of Third Party Rights**.

(a) **Notice**. If any Product used or sold by a Party, its Affiliates, or (Sub)licensees becomes the subject of a Third Party's claim or assertion of infringement of a Patent, the Party first having notice of the claim or assertion shall promptly notify the other Party, the Parties shall agree on and enter into an "identity of interest agreement" wherein such Parties agree to their shared, mutual interest in the outcome of such potential dispute, and thereafter, the Parties shall promptly meet to consider the claim or assertion and the appropriate course of action.

(b) **Defense**. Licensee shall have the first right, but not the obligation, to defend any such Third Party claim or assertion of infringement of a Patent as described in Section 9.6(a) above in the Territory, at Licensee's expense. Takeda shall have the first right, but not the obligation, to defend any such Third Party claim or assertion of infringement of a Patent as described in Section 9.6(a) above outside the Territory, at Takeda's expense. If such first Party does not commence actions to defend such claim within [***] after it receives notice thereof (or within [***] after it

should have given notice thereof to the other Party as required by Section 9.6(a)), then to the extent allowed by the Applicable Laws, such other Party shall have the right, but not the obligation, to control the defense of such claim by legal counsel of its choice, at such other Party's expense. The non-defending Party shall reasonably cooperate with the Party conducting the defense of the claim or assertion, including if required to conduct such defense, furnishing a power of attorney. If the defending Party recovers monetary damages from any such Third Party asserting such a claim of infringement as a result of counter claims brought by such defending Party based on any Takeda Compound Patent or Joint Patent, or any royalties from a license agreement with such Third Party, such recovery shall be allocated first to the reimbursement of any expenses incurred by the defending Party in such litigation, action or license, and any remaining amounts shall be split as follows: [***].

(c) **Settlement; Licenses**. Neither Party shall enter into any settlement of any claim described in this Section 9.6 that affects the other Party's rights or interests without such other Party's written consent, which consent shall not be unreasonably withheld, conditioned or delayed. Each Party shall have the right to decline to defend or to tender defense of any such claim to the other Party upon reasonable notice, including if the other Party fails to agree to a settlement that such Party proposes.

9.7 **Patent Oppositions and Other Proceedings**.

(a) **Third Party Patent Rights**. If either Party desires to bring an opposition, action for declaratory judgment, nullity action, interference, declaration for non-infringement, reexamination or other attack upon the validity, title or enforceability of a Patent owned or controlled by a Third Party and having one or more claims that covers the Product, or the use, making, sale, offer for sale or importation of the Product (except insofar as such action is a counterclaim to or defense of, or accompanies a defense of, a Third Party's claim or assertion of infringement under Section 9.6, in which case the provisions of Section 9.6 shall govern), such Party shall so notify the other Party and the Parties shall promptly confer to determine whether to bring such action or the manner in which to settle such action. Each Party shall have the exclusive right, but not the obligation, to bring at its own expense and in its sole control such action in its respective territory. If such Party does not bring such an action in its territory, within [***] of notification thereof pursuant to this Section 9.7(a) (or earlier, if required by the nature of the proceeding), then the other Party shall have the right, but not the obligation, to bring, at such other Party's sole expense, such action. The Party not bringing an action under this Section 9.7(a) shall be entitled to separate representation in such proceeding by legal counsel of its own choice and at its own expense, and shall cooperate fully with the Party bringing such action.

(b) **Parties' Patent Rights**. If any Takeda Compound Patent, Joint Patent or Licensee Patent has become by the Effective Date or becomes on or after the Effective Date the subject of any proceeding commenced by a Third Party in connection with an opposition, reexamination request, action for declaratory judgment, nullity action, interference or other attack upon the validity, title or enforceability thereof (except insofar as such action is a counterclaim to or defense of, or accompanies a defense of, an action for infringement against a Third Party under Section 9.5, in which case the provisions of Section 9.5 shall govern), then the Party responsible for filing, preparing, prosecuting and maintaining such Patent as set forth in Section 9.3, shall control such defense at its own expense. The controlling Party shall permit the non-controlling Party to

participate in the proceeding to the extent permissible under Applicable Law, and to be represented by its own legal counsel in such proceeding, at the non-controlling Party's expense. If either Party decides that it does not wish to defend against such action, then the other Party shall have a backup right to assume defense of such Third Party action at its own expense. Any awards or amounts received in defending any such Third Party action shall be allocated between the Parties as provided in Section 9.5(d). A list of proceedings commenced by a Third Party in connection with an opposition, reexamination request, action for declaratory judgment, nullity action, interference or other attack upon the validity, title or enforceability thereof before the Effective Date is attached hereto as Exhibit D.

9.8 **Product Trademarks and Takeda Product Trademarks.**

(a) **Generally.** Licensee shall have the sole right to determine the Trademarks to be used with respect to the Exploitation of a Product in the Field in the Territory. Takeda shall have the sole right to determine the Trademarks to be used with respect to the Exploitation of a Product outside of the Territory, including any Takeda Product Trademarks.

(b) **Licensee Product Trademarks.**

(i) If Licensee, in its sole discretion, elects to use a Product Trademark with respect to the Exploitation of a Product in the Field in the Territory, Licensee shall own all right, title, and interest to such Product Trademark, and shall be responsible, [***], for the registration, prosecution, maintenance and enforcement thereof.

(ii) Takeda may, in its sole discretion, elect to use a Product Trademark with respect to the Exploitation of such Product in the Field outside of the Territory under the license grant set forth in Section 4.2. If Takeda so elects to use a Product Trademark, Licensee shall file, register and maintain such Product Trademarks outside of the Territory at Takeda's cost. Takeda may also, in its sole discretion, elect to use a Takeda Product Trademark with respect to the Exploitation of such Product in the Field outside the Territory.

(iii) In the event Takeda exercises its rights under Section 4.2 to use the Product Trademarks, Takeda recognizes Licensee's rights in, under and to the Product Trademarks and shall not at any time impair Licensee's rights to the Product Trademarks.

(iv) In the event Takeda exercises its rights under Section 4.2 to use the Product Trademarks, Takeda shall not make any representation indicating that it has any right, title or interest in or to the ownership or use of the Product Trademarks except under the terms of this Agreement, and Takeda acknowledges that nothing in this Agreement shall give Takeda any right, title or interest in or to any Product Trademark except under the terms of this Agreement.

(v) Each Party shall provide to the other Party prompt written notice of any actual or threatened infringement of any Product Trademarks and of any actual or threatened claim that the use of any Product violates the rights of any Third Party.

(vi) Licensee shall at its sole discretion, be responsible for defending and enforcing the Product Trademarks, including the settlement of any actions relating to the same

and, in connection therewith, will consider in good faith and reasonably address Takeda's input and comments with respect to use outside the Territory. Any award of damages or other recovery from an infringement action concerning the Product Trademarks pursuant to this Section 9.8(b)(vi) shall be retained solely and exclusively by Licensee.

(c) **Takeda Product Trademarks. [***].

ARTICLE 10 – REPRESENTATIONS AND WARRANTIES

10.1 **Mutual Representations, Warranties and Covenants**. Each of the Parties hereby represents and warrants to the other Party as of the Effective Date and covenants that:

(a) **Organization**. It is a corporation duly organized, validly existing, and in good standing under the laws of the jurisdiction of its organization, and has all requisite power and authority, corporate or otherwise, to execute, deliver, and perform this Agreement.

(b) **Binding Agreement**. This Agreement is a legal and valid obligation binding upon such Party and enforceable in accordance with its terms, subject to the effects of bankruptcy, insolvency, or other laws of general application affecting the enforcement of creditor rights, judicial principles affecting the availability of specific performance, and general principles of equity (whether enforceability is considered a proceeding at law or equity).

(c) **Authorization**. The execution, delivery, and performance of this Agreement by such Party have been duly authorized by all necessary corporate action and do not conflict with, violate or result in a breach of any agreement, instrument, or understanding, oral or written, to which it is a party or by which it is bound (including, in the case of Takeda and its Affiliates, the Agreement and Plan of Merger), nor violate any Applicable Law or any order, writ, judgment, injunction, decree, determination, or award of any court or governmental body, or administrative or other agency presently in effect applicable to such Party.

(d) **No Further Approval**. It is not aware of any government authorization, consent, approval, license, exemption of or filing or registration with any court or governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, under any Applicable Law, currently in effect, necessary for, or in connection with, the transactions contemplated by this Agreement or any other agreement or instrument executed in connection herewith, or for the performance by it of its obligations under this Agreement and such other agreements (save for Regulatory Approvals and similar authorizations from Regulatory Authorities necessary for the Exploitation of the Compound and the Product as contemplated hereunder).

