As confidentially submitted to the Securities and Exchange Commission on September 16, 2021.
This Amendment No. 1 to the draft registration statement has not been filed publicly with the Securities and Exchange Commission and all information herein remains strictly confidential.

Registration No. 333-

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

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

Vaxxinity, Inc.

(Exact name of registrant as specified in its charter)

Delaware	2834	86-2083865
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

1717 Main St, Ste 3388
Dallas, TX 75201
(254) 244-5739
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

René Paula Molina
General Counsel and Secretary
Vaxxinity, Inc.
1717 Main St, Ste 3388
Dallas, TX 75201
(254) 244-5739
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes 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, a 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)(2)	Amount of Registration Fee
Class A 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.
(2) Includes offering price of any additional shares that may be sold upon the exercise of the underwriters' option to purchase additional shares. See "Underwriting."

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 this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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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 preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated , 2021

Preliminary Prospectus

Shares

Vaxxinity, Inc.

Class A Common Stock

This is an initial public offering of shares of Class A common stock of Vaxxinity, Inc. We are offering shares of Class A common stock to be sold in this offering.

Prior to this offering, there has been no public market for our Class A common stock. We estimate that the initial public offering price per share of Class A common stock will be between $ and $. We intend to apply to list the Class A common stock on the Nasdaq Global Market ("Nasdaq") under the symbol "VAXX." Upon the completion of this offering, we will have two classes of common stock: Class A common stock, which will have one vote per share, and Class B common stock, which will have ten votes per share. We refer to our Class A common stock and our Class B common stock collectively as our "common stock." Our co-founders (Mei Mei Hu and Louis Reese), United Biomedical, Inc. ("UBI") and certain of their respective affiliates (collectively, the "principal stockholders") have entered into a voting agreement, which will be effective upon the completion of this offering, providing our Chief Executive Officer, Ms. Hu, with the authority (and irrevocable proxies) to vote the shares of capital stock held by such persons at her discretion on all matters to be voted upon by stockholders. Upon the completion of this offering, approximately % of the total voting power of our outstanding capital stock will be subject to this voting agreement. As a result, we expect to be a "controlled company" within the meaning of the Nasdaq's corporate governance standards.

We are an "emerging growth company" and a "smaller reporting company" as defined under the federal securities laws and, under applicable Securities and Exchange Commission ("SEC") rules, we have elected to comply with certain reduced public company reporting and disclosure requirements. See "Prospectus Summary—Implications of Being an Emerging Growth Company and a Smaller Reporting Company."

Investing in our Class A common stock involves risk. See "Risk Factors" beginning on page 15 to read about factors you should consider before buying shares of our Class A common stock.

Neither the Securities and Exchange Commission nor any state securities commission or other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds to us, before expenses	$	$

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

We have granted the underwriters the option for a period of 30 days to purchase up to an additional shares of our Class A common stock from us at the initial public offering price less the underwriting discounts and commissions.

The underwriters expect to deliver the shares on or about , 2021.

BofA Securities **Jefferies** **Evercore ISI**

Prospectus dated , 2021.

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Through and including , 2021 (25 days 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 any of the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. 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. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

Except as otherwise expressly set forth herein, the information contained in this prospectus is current only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our Class A common stock. Our business, financial condition, results of operations and prospects may have changed since that date. You should therefore not assume that the information contained in this prospectus is accurate as of any other date.

Neither we nor any of the underwriters have 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 in the United States. Persons outside 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 Class A common stock and the distribution of this prospectus outside the United States.

PRESENTATION OF FINANCIAL INFORMATION

Vaxxinity, Inc. was incorporated under the laws of the State of Delaware on February 2, 2021 for the purpose of acquiring United Neuroscience ("UNS"), a Cayman Islands exempted company, and C19 Corp., a Delaware corporation ("COVAXX"). On March 2, 2021, in accordance with a contribution and exchange agreement among Vaxxinity, UNS, COVAXX and the UNS and COVAXX stockholders party thereto (the "Contribution and Exchange Agreement"), the existing equity holders of UNS and COVAXX contributed their equity interests in each of UNS and COVAXX in exchange for equity interests in Vaxxinity (the"Reorganization"). In connection with the Reorganization, (i) all outstanding shares of UNS and COVAXX preferred stock and common stock were contributed to Vaxxinity and exchanged for like shares of stock in Vaxxinity, (ii) the outstanding options to purchase shares of UNS and COVAXX common stock were terminated and substituted with options to purchase shares of Class A common stock in Vaxxinity, (iii) the outstanding warrant to purchase shares of COVAXX common stock was cancelled and exchanged for a warrant to acquire Class A common stock in Vaxxinity (the "Reorg. Warrant") and (iv) the outstanding Convertible Notes and the Related Note (each term as defined below) were contributed to Vaxxinity and the former holders of such notes received Series A preferred stock in Vaxxinity. Our historical financial information between March 23, 2020 and March 2, 2021 described in this prospectus refers to the combined historical financial information of UNS and COVAXX and the historical financial information prior to March 23, 2020 described in this prospectus refers only to the historical financial information of UNS, as COVAXX was incorporated on March 23, 2020.

The Reorganization was determined to be a common control transaction, so the carrying values of all contributed assets and assumed liabilities remained unchanged and the financial information for all periods in this prospectus presented prior to the Reorganization are presented on a combined consolidated basis. All share and per share amounts, as originally recorded by UNS and COVAXX, have been converted to a number of shares and per share amounts using the conversion ratios determined as part of the Contribution and Exchange Agreement.

MARKET, INDUSTRY AND OTHER DATA

This prospectus includes estimates regarding market and industry data. Unless otherwise indicated, information concerning our industry and the markets in which we operate, including our general expectations, market position, market opportunity and market size, are based on our management's knowledge and experience in the markets in which we operate, together with currently available information obtained from various sources, including publicly available information, industry reports and publications, surveys, our customers, trade and business organizations and other contacts in the markets in which we operate. Certain information is based on management estimates, which have been derived from third-party sources, as well as data from our internal research, and are based on certain assumptions that we believe to be reasonable.

In presenting this information, we have made certain assumptions that we believe to be reasonable based on such data and other similar sources and on our knowledge of, and our experience to date in, the markets in which we operate. While we believe the estimated market and industry data included in this prospectus are generally reliable, such information, which is derived in part from management's estimates and beliefs, is inherently uncertain and imprecise. Market and industry data are subject to change and may be limited by the availability of raw data, the voluntary nature of the data-gathering process and other limitations inherent in any statistical survey of such data. In addition, projections, assumptions and estimates of the future performance of the markets in which we operate and our future performance are necessarily subject to uncertainty and risk due to a variety of factors, including those described in "Risk Factors" and "Special Note Regarding Forward-Looking Statements." These and other factors could cause results to differ materially from those expressed in the estimates made by third parties and by us.

TRADEMARKS AND TRADE NAMES

We own or have rights to certain trademarks that we use in conjunction with the operations of our business, including Vaxxinity, United Neuroscience and COVAXX. Each trademark, trade name or service mark of any other company appearing in this prospectus belongs to its holder. Solely for convenience, trademarks and service marks referred to in this prospectus may appear with or without the "®" or "™" symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent possible under applicable law, our rights or the rights of the applicable licensor to these trademarks and service marks. We do not intend our use or display of other companies' trademarks, trade names or service marks to imply a relationship with, or endorsement or sponsorship of us by, such other companies.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider before deciding to invest in shares of our Class A common stock. Before investing in shares of our Class A common stock, you should carefully read this entire prospectus, including our combined consolidated financial statements and the related notes thereto and the information set forth under the sections "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case included in this prospectus.

Our Company

We are a purpose-driven biotechnology company committed to democratizing healthcare across the globe. Our vision is to disrupt the existing treatment paradigm for chronic diseases, increasingly dominated by drugs, particularly monoclonal antibodies ("mAbs"), which suffer from prohibitive costs and cumbersome administration. We believe our synthetic peptide vaccine platform ("Vaxxine Platform") has the potential to enable a new class of therapeutics that will improve the quality and convenience of care, reduce costs and increase access to treatments for a wide range of indications. Our Vaxxine Platform is designed to harness the immune system to convert the body into its own "drug factory," stimulating the production of antibodies with a therapeutic or protective effect. While traditional vaccines have been able to leverage this approach against infectious diseases, they have historically been unable to resolve key challenges in the fight against chronic diseases. We believe our Vaxxine Platform has the potential to overcome these challenges, and has the potential to bring the efficiency of vaccines to a whole new class of medical conditions. Specifically, our technology uses synthetic peptides to mimic and optimally combine biological epitopes in order to selectively activate the immune system, producing antibodies against only the desired targets, including self-antigens, making possible the safe and effective treatment of chronic diseases by vaccines. The modular and synthetic nature of our Vaxxine Platform generally provides significant speed and efficiency in candidate development and has generated multiple product candidates that we are designing to have safety and efficacy equal to or greater than the standard-of-care treatments for many chronic diseases, with more convenient administration and meaningfully lower costs. Our current pipeline consists of five chronic disease product candidates from early to late-stage development across multiple therapeutic areas including Alzheimer's Disease ("AD"), Parkinson's Disease ("PD"), migraine and hypercholesterolemia. Additionally, we believe our Vaxxine Platform may be used to disrupt the treatment paradigm for a wide range of other chronic diseases, including any that are or could potentially be successfully treated by mAbs. We also will opportunistically pursue infectious disease treatments. When the COVID-19 pandemic struck the world in March 2020, we quickly reallocated our resources to develop vaccine candidates for the condition. We have assembled an industry-leading team with extensive experience developing and commercializing successful drugs that is committed to realizing our mission of democratizing healthcare.

Limitations of the Current Healthcare Paradigm

The current healthcare paradigm favors the development of drugs that are primarily intended for the U.S. market, for niche indications and for treatment of disease rather than prevention. Furthermore, these drugs are expected to be sold at price points that are only accessible to healthcare systems in developed countries. One class of drugs in particular exemplifies the current environment: biologics, particularly mAbs. In 2019, biologics represented eight of the ten top selling drugs in the United States, of which seven were mAbs. The global market for mAbs totaled approximately $163 billion in 2019, representing approximately 70% of the total sales for all biopharmaceutical products.

While mAbs can provide life-altering care with generally favorable safety characteristics and significant health benefits for the patients who receive them, regular in-office transfusions and annual treatment costs, which

can exceed hundreds of thousands of dollars, present challenges to both patients and payors. These price and administration hurdles cause mAb treatments to be available to only a fraction of the population who could benefit from them. Furthermore, mAbs are often restricted to moderate to severe disease and to later lines of treatment due to their high cost. Based on internal estimates, less than 1% of the worldwide population is on mAbs. Meanwhile, the alternative to mAbs treatments tends to be small molecules, which are accessible to most patients, but are often comparatively less effective with more significant side effects.

Collectively, this perpetuates a profound inequity in healthcare access, domestically but even more so globally, that we believe represents a tremendous social and market opportunity.

Our Solution

Monoclonal antibodies are developed, produced and purified outside the body and then transfused into the patient on a regular basis, as frequently as bi-weekly. Therefore, mAbs are inherently less efficient than vaccines, which instead stimulate antibody production within the patient's immune system, requiring both less active material and less frequent treatments. However, while traditional vaccines have historically been successful addressing infectious diseases, previous attempts to utilize vaccines to address chronic disease have not achieved both acceptable safety and efficacy. This limitation is driven by a traditional vaccine's inability to either stimulate the requisite antibody response against harmful self-antigens, that is, break immune tolerance, or produce acceptable levels of reactogenicity, the physical manifestation of the immune response to vaccination. Our Vaxxine Platform technology contains modular components custom-designed to mimic select biology and activate the immune system, enabling our product candidates to break immune tolerance when targeting self-antigens, a property observed across multiple clinical and pre-clinical studies. Our Vaxxine Platform depends heavily on intellectual property licensed from UBI and its affiliates, a related party and a significant commercial partner for us, who first developed the peptide vaccine technology utilized by our Vaxxine Platform. The formulation of peptide-based medicines is also complex, requiring significant expertise from UBI, its affiliates and our other contract manufacturers to produce our product candidates.