(e) **No Inconsistent Obligations**. Neither Party is under any obligation, contractual or otherwise, to any Person that conflicts with or is inconsistent in any material respect with the terms of this Agreement, or that would impede the diligent and complete fulfillment of its obligations hereunder.

(f) **Transparency Reporting**. Each Party shall be responsible for tracking and reporting transfers of value initiated and controlled by its and its Affiliates' employees, contractors,

and agents pursuant to the requirements of the marketing reporting laws of any Government Authority, including Section 6002 of the Patient Protection and Affordable Care Act, commonly referred to as the "Sunshine Act."

10.2 **Additional Representations, Warranties and Covenants of Takeda**. Takeda represents and warrants as of the Effective Date and covenants to Licensee that:

(a) As of the Effective Date, Takeda has all rights necessary to grant, and the U.S. Government does not hold any rights or property interests that prevent or prohibit Takeda's ability to grant, the licenses under the Takeda Compound Patents and Takeda General Patents listed on Exhibit D as of the Effective Date and the Takeda Know-How Controlled by Takeda or any of its Affiliates as of the Effective Date, and rights of cross-reference under Regulatory Materials existing as of the Effective Date that it grants to Licensee in this Agreement. As of the date Takeda includes any additional Takeda Compound Patents or Takeda General Patents on Exhibit D, Takeda shall have all rights necessary to grant the license under such additional Takeda Compound Patents and Takeda General Patents that it grants to Licensee in this Agreement. During the Term, Takeda shall have all rights necessary to grant the rights of cross-reference under Regulatory Materials that it grants to Licensee in this Agreement.

(b) As of the Effective Date, the Takeda Compound Patents set forth in Exhibit D represent all Patents that Takeda or any of its Affiliates Controls that claim TAK-214 or a Product comprising TAK-214 as the sole active ingredient in the Field in the Territory. As of the date Takeda provides Licensee any update of Exhibit D, the Takeda Compound Patents set forth in Exhibit D represent all Patents that Takeda or any of its Affiliates Controls that claim TAK-214 or a Product comprising TAK-214 as the sole active ingredient in the Field in the Territory. As of the later of the Effective Date or the date on which any Takeda Compound Patent is first set forth on Exhibit D, Takeda is the sole and exclusive owner of the entire right, title and interest in such Takeda Compound Patent free of any encumbrance, lien, or claim of ownership by any Third Party, except to the extent otherwise expressly stated on Exhibit D. As of the Effective Date, Exhibit D lists all Patents Controlled by Takeda or its Affiliates needed to conduct Exploitation of the Compound and Product in the Field and in the Territory as conducted by Takeda prior to the Effective Date.

(c) As of the Effective Date, to Takeda's Knowledge, there is no actual or threatened infringement or misappropriation of the Takeda Know-How or Takeda Compound Patents by any Person in the Territory. Takeda shall notify Licensee promptly after becoming aware of any actual or threatened infringement or misappropriation of the Takeda Know-How or Takeda Compound Patents by any Person in the Territory.

(d) As of the date on which any Takeda Compound Patent is first set forth on Exhibit D, such Takeda Compound Patent is being diligently prosecuted in the Territory in accordance with Applicable Law, and, to Takeda's Knowledge, such Takeda Compound Patent has been filed and maintained properly and correctly and all applicable fees have been paid on or before the due date for payment.

(e) As of the date on which any Takeda Compound Patent is first set forth on Exhibit D, such Takeda Compound Patent does not fail to properly identify each and every inventor of the

claims thereof as determined in accordance with Applicable Law of the jurisdiction in which such Takeda Compound Patent is issued or such application is pending; except in each case to the extent otherwise expressly stated on Exhibit D as of the date on which any such Takeda Compound Patent is first set forth on Exhibit D.

(f) As of the Effective Date, to Takeda's Knowledge, the Takeda Know-How has been kept confidential or has been disclosed to Third Parties only under terms of confidentiality. To the Knowledge of Takeda, no breach of such confidentiality has been committed by any Third Party.

(g) The inventions claimed or disclosed by any Takeda Compound Patent (i) were not conceived, discovered, developed, or otherwise made in connection with any research activities funded, in whole or in part, by the federal government of the U.S. or any agency thereof, (ii) are not a "subject invention" as that term is described in 35 U.S.C. Section 201(f), and (iii) are not otherwise subject to the provisions of the Bayh-Dole Act; except in each case to the extent otherwise expressly stated on Exhibit D as of the date on which any such Takeda Compound Patent is first set forth on Exhibit D.

(h) As of the Effective Date, neither Takeda nor any of its Affiliates has been debarred by the FDA or is subject to any similar sanction of other Regulatory Authorities. Neither Takeda nor any of its Affiliates has used, or will engage, in any capacity, in connection with this Agreement or any ancillary agreements (if any), any Person who either has been debarred by such a Regulatory Authority, or is the subject of a conviction described in Section 306 of the FFDCA. Takeda shall inform Licensee in writing [***] if it or any Person engaged by Takeda or any of its Affiliates who is performing any activities under or in connection with this Agreement or any ancillary agreements (if any) is debarred or is the subject of a conviction described in Section 306 of the FFDCA, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to Takeda's Knowledge, is threatened, relating to the debarment or conviction of Takeda, any of its Affiliates or any such Person performing activities.

(i) As of the Effective Date, to Takeda's Knowledge, there are no material claims, judgments, or settlements against, or amounts with respect thereto, owed by Takeda or any of its Affiliates to any Third Parties relating to the Regulatory Materials licensed by Takeda to Licensee or the Takeda Know-How. As of the date Takeda includes any Takeda Compound Patents on Exhibit D to Takeda's Knowledge, there are no material claims, judgments, or settlements against, or amounts with respect thereto, owed by Takeda or any of its Affiliates to any Third Parties relating to such Takeda Compound Patents in the Territory except in each case to the extent otherwise expressly stated on Exhibit D as of the date on which any such Takeda Compound Patent is first set forth on Exhibit D.

(j) No claim or litigation has been brought or, to Takeda's Knowledge, threatened by any Person alleging, and Takeda has no Knowledge of any claim, whether or not asserted: (i) that any of the Takeda Compound Patents is invalid or unenforceable; except in each case to the extent otherwise expressly stated on Exhibit D as of the date on which any such Takeda Compound Patent is first set forth on Exhibit D, (ii) that the Regulatory Materials licensed by Takeda to Licensee, the Takeda Compound Patents, the Takeda Know-How, or the disclosing, copying, making, assigning, or licensing of the Regulatory Materials by Takeda to Licensee, the Takeda

Compound Patents or the Takeda Know-How, violates, infringes, or otherwise conflicts or interferes with, or would violate, infringe, or otherwise conflict or interfere with, any intellectual property or proprietary right of any Person; or (iii) related to the Development of the Product except in each case to the extent otherwise expressly stated on Exhibit D. Takeda shall notify Licensee [***] after becoming aware of any claim or litigation that has been brought or threatened by any Person alleging any of the foregoing. [***].

(k) To Takeda's Knowledge, Takeda and its Affiliates have provided or made available to Licensee prior to the Effective Date, true, complete, and correct copies (as of the Effective Date) of all material adverse information known to Takeda with respect to the safety and efficacy of any Compound or Product, and all of the foregoing information and documents provided are true, correct, and complete in all material respects.

(l) Takeda owns or otherwise controls all right, title and interest in and to the Regulatory Materials that Takeda licenses to Licensee hereunder, and to Takeda's Knowledge, Takeda and its Affiliates have generated, prepared, maintained, and retained all material Regulatory Materials in the Field that are required to be maintained or retained pursuant to and in accordance with GCP, GLP and other Applicable Law, and all such information is true, complete and correct in all material respects and what it purports to be.

10.3 **Additional Representations, Warranties and Covenants of Licensee**. Licensee represents and warrants as of the Effective Date and covenants to Takeda that:

(a) As of the Effective Date, Licensee has not been debarred by the FDA (and is not subject to any similar sanction of other Regulatory Authorities), and is not subject to any such debarment or similar sanction by any such Regulatory Authority. Licensee has not used, and will not engage, in any capacity, in connection with this Agreement, any Person who either has been debarred by such a Regulatory Authority, or is the subject of a conviction described in Section 306 of the FFDCA. Licensee shall inform Takeda in writing [***] if it or any Person engaged by Licensee who is performing services under this Agreement is debarred or is the subject of a conviction described in Section 306 of the FFDCA, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to Licensee's Knowledge, is threatened, relating to the debarment or conviction of Licensee or any such Person performing services hereunder.

(b) To the extent permissible under Applicable Law, all employees of Licensee or its Affiliates performing activities under this Agreement shall be under an obligation to assign all right, title and interest in and to their inventions and other know-how, whether or not patentable, and intellectual property rights therein, to Licensee or its Affiliate(s) as the sole owner thereof. Takeda shall have no obligation to contribute to any remuneration of any inventor employed or previously employed by Licensee or any of its Affiliates in respect of any such inventions, Information and discoveries and intellectual property rights therein that are so assigned to Licensee or its Affiliate(s). Licensee will pay all such remuneration, if any, due to such inventors with respect to such inventions and other know-how and intellectual property rights therein.

(c) In performing its obligations under this Agreement, or any ancillary agreements (if any), Licensee shall, and shall cause its Affiliates and (Sub)licensees to, comply with (i) all Applicable Law, including any applicable anti-corruption or anti-bribery laws or regulation, of any

Governmental Authority with jurisdiction over the activities performed by Licensee or its Affiliates or (Sub)licensees in furtherance of such obligations, and (ii) standard pharmaceutical industry accepted guidelines regarding promotional materials, including Pharmaceutical Research and Manufacturers of America (PhRMA) guidelines.

(d) During the period commencing upon the Effective Date and until the first to occur of [***], Licensee and its Affiliates, without the prior written consent of Takeda, during the Term, shall not solicit, induce, encourage, or participate in soliciting, inducing, or encouraging any employee of Takeda, or any of its Affiliates who has been as of, or becomes after the Effective Date, involved in the discussion leading to this Agreement, or the Development, Manufacture or Commercialization of any Compound or Product (each, an "Involved Employee") to terminate his or her relationship with Takeda or Takeda's Affiliate. An offer of employment to any such Involved Employee of Takeda by Licensee or its Affiliates which results directly from unsolicited responses to general advertisements for employment will not be deemed to be in violation of this provision.

(e) The Stock Issuance Agreement attached as Exhibit F is substantially the same as the Common Stock purchase agreements entered into by Licensee and other founders on or prior to the Effective Date.

(f) The Up-Front Shares issued pursuant to Section 2.1 represent [***] of Fully-Diluted Capitalization of Licensee as of the Effective Date, excluding the securities issued in the Qualified Financing (and, for the avoidance of doubt, excluding any Series A preferred stock and any convertible promissory notes that are converted into the securities issued in the Qualified Financing).

(g) The capitalization table provided to Takeda (i) reflects the information upon which the calculation of the number of shares of Common Stock issued to Takeda pursuant to this Agreement has been made and (ii) is true, complete and correct as of the Effective Date.

(h) As of the date Licensee includes any Licensee Patents on Exhibit B Licensee shall have all rights necessary to grant the license under such Licensee Patents that it grants to Takeda in this Agreement. During the Term, Licensee shall have all rights necessary to grant the rights of cross-reference under Regulatory Materials that it grants to Takeda in this Agreement.

(i) There are no Licensee Patents as of the Effective Date and accordingly there are no Licensee Patents listed in Exhibit B as of the Effective Date. As of the date Licensee provides Takeda any update of Exhibit B, the Licensee Patents set forth in Exhibit B represent all Licensee Patents that Licensee or any of its Affiliates (if any Affiliates) Controls that claim the Compound or Product in the Field. As of the date on which any Licensee Patent is first set forth on Exhibit B, Licensee is the sole and exclusive owner of the entire right, title and interest in such Licensee Patent free of any encumbrance, lien, or claim of ownership by any Third Party, except to the extent otherwise expressly stated on Exhibit B.

(j) Licensee shall notify Takeda [***] after becoming aware of any actual or threatened infringement or misappropriation of the Licensee Know-How or Licensee Patents by any Person.

(k) As of the date on which any Licensee Patent is first set forth on Exhibit B, such Licensee Patent is being diligently prosecuted in accordance with Applicable Law, and, to Licensee's Knowledge, such Licensee Patent has been filed and maintained properly and correctly and all applicable fees have been paid on or before the due date for payment.

(l) As of the date on which any Licensee Patent is first set forth on Exhibit B, such Licensee Patent does not fail to properly identify each and every inventor of the claims thereof as determined in accordance with Applicable Law of the jurisdiction in which such Licensee Patent is issued or such application is pending.

(m) As of the Effective Date, to Licensee's Knowledge, the Licensee Know-How has been kept confidential or has been disclosed to Third Parties only under terms of confidentiality. To the Knowledge of Licensee, no breach of such confidentiality has been committed by any Third Party.

(n) The inventions claimed or disclosed by any Licensee Patent (i) were not conceived, discovered, developed, or otherwise made in connection with any research activities funded, in whole or in part, by the federal government of the U.S. or any agency thereof, (ii) are not a "subject invention" as that term is described in 35 U.S.C. Section 201(f), and (iii) are not otherwise subject to the provisions of the Bayh-Dole Act; except in each case to the extent otherwise expressly stated on Exhibit B as of the date on which any such Licensee Patent is first set forth on Exhibit B.

(o) As of the Effective Date, to Licensee's Knowledge, there are no material claims, judgments, or settlements against, or amounts with respect thereto, owed by Licensee or any of its Affiliates to any Third Parties relating to the Regulatory Materials licensed by Licensee to Takeda or the Licensee Know-How. As of the date Licensee includes any Licensee Patents on Exhibit B to Licensee's Knowledge, there are no material claims, judgments, or settlements against, or amounts with respect thereto, owed by Licensee or any of its Affiliates to any Third Parties relating to such Licensee Patents except in each case to the extent otherwise expressly stated on Exhibit B as of the date on which any such Licensee Patent is first set forth on Exhibit B.

(p) Licensee shall notify Takeda [***] after becoming aware of any claim or litigation that has been brought or threatened by any Person alleging: (i) that any of the Licensee Patents is invalid or unenforceable, (ii) that the Regulatory Materials licensed by Licensee to Takeda, the Licensee Patents, the Licensee Know-How, or the disclosing, copying, making, assigning, or licensing of the Regulatory Materials by Licensee to Takeda, the Licensee Patents or the Licensee Know-How, violates, infringes, or otherwise conflicts or interferes with, or would violate, infringe, or otherwise conflict or interfere with, any intellectual property or proprietary right of any Person; or (iii) related to the Development of the Product.

(q) Licensee owns or otherwise controls all right, title and interest in and to the Regulatory Materials that Licensee licenses to Takeda hereunder, and to Licensee's Knowledge, Licensee and its Affiliates have generated, prepared, maintained, and retained all material Regulatory Materials in the Field that are required to be maintained or retained pursuant to and in accordance with GCP, GLP and other Applicable Law, and all such information is true, complete and correct in all material respects and what it purports to be.

10.4 **No Other Representations or Warranties**. EXCEPT AS EXPRESSLY SET FORTH IN THIS ARTICLE 10, THE PARTIES MAKE NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WHATSOEVER, EITHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, EITHER IN FACT OR BY OPERATION OF LAW, BY STATUTE OR OTHERWISE, AND EACH PARTY SPECIFICALLY DISCLAIMS ANY OTHER WARRANTIES, INCLUDING ANY EXPRESS OR IMPLIED WARRANTY OF QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OF NON-INFRINGEMENT OR AS TO THE VALIDITY OF ANY PATENTS.

ARTICLE 11 – CONFIDENTIALITY

11.1 **Nondisclosure**. Each Party agrees that, during the Term and for a period of [***] thereafter, a Party (the "Receiving Party") receiving Confidential Information of the other Party (the "Disclosing Party") shall (a) maintain in confidence such Confidential Information using not less than the efforts such Receiving Party uses to maintain in confidence its own confidential or proprietary information of similar kind and value, (b) not disclose such Confidential Information to any Third Party without the prior written consent of the Disclosing Party, except for disclosures expressly permitted below, and (c) not use such Confidential Information for any purpose except those permitted by this Agreement (it being understood that this Section 11.1 shall not create or imply any rights or licenses not expressly granted under this Agreement). Notwithstanding anything to the contrary in the foregoing, the obligations of confidentiality and non-use with respect to any trade secret (to the extent understood by a Party to be a trade secret) within such Confidential Information shall survive such [***] period for so long as such Confidential Information remains protected as a trade secret under Applicable Law.