We believe our Vaxxine Platform has the potential to generate product candidates with attributes that collectively offer significant advantages over both mAbs and small molecule therapeutics:

- *Cost*: Monoclonal antibodies require costly and complex biological manufacturing processes. Our manufacturing process is chemically based and highly scalable and requires lower capital expenditures. In addition, we designed our product candidates to generate antibody production in the body, thus requiring meaningfully less drug substance relative to mAbs, leading to commensurately lower costs.

- *Administration*: Our product candidates are designed to be injected in quarterly or longer intervals via intramuscular injection similar to a flu shot. We believe this offers considerable convenience compared to mAbs, which can require up to bi-weekly dosing via intravenous infusion or subcutaneous injections, and small molecules, which often require daily dosing.

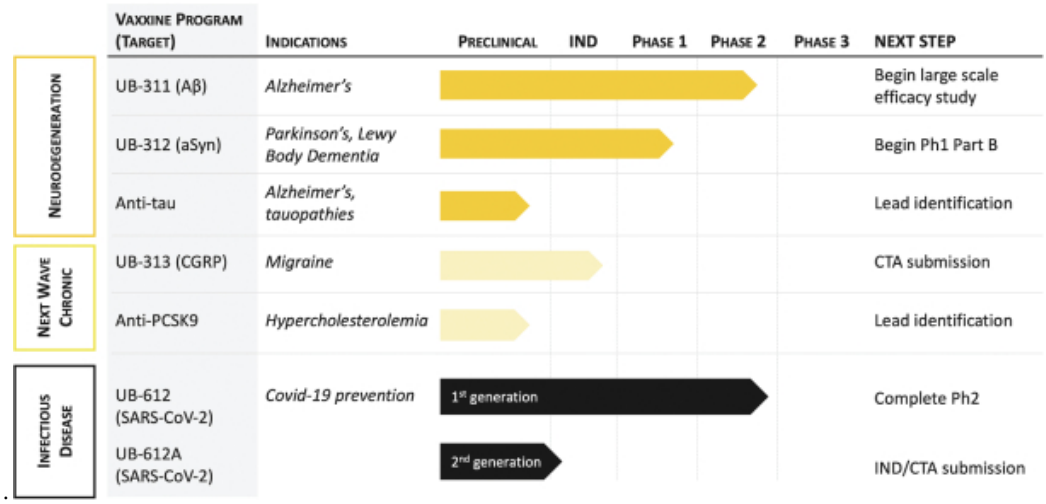
- *Efficacy*: In our clinical trials conducted to date, our product candidates have yielded comparatively high response rates, high target-specific antibodies against self-antigens and relatively long durations of action. We also believe that the improved convenience of our product candidates as compared to mAbs has the potential to lead to increased adherence by patients. Furthermore, our Vaxxine Platform enables the combining of target antigens into a single formulation. For indications that could be treated more effectively with a multivalent approach, we believe our Vaxxine Platform would have an advantage over other modalities. Finally, because our Vaxxine Platform is designed to elicit endogenous antibodies, we believe our product candidates may lessen or avoid altogether the phenomenon of anti-drug antibodies which has limited the efficacy of certain mAbs over time.

- *Safety*: Based on our clinical trials to date, our product candidates have been well tolerated, with safety profiles comparable to placebo. We aim to offer product candidates with safety profiles at least comparable to the competing mAb or small molecule alternative for the relevant disease.

	Vaxxinity Product Candidates	Monoclonal antibodies	Small molecules
Cost			
Stability	✓ Stable	✗ Unstable, sensitive to external factors	✓ Stable
Manufacturability	✓ Simple, scalable, chemical process	✗ Complex biologic process	✓ Simple, chemical process
Accessibility	✓ Cost-effective	✗ Expensive	✓ Cost-effective
Distribution	✓ No new infrastructure requirements	✗ Requires infusion clinics	✓ Strong existing network
Administration			
Dose frequency	✓ Quarterly to annually	✗ Bi-weekly or monthly	✗ Daily
Route	✓ IM injection	✗ IV infusion or SC	✓ Oral
Safety Mechanism	• Target-specific	• Target-specific	• Toxic off-target effects • Drug-drug interactions
Efficacy Mechanism	• Specific and targeted • Penetrates BBB at higher rate than mAb	• Specific and targeted	• Generally less specific than biologics

Our Pipeline

The following chart reflects our current product candidate pipeline:



As used in the chart above, "IND" signifies a program has begun IND-enabling studies.

Our pipeline consists of five programs focused on chronic disease, particularly neurodegenerative disorders, in addition to other neurology and cardiovascular indications.

Neurodegenerative Disease Programs:

- *UB-311*: Targets toxic forms of aggregated Ab in the brain to fight AD. Phase 1, Phase 2a and Phase 2a LTE trials have shown UB-311 to be well tolerated in mild-to-moderate AD subjects over three years of repeat dosing, with a safety profile comparable to placebo, with no cases of amyloid-related imaging abnormalities-edema ("ARIA-E"), and immunogenic, with a high responder rate and antibodies that bind to the desired target. We expect to initiate a Phase 2b early AD efficacy trial in .

- *UB-312*: Targets toxic forms of aggregated α-synuclein in the brain to fight PD and other synucleinopathies, such as dementia with Lewy Body ("DLB") and multiple system atrophy ("MSA"). The first part of a Phase 1 trial in healthy volunteers has shown UB-312 to be well tolerated, with no significant safety findings, and immunogenic, with a high responder rate and antibodies that cross the blood-brain barrier ("BBB"). No serious adverse events were observed in Part A of the Phase 1 trial. We expect to initiate the second part of this Phase 1 trial in PD subjects in .

- *Anti-tau*: We are developing an anti-tau product candidate that has the potential to address multiple neurodegenerative conditions, including AD, by targeting abnormal tau proteins alone and in potential combination with other pathological proteins such as Ab to combat multiple pathological processes at once. We expect to identify a lead product candidate in .

Next Wave Chronic Disease Programs:

- *UB-313*: Targets CGRP to fight migraines. We have initiated IND-enabling studies and expect to begin a first-in-human Phase 1 clinical trial in .

- *Anti-PCSK9*: Targets PCSK9 to lower LDL cholesterol and reduce the risk of cardiac events. We expect to initiate IND-enabling studies for this program in .

Given the global COVID-19 pandemic and our Vaxxine Platform's applicability to infectious disease, we also have advanced product candidates that address SARS-CoV-2.

COVID-19

- *UB-612/UB-612A*: Employ a "multitope" approach to neutralizing the SARS-CoV-2 virus, meaning the product candidates are designed to activate both antibody and cellular immunity against multiple viral epitopes. Phase 1 and Phase 2 trials of UB-612 have shown UB-612 to be well tolerated, with no significant safety findings to date. No serious adverse events were observed in the Phase 1 trial. In the Phase 2 trial, twenty serious adverse events were observed through interim analysis. Only one led to discontinuation of the study, and none were considered UB-612 related. In these trials we observed that UB-612 generated antibodies that can bind to the S1-RBD protein and neutralize SARS-CoV-2, in addition to driving T-cell response. An emergency use authorization ("EUA") application for UB-612 was denied by the Taiwan Food and Drug Administration ("TFDA") in August 2021, but, in collaboration with our partner United Biomedical, Inc., Asia ("UBIA"), we are appealing that decision. At the same time, we are accelerating our development of our second COVID-19 product candidate, UB-612A, with pre-clinical data showing multifold higher neutralizing titers than UB-612 against multiple variants. UB-612A employs the same mix of proteins and peptides as UB-612 with a new formulation using different adjuvants.

We believe our Vaxxine Platform has application across a multitude of chronic and infectious disease indications beyond our existing pipeline. We also are developing additional product candidates that we believe may address significant unmet needs both within and beyond our current pipeline's therapeutic areas.

Our Team

We have assembled an experienced group of executives with deep scientific, business and leadership expertise in pharmaceutical and vaccine discovery and development, manufacturing, regulatory and commercialization. Mei Mei Hu, our co-founder and Chief Executive Officer, has been a member of the executive committee of UBI since 2010. Our board of directors is chaired by our co-founder Louis Reese, who has been a member of the executive committee of UBI since 2014. Our research efforts are guided by highly experienced scientists and physicians on our leadership team including Dr. Peter Powchik, our Executive Vice President of Research & Development, who previously ran the anti-PCSK9 mAb program at Regeneron, Dr. Ulo Palm, our Chief Medical Officer, and Dr. Farshad Guirakhoo, our Chief Scientific Officer. Our leadership team contributes a diverse range of experiences from leading companies including Acambis, Amgen, Dendreon, Eli Lilly, Merck, Novavax, Novartis, Regeneron and Sanofi, and were executives in multiple successful mAb and vaccine launches, including Eyelea, Pralulent, Dupixent, Kevzara, Provenge, PreveNile, Ervebo, Imojev and Dengvaxia. As of September 1, 2021, we have assembled an exceptional team of approximately 75 employees, the majority of whom hold Ph.D., M.D., J.D. or Master's degrees, and we are regularly hiring additional personnel. We also have a highly experienced scientific advisory board consisting of 13 doctors and scientists.

Our Strategy

Our mission is to develop product candidates that improve the quality of care for chronic diseases and are accessible to all patients across the globe. In order to achieve this mission, we seek to:

- Advance our chronic disease pipeline through clinical stage development.
- Expand our pipeline of product candidates.
- Opportunistically develop treatments for infectious diseases.
- Expand and scale our existing capabilities.
- Continue to improve our Vaxxine Platform.
- Maximize the value of our product candidates through potential partnerships.

Summary of Risk Factors

Our business is subject to a number of risks, including risks that may prevent us from achieving our business objectives or may adversely affect our business, financial condition, results of operations and prospects, which could cause the trading price of our Class A common stock to decline and could result in a partial or total loss of your investment. You should consider these risks before making a decision to invest in shares of our Class A common stock. These risks are discussed more fully in "Risk Factors" beginning on page 15 in this prospectus. The following is a summary of some of the principal risks we face:

- clinical drug development involves a lengthy and expensive process, and if our pre-clinical development or clinical trials are prolonged or delayed or do not achieve expected results, we may be unable to commercialize our product candidates;

- we depend on intellectual property licensed from UBI and its affiliates, the termination of which could result in the loss of significant rights;
- even if we obtain regulatory approval of any of our product candidates in Taiwan or other jurisdictions, we may never obtain approval for or commercialize our product candidates in other jurisdictions;
- after receipt of regulatory approval for a product candidate, our products will remain subject to regulatory scrutiny and post-marketing requirements, which may include burdensome post-approval study or risk management requirements;
- if we are able to commercialize any product candidate, the successful commercialization of such product candidate will depend on the extent governmental authorities, private health insurers and other third-party payors provide coverage, adequate reimbursement levels and favorable pricing policies;
- the manufacture of peptide-based medicines is complex and manufacturers often encounter difficulties in production;
- we have no history of commercializing pharmaceutical products, which may make it difficult to evaluate the prospects for our future viability;
- the regulatory landscape that will govern our product candidates is uncertain, and changes in regulatory requirements could result in delays or discontinuation of development of our product candidates or unexpected costs;
- developments by competitors may render our products or technologies obsolete or non-competitive or may reduce the size of our markets;
- our capital resources, including the net proceeds from this offering, may not be sufficient to successfully complete the development and commercialization of our product candidates, which could delay, limit, reduce or terminate our development or commercialization efforts;
- we have incurred significant losses since inception, and we expect to incur losses for the foreseeable future and may never achieve or maintain profitability;
- conflicts of interest may arise between us and UBI and its affiliates, and these conflicts might ultimately be resolved in a manner unfavorable to us;
- we will need to expand our organization, and we may experience difficulties in managing this growth, which could disrupt our operations;
- the dual-class structure of our common stock and the Voting Agreement (as defined below) will have the effect of concentrating voting power, which will significantly limit your ability to influence significant corporate decisions;
- we rely on contract manufacturers for the manufacture of raw materials for our research programs, pre-clinical studies and clinical trials and we do not have long-term contracts with many of these parties, which could impact our ability to commercialize our products;
- undetected errors or defects in our production could harm our reputation or expose us to product liability claims;

- we rely on in-licensed intellectual property and technology, and the loss of such rights, our licensors' inability or refusal to enforce or defend such rights, and the requirement to pay royalties, milestones and other amounts could harm our business;
- the degree of protection afforded by our intellectual property rights is uncertain because such rights offer only limited protection and may not adequately protect our rights or permit us to gain or keep a competitive advantage;
- we have identified a material weakness, and have previously identified other material weaknesses, in our internal control over financial reporting and if we are unable to remediate our existing material weakness and otherwise develop and maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud, and as a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our Class A common stock;
- cyberattacks or other failures in our or our third-party vendors', contractors' or consultants' telecommunications or information technology systems could result in information theft, compromise, or other unauthorized access, data corruption and significant disruption of our business operations, and could harm our reputation and subject us to liability, lawsuits and actions from governmental authorities; and
- we are subject to stringent privacy laws, information security laws, regulations, policies and contractual obligations related to data privacy and security and changes in such laws, regulations, policies and contractual obligations could adversely affect our business, financial condition, results of operations and prospects.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (the "JOBS Act"). An emerging growth company may take advantage of specified exemptions from various requirements that are otherwise applicable generally to public companies in the United States. These provisions include:

- presenting 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 in this prospectus;
- reduced disclosure about our executive compensation arrangements;
- an exemption from the requirements to hold non-binding advisory votes on executive compensation and golden parachute payments;
- an exemption from the auditor attestation requirement under Section 404 of the Sarbanes Oxley Act of 2002, as amended (the "Sarbanes-Oxley Act"), in the assessment of the emerging growth company's internal control over financial reporting; and
- an exemption from compliance with any requirement that the Public Company Accounting Oversight Board may adopt regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements.