11.2 **Exceptions**. The obligations in Section 11.1 shall not apply with respect to any portion of the Confidential Information that the Receiving Party can show by competent evidence:

(a) is publicly disclosed by the Disclosing Party, either before or after it is disclosed to the Receiving Party hereunder;

(b) is known to the Receiving Party or any of its Affiliates, without any obligation to keep it confidential or any restriction on its use, prior to disclosure by the Disclosing Party;

(c) is subsequently disclosed to the Receiving Party or any of its Affiliates on a non-confidential basis by a Third Party that, to the Receiving Party's knowledge, is not bound by a similar duty of confidentiality or restriction on its use;

(d) is now, or hereafter becomes, through no act or failure to act on the part of the Receiving Party or any of its Affiliates, generally known or available, either before or after it is disclosed to the Receiving Party;

(e) is independently discovered or developed by or on behalf of the Receiving Party or any of its Affiliates without the use of or access to Confidential Information belonging to the Disclosing Party; or

(f) is the subject of written permission to disclose provided by the Disclosing Party.

11.3 **Authorized Disclosure**. The Receiving Party may disclose Confidential Information belonging to the Disclosing Party only to the extent such disclosure is reasonably necessary in the following instances:

(a) filing or prosecuting Patents as permitted by this Agreement;

(b) filing Regulatory Materials in order to obtain or maintain Regulatory Approvals;

(c) prosecuting or defending litigation, including responding to a subpoena in a Third Party litigation;

(d) complying with Applicable Law or regulations or court or administrative orders; or

(e) to its Affiliates, (Sub)licensees or prospective (Sub)licensees, subcontractors or prospective subcontractors, payors, consultants, agents and advisors on a "need-to-know" basis in order for the Receiving Party to exercise its rights or fulfill its obligations under this Agreement, each of whom prior to disclosure must be bound by obligations of confidentiality and restrictions on use of such Confidential Information that are no less restrictive (except for the duration of such restrictions, which shall be no less than [***] than those set forth in this Article 11; provided, however, that, in each of the above situations, the Receiving Party shall remain responsible for any failure by any Person who receives Confidential Information pursuant to this Section 11.3(e) to treat such Confidential Information as required under this Article 11.

(f) to its actual or prospective investors, acquirers, merger-partners, and to any investment advisors, each of whom prior to disclosure must be bound by obligations of confidentiality and restrictions on use of such Confidential Information that are no less restrictive than those set forth in this Article 11 (except for the duration of such restrictions, which shall be [***] or, [***]); provided, however, that, in each of the above situations, the Receiving Party shall remain responsible for any failure by any Person who receives Confidential Information pursuant to this Section 11.3(f) to treat such Confidential Information as required under this Article 11.

(g) If and whenever any Confidential Information is disclosed in accordance with this Section 11.3, such disclosure shall not cause any such information to cease to be Confidential Information except to the extent that such disclosure results in a public disclosure of such information (other than by breach of this Agreement). Notwithstanding the foregoing, in the event a Party is required to make a disclosure of the other Party's Confidential Information pursuant to clauses (a) through (d) of this Section 11.3, it shall, except where impracticable, give reasonable advance notice to the other Party of such disclosure and use not less than the same efforts to secure confidential treatment of such information as it would to protect its own confidential information from disclosure and shall be jointly and severally liable for any breach of this Article 11 by such Person.

11.4 **Terms of this Agreement**. The Parties acknowledge that this Agreement and all of the respective terms of this Agreement shall be treated as Confidential Information of both Parties.

11.5 **Publicity**. After consummation of the Qualified Financing, the Parties shall make a joint public announcement of the execution of this Agreement which shall be issued at a time to be mutually agreed by the Parties. The Parties intend that the content of the joint public

announcement will be substantially similar to the form of press release attached hereto as Exhibit J, however the final content must be mutually agreed upon by both Parties prior to being issued by either party. Each Party agrees not to issue any other press release or other public statement disclosing other information relating to this Agreement or the transactions contemplated hereby that contains information not previously publicly disclosed in accordance with this Section 11.5 without the prior written consent of the other Party, not to be unreasonably withheld, conditioned or delayed.

11.6 **Securities Filings**. Notwithstanding anything to the contrary in this Article 11, in the event either Party proposes to file with the Securities and Exchange Commission or the securities regulators of any state or other jurisdiction a registration statement or any other disclosure document that describes or refers to the terms and conditions of this Agreement or any related agreements between the Parties, such Party shall notify the other Party of such intention and shall provide the other Party with a copy of relevant portions of the proposed filing at least [***] prior to such filing (and any revisions to such portions of the proposed filing a reasonable time prior to the filing thereof), including any exhibits thereto that refer to the other Party or the terms and conditions of this Agreement or any related agreements between the Parties. The Party making such filing shall cooperate in good faith with the other Party to obtain confidential treatment of the terms and conditions of this Agreement or any related agreements between the Parties that the other Party requests to be kept confidential or otherwise afforded confidential treatment, and shall only disclose Confidential Information that it is reasonably advised by legal counsel is legally required to be disclosed. No such notice shall be required if the description of or reference to this Agreement or a related agreement between the Parties contained in the proposed filing has been included in any previous filing made by the either Party in accordance with this Section 11.6 or otherwise approved by the other Party or disclosed in a prior press release by the Parties or other prior public disclosure made by a Party in accordance with the terms of this Article 11.

11.7 **Publications and Promotional Materials**.

(a) As between the Parties, (i) Licensee, its Affiliates and its or their (Sub)licensees will have the sole right to publish academic, scientific or medical peer reviewed publications that relate to the Compound or a Product, other than any publication of data resulting from Clinical Trials conducted by Takeda, its Affiliates and its or their (Sub)licensees with respect to Development of Product for Regulatory Approval in Japan, and (ii) Takeda, its Affiliates and its or their (Sub)licensees will have the sole right to publish data resulting from Clinical Trials conducted by Takeda, its Affiliates and its or their (Sub)licensees with respect to Development of Product for Regulatory Approval in Japan.

(b) Each Party shall submit to the other Party for such other Party's review any proposed academic, scientific or medical peer reviewed publication by such Party, its Affiliates and its or their (Sub)licensees that relates to the Compound or a Product. Licensee shall also submit to Takeda for its review any proposed academic, scientific or medical publication or public presentation that contains Takeda Know-How or Joint Know-How that has not been previously publicly disclosed or otherwise approved by Takeda to be publicly disclosed, for the purposes of determining whether any portion of the proposed publication or presentation should be modified or deleted so as to preserve the value of such Takeda Know-How and Joint Know-How. Takeda shall also submit to Licensee for its review any proposed academic, scientific or medical

publication or public presentation that contains Licensee Know-How or Joint Know-How that has not been previously publicly disclosed or otherwise approved by Licensee to be publicly disclosed, for the purposes of determining whether any portion of the proposed publication or presentation should be modified or deleted so as to preserve the value of such Licensee Know-How or Joint Know-How. Each Party shall consider all comments provided by the other Party in good faith, including comments regarding the potential adverse impact on Exploitation of Compound and/or Product.

(c) Written copies of any proposed publication or presentation required to be submitted hereunder shall be submitted to the applicable Party no later than [***] before submission for publication or presentation (the "Review Period"). The Party receiving such submission shall provide its comments with respect to such publications and presentations within [***] of its receipt of such written copy. The Review Period may be extended for an additional [***] in the event such receiving Party can, within [***] of receipt of the written copy, demonstrate reasonable need for such extension including for the preparation and filing of patent applications.

(d) Each Party shall comply, and shall cause its Affiliates and (Sub)licensees to comply, with (i) standard academic practice regarding authorship of scientific publications and recognition of contribution of the other Party in any publication governed by this Section 11.7, including International Committee of Medical Journal Editors standards regarding authorship and contributions, and (ii) standard pharmaceutical industry accepted guidelines regarding promotional materials, including Pharmaceutical Research and Manufacturers of America (PhRMA) guidelines.

11.8 **Equitable Relief**. Given the nature of the Confidential and the competitive damage that could result to a Party upon unauthorized disclosure, use or transfer of its Confidential Information to any Third Party, the Parties agree that monetary damages may not be a sufficient remedy for any breach of this Article 11. In addition to all other remedies, a Party shall be entitled to seek specific performance and injunctive and other equitable relief as a remedy for any breach or threatened breach of this Article 11.

ARTICLE 12 – COMMITTEE

12.1 **Information Sharing Committee**. Within [***] after the Effective Date, the Parties will establish an information sharing committee (the "Information Sharing Committee"). The Information Sharing Committee will be comprised of two (2) representatives from each Party, or such other number of equal representatives as the Parties may mutually agree upon. From time to time each Party may replace its Information Sharing Committee representatives by written notice to the other Party specifying the prior representative(s) and their replacement(s). The Information Sharing Committee will meet at least [***], or as frequently as agreed to by the members of the Information Sharing Committee, on such dates and at such times and places as agreed to by the members of the Information Sharing Committee, provided that at least [***] will be held in person unless otherwise mutually agreed. Each Party will be responsible for its own expenses relating to attendance at or participation in Information Sharing Committee meetings. The purpose of the Information Committee will be for (i) Party to provide the other Party with updates regarding progress of such Party's and its Affiliates' and (Sub)licensees' Development, Manufacturing, and

Commercialization activities with respect to the Compound and Product, and (ii) the Parties, in accordance with Section 12.2, to exchange Licensee Know-How and Takeda Know-How.

12.2 **Sharing of Know-How.**

(a) At [***] Information Sharing Committee meeting each Calendar Year, the Information Sharing Committee shall discuss, and in good faith attempt to agree upon, whether any Takeda Know-How first obtained or generated by Takeda after the Effective Date or any Licensee Know-How is reasonably necessary or useful to enable Licensee or Takeda, respectively: (i) to perform its obligations under this Agreement; (ii) Develop or Manufacture the Product; and (iii) Commercialize the Product in its respective territory. Takeda shall disclose to Licensee all Takeda Know-How first obtained or generated by Takeda after the Effective Date, and Licensee shall disclose to Takeda all Licensee Know-How first obtained or generated by Licensee after the Effective Date, in each case that the Information Sharing Committee determines is reasonably necessary or useful to enable Licensee and Takeda, respectively: (A) to perform its obligations under this Agreement; (B) Develop or Manufacture the Product; and (C) Commercialize the Product in its respective territory. All decisions by the Information Sharing Committee as to any Information to be shared pursuant to this Section 12.2(a) shall be taken only following unanimous vote, with each Party having one (1) vote.

(b) In addition to the foregoing, during the Term, at either Party's reasonable request, the other Party will cooperate with the requesting party to transfer Information created after the Effective Date to the extent relating to CMC data and Clinical Trial data.

12.3 **Non-Member Participation.** Additional non-members of the Information Sharing Committee having relevant experience may from time to time be invited to participate in an Information Sharing Committee meeting, provided that such participants shall have no voting rights or powers. Non-member participants who are not employees of a Party or its Affiliates shall only be allowed to attend if: (1) the other Party's representatives have consented to the attendance (such consent not to be unreasonably withheld, conditioned or delayed); and (2) such non-member participant is subject to confidentiality and non-use obligations at least as restrictive as those set forth in this Agreement.

12.4 **Alliance Managers**. Promptly following the Effective Date, each Party shall designate in writing an Alliance Manager to serve as the primary point of contact for the Parties regarding this Agreement. Each Alliance Manager shall facilitate communication and coordination of the Parties' activities under this Agreement. The Alliance Managers shall not be a member of the Information Sharing Committee but shall be allowed to attend any Information Sharing Committee meeting as a non-voting observer.

12.5 **English Language**. With respect to the following material communications with any Regulatory Authority which are required to be provided by one Party to the other under this Agreement, the providing Party shall provide such communication in the English language: communications or filings with the PMDA prior to the Effective Date. Notwithstanding the above, Takeda shall not be required to translate the CMC section of any Regulatory Authority communication or filing.

ARTICLE 13 – TERM AND TERMINATION

13.1 **Term**. This Agreement shall become effective as of the Effective Date and shall continue in full force and effect until the expiration of this Agreement as described in this Section 13.1, unless earlier terminated pursuant to this Article 13 (the "Term"). This Agreement shall expire as follows:

(a) on a country-by-country and Product-by-Product basis, upon the expiration of the Royalty Term with respect to each Product in each country, as applicable; or

(b) in its entirety, upon the expiration of the Royalty Term with respect to the last Product Commercialized in the last country.

13.2 **Termination for Material Breach**.

(a) Either Party (the "Non-breaching Party") may terminate this Agreement in its entirety in the event the other Party (the "Breaching Party") has materially breached this Agreement, and such material breach has not been cured within [***] (other than any breach for failure to pay, which shall be [***] or other than as provided in Section 13.2(b)) after receipt of written notice of such breach by the Breaching Party from the Non-Breaching Party (the "Cure Period"); provided, however, that, to the extent termination is for uncured breach by Licensee, such termination shall apply only to those countries in the Territory to which such breach relates except for an uncured breach affecting the United States, in which case this Agreement will terminate in its entirety. A material breach by Licensee of the Warrant, which is not cured by Licensee within [***] after written notice of such material breach to Licensee from Takeda, shall be deemed a material breach of this Agreement which relates to the entire Territory. The written notice describing the alleged material breach shall provide sufficient detail to put the Breaching Party on notice of such material breach. Any termination of this Agreement pursuant to this Section 13.2(a) shall become effective at the end of the Cure Period, unless the Breaching Party has cured any such material breach prior to the expiration of such Cure Period, or unless such allegedly breaching Party disputes such breach. The right of either Party to terminate this Agreement as provided in this Section 13.2(a) shall not be affected in any way by such Party's waiver of or failure to take action with respect to any previous breach under this Agreement.

(b) If the Parties reasonably and in good faith disagree as to whether there has been a material breach, including whether such breach was material, the Party that disputes whether there has been a material breach may contest the allegation in accordance with Article 14. Notwithstanding anything to the contrary contained in Section 13.2(a), the Cure Period for any Dispute shall run from the date that written notice was first provided to the Breaching Party by the Non-Breaching Party through the resolution of such Dispute pursuant to Article 14, and it is understood and acknowledged that, during the pendency of a Dispute pursuant this Section 13.2(b), all of the terms and conditions of this Agreement shall remain in effect, and the Parties shall continue to perform all of their respective obligations under this Agreement.

13.3 **Termination by Licensee**.

(a) Licensee shall have the unilateral right to terminate this entire Agreement upon six (6) months prior written notice to Takeda.

(b) Licensee shall have the right to terminate this entire Agreement at any time upon providing [***] prior written notice to Takeda if Licensee determines that the Compound or the Product caused or is likely to cause a fatal, life-threatening or other serious adverse event that is reasonably expected, based upon then available data, to preclude continued Development and/or Commercialization of the Product in the Field in the Territory.

(c) The Parties may agree to terminate this Agreement prior to expiration of the [***] notice period provided in Section 13.3(b) above, where the Parties: (i) have reached consensus regarding the inability to continue Commercializing the Products in the Field in the Territory for the reasons set forth in Section 13.3(b); and (ii) have completed all wind-down and other transition activities, including those set forth in Section 13.6.

13.4 **Termination for Patent Challenge**. Takeda may terminate this entire Agreement at any time upon written notice to Licensee, if Licensee, or any of Licensee's Affiliates, or its or their (Sub)licensees, directly, or indirectly through assistance granted to a Third Party, commences any interference or opposition proceeding, challenges the validity or enforceability of, or opposes any extension of or the grant of a supplementary protection certificate with respect to (a "Patent Proceeding") any Takeda Patent anywhere in the Territory except for a country in the Territory in which this Agreement has been terminated prior to the commencement of any such Patent Proceeding. However, Takeda's right to terminate this Agreement under this Section 13.4 shall not apply to any Affiliate of Licensee that first becomes an Affiliate of Licensee after the Effective Date in connection with a merger or acquisition event, or any (Sub)licensee, where such Affiliate or (Sub)licensee was undertaking activities in connection with a Patent Proceeding prior to such merger or acquisition event or the grant of such sublicense, provided such Affiliate or (Sub)licensee promptly ceases all activities in the furtherance of such Patent Proceeding and withdraws or terminates with prejudice any such Patent Proceeding within [***] of such merger or acquisition event or grant of sublicense.

13.5 **Automatic Termination for Failure to Consummate a Qualified Financing**. This Agreement shall automatically terminate if Licensee has not consummated a Qualified Financing within [***] of the Effective Date.

13.6 **Termination for Insolvency**.