We will remain an emerging growth company until the earliest to occur of:

- the last day of the fiscal year in which we have annual gross revenues of $1.07 billion or more;
- the date on which we have issued more than $1.0 billion in non-convertible debt in the previous three years;
- the date we qualify as a "large accelerated filer" under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which would occur at the end of the fiscal year in which the market value of our common stock that is held by non-affiliates is $700 million or more as of the last business day of the second fiscal quarter of such year (and we have been a public company for at least 12 months and have filed one annual report on Form 10-K); and
- the last day of the fiscal year ending after the fifth anniversary of this offering.

We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our investors may be different from the information you might receive from other public reporting companies that are not emerging growth 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. 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, while we are an emerging growth company, we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies.

To the extent that we continue to qualify as a "smaller reporting company," as such term is defined in Rule 12b-2 under the Exchange Act, after we cease to qualify as an emerging growth company, we will continue to be permitted to make certain reduced disclosures in our periodic reports and other documents that we file with the SEC.

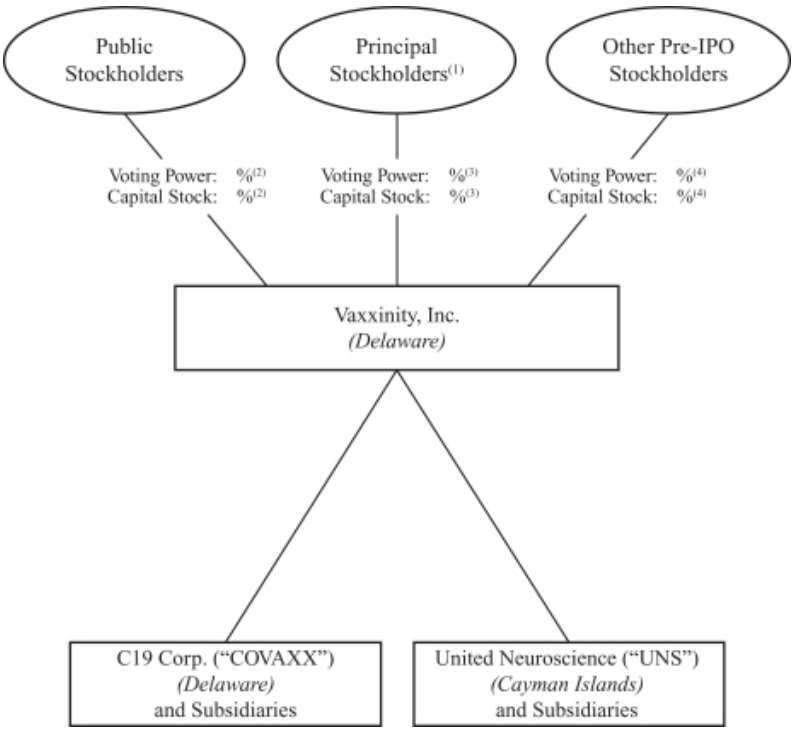
Our History

Vaxxinity, Inc. was incorporated under the laws of the State of Delaware on February 2, 2021 for the purpose of acquiring UNS, a biotechnology company dedicated to the development of medicines for chronic diseases, and COVAXX, a biotechnology company dedicated to the development of a COVID-19 vaccine. We separated our business from UBI through a spin-out in 2014 that resulted in UNS as a separate company and a second spin-out in 2020 that resulted in COVAXX as a separate company. Vaxxinity then acquired all of the equity interests of UNS and COVAXX in March 2021 in connection with the Reorganization. Unless the context requires otherwise, we use the terms "Vaxxinity," the "Company," "we," "us" and "our" in this prospectus to refer to our operations (including through UNS and COVAXX) both prior to and after the Reorganization.

Corporate Information and Structure

Our principal executive office is located at 1717 Main St, Ste 3388 Dallas, TX 75201 and our telephone number is (254) 244-5739. Our website address is www.vaxxinity.com. The information contained on, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus, and you should not rely on any such information in making the decision whether to purchase shares of our Class A common stock.

The following chart shows our simplified organizational structure immediately following the consummation of this offering, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same and after giving effect to (i) the Stock Split, (ii) the Preferred Stock Conversion, (iii) the Warrant Exercise and (iv) the filing and effectiveness of our Charter (each term as defined below). This diagram is for illustrative purposes and does not represent all legal entities or affiliates with the entities depicted.



(1) Comprised of Mei Mei Hu, Louis Reese, UBI and certain of their respective affiliates.

(2) If the underwriters exercise in full their option to purchase additional shares of Class A common stock from us, our public stockholders would hold % of the total voting power and % of the outstanding capital stock in the Company.

(3) If the underwriters exercise in full their option to purchase additional shares of Class A common stock from us, our principal stockholders would hold % of the total voting power and % of the outstanding capital stock in the Company.

(4) If the underwriters exercise in full their option to purchase additional shares of Class A common stock from us, our other pre-IPO stockholders would hold % of the total voting power and % of the outstanding capital stock in the Company.

Our principal stockholders have entered into a voting agreement which will be effective upon the completion of this offering (the "Voting Agreement"). The Voting Agreement provides Ms. Hu with the authority (and irrevocable proxies) to vote the shares of capital stock held by our principal stockholders at her discretion on all matters to be voted upon by stockholders. Upon the completion of this offering, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, approximately % of the total voting power of our outstanding capital stock will be subject to the Voting Agreement. As a result, we expect to be a "controlled company" within the meaning of the Nasdaq's corporate governance standards.

THE OFFERING

Issuer in this offering	Vaxxinity, Inc.
Class A common stock offered by us	shares (or shares if the underwriters exercise in full their option to purchase additional shares from us).
Underwriters' option to purchase additional shares of Class A common stock from us	shares.
Common stock to be outstanding immediately after this offering	shares of Class A common stock (or shares of Class A common stock if the underwriters exercise in full their option to purchase additional shares from us). shares of Class B common stock.
Voting	Each share of our Class A common stock entitles its holder to one vote on all matters to be voted on by stockholders generally. Each share of our Class B common stock entitles its holder to ten votes on all matters to be voted on by stockholders generally. Holders of our Class A common stock and Class B common stock vote together as a single class on all matters presented to our stockholders for their vote or approval, except as otherwise required by applicable law or our amended and restated certificate of incorporation (the "Charter"), which will be in effect at the closing of this offering.
Voting Agreement	Our co-founders (Mei Mei Hu and Louis Reese), UBI and certain of their respective affiliates (collectively, the "principal stockholders") have entered into the Voting Agreement, which will be effective upon the completion of this offering. Upon the completion of this offering, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, the Voting Agreement will cover, in the aggregate, approximately % of the total voting power of our outstanding capital stock (or % if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us). The Voting Agreement provides Ms. Hu with the authority (and irrevocable proxies) to direct the vote and vote the shares of capital stock held by the principal stockholders at her discretion on all matters to be voted upon by stockholders. See "Description of Capital Stock—Authorized Capital Stock—Voting Agreement." As a result, we expect to be a "controlled company" under the Nasdaq's corporate governance standards. Under these standards, a company of which more than 50% of the voting power is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance standards.

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 in full their option to purchase additional shares of Class A common stock from us) based on an assumed initial public offering price of $ per share of Class A common stock, which is the midpoint of the estimated 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 currently intend to use the net proceeds from this offering and our existing cash and cash equivalents to advance our existing chronic disease product candidates, advance UB-612A, invest in our Vaxxine Platform and new product candidates and for general working capital, capital expenditures and other general corporate purposes. See "Use of Proceeds."
Risk factors	You should read the "Risk Factors" section beginning on page 15 and the other information included in this prospectus for a discussion of the factors to consider before deciding to invest in shares of our Class A common stock.
Proposed listing and symbol	We intend to apply to list our Class A common stock on the Nasdaq under the trading symbol "VAXX."
Directed share program	At our request, the underwriters have reserved for sale, at the initial public offering price, up to shares of Class A common stock offered hereby for certain persons with relationships with us. Other than directors, executive officers, employees and other stockholders who are subject to the lock-up agreement described elsewhere in this prospectus, individuals who purchase these shares will not be subject to a lock-up restriction. The number of shares of Class A common stock available for sale to the general public will be reduced to the extent these individuals purchase such reserved shares. Any reserved shares of Class A common stock that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus. See "Underwriting—Directed Share Program" for more information.

The number of shares of our common stock that will be issued and outstanding after this offering is based on shares of common stock outstanding as of , which gives effect to the Assumed Share Events (as defined below), and excludes:

- 3,000,000 shares of our Class A common stock issuable upon the exercise of a warrant granted to UBI in August 2021 (the "UBI Warrant");
- shares of our Class A common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of with a weighted-average exercise price of $ per share; and

- shares of our common stock reserved for future issuance under our Existing 2021 Plan (as defined below) as of .

Unless otherwise indicated, all information in this prospectus assumes (collectively, the "Assumed Share Events"):

- an initial public offering price of $ per share of Class A common stock, which is the midpoint of the estimated price range set forth on the cover page of this prospectus;
- a one-for- stock split (the "Stock Split") of our Class A and Class B common stock to be effected prior to the closing of this offering;
- the filing and effectiveness of our Charter and the adoption of our amended and restated bylaws (the "Bylaws"), each of which will be in effect at the closing of this offering;
- the automatic conversion of all of our outstanding preferred stock, of which shares were outstanding as of , into shares of our Class A common stock concurrently with the closing of this offering (the "Preferred Stock Conversion");
- the automatic exercise of the outstanding Reorg. Warrant to acquire Class A common stock on a cashless basis into shares of our Class A common stock in connection with this offering (the "Warrant Exercise");
- no exercise of outstanding options or warrants subsequent to except as described above; and
- no exercise by the underwriters of their option to purchase up to an additional shares of our Class A common stock.

Summary Combined Consolidated Financial Data

The following summary combined consolidated financial data for the years ended December 31, 2019 and 2020 and as of December 31, 2020 are derived from the audited combined consolidated financial statements of Vaxxinity that are included elsewhere in this prospectus. The following summary combined consolidated financial data for the six months ended June 30, 2020 and 2021 and as of June 30, 2021 are derived from the unaudited combined consolidated financial statements of Vaxxinity that are included elsewhere in this prospectus. We have prepared the unaudited combined consolidated financial statements on the same basis as the audited combined consolidated financial statements and have included all adjustments, consisting only of normal recurring adjustments, which in our opinion are necessary to present fairly the financial information set forth in those statements.