(a) Either Party may terminate this Agreement in its entirety upon providing written notice to the other Party on or after the time that such other Party makes a general assignment for the benefit of creditors, files an insolvency petition in bankruptcy, petitions for or acquiesces in the appointment of any receiver, trustee or similar officer to liquidate or conserve its business or any substantial part of its assets, commences under the laws of any jurisdiction any proceeding involving its insolvency, bankruptcy, reorganization, adjustment of debt, dissolution, liquidation or any other similar proceeding for the release of financially distressed debtors, or becomes a party to any proceeding or action of the type described above, and such proceeding or action remains un-dismissed or un-stayed for a period of more than [***].

(b) All rights and licenses granted under or pursuant to this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of Title 11 of the United States Code and other similar laws in any other jurisdiction (collectively, the "Bankruptcy Laws"), licenses of

rights to "intellectual property" as defined under the Bankruptcy Laws. If a case is commenced during the Term by or against a Party under Bankruptcy Laws then, unless and until this Agreement is rejected as provided pursuant to such Bankruptcy Laws, such Party (in any capacity, including debtor-in-possession) and its successors and assigns (including a Title 11 trustee) shall perform all of the obligations in this Agreement intended to be performed by such Party. If a case is commenced during the Term by or against a Party under the Bankruptcy Laws, this Agreement is rejected as provided for under the Bankruptcy Laws, and the non-bankrupt Party elects to retain its rights hereunder as provided for under the Bankruptcy Laws, then the Party subject to such case under the Bankruptcy Laws (in any capacity, including debtor-in-possession) and its successors and assigns (including a Title 11 trustee), shall provide to the non-bankrupt Party copies of all Patents and Information necessary for the non-bankrupt Party to prosecute, maintain and enjoy its rights under the terms of this Agreement. All rights, powers and remedies of the non-bankrupt Party as provided herein are in addition to and not in substitution for any and all other rights, powers and remedies now or hereafter existing at law or in equity (including the Bankruptcy Laws) in the event of the commencement of a case by or against a Party under the Bankruptcy Laws. In particular, it is the intention and understanding of the Parties to this Agreement that the rights granted to the Parties under this Section 13.5 are essential to the Parties' respective businesses and the Parties acknowledge that damages are not an adequate remedy.

13.7 **Effects of Termination**. All of the following effects of termination are in addition to the other rights and remedies that may be available to either of the Parties under this Agreement and shall not be construed to limit any such rights or remedies. Upon the termination of this Agreement:

(a) Notwithstanding anything contained in this Agreement to the contrary, all rights and licenses granted herein to Licensee shall terminate in the terminated countries and Licensee shall cease any and all Development, Manufacture, and Commercialization activities with respect to the Compound and the Product in such terminated countries except for Licensee's rights under Section 13.6(f) below;

(b) All payment obligations to Takeda under Article 8 (excluding Section 8.12) with respect to Licensee's Net Sales of Product in the terminated countries shall terminate, other than those that are accrued and unpaid as of the effective date of such termination or that are required to be paid pursuant to Section 8.12 or Section 13.6(f);

(c) [***].

(d) [***];

(e) [***];

(f) Subject to the payment of all amounts required under Sections 13.6(b) above and Article 8 with respect to Licensee's Net Sales of Product, for a period of up to [***] after termination of this Agreement, Licensee shall have the right to sell or otherwise dispose of any inventory of the Product on hand at the time of such termination or in the process of Manufacturing;

(g) [***]; and

(h) [***].

13.8 **Effect of Addition of Japan to Territory.** Upon the addition of Japan to the Territory in accordance with Section 7.1(b):

(a) Notwithstanding anything contained in this Agreement to the contrary, all rights and licenses granted herein to Takeda to Develop (for Commercialization in Japan), Manufacture (for Commercialization in Japan) and Commercialize in Japan shall terminate, Takeda shall cease any and all such Development, Manufacture, and Commercialization activities with respect to the Compound and the Product for Japan, and the Territory shall be deemed to include the world, and accordingly all rights of Takeda to Exploit Compounds or Products with respect to Japan will terminate except for Takeda's rights under Section 13.7(d) below;

(b) All Takeda payment obligations to Licensee under Article 8 (excluding Section 8.12) with respect to Takeda's Net Sales of the Product in Japan shall terminate, other than those that are accrued and unpaid as of the effective date of such termination or that are required to be paid pursuant to Section 8.12 or Section 13.7(d);

(c) [***];

(d) Subject to the payment of all amounts required under Sections 13.7(b) above and Article 8 with respect to Takeda's Net Sales of Product, for a period of up to [***] after termination of this Agreement, Takeda shall have the right to sell or otherwise dispose of any inventory of the Product on hand at the time of such termination or in the process of Manufacturing;

(e) [***]; and

(f) [***].

13.9 **Remedies**. Notwithstanding anything to the contrary in this Agreement, except as otherwise set forth in this Agreement, termination or expiration of this Agreement shall not relieve the Parties of any liability or obligation which accrued hereunder prior to the effective date of such termination or expiration, nor prejudice either Party's right to obtain performance of any obligation. Each Party shall be free, pursuant to Article 14, to seek, without restriction as to the number of times it may seek, damages, expenses and remedies that may be available to it under Applicable Law or in equity and shall be entitled to offset the amount of any damages and expenses obtained against the other Party in a final determination under Section 14.3, against any amounts otherwise due to such other Party under this Agreement.

13.10 **Survival**. The following provisions shall survive any expiration or termination of this Agreement for the period of time specified therein (or, if no such period is specified, indefinitely): Articles 1, 8 (but only to the extent relating to milestone events occurring on or prior to the date of expiration or termination, and only with respect to royalties owed, if any, on Products sold prior to the date of expiration or termination, or sold by Licensee, its Affiliates or (Sub)licensees after such termination to the extent expressly permitted under this Agreement), 11 (for the period set forth in Section 11.1), 14, 15, and 16 and Sections 2.1 (b), (c), (d), (e) and (f), 3.1, 4.3(d), 4.4, 4.6, 4.7, 5.8 (first sentence only), 5.9 (last sentence only), 6.6 (solely following expiration if both Parties (or any of their (Sub)licensees) are Commercializing Product), 9.1, 9.2 (with respect to any

disclosure obligations that arise on or prior to expiration or termination), 9.3(b) (with respect to Licensee's obligation to notify Takeda of Licensee's decision to abandon or not maintain Licensee Patents), 9.3(c) (solely with respect to any Joint Patents not assigned to Takeda), 9.3(d)(ii)-(iii), 9.5(d) (to the extent any suit or action under that section is still pending upon expiration or termination), 10.4, 13.7, 13.9, and 13.10. Following the expiration of this Agreement pursuant to Section 13.1 with respect to a Product in a country of the Territory, Licensee will have a perpetual, irrevocable, non-exclusive, fully-paid and royalty-free right and license, with the right, subject to Takeda's prior written consent, which shall not be unreasonably withheld, conditioned or delayed, to grant sublicenses, under the Takeda Intellectual Property to Exploit such Product in the Field in such country of the Territory. Following the expiration of this Agreement pursuant to Section 13.1 with respect to a Product in a country outside of the Territory, Takeda will have a perpetual, irrevocable, non-exclusive, fully-paid and royalty-free right and license, with the right, subject to Licensee's prior written consent, which shall not be unreasonably withheld, conditioned or delayed, to grant sublicenses, under the Licensee Intellectual Property to Exploit such Product in the Field in such country.

ARTICLE 14– DISPUTE RESOLUTION

14.1 **Exclusive Dispute Resolution Mechanism**. The Parties agree that the procedures set forth in this Article 14 shall be the exclusive mechanism for resolving any dispute, controversy, or claim between the Parties that may arise from time to time pursuant to this Agreement relating to either Party's rights or obligations hereunder (each, a "Dispute", and collectively, the "Disputes") that is not resolved through good faith negotiation between the Parties.

14.2 **Resolution by Executive Officers**. Except as otherwise provided in this Section 14.2, in the event of any Dispute, the Parties shall first attempt in good faith to resolve such Dispute by negotiation and consultation between themselves. In the event that such Dispute is not resolved on an informal basis within [***] after receipt of written notice of such Dispute by a Party, either Party may, by written notice to the other Party, refer the Dispute to the senior executive officer (or his/her delegate) of the other Party for attempted resolution by good faith negotiation within [***] after such notice is received. Each Party may, in its sole discretion, seek resolution of any and all Disputes that are not resolved under this Section 14.2 in accordance with Section 14.3.