The historical results presented below are not indicative of financial results to be achieved in future periods, and our interim results are not necessarily indicative of the results to be expected for the full year or any future period. The summary combined consolidated financial data should be read together with "Presentation of Financial Information," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Capitalization" and our combined consolidated financial statements and related notes included elsewhere in this prospectus.

Combined Consolidated Statements of Operations Data:

	Six Months Ended June 30,		Year Ended December 31,	
(in thousands, except per share data)	2020	2021	2019	2020
Revenue	$ 440	17	$ —	557
Cost of revenue	229	1,928	—	52
Gross profit	211	(1,911)	—	505
Operating expenses				
Research and development	6,071	30,605	10,656	20,570
General and administrative	5,048	14,430	3,005	12,217
Total operating expenses	11,119	45,035	13,661	32,787
Loss from operations	(10,908)	(46,946)	(13,661)	(32,282)
Other expense				
Interest expense, net	595	384	435	1,181
Change in fair value of convertible notes	2,965	2,667	27	5,761
Change in fair value of simple agreement for future equity	—	8,365	—	615
Change in fair value of warrant liability	—	214	—	41
Loss on foreign currency translation, net	14	16	40	77
Other expense, net	3,574	11,646	502	7,675
Loss before income taxes	(14,482)	(58,592)	(14,163)	(39,957)
Provision for income taxes	—	—	56	—
Net loss	$ (14,482)	(58,592)	$ (14,219)	(39,957)
Net loss per share, basic and diluted	$ (0.19)	(0.55)	$ (0.27)	(0.39)

Combined Consolidated Balance Sheets Data:

(in thousands)	As of June 30, 2021	As of December 31, 2020
Cash and cash equivalents	$ 110,845	$ 31,143
Total assets	141,889	50,141
Total liabilities	32,658	75,041
Total convertible preferred stock	251,049	62,475
Total stockholders' deficit	$ (141,818)	$ (87,375)

RISK FACTORS

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below and the other information in this prospectus, including our combined consolidated financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" before making an investment in our Class A common stock. The occurrence of any of the events or developments described below could materially adversely affect our business, financial condition, results of operations and prospects. In such an event, the market price of our Class A common stock could decline, and you may lose all or part 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. See "Special Note Regarding Forward-Looking Statements." Our actual results could differ materially and adversely from those anticipated in these forward-looking statements as a result of certain factors, including the risks facing us.

Risks Related to the Discovery and Development of Product Candidates

Clinical drug development involves a lengthy and expensive process with uncertain timelines and uncertain outcomes, and results of earlier studies and trials may not be predictive of future results. If our pre-clinical development or clinical trials are prolonged or delayed, or if we do not or cannot achieve the results we expect, we may be unable to obtain required regulatory approvals, and therefore be unable to commercialize our product candidates on a timely basis or at all.

Our business is dependent on the successful development, regulatory approval and commercialization of product candidates based on our Vaxxine Platform. If we and our collaborators are unable to obtain approval for and effectively commercialize our product candidates, our business would be significantly harmed. Even if we complete the necessary pre-clinical studies and clinical trials, the regulatory approval process is expensive, time-consuming and uncertain, and we may not be able to obtain approvals for the commercialization of any product candidates we may develop. Changes in regulatory approval policies, changes in or the enactment of additional statutes or regulations, or changes in regulatory review processes, may cause delays in the approval of a particular product candidate or rejection of an application for a particular product candidate. We have not obtained regulatory approval for any product candidate to date, and it is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval. Any regulatory approval we ultimately obtain may be limited or subject to restrictions, including labeling requirements, or post-approval commitments that render the approved product not commercially viable. While our enzyme-linked immunosorbent assay ("ELISA") test has received an EUA from the FDA, there can be no assurance that any of our product candidates will receive an EUA or regulatory approval or that there will not be changes in formulation, whether required by any regulatory authority or at our determination for operational or scientific reasons, affecting the use of our products. Further, some countries may not rely on an EUA or regulatory approval issued by another jurisdiction, and we may be required to seek separate EUAs or regulatory approval from different regulatory authorities in different jurisdictions. See "—Even if we obtain TFDA approval or other foreign regulatory approval of any of our product candidates in Taiwan or elsewhere, we may never obtain approval for or commercialize any of our products in other jurisdictions, which would limit our ability to realize their full market potential."

To obtain the requisite regulatory approvals to market and sell any of our product candidates, we must demonstrate through extensive pre-clinical studies and clinical trials that our products are safe and effective in humans. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of pre-clinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials and results from post-hoc data analysis may not be predictive of final results and may not support product approval. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy characteristics

despite having progressed through pre-clinical studies and initial clinical trials. For example, an EUA for UB-612 was denied by the TFDA in August 2021 because the neutralizing antibody response generated by UB-612, as compared to a designated adenovirus vectored vaccine, did not meet the TFDA's specified evaluation criteria, but, in collaboration with UBIA, we are appealing the decision and have asked the TFDA to update their criteria to include a comparison of geometric mean neutralizing titers against the Delta variant. The outcome of that appeal remains highly uncertain. If results from our clinical trials differ from previous reports or market expectations, such as a potential development of market expectations that COVID-19 boosters or vaccines be developed specifically to address certain variants which we fail to satisfy, or if we fail to obtain a required regulatory approval, the price of our Class A common stock could decrease substantially from the initial public offering price. Several companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials. Our ongoing and future clinical trials may not be successful.

Further, to date, we have not conducted a head-to-head comparison of any competing products to any of our product candidates in any clinical trial. We have compared the published data for certain of our competitors' products to the clinical trial results of certain of our product candidates to date. Accordingly, the value of comparisons of our product candidates to any alternative products in this prospectus may be limited because they are not derived from a head-to-head trial, rather they are from trials that were conducted under different protocols, at different sites, with different patient populations, at different times and results were analyzed using non-standardized assays performed internally or by different clinical research organizations ("CROs"). Without head-to-head data, we will be unable to make comparative claims for our product candidates, if any such product candidate is approved. Future clinical trials may not confirm the comparisons or analyses we have made to date.

Clinical trials must be conducted in accordance with applicable regulatory authorities' legal requirements, regulations or guidelines and are subject to oversight by these governmental agencies as well as Institutional Review Boards ("IRBs") at the medical institutions where the clinical trials are conducted. In addition, clinical trials must be conducted with supplies of our product candidates produced in accordance with current good manufacturing practices ("cGMP") and other legal and regulatory requirements. Defects in manufacturing of a clinical trial batch or a failure of a batch to meet all quality control test specifications could result in delays to initiation of our clinical trials. We depend on medical institutions and CROs to conduct our clinical trials in compliance with good clinical practice ("GCP"), and other applicable laws and regulations. Failure to follow and document adherence to such laws and regulations may lead to significant delays in the availability of product for our clinical trials, result in the termination of or a clinical hold being placed on one or more of our clinical trials, or delay or prevent submission or approval of marketing applications for our product candidates.

To the extent our CROs fail to enroll participants for our clinical trials, fail to conduct the trial in accordance with the trial protocol GCP or are delayed for a significant time in the execution of trials, including achieving full enrollment, we may be affected by increased costs, program delays or both, which may harm our business and delay our ability to seek approval for our product candidates. For example, due to an error by the CRO responsible for administering blinded placebo and active doses to trial subjects, which reduced the confidence of subsequently collected data, we decided to discontinue a Phase 2a Long Term Extension ("LTE") trial for UB-311. In that case, however, we determined that we had collected sufficient data on UB-311's tolerability and immunogenicity. To date, we have not completed clinical trials sufficient for obtaining marketing approvals for any of our product candidates. Our most advanced candidates are UB-612 and UB-311, each of which is in Phase 2 of clinical development. Our product candidate UB-312 is in Phase 1 of clinical development and UB-313 has entered IND-enabling studies. All of our other research programs are in the pre-clinical development stage.

The completion of clinical trials for our clinical product candidates may be delayed, suspended or terminated because of many factors, including but not limited to:

- the delay or refusal of regulators or IRBs to authorize us to commence a clinical trial at a prospective trial site;
- changes in regulatory requirements, policies and guidelines;

- delays or failure to reach agreement on acceptable terms with prospective 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 patient enrollment and variability in the number and types of patients available for clinical trials;
- negative or inconclusive results, which may require us to conduct additional pre-clinical or clinical trials or to abandon product candidates that we expect to be promising;
- delays in manufacturing and control of clinical trial materials;
- shortages of materials required for the production of our product candidates;
- disruptions from events surrounding the COVID-19 pandemic;
- safety or tolerability concerns causing us to suspend or terminate a trial if it is determined that the participants are being exposed to unacceptable health risks;
- lower than anticipated retention rates of patients and volunteers in clinical trials and difficulty in maintaining contact with patients after treatment, resulting in incomplete data;
- failure of us, our CROs or clinical trial sites to comply with regulatory requirements;
- failure of our CROs or clinical trial sites to meet their contractual obligations to us in a timely manner, or at all, deviating from the clinical trial protocol or dropping out of a trial;
- delays relating to adding new clinical trial sites;
- delays in establishing necessary pre-clinical or clinical data;
- the occurrence of unexpected severe or serious product-related adverse events in a clinical trial;
- the quality or stability of the product candidate falling below acceptable standards;
- the inability to produce or obtain sufficient quantities of the product candidate to complete clinical trials on time, or delays in sufficiently developing, characterizing or controlling a manufacturing process suitable for clinical trials;
- the lack of adequate funding to continue the clinical trial;
- developments observed in trials conducted by competitors for related technology that raises general concerns from regulatory authorities about risk to patients of similar vaccine technology;
- the determination that a product candidate will not be producible in relevant quantities at the manufacturing stage;
- the failure of regulatory authorities such as the FDA or the TFDA to approve our manufacturing processes or facilities or those of contract manufacturers with which we contract for clinical and commercial supplies; and
- the transfer of manufacturing processes to larger-scale facilities operated by contract manufacturers or by us, and delays or failure by our contract manufacturers or us to make any necessary changes to such manufacturing process.

In addition, pre-clinical and clinical data are often susceptible to varying interpretations and analyses and results from post-hoc data analysis may not be predictive of final results and may not support product approval. Many companies that believed their product candidates performed satisfactorily in pre-clinical studies and clinical trials have nonetheless failed to obtain marketing approval for their product candidates. Regulatory authorities have substantial discretion in the approval process and in determining when or whether regulatory approval will be obtained for any of our product candidates. Additionally, the FDA typically does not accept post-hoc data analyses as support for regulatory approval. Even if we believe the data collected from clinical trials of our product candidates are promising, such data may not be sufficient to support approval by regulatory authorities. Regulatory authorities may disagree with the design or implementation of our clinical trials and may disagree with our interpretation of data from pre-clinical studies or clinical trials.

In some instances, there can be significant variability in safety and/or efficacy results between different trials of the same product candidate due to numerous factors, including changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, adherence to the dosing regimen and other trial procedures and the rate of dropout among clinical trial participants. Further, none of our trials to date of UB-311 and UB-312 have been large enough to determine whether their assessments of efficacy were statistically significant. Therefore, we are able to report potential trends on such measures, but we will not be able to make more definitive statements about the efficacy of our product candidates until we complete clinical trials that are adequately powered to demonstrate statistical significance of clinically meaningful results.

Moreover, for AD, given the difficulties in assessing whether a product candidate is disease-modifying in terms of delaying cognition and other symptoms of AD, we plan to include in our trial designs for UB-311 biomarker endpoints and, if our trial results warrant, may apply for regulatory approval based on biomarker data. While the FDA recently approved aducanumab based on biomarker data, there is no assurance that the FDA will accept biomarker data for other product candidates, including UB-311, in the future. See “Business—Our Product Candidates—Neurodegenerative Disease Programs—Limitations of Current Therapies.”

Even if we obtain TFDA approval or other foreign regulatory approval of any of our product candidates in Taiwan or elsewhere, we may never obtain approval for or commercialize any of our products in other jurisdictions, which would limit our ability to realize their full market potential.

To market any products, we must establish and comply with numerous and varying regulatory requirements in different countries regarding safety and efficacy and obtain relevant approvals to market our product candidates. While we have not obtained any regulatory approvals for our product candidates to date, we have reported the interim results and are expecting to report the complete results of our UB-612 Phase 2 clinical trial in Taiwan in the coming months. As discussed above under “—Clinical drug development involves a lengthy and expensive process with uncertain timelines and uncertain outcomes, and results of earlier studies and trials may not be predictive of future results. If our pre-clinical development or clinical trials are prolonged or delayed, or if we do not or cannot achieve the results we expect, we may be unable to obtain required regulatory approvals, and therefore be unable to commercialize our product candidates on a timely basis or at all,” an EUA for UB-612 was denied by the TFDA in August 2021, which decision we are appealing in collaboration with UBIA. Approval by the TFDA or by another foreign regulatory authority in any other jurisdiction does not ensure approval by comparable regulatory authorities in other countries or jurisdictions, including approval by the FDA in the United States. The failure to obtain approval in one jurisdiction may delay or otherwise negatively impact our ability to obtain approval elsewhere. In addition, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. We have a partnership with Aurobindo Pharma Limited (“Aurobindo”) for clinical trials, which we expect, if successful, to enable an EUA in India and other countries. Approval procedures vary among these countries and others, and even if we have obtained approval in one country, approval in other countries can involve additional product testing and validation and additional administrative review periods.

Seeking regulatory approvals in different countries could result in additional and unexpected costs for us, including as a result of additional required pre-clinical studies or clinical trials which would be costly and

time-consuming. Satisfying regulatory requirements is costly, time-consuming, uncertain and may be subject to unanticipated delays. In addition, our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries. Apart from our ELISA test, which has been approved for sale by the FDA through an EUA, we do not have any product candidates approved for sale in any jurisdiction, including international markets. We do not have experience in obtaining regulatory approval in international markets, and we will be relying on our collaboration partners such as UBIA and Aurobindo to assist us in this process. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, our ability to realize the full market potential of our products will be harmed.

Interim, "top-line" and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are also 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 top-line data from our pre-clinical studies and clinical trials, which are 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 may 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 top-line or preliminary results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Top-line data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, top-line data should be viewed with caution until the final data are available.

From time to time, we may also disclose interim data from our pre-clinical 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 or as patients from our clinical trials continue other treatments for their disease. Adverse differences between preliminary or 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 Class A common stock after this offering.

Further, others, including regulatory authorities, 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 product candidate or product and the 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 we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed and result in increased costs and longer development periods or otherwise be adversely affected.

We will be required to identify and enroll a sufficient number of patients for our planned clinical trials. Trial participant enrollment could be limited in future trials given that many potential participants may be ineligible because of pre-existing conditions, medical treatments or other reasons. For example, trial participant enrollment for our COVID-19 product candidates could be negatively impacted as COVID-19 vaccination rates increase and the number of potential unvaccinated participants decreases. We may not be able to initiate or continue clinical trials required by applicable regulatory authorities or any of our other product candidates that we pursue if we are unable to locate and enroll enough eligible patients or volunteers to participate in these clinical trials. Patient enrollment is affected by other factors, as well, including the incidence and severity of the disease under investigation; the design of the clinical trial protocol; the size and nature of the patient population;

the eligibility criteria for the trial in question; the perceived risks and benefits of the product candidate under trial; the perceived safety and tolerability of the product candidate; the proximity and availability of clinical trial sites for prospective patients; the availability of competing therapies and clinical trials; effects of the COVID-19 pandemic on our clinical trial sites; our ability to monitor patients adequately during and after treatment; patient referral practices of physicians; clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including standard-of-care and any new drugs that may be approved for the indications we are investigating; and efforts to facilitate timely enrollment in clinical trials.

We also may encounter difficulties in identifying and enrolling such patients with a stage of disease appropriate for our ongoing or future clinical trials. In addition, the process of finding and diagnosing patients may prove costly. Our inability to enroll a sufficient number of patients for any of our clinical trials would result in significant delays or may require us to abandon one or more clinical trials.

Even if we obtain regulatory approval for a product candidate, our products will remain subject to regulatory scrutiny and post-marketing requirements.

Any regulatory approvals that we may receive for our product candidates will require the submission of reports to regulatory authorities and surveillance to monitor the safety and efficacy of the product candidate, 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 Risk Evaluation and Mitigation Strategy ("REMS") to approve our product candidates, which could entail requirements for a medication guide, physician training and communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if one of our product candidates is approved in the United States or abroad, it will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies and submission of safety, efficacy and other post- market information. Manufacturers and manufacturers' facilities are required to comply with extensive requirements by regulatory authorities, including ensuring that quality control and manufacturing procedures conform to cGMP regulations. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any approved marketing application. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

If a regulatory authority such as the FDA or the TFDA discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with product quality or the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, such regulatory authorities may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory authority or enforcement authority may, among other things: issue warning letters; impose civil or criminal penalties; suspend or withdraw regulatory approval; suspend any of our clinical trials; refuse to approve pending applications or supplements to approved applications submitted by us; impose restrictions on our operations, including closing our contract manufacturers' facilities; or seize or detain products, or require a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may adversely affect our ability to commercialize and generate revenue from our products. If regulatory sanctions are applied or if regulatory approval is withdrawn, our business will be seriously harmed. Further, if a regulatory authority identifies previously unknown problems with our platform, any or all of our product candidates may also be affected.

Moreover, the policies of regulatory authorities may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the

likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. 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 lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

We have no history of commercializing pharmaceutical products, which may make it difficult to evaluate the prospects for our future viability.

We commenced operations through UNS and COVAXX in 2014 and 2020, respectively. Our operations to date have been limited to organizing and staffing Vaxxinity, business planning, raising capital, developing our Vaxxine Platform, identifying and testing potential product candidates and conducting clinical trials. We have a limited track record of successfully conducting late-stage clinical trials, obtaining marketing approvals, manufacturing a commercial-scale product, or arranging for a third-party to do so on our behalf, or conducting sales and marketing activities necessary for successful product commercialization. Accordingly, you should consider our prospects considering the costs, uncertainties, delays and difficulties frequently encountered by companies in the early stages of development, especially clinical-stage biopharmaceutical companies such as ours. Any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing pharmaceutical products.

We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We will eventually need to transition from a company with a development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

We expect our financial condition and operating results to continue to fluctuate significantly from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. Accordingly, you should not rely upon the results of any quarterly or annual periods as indications of future operating performance.

Our product candidates may cause undesirable side effects that could delay or prevent their regulatory approval, limit the commercial profile of an approved label or result in significant negative consequences following regulatory approval, if any.

Undesirable side effects that may be caused by our product candidates could cause us, our collaboration partners or the regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of approval by regulatory authorities. Results of our trials could reveal a high and unacceptable severity and prevalence of side effects. In such an event, our trials could be suspended or terminated and regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. The product-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition, results of operations and prospects significantly.

Clinical trials assess a sample of the potential patient population. With a limited number of patients and duration of exposure, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the product candidate. If our product candidates receive an EUA or regulatory approval and we or others identify undesirable side effects caused by such product candidates (or any other similar products) after such approval, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit their approval of such product candidates and require us to take our approved product(s) off the market;

- regulatory authorities may require the addition of labeling statements, such as a “boxed” warning or a contraindication, or submission of field alerts to physicians and pharmacies;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we may be required to change the way such product candidates are distributed or administered, conduct additional clinical trials or change the labeling of the product candidates;
- actual or potential drug-related side effects could negatively affect patient recruitment or the ability of enrolled patients to complete a trial for our products or product candidates;
- market acceptance of our products by patients and physicians may be reduced and sales of the product may decrease significantly;
- regulatory authorities may require a REMS plan to mitigate risks, which 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;
- we may be subject to regulatory investigations and government enforcement actions;
- we may decide or be required to remove such product candidates from the marketplace;
- we could be sued and potentially held liable for injury caused to individuals exposed to or taking our product candidates;
- sales of the product(s) may decrease substantially; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product candidates and could substantially increase the costs of commercializing our product candidates, if approved, and therefore could have a material adverse effect on our business, financial condition, results of operations and prospects.

The regulatory landscape that will govern our product candidates is uncertain. Regulations that impact our product candidates are still developing, and changes in regulatory requirements could result in delays or discontinuation of development of our product candidates or unexpected costs in obtaining regulatory approval.

The regulatory requirements to which our product candidates will be subject are complex and uncertainties exist. Even with respect to more established vaccine products, the regulatory landscape is still developing, especially as it relates to novel adjuvants in vaccines, such as CpG1, which we use at low concentration in our COVID-19 product candidates. Although regulatory authorities decide whether individual clinical trial protocols may proceed, the review process and determinations of other reviewing bodies can impede or delay the initiation of a clinical trial, even if another regulatory authority has reviewed the trial and authorizes its initiation. The FDA, for example, can place an IND on clinical hold even if other regulatory agencies have provided a favorable review. In addition, adverse developments in clinical trials involving novel adjuvants in vaccines, such as CpG1, conducted by others may cause regulatory authorities to change the requirements for approval of any of our product candidates.

Complex regulatory environments exist in other jurisdictions in which we might consider seeking regulatory approvals for our product candidates, further complicating the regulatory landscape. For example, in

the European Union a special committee called the Committee for Advanced Therapies was established within the European Medicines Authority in accordance with Regulation (EC) No 1394/2007 on advanced-therapy medicinal products ("ATMPs"), to assess the quality, safety and efficacy of ATMPs, and to follow scientific developments in the field.

These various regulatory review committees and advisory groups and new or revised guidelines that they promulgate from time to time may lengthen the regulatory review process, require us to perform additional studies, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of our product candidates or lead to significant post-approval limitations or restrictions. We may face even more cumbersome and complex regulations than those emerging for novel adjuvants. Furthermore, even if our product candidates obtain required regulatory approvals, such approvals may later be withdrawn because of changes in regulations or the interpretation of regulations by applicable regulatory authorities.

Even if we receive regulatory approval to market any of our product candidates, we will be subject to ongoing obligations and continued regulatory review, which may materially adversely affect our business, financial condition, results of operations and prospects. We have not previously submitted a biologics license application ("BLA") to the FDA, or similar regulatory approval filings to comparable foreign authorities, for any product candidate and never received regulatory approval for any of our product candidates. Further, other jurisdictions may consider our product candidates to be new drugs, not biologics or medicinal products, and require different marketing applications. Even if a regulatory authority approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, product sampling, adverse event reporting, storage, advertising, marketing, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports and registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval, all of which may result in significant expense and limit our ability to commercialize such products. There also are continuing, annual program user fees for any marketed products. In the United States, 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 upon us and our contract manufacturers. 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 upon us and any contract manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

Any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing and surveillance to monitor the safety and efficacy of the product. For example, the FDA has the authority to require a REMS as part of a BLA or after approval, which may impose further requirements or restrictions on the distribution or use of an approved product, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our contract manufacturers or manufacturing processes, or failure to comply with regulatory requirements may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market, or voluntary or mandatory product recalls;

- fines, warning letters, untitled letters or holds on clinical trials;

- refusal by regulatory authorities to approve pending applications or supplements to approved applications, or suspension or revocation of product approvals;
- requirements to conduct additional clinical trials, change our product labeling or submit additional applications or application supplements;
- product seizure or detention, or refusal to permit the import or export of products;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- 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.

In addition, regulatory policies may change or additional government regulations or legislation may be enacted that could prevent, limit or delay regulatory approval of our product candidates, particularly in countries where elections may result in changes in government administration. If we fail to comply with existing requirements, 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 lose any regulatory approval that we may have obtained or face regulatory or enforcement actions, which may materially adversely affect our business, financial condition, results of operations and prospects.

The FDA strictly regulates the promotional claims that may be made about prescription products in the United States. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling. If we receive marketing approval for a product candidate, physicians may nevertheless prescribe it to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant sanctions. 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 FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response, and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize our product candidates.

A breakthrough therapy designation by the FDA for a product candidate may not lead to a faster development or regulatory review or approval process, and it would not increase the likelihood that the product candidate will receive marketing approval.

We may in the future seek a breakthrough therapy designation for one or more product candidates eligible for such designation. A breakthrough therapy is defined as a product candidate that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the product candidate may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed

early in clinical development. For product candidates that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Product candidates designated as breakthrough therapies by the FDA are also eligible for priority review if supported by clinical data at the time of the submission of the BLA.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe that one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a breakthrough therapy designation for a product candidate may not result in a faster development process, review or approval compared to product candidates considered for approval under conventional FDA procedures and it would not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the product candidate no longer meets the conditions for qualification or it may decide that the time period for FDA review or approval will not be shortened. Further, certain of our product candidates, including our COVID-19 product candidates, are not eligible for breakthrough therapy designation, and we will be unable to take advantage of such designation for such product candidates.

We are currently attempting to secure regulatory approval of certain product candidates through the use of an accelerated approval pathway or an EUA. If we are unable to obtain such approval, we may be required to conduct additional pre-clinical studies or clinical trials beyond those that we contemplate, which could increase the expense of obtaining, and delay the receipt of, necessary marketing approvals. Even if our product candidates receive accelerated approval or an EUA from regulatory authorities, if our confirmatory trials do not verify clinical benefit, or if we do not comply with rigorous post-marketing requirements, such regulatory authorities may seek to withdraw accelerated approval.

We are developing certain product candidates for the treatment of serious or life-threatening conditions, including UB-311, and therefore may decide to seek approval of such product candidates under the FDA's accelerated approval pathway. A product may be eligible for accelerated approval if it is designed to treat a serious or life-threatening disease or condition and generally provides a meaningful advantage over available therapies upon a determination that the product candidate has an effect on a surrogate endpoint or intermediate clinical endpoint that is reasonably likely to predict clinical benefit. The FDA considers a clinical benefit to be a positive therapeutic effect that is clinically meaningful in the context of a given disease, such as irreversible morbidity or mortality. For the purposes of accelerated approval, a surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign or other measure that is thought to predict clinical benefit, but is not itself a measure of clinical benefit. An intermediate clinical endpoint is a clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit.

The accelerated approval pathway may be used in cases in which the advantage of a new drug over available therapy may not be a direct therapeutic advantage, but is a clinically important improvement from a patient and public health perspective. If granted, accelerated approval is usually contingent on the sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory studies to verify and describe the drug's clinical benefit. If the sponsor fails to conduct such studies in a timely manner, or if such post-approval studies fail to validate the drug's predicted clinical benefit, the FDA may withdraw its approval of the drug on an expedited basis.

If we decide to submit a new drug application ("NDA") seeking accelerated approval or receive an expedited regulatory designation for our product candidates, there can be no assurance that such submission or application will be accepted or that any expedited development, review or approval will be granted on a timely basis, or at all. Failure to obtain accelerated approval or any other form of expedited development, review or approval for a product candidate would result in a longer time period to commercialization of such product candidate, if any, and could increase the cost of development of such product candidate, which could harm our competitive position in the marketplace.

An EUA for UB-612 was denied by the TFDA in August 2021. In addition to appealing that decision, we plan to pursue regulatory approval for UB-612 from one or more regulators in other jurisdictions that may accept Phase 2 and immunobridging data as the basis for an EUA submission. We may seek EUAs from regulatory authorities for certain of our other product candidates, as well. If we do not receive an EUA from regulatory authorities for product candidates for which we request such approval, we may be required to conduct further clinical trials which could increase the expense of obtaining, and delay the receipt of, marketing approvals in any jurisdiction where we do not receive an EUA. Regulatory authorities may also cease granting EUAs for product candidates targeting COVID-19 or otherwise, which would delay our ability to commercialize product candidates for which we might seek an EUA in the future.

Because we are developing product candidates for the treatment or prevention of diseases in which there is little clinical experience using new technologies, there is increased risk that the FDA, the TFDA or other foreign regulatory authorities may not consider the endpoints of our clinical trials to provide clinically meaningful results and that these results may be difficult to analyze.

As we are developing novel treatments and preventative measures for diseases in which we believe there is limited clinical experience with new endpoints and methodologies, there is heightened risk that the applicable regulatory authorities may not consider the clinical trial endpoints to provide clinically meaningful results, and the resulting clinical data and results may be more difficult to analyze. It is difficult to determine how long it will take, if ever, or how much it will cost to obtain regulatory approvals for our product candidates in the United States, Taiwan or other jurisdictions, if ever. Further, approvals by one regulatory authority may not be indicative of what other regulatory authorities may require for approval.

During the regulatory review process, we will need to identify success criteria and endpoints such that regulatory authorities will be able to determine the clinical efficacy and safety profile of any product candidates we may develop. Because our initial focus is to identify and develop product candidates to treat or prevent diseases in which there is little clinical experience using new technologies, there is heightened risk that regulatory authorities may not consider the clinical trial endpoints that we propose to provide clinically meaningful results. In addition, the resulting clinical data and results may be difficult to analyze.

In the United States, the FDA also weighs the benefits of a product against its risks, and the FDA may view the efficacy results in the context of safety as not being supportive of regulatory approval. The TFDA and other foreign regulatory authorities may make similar comments with respect to these endpoints and data. Any product candidate we may develop will be based on a novel technology that makes it difficult to predict the time and cost of development and of subsequently obtaining regulatory approval.

We and our collaboration partners have conducted and intend to conduct additional clinical trials for selected product candidates at sites outside the United States, and for any of our product candidates for which we seek approval in the United States, the FDA may not accept data from trials conducted in such locations or may require additional U.S.-based trials.

We and our collaboration partners have conducted, currently are conducting and intend in the future to conduct, clinical trials outside the United States, particularly in Taiwan where we have reported interim results and expect to report the complete results of our UB-612 Phase 2 clinical trial in the coming months.

Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of these data is subject to certain conditions imposed by the FDA. For example, the clinical trial must be conducted by qualified investigators in accordance with GCPs, and the FDA must be able to validate the trial data through an on-site inspection, if necessary. Generally, the patient population for any clinical trial conducted outside of the United States must be representative of the population for which we intend to seek approval in the United States. There can be no assurance that the FDA will accept data from trials conducted outside of the United States. If FDA does not accept the data from any clinical trials that we or our collaboration partners

conduct outside the United States, it would likely result in the need for additional clinical trials, which would be costly and time-consuming and delay or permanently halt our ability to develop and market these or other product candidates in the United States. In other jurisdictions, for instance, in Taiwan, there is a similar risk regarding the acceptability of clinical trial data conducted outside of that jurisdiction.

In addition, there are risks inherent in conducting clinical trials in multiple jurisdictions, inside and outside of the United States, such as:

- regulatory and administrative requirements of the jurisdiction where the trial is conducted that could burden or limit our ability to conduct our clinical trials;
- foreign exchange fluctuations;
- manufacturing, customs, shipment and storage requirements;
- cultural differences in medical practice and clinical research; and
- the risk that the patient populations in such trials are not considered representative as compared to the patient population in the target markets where approval is being sought.

If any of our product candidates receive an EUA or regulatory approval, such products may not achieve broad market acceptance among government agencies, physicians, patients, the medical community and third-party payors, in which case revenue generated from their sales would be limited.

The commercial success of our product candidates and our ability to generate revenues from our products will depend upon their acceptance among government agencies, physicians, patients and the medical community. The degree of market acceptance of our product candidates will depend on a number of factors, including:

- limitations or warnings contained in the approved labeling for a product candidate and any other product insert requirements of regulatory authorities;
- changes in the standard of care for the targeted indications for any of our product candidates;
- limitations in the approved clinical indications for our product candidates;
- demonstrated clinical safety and efficacy compared to other products;
- the impact of disease variants, such as the Delta variant of SARS-CoV-2, on the efficacy and marketability of our product candidates targeting such diseases;
- lack of significant adverse side effects, and the prevalence and severity of any side effects;
- sales, marketing and distribution support;
- availability of coverage and extent of reimbursement from managed care plans and other third-party payors;
- timing of market introduction and perceived effectiveness of our products as well as competitive products;
- continued projected growth of the markets in which our products compete;

- the degree of cost-effectiveness of our product candidates;
- the impact of past product price increases and limitations on future price increases for our products;
- availability of alternative therapies;
- whether the product is designated under physician treatment guidelines as a first-line therapy or as a second or third-line therapy for particular diseases;
- whether the product can be used effectively with other therapies to achieve higher response rates;
- adverse publicity about our product candidates or favorable publicity about competitive products;
- if and when we are able to obtain regulatory approvals for indications for our products;
- our ability to establish and maintain a continuous supply of our products for commercial sale;
- potential or perceived advantages or disadvantages of our products over alternative treatments;
- convenience and ease of administration of our products; and
- the effect of current and future healthcare laws.

If any of our product candidates are approved, but do not achieve an adequate level of acceptance by government agencies as well as physicians, patients and the medical community, we may not generate sufficient revenue from these products, and we may not become or remain profitable. In addition, efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may never be successful.

We may focus on potential product candidates that may prove to be unsuccessful and such focus may require us to forego opportunities to develop other product candidates that may prove to be more successful.

We may choose to focus our efforts and resources on a potential product candidate that ultimately proves to be unsuccessful, or to license or purchase a marketed product that does not meet our financial expectations. Furthermore, we have limited financial and personnel resources and are placing significant focus on the development of our lead product candidates, and as such, we may forgo or delay pursuit of opportunities with other future product candidates that later prove to have greater commercial potential. Our spending on current and future research and development programs and other future product candidates for specific indications may not yield any commercially viable future product candidates. As a result of our resource allocation decisions, we may fail to capitalize on viable commercial products or profitable market opportunities, be required to forego or delay pursuit of opportunities with other product candidates or other diseases that may later prove to have greater commercial potential, fail to identify novel product candidates that may be successful, or relinquish valuable rights to such product candidates through collaboration, licensing or other arrangements in cases in which it would have been advantageous for us to retain sole development and commercialization rights. If we are unable to identify and successfully commercialize additional suitable product candidates, or if the additional product candidates we do identify and develop prove to be ineffective, incapable of being commercialized on a large scale or otherwise fail to achieve market success, this would adversely impact our business strategy and our financial position.

Risks Related to Our Financial Position and Need for Additional Capital

We cannot assure you of the adequacy of our capital resources, including the net proceeds from this offering, to successfully complete the development and commercialization of our product candidates, and a failure to obtain additional capital, if needed, could force us to delay, limit, reduce or terminate one or more of our product development programs or commercialization efforts.

As of June 30, 2021, we had cash and cash equivalents amounting to $110.9 million. We believe that we will continue to expend substantial resources for the foreseeable future developing our proprietary product candidates. These expenditures will include costs associated with research and development, conducting pre-clinical studies and clinical trials, seeking regulatory approvals, as well as launching and commercializing products approved for sale and costs associated with manufacturing products. In addition, other unanticipated costs may arise. Because the outcomes of our anticipated clinical trials are highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of our proprietary product candidates.

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

- our ability to successfully complete this offering;
- the numerous risks and uncertainties associated with developing product candidates and maintaining our platform;
- the number and characteristics of product candidates that we pursue;
- the rate of enrollment, progress, cost and outcomes of our clinical trials, which may or may not meet their primary end-points;
- the timing of, and cost involved in, conducting non-clinical studies that are regulatory prerequisites to conducting clinical trials of sufficient duration for successful product registration;
- the cost of manufacturing clinical supply and establishing commercial supply of our product candidates;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- tax costs associated with operating in foreign jurisdictions (including any withholding requirements);
- the timing of, and the costs involved in, obtaining regulatory approvals for our product candidates if clinical trials are successful;
- the timing of, and costs involved in, conducting post-approval studies that may be required by regulatory authorities;
- the cost of commercialization activities for our product candidates, including product manufacturing, pharmacovigilance, marketing and distribution of product candidates generated from our platform and any other product opportunity for which we receive marketing approval in the future;
- the terms and timing of any collaborative, licensing and other arrangements that we are currently party to or may establish, including any required milestone and royalty payments thereunder and any non-dilutive funding that we may receive;

- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims, including litigation costs, if any, and the outcome of any such litigation;
- the timing, receipt and amount of sales of, or royalties or milestones on, our future products, if any, including the risk of potential nonpayment by buyers of our future products, if any;
- the costs to recruit and build the organization including key executives needed to transform to a commercial organization; and
- the costs of operating as a public company, including hiring additional personnel.