14.3 **Litigation**. Any unresolved Dispute which was subject to Section 14.2, shall be brought exclusively in a court of competent jurisdiction, federal or state, located in New York, New York, and in no other jurisdiction. Each Party to this Agreement, by its execution hereof, (a) hereby irrevocably submits to the exclusive jurisdiction of the United States District Court and state courts located in New York, New York for the purpose of any and all unresolved Disputes which were subject to Section 14.2; (b) hereby waives to the extent not prohibited by Applicable Law, and agrees not to assert, by way of motion, as a defense or otherwise, in any such action, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that any such action brought in one of the above-named courts in such jurisdiction should be dismissed on grounds of forum non-conveniens, should be transferred to any court other than one of the above-named courts, or should be stayed by reason of the pendency of some other proceeding in any other court other than one of the above-named courts, or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (c) hereby agrees not to commence any such action other than before one of the

above-named courts nor to make any motion or take any other action seeking or intending to cause the transfer or removal of any such action to any court other than one of the above-named courts whether on the grounds of inconvenient forum or otherwise. Notwithstanding the foregoing, application may be made to any court of competent jurisdiction with respect to the enforcement of any judgment or award.

14.4 **Preliminary Injunctions**. Notwithstanding anything in this Agreement to the contrary, a Party may seek a temporary restraining order or a preliminary injunction from any court of competent jurisdiction in order to prevent immediate and irreparable injury, loss, or damage on a provisional basis, pending the decision of the arbitrator(s) on the ultimate merits of any Dispute.

14.5 **Payment Tolling**. During the pendency of any dispute resolution proceeding between the Parties under this Article 14, the obligation to make any payment, or portion thereof, under this Agreement from one Party to the other Party, which payment, or portion thereof, is the subject, in whole or in part, of a proceeding under this Article 14, shall be tolled until the final outcome of such Dispute has been established. Any portion of a payment which is not in dispute shall be paid in accordance with the terms of this Agreement.

14.6 **Confidentiality**. Any and all activities conducted under Article 14, including any and all proceedings and decisions under Section 14.3, shall be deemed Confidential Information of each of the Parties, and shall be subject to Article 11.

14.7 **WAIVER OF RIGHT TO JURY TRIAL**. In connection with the Parties' rights under Section 14.3, EACH PARTY, TO THE EXTENT PERMITTED BY APPLICABLE LAWS, KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVES ITS RIGHT TO A TRIAL BY JURY IN ANY ACTION OR OTHER LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT AND THE TRANSACTIONS IT CONTEMPLATES. THIS WAIVER APPLIES TO ANY ACTION OR LEGAL PROCEEDING, WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE.

ARTICLE 15 – INDEMNIFICATION AND LIMITATION OF LIABILITY

15.1 **Indemnification by Licensee**. Licensee hereby agrees to defend, indemnify and hold harmless Takeda and its Affiliates, and each of their respective directors, officers, employees, agents and representatives (each, a *"*Takeda Indemnitee") from and against any and all claims, suits, actions, demands, liabilities, expenses and/or loss, including reasonable legal expense and attorneys' fees (collectively, the *"*Losses"), to which any Takeda Indemnitee may become subject as a result of any claim, demand, action or other proceeding by any Third Party (each, a *"*Claim") to the extent such Losses arise directly or indirectly out of: (i) the practice by Licensee or its Affiliate of any license granted to it under Article 4; (ii) the use, handling, storage, sale or other disposition of the Compound or the Product by Licensee or its Affiliate or (Sub)licensee, including any use of the Compound or the Product for Development and Commercialization; (iii) the breach by Licensee of any warranty, representation, covenant or agreement made by Licensee in this Agreement; or (iv) the negligence, gross negligence or willful misconduct of Licensee, its Affiliate or its (Sub)licensee, or any officer, director, employee, agent or representative thereof; except, with respect to each of subsections (i) through (iv) above, to the extent such Losses arise directly or indirectly from the negligence, gross negligence or willful misconduct of any Takeda

Indemnitee or the breach by Takeda of any warranty, representation, covenant or agreement made by Takeda in this Agreement, or are subject to Takeda's indemnification obligations pursuant to Section 15.2.

15.2 **Indemnification by Takeda**. Takeda hereby agrees to defend, indemnify and hold harmless Licensee and its Affiliates and each of their respective directors, officers, employees, agents and representatives (each, an "Licensee Indemnitee") from and against any and all Losses to which any Licensee Indemnitee may become subject as a result of any Claim to the extent such Losses arise directly or indirectly out of: (i) the practice by Takeda or its Affiliate of any license granted to it under Article 4; (ii) the manufacture, use, handling, storage, sale or other disposition of the Compound or the Product (other than the manufacture, use, handling, storage, by Takeda or any of its Affiliates or licensees for any of the Licensee Indemnitees or the sale or other disposition of Compound or Product by Takeda or its Affiliate or its licensee to any of the Licensee Indemnitees) by Takeda or its Affiliate or its licensee (other than Licensee or its Affiliate or (Sub)licensee); (iii) the breach by Takeda of any warranty, representation, covenant or agreement made by Takeda in this Agreement; or (iv) the negligence, gross negligence or willful misconduct of Takeda or its Affiliate or its licensee (other than Licensee or its Affiliate), or any officer, director, employee, agent or representative thereof; except, with respect to each of subsections (i) through (iv) above, to the extent such Losses arise directly or indirectly from the negligence, gross negligence or willful misconduct of any Licensee Indemnitee or the breach by Licensee of any warranty, representation, covenant or agreement made by Licensee in this Agreement, or are subject to Licensee's indemnification obligations pursuant to Section 15.1.

15.3 **Indemnification Procedures**.

(a) **Notice.** Promptly after a Takeda Indemnitee or a Licensee Indemnitee (each, an "Indemnitee") receives notice of a pending or threatened Claim, such Indemnitee shall give written notice of the Claim to the Party from whom the Indemnitee is entitled to receive indemnification pursuant to Sections 15.1 or 15.2, as applicable (the "Indemnifying Party"). However, an Indemnitee's delay in providing or failure to provide such notice shall not relieve the Indemnifying Party of its indemnification obligations, except to the extent it can demonstrate prejudice due to the delay or lack of notice.

(b) **Defense**. Upon receipt of notice under Section 15.3(a) from the Indemnitee, the Indemnifying Party shall have the duty to either compromise or defend, at its own expense and by legal counsel (reasonably satisfactory to Indemnitee), such Claim. The Indemnifying Party shall promptly (and in any event not more than [***] after receipt of the Indemnitee's original notice) notify the Indemnitee in writing that it acknowledges its obligation to indemnify the Indemnitee with respect to the Claim pursuant to this Article 15 and of its intention either to compromise or defend such Claim. Once the Indemnifying Party gives such notice to the Indemnitee, the Indemnifying Party is not liable to the Indemnitee for the fees of other legal counsel or any other expenses subsequently incurred by the Indemnitee in connection with such defense, other than the Indemnitee's reasonable expenses of investigation and cooperation. However, the Indemnitee shall have the right to employ separate legal counsel and to control the defense of a Claim at its own expense.

(c) **Cooperation**. The Indemnitee shall cooperate fully with the Indemnifying Party and its legal representatives in the investigation and defense of any Claim. The Indemnifying Party shall keep the Indemnitee informed on a reasonable and timely basis as to the status of such Claim (to the extent the Indemnitee is not participating in the defense of such Claim) and conduct the defense of such Claim in a prudent manner.

(d) **Settlement**. If an Indemnifying Party assumes the defense of a Claim, no compromise or settlement of such Claim may be effected by the Indemnifying Party without the Indemnitee's written consent (which consent shall not be unreasonably withheld, conditioned or delayed), unless: (i) there is no finding or admission of any violation of law or any violation of the rights of any person and no effect on any other claims that may be made against the Indemnitee; (ii) the sole relief provided is monetary damages that are paid in full by the Indemnifying Party; and (iii) the Indemnitee's rights under this Agreement are not adversely affected. If the Indemnifying Party fails to assume defense of a Claim within a reasonable time, the Indemnitee may settle such Claim on such terms as it deems appropriate with the consent of the Indemnifying Party (which consent shall not be unreasonably withheld, conditioned or delayed), and the Indemnifying Party shall be obligated to indemnify the Indemnitee for such settlement as provided in this Article 15.