In addition, our operating plan may change as a result of many factors currently unknown to us. As a result of these factors, we may need additional funds sooner than planned. We expect to finance future cash needs primarily through public or private equity offerings, strategic collaborations and debt financing. If sufficient funds on acceptable terms are not available when needed, or at all, we could be forced to significantly reduce operating expenses and delay, limit, reduce or terminate one or more of our product development programs or commercialization efforts, which would have a negative impact on our business, financial condition, results of operations and prospects.

We have incurred significant losses since our inception, and we expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

We have incurred significant losses since our inception. Our combined consolidated net loss for the year ended December 31, 2020 was approximately $40.0 million. As of June 30, 2021, our combined accumulated deficit was $150.9 million. Our expectation is that we will to continue to incur losses as we continue our research and development of, and seek regulatory approvals for, our product candidates and maintain and develop new platforms, prepare for and begin to commercialize any approved product candidates and add infrastructure and personnel to support our product development efforts and operations as a public company. We have devoted substantially all of our financial resources and efforts to research and development, including pre-clinical studies and clinical trials and we anticipate that our expenses will continue to increase over the next several years as we continue these activities. The net losses and negative cash flows incurred to date, together with expected future losses, have had, and may continue to have, an adverse effect on our working capital. The amount of future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue.

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. For example, our expenses could increase if we are required by regulatory authorities such as the FDA to perform trials in addition to those that we currently expect to perform, or if there are any delays in completing our currently planned clinical trials, the partnering process for our proprietary product candidates or in the development of any of our proprietary product candidates.

Our revenue to date has been generated from the sales of our ELISA test and the sale of an option to negotiate a license with UNS (which option has expired). Our ability to generate revenue and achieve profitability in the future depends in large part on our ability, alone or with our collaborators, to achieve milestones and to successfully complete the development of, obtain the necessary regulatory approvals for, and commercialize, our product candidates and Vaxxine Platform. We may never succeed in these activities and may never generate revenue from product sales that is significant enough to achieve profitability. Even if we successfully obtain regulatory approvals to market one or more of our product candidates, our revenues will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval and have commercial rights. If the markets for patient subsets that we are targeting are not as significant as we estimate, we may not generate significant revenues from sales of such products, if approved. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to become

or remain profitable could depress our market value and could impair our ability to raise capital, expand our business, develop other product candidates or continue our operations. A decline in our value could also cause you to lose all or part of your investment.

Raising additional capital may cause dilution to our shareholders, including purchasers of Class A common stock in this offering, restrict our operations or require us to relinquish rights to our technology or product candidates.

We expect our expenses to continue to increase in connection with our planned operations. To the extent that we raise additional capital through the sale of our Class A common stock, convertible securities or other equity securities, your ownership interest will be diluted, and the terms of these securities could restrict our operations or include liquidation or other preferences and anti-dilution protections that could adversely affect your rights as a stockholder. The issuance of additional equity securities, or the possibility of such issuance, may cause the market price of our Class A common stock to decline. In addition, debt financing, if available, may result in fixed payment obligations and may involve agreements that include restrictive covenants that limit our ability to take specific actions, such as incurring additional debt, making capital expenditures, creating liens, redeeming shares or declaring dividends, that could adversely impact our ability to conduct our business. Securing financing could require a substantial amount of time and attention from our management and may divert a disproportionate amount of their attention away from day-to-day activities, which may adversely affect our management's ability to oversee the development of our product candidates.

If we raise additional funds through collaborations or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds 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 product candidates that we would otherwise prefer to develop and market ourselves.

We cannot be certain that additional funding will be available on acceptable terms, or at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of our product candidates or other research and development initiatives. Our current or future license agreements may also be terminated if we are unable to meet the payment or other obligations under the agreements.

Changes in or reinterpretations of tax laws and regulations, including their application to us or our customers as reviewed by the relevant tax authorities, may have a material adverse effect on our business, results of operations, financial condition and prospects.

We are subject to complex and evolving tax laws and regulations. New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could affect the tax treatment of any of our future domestic and foreign earnings. Any new taxes could adversely affect our domestic and international business operations, and our business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us or our customers. Future changes in applicable tax laws and regulations, or their interpretation and application, could have an adverse effect on our business, financial conditions, results of operations and prospects.

In addition, our determination of our tax liability is subject to review by applicable tax authorities. Any adverse outcome of such a review could harm our results of operations, cash flow and overall financial condition. The determination of our tax liabilities requires significant judgment and, in the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is complex and uncertain.

Our ability to use our net operating loss carryforwards and other tax attributes to offset future taxable income may be subject to certain limitations.

As of December 31, 2020, we had U.S. federal net operating loss carryforwards ("NOLs") of $44.5 million, which may be available to offset future taxable income, if any, and have no expiration date but are limited in their usage (for taxable years beginning after December 31, 2020) to an annual deduction equal to 80% of annual taxable income. In general, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the "Code"), a corporation that undergoes an "ownership change," generally defined as a greater than 50% change by value in its equity ownership over a three-year period, is subject to limitations on its ability to utilize its pre-change NOLs and its research and development credit carryforwards to offset future taxable income. Our existing NOLs and research and development credit carryforwards may be subject to limitations arising from previous ownership changes, and if we undergo an ownership change in connection with or after this offering, our ability to utilize NOLs and research and development credit carryforwards could be further limited by Sections 382 and 383 of the Code. In addition, future changes in our stock ownership, some of which might be beyond our control, could result in an ownership change under Sections 382 and 383 of the Code. For these reasons, we may not be able to utilize a material portion of the NOLs or research and development credit carryforwards even if we attain profitability.

Risks Related to the Manufacturing of Our Product Candidates

The formulation of peptide-based medicines is complex and manufacturers often encounter difficulties in production. If we, UBI or any of our other contract manufacturers encounter difficulties, our ability to provide product candidates for clinical trials or products, if approved, to patients or future customers could be delayed or halted.

The formulation of peptide-based medicines is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and analytics. We are currently dependent on contract manufacturers, including UBI, its affiliates and C S Bio Co. ("CSBio"), to conduct the manufacturing and supply activities for our product candidates and the underlying component parts, but may choose to conduct these manufacturing activities ourselves in the future. If our contract manufacturers are unable to manufacture our product candidates in clinical quantities or, when necessary, in commercial quantities and at sufficient yields, then we will need to identify and reach supply arrangements with additional third parties. Further, our product candidates may be in competition with other products for access to these facilities and may be subject to delays in manufacture if our contract manufacturers give other products higher priority. We and our contract manufacturers must comply with cGMP, regulations and guidelines for the manufacturing of our product candidates used in pre-clinical studies and clinical trials and, if approved, marketed products. If we or our contract manufacturers do not receive any regulatory approvals required to manufacture our product candidates, production and fulfilment of orders will be delayed, which may materially adversely affect our business. Manufacturers of biotechnology products often encounter difficulties in production, particularly in scaling up and validating initial production. Furthermore, if microbial, viral or other contaminations are discovered in our product candidates or in the manufacturing facilities where our product candidates are made, such manufacturing facilities may be closed for an extended period of time to investigate and remedy the contamination. Shortages of raw materials may also extend the period of time required to develop our product candidates.

Manufacturing these products requires facilities specifically designed for and validated for this purpose and sophisticated quality assurance and quality control procedures are necessary. Slight deviations anywhere in the manufacturing process, including filling, labeling, packaging, storage and shipping and quality control and testing, may result in lot failures, product recalls or spoilage. Further, delays in our clinical trials or in any regulatory approvals may result in the expiration of manufactured product, which could in turn lead to further delays. When changes are made to the manufacturing process, we may be required to provide pre-clinical and clinical data showing the comparable identity, strength, quality, purity or potency of the products before and after such changes. The use of biologically derived ingredients can also lead to allegations of harm, including infections or allergic reactions, or closure of product facilities due to possible contamination.

In addition, there are risks associated with large scale manufacturing for clinical trials or commercial scale including, among others, cost overruns, potential problems with process scale-up, process reproducibility, stability issues, compliance with cGMP, lot consistency and timely availability of raw materials. Even if we obtain marketing approval for any of our product candidates, there is no assurance that we or our manufacturers will be able to manufacture the approved product to specifications acceptable to regulatory authorities, to produce it in sufficient quantities to meet the requirements for the potential commercial launch of the product or to meet potential future demand. If we or our manufacturers are unable to produce sufficient quantities for clinical trials, advance purchase commitments or commercialization, more generally, our development and commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and prospects.

We cannot assure you that any disruptions or other issues relating to the manufacture of any of our product candidates will not occur in the future. Any delay or interruption in the supply of clinical trial supplies could delay the completion of planned clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to commence new clinical trials at additional expense or terminate clinical trials completely. Any adverse developments affecting clinical or commercial manufacturing of our product candidates or products may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls or other interruptions in the supply of our product candidates. We may also have to take inventory write-offs and incur other charges and expenses for product candidates that fail to meet specifications, undertake costly remediation efforts or seek more costly manufacturing alternatives. Accordingly, failures or difficulties faced at any level of our supply chain could delay or impede the development and commercialization of any of our product candidates and could have an adverse effect on our business, financial condition, results of operations and prospects.

We and our contract manufacturers and suppliers could be subject to liabilities, fines, penalties or other sanctions under federal, state, local and foreign environmental, health and safety laws and regulations if we or they fail to comply with such laws or regulations or otherwise incur costs that could have a material adverse effect on our business.

We currently rely on and expect to continue to rely on contract manufacturers for the manufacturing and supply of our product candidates and custom components. We and these contract manufacturers are subject to various federal, state, local and foreign environmental, health and safety laws and regulations, including those governing laboratory procedures and the generation, handling, labeling, transportation, use, manufacture, storage, treatment and disposal of hazardous materials and wastes and worker health and safety. We do not have control over a manufacturer’s or supplier’s compliance with environmental, health and safety laws and regulations. Liabilities they incur pursuant to these laws and regulations could result in significant costs or in certain circumstances, an interruption in operations, any of which could adversely affect our business, financial condition, results of operations and prospects.

With respect to any hazardous materials or waste which we are currently, or in the future will be, generating, handling, transporting, using, manufacturing, storing, treating or disposing of, we cannot eliminate the risk of contamination or injury from these materials or waste, including at third-party disposal sites. In the event of such contamination or injury, we could be held liable for any resulting damages and liability. We also could be subject to significant civil or criminal fines and penalties, cessation of operations, investigation or remedial costs or other sanctions for failure to comply with applicable environmental, health and safety laws. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts or otherwise have a material adverse effect on our business.

Undetected errors or defects in our production could harm our reputation or expose us to product liability claims.

Undetected errors and defects in the cGMP materials used in the production of our product candidates would result in a lower quality of any products we produce, and could give rise to reputational harm to us and to the contract manufacturers with whom we work. If any such errors or defects are discovered, we may incur significant costs, the attention of our key personnel could be diverted, or other significant problems may arise. We may also be subject to warranty and liability claims for damages related to errors or defects in products made with our cGMP materials. In addition, if we do not meet industry or quality standards, if applicable, such products may be subject to recall. A material liability claim, recall or other occurrence that harms our reputation or decreases market acceptance of such products could harm our business and operating results.

Risks Related to Our Reliance on UBI, Collaborators and Other Third Parties

Conflicts of interest may arise between us and UBI and its affiliates, and these conflicts might ultimately be resolved in a manner unfavorable to us.

UBI, together with its affiliate UBIA, is our largest stockholder and is a significant commercial partner for the Company. In addition, Dr. Wang, UBI's founder and a member of our scientific advisory board, holds shares of our Class B common stock. UBI, Ms. Hu, Mr. Reese and certain of their respective affiliates are party to the Voting Agreement providing Ms. Hu with the authority (and irrevocable proxies) to vote the shares of capital stock held by such persons at her discretion on all matters to be voted upon by stockholders. See "Certain Relationships and Related Party Transactions —Our Relationship with UBI." Nonetheless, UBI's equity interests in the Company could give rise to conflicts of interest when faced with a decision that could favor the interests of one of the affiliated companies over another. Further, we depend heavily on UBI and its affiliates for our existing business operations, including the provision of research, development and manufacturing services. We have partnered with UBIA for the development of UB-612 in Taiwan. UBIA also provides testing services and produces small-scale peptides for research and clinical use for us. UBI Pharma Inc. ("UBIP") provides formulation-fill-finish services and produces small-scale peptides for research and clinical use for us, and United BioPharma, Inc. ("UBP") is currently our sole manufacturer of protein. Conflicts of interest may arise with respect to existing or possible future commercial arrangements between us and UBI or any of its affiliates in which the terms and conditions of the arrangements are subject to negotiation or dispute. For example, conflicts of interest could arise over matters such as:

- disputes over the cost or quality of the manufacturing and testing services provided to us by UBI with respect to our product candidates;
- the allocation of UBI's resources as between our business objectives and UBI's own objectives;
- a decision whether to engage UBI or its affiliates in the future to manufacture, test and supply of additional custom components or product candidates for us;
- decisions as to which particular product candidates we will commit sufficient development efforts to; or
- business opportunities unrelated to our current products that may be attractive both to us and to the other company.

We also cannot guarantee conflicts of interest will not arise in connection with the negotiation or execution of any agreement with UBI, its affiliates or any other related party. For more information on our related party contracts, see "Certain Relationships and Related Party Transactions."

We will rely on contract manufacturers for the manufacture of raw materials for our research programs, pre-clinical studies and clinical trials and we do not have long-term contracts with many of these parties. This reliance on contract manufacturers increases the risk that we will not have sufficient quantities of such materials or product candidates that we may develop and commercialize, or that such supply will not be available to us at an acceptable cost or on an acceptable timeline, which could delay, prevent or impair our development or commercialization efforts.

We rely on contract manufacturers, including UBI and its affiliates, for the manufacture of raw materials for our clinical trials and pre-clinical and clinical development. We do not have a long-term agreement with some of the contract manufacturers we currently use to provide pre-clinical and clinical raw materials. Certain of these manufacturers are critical to our production, and the loss of these manufacturers to one of our competitors or otherwise, or an inability to obtain quantities at an acceptable cost or quality, could delay, prevent or impair our ability to timely conduct pre-clinical studies or clinical trials, and would materially adversely affect our development and commercialization efforts.

We expect to continue to rely on contract manufacturers for the commercial supply of any of our product candidates for which we obtain marketing approval, if any. We may be unable to maintain or establish long-term agreements with contract manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with contract manufacturers, reliance on contract manufacturers entails additional risks, including:

- the failure of the contract manufacturer to manufacture our product candidates according to our schedule, or at all, including if our contract manufacturers give greater priority to the supply of other products over our product candidates or otherwise do not satisfactorily perform according to the terms of the agreements between us and them;
- the reduction or termination of production or deliveries by suppliers, or the raising of prices or renegotiation of terms;
- the termination or nonrenewal of arrangements or agreements by our contract manufacturers at a time that is costly or inconvenient for us;
- the breach by the contract manufacturers of our agreements with them;
- the failure of contract manufacturers to comply with applicable regulatory requirements;
- the failure of the contract manufacturer to manufacture our product candidates according to our specifications;
- the mislabeling of clinical supplies, potentially resulting in the wrong dose amounts being supplied or active drug or placebo not being properly identified;
- clinical supplies not being delivered to clinical sites on time, leading to clinical trial interruptions, or of drug supplies not being distributed to commercial vendors in a timely manner, resulting in lost sales; and
- the misappropriation or unauthorized disclosure of our intellectual property or other proprietary information, including our trade secrets and know-how.

We do not have complete control over all aspects of the manufacturing process of, and are dependent on, our contract manufacturing partners for compliance with cGMP regulations for manufacturing both custom components and finished products. Contract manufacturers may not be able to comply with cGMP regulations

or similar regulatory requirements outside of the United States. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of applicable regulatory authorities, they will not be able to secure and/or maintain authorization for their manufacturing facilities. In addition, we do not have full control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. Further, our manufacturing partners may be unable to successfully increase the manufacturing capacity for any of our product candidates in a timely or cost-effective manner, or at all, and quality issues may arise during any such scale-up activities. If regulatory authorities do not authorize these facilities for the manufacture of our product candidates or if they withdraw any such authorization in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain marketing approval for or market our product candidates, if approved. Our failure, or the failure of our contract manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our product candidates or drugs and harm our business and results of operations.

We depend on strategic partnerships, collaborations and license agreements in connection with the research, development and commercialization of our Vaxxine Platform and product candidates. If our existing or future partners, collaborators or licensees do not perform as expected, if we fail to maintain any of these strategic partnerships, collaborations or license agreements, or if they are not successful, our ability to commercialize our product candidates successfully and to generate revenues may be materially adversely affected.

We have established and intend to continue to establish strategic partnerships, collaborations, licensing agreements, or other arrangements with third parties. For example, we have arrangements with UBIA to research and develop UB-612 in Taiwan (exclusively) and with Aurobindo to research, develop and commercialize our Vaxxine Platform and existing and future product candidates in India (exclusively) and on a non-exclusive basis in other selected emerging and developing markets. For our research, development and commercialization activities, we have depended, and will continue to depend, on our partners to design and conduct their own clinical studies. As a result, these activities may not be able to be conducted in the manner or on the time schedule we currently contemplate, which may negatively impact our business operations. While we have certain contractual rights to information about pre-clinical and clinical developments and results under certain of our collaboration and license agreements, including our agreements with UBIA and Aurobindo, we cannot be certain that clinical trials conducted in connection with such collaboration programs will be conducted in a manner consistent with the best interests of our business. In addition, if any of our partners, collaborators or licensees withdraw support for these programs or proposed products or otherwise impair their development, our business could be negatively affected. Also, our inability to find a partner for any of our product candidates may result in our termination of that specific product candidate program or evaluation of a product candidate in a particular indication. Because of contractual restraints and the limited number of contract manufacturers with the expertise, required regulatory approvals and facilities to manufacture our product candidates on a commercial scale, replacement of a contract manufacturer may be expensive and time-consuming and may cause interruptions in the production of our product candidates, which could delay our clinical trials or interrupt our potential future commercial sales. Even if we find or establish a strategic partner, collaborator or licensee for one or more of our product candidates, there is no assurance that upon the approval of one or more of such product candidates that such product candidates will be successfully commercialized.

Furthermore, our licenses and collaboration agreements impose, and any future agreement we enter into may also impose, restrictions on our ability to license certain of our intellectual property to third parties or to develop or commercialize certain product candidates or technologies ourselves.

In the future, we may enter into additional collaborations or license agreements to fund our development programs or to gain access to sales, marketing or distribution capabilities of other parties. While

certain of our existing collaboration and license agreements, including our agreements with Aurobindo, impose development or commercialization obligations on our collaborators or licensees, we cannot be certain that our collaboration partners will allocate sufficient resources or attention to our collaboration programs, that they will progress our collaboration programs consistent with the best interests of our business or that they will otherwise meet their obligations under these agreements in a timely manner or at all. Our existing collaborations and licenses, and any future collaborations and licenses we enter into, therefore may pose a number of risks, including the following:

- collaborators or licensees may have significant discretion in determining the efforts and resources that they will apply to developing or commercializing our product candidates, and they may not sufficiently fund the development or commercialization of a product candidate;
- collaborators and licensees may not perform their obligations as expected by us or by health authorities, such as the FDA, the TFDA or comparable foreign regulatory authorities;
- collaborators and licensees may dissolve, merge, be bought or may otherwise become unwilling to fulfill the initial terms of the collaboration with us, or we may be unwilling to continue our arrangement following such an occurrence;
- collaborators and licensees may fail to perform their obligations under their agreements or may be slow in performing their obligations;
- collaborations and licensees may be terminated for the convenience of the collaborator or licensee and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates;
- collaborators and licensees may not pursue commercialization of any product 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' or licensees' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities, or due to the actual or perceived competitive situation in a specific indication;
- collaborators and licensees may delay clinical trials, stop a clinical trial or abandon a product candidate, repeat or conduct additional clinical trials or may require a new formulation of a product candidate for clinical testing;
- collaborators and licensees could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- disagreements with collaborators or licensees, including disagreements over proprietary rights, contract interpretation and breach of contract claims, payment obligations or the preferred course of development, might cause delays or termination of the research, development or commercialization of products or product candidates, might lead to additional responsibilities, including financial obligations for us with respect to products or product candidates, or delays or withholding of payments due to us or might result in litigation or arbitration, any of which would be time-consuming and expensive, and could limit our ability to execute on our strategies and delay or prevent our ability to devote resources to other product candidates;

- collaborators or licensees may not properly obtain, maintain, enforce or defend our intellectual property or may use our proprietary information in such a way that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation; and

- collaborators may infringe, misappropriate or otherwise violate the intellectual property of third parties, which may expose us to litigation and potential liability.

If our collaborations and licenses related to the research, development and commercialization of product candidates do not result in the successful development and commercialization of our product candidates, or if one of our collaborators or licensees terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration or license, and we may be unable to continue the development and commercialization of the product candidate. Further, even if our collaborations and licenses do result in successful development and commercialization of products, if one of our collaborators breaches its obligations under its agreement with us or enters bankruptcy or insolvency, there may be a material delay in our receipt of payments under such agreements, or we may never receive such payments. If we do not receive the payments we expect under these agreements, our own development and commercialization activities could be delayed or prevented altogether, and we may need to secure additional resources to develop our proprietary product candidates. Moreover, maintaining our relationships with our collaborators and licensees may divert significant time and effort of our scientific staff and management team, which may harm our ability to effectively allocate our resources to multiple internal and other projects. All of the risks relating to product development, regulatory approval and commercialization described in this prospectus also apply to the activities of our collaborators and licensees.

Additionally, subject to its contractual obligations to us, if one of our collaborators or licensors is involved in a business combination, merger, acquisition or other similar transaction, the collaborator or licensor might deprioritize or terminate the development or commercialization of any product candidate licensed to it by us. If one of our collaborators or licensors terminates its agreement with us, we may be unable to attract new collaborators in a timely manner or at all, which may delay or prevent our ability to develop or commercialize one or more of our product candidates.

We rely on third parties to conduct our pre-clinical studies and clinical trials and perform other tasks for us. If these third parties do not successfully carry out their contractual duties, meet expected deadlines, or comply with legal and regulatory requirements, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We have relied upon and plan to continue to rely upon CROs to execute certain of our pre-clinical and clinical trials, and to monitor and manage data for our ongoing pre-clinical and clinical programs and to provide us with significant data and other information related to our projects, pre-clinical studies and clinical trials. If such third parties provide inaccurate, misleading or incomplete data, our business, financial condition and results of operations and prospects could be materially adversely affected. We have control over limited aspects of our CROs' activities; nevertheless, we are responsible for, and our reliance on CROs does not relieve us of our responsibilities for, ensuring that each of our trials is conducted in accordance with the applicable protocol, legal, regulatory, scientific and ethical standards. We and our CROs and other vendors are required to comply with cGMP, GCP, Good Laboratory Practice ("GLP") and other laws, regulations and guidelines enforced by applicable regulatory authorities for all of our product candidates during both pre-clinical and clinical development. Regulatory authorities enforce these regulations through periodic inspections of study sponsors, principal investigators, trial sites and other contractors. If we or any of our CROs or vendors fail to comply with applicable regulations, the data generated in our pre-clinical and clinical trials may be deemed unreliable and regulatory authorities may require us to perform additional pre-clinical and clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that all of our clinical trials comply with cGCP regulations or other applicable laws and regulations. Our failure to comply with applicable laws and regulations may require us to repeat clinical

trials, which would delay the regulatory approval process and require significant additional expenditures, which we may be unable to meet.

If any of our relationships with these CROs