15.4 **Limitation of Liability**. EXCEPT FOR A PARTY'S OBLIGATIONS SET FORTH IN THIS ARTICLE 15, AND ANY BREACH OF ARTICLE 11 (CONFIDENTIALITY), IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER PARTY (OR THE OTHER PARTY'S AFFILIATES OR (SUB)LICENSEES) IN CONNECTION WITH THIS AGREEMENT FOR LOST REVENUE, LOST PROFITS, LOST SAVINGS, LOSS OF USE, DAMAGE TO GOODWILL, OR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY, PUNITIVE OR INDIRECT DAMAGES UNDER ANY THEORY, INCLUDING CONTRACT, NEGLIGENCE, OR STRICT LIABILITY, EVEN IF THAT PARTY HAS BEEN PLACED ON NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

ARTICLE 16 – MISCELLANEOUS

16.1 **Notice**. Any notice, request, or other communication permitted or required under this Agreement shall be in writing, shall refer specifically to this Agreement and shall be hand delivered or sent by a recognized overnight delivery service, expenses prepaid, or by facsimile (with transmission confirmed), to the following addresses or to such other addresses as a Party may designate by written notice in accordance with this Section 16.1:

If to Takeda:

Takeda Vaccines, Inc.
40 Landsdowne Street
Cambridge, Massachusetts Attention: President of the Global Vaccine Business Unit

Copy to (which alone shall not constitute sufficient notice):

Takeda Vaccines, Inc.
75 Sidney Street
Cambridge, Massachusetts Attention: Chief Counsel Specialty BUs R&D

If to Licensee:

HilleVax, Inc.
601 Union Street, Suite 3200
Seattle, WA, 98101, U.S.A.
Attention: Chief Executive Officer

Copy to (which alone shall not constitute sufficient notice):

Latham & Watkins LLP
12670 High Bluff Drive
San Diego, CA 92103, U.S.A.
Attention: Cheston J. Larson
Email: cheston.larson@lw.com
Facsimile No.: (858) 523-5450

16.2 **Designation of Affiliates**. Each Party may discharge any obligations and exercise any rights hereunder through delegation of its obligations or rights to any of its Affiliates. Each Party hereby guarantees the performance by its Affiliates of such Party's obligations under this Agreement, and shall cause its Affiliates to comply with the provisions of this Agreement in connection with such performance. Any breach by a Party's Affiliate of any of such Party's obligations under this Agreement shall be deemed a breach by such Party, and the other Party may proceed directly against such Party without any obligation to first proceed against such Party's Affiliate.

16.3 **Force Majeure**. Both Parties shall be excused from the performance of their obligations under this Agreement to the extent that such performance is prevented by Force Majeure and the nonperforming Party promptly provides notice of the prevention to the other Party. Such excuse shall be continued so long as the condition constituting Force Majeure continues and the nonperforming Party takes reasonable efforts to remove the condition. The Parties agree the effects of the COVID-19 pandemic that is ongoing as of the Effective Date (including related government orders) may be invoked as a Force Majeure for the purposes of this Agreement even though the pandemic is ongoing and those effects may be reasonably foreseeable (but are not known for certain) as of the Effective Date. Notwithstanding the foregoing, a Party shall not be excused from making payments owed hereunder because of a Force Majeure affecting such Party. If a Force Majeure persists for more than [***], then the Parties shall discuss in good faith the modification of the Parties' obligations under this Agreement in order to mitigate the delays caused by such Force Majeure.

16.4 **Assignment**. Neither Party may assign or transfer this Agreement or any rights or obligations hereunder without the prior written consent of the other (which consent shall not be

unreasonably withheld, conditioned or delayed), except that a Party may assign this Agreement (together with the other agreements between the Parties referenced in this Agreement, including the Clinical Supply Agreement) without the other Party's consent to any Affiliate or to a successor to all or substantially all of the business of such Party to which this Agreement relates, whether in a merger, sale of stock or units, sale of assets or other transaction. Any other assignment or transfer shall require the prior written consent of the other Party (which consent shall not be unreasonably withheld, conditioned or delayed). Any successor or assignee of rights and/or obligations permitted hereunder shall, in writing to the other Party, expressly assume performance of such rights and/or obligations. Any permitted assignment shall be binding on the successors of the assigning Party. [***].

16.5 **Severability**. If any one or more of the provisions of this Agreement is held to be invalid or unenforceable by any court of competent jurisdiction from which no appeal can be or is taken, the provision shall be considered severed from this Agreement and shall not serve to invalidate any remaining provisions hereof. The Parties shall make a good faith effort to replace any invalid or unenforceable provision with a valid and enforceable one such that the objectives contemplated by the Parties when entering this Agreement may be realized.

16.6 **Waiver and Non-Exclusion of Remedies**. Any term or condition of this Agreement may be waived at any time by the Party that is entitled to the benefit thereof, but no such waiver shall be effective unless set forth in a written instrument duly executed by or on behalf of the Party waiving such term or condition. The waiver by either Party hereto of any right hereunder or of the failure to perform or of a breach by the other Party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by such other Party whether of a similar nature or otherwise. The rights and remedies provided herein are cumulative and do not exclude any other right or remedy provided by Applicable Law or otherwise available except as expressly set forth herein.

16.7 **Further Assurance**. Each Party shall duly execute and deliver, or cause to be duly executed and delivered, such further instruments and do and cause to be done such further acts and things, including the filing of such assignments, agreements, documents, and instruments, as may be necessary or as the other Party may reasonably request in connection with this Agreement or to carry out more effectively the provisions and purposes hereof.

16.8 **Relationship of the Parties**. It is expressly agreed that Takeda, on the one hand, and Licensee, on the other hand, shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency, including for Tax purposes. Neither Takeda nor Licensee shall have the authority to make any statements, representations or commitments of any kind, or to take any action which shall be binding on the other, without the prior written consent of the other Party to do so. All persons employed by a Party shall be employees of that Party and not of the other Party and all expenses and obligations incurred by reason of such employment shall be for the account and expense of such Party.

16.9 **Counterparts.** This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement may be executed by facsimile, .pdf or other electronically transmitted

signatures and such signatures shall be deemed to bind each Party hereto as if they were the original signatures.

16.10 **Construction**. Except where the context otherwise requires, wherever used, the singular shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders. Whenever this Agreement refers to a number of days, such number refers to calendar days. The captions of this Agreement are for the convenience of reference only and in no way define, describe, extend, or limit the scope or intent of this Agreement or the intent of any provision contained in this Agreement. The terms "including," "include," or "includes" as used herein shall mean "including, but not limited to," and shall not limit the generality of any description preceding such term. The language of this Agreement shall be deemed to be the language mutually chosen by the Parties and no rule of strict construction shall be applied against either Party hereto. Each Party represents that it has been represented by legal counsel in connection with this Agreement and acknowledges that it has participated in the drafting hereof. In interpreting and applying the terms and provisions of this Agreement, the Parties agree that no presumption will apply against the Party which drafted such terms and provision.

16.11 **Governing Laws**. This Agreement was prepared in the English language, which language shall govern the interpretation of, and any dispute regarding, the terms of this Agreement. This Agreement and all disputes arising out of or related to this Agreement or any breach hereof shall be governed by and construed under the laws of the State of New York, without giving effect to any choice of law principles that would require the application of the laws of a different state.

16.12 **Entire Agreement**. This Agreement, including the Exhibits hereto, sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties with respect to the subject matter hereof and supersedes, as of the Effective Date, all prior agreements and understandings between the Parties with respect to the subject matter hereof. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or written, between the Parties other than as are set forth herein and therein. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized officer of each Party. In the event of any inconsistency between the body of this Agreement and the Exhibits to this Agreement or any subsequent agreements ancillary to this Agreement, unless otherwise expressly stated to the contrary in such Exhibit or subsequent ancillary agreement, the terms contained in this Agreement shall control.

16.13 **Headings**. The headings of each Article and Section in this Agreement have been inserted for convenience of reference only and are not intended to limit or expand on the meaning of the language contained in the particular Article or Section.

SIGNATURE PAGE FOLLOWS

IN WITNESS WHEREOF, the Parties have signed this Agreement as of the Effective Date.

TAKEDA VACCINES, INC.

By: /s/ Rajeev Venkayya, MD

Name: Rajeev Venkayya

Title: President, Global Vaccine Business Unit Takeda Pharmaceuticals

Date: July 2, 2021

HILLEVAX, INC.

By: /s/ Rob Hershberg

Name: Rob Hershberg

Title: Chief Executive Officer

Date: July 2, 2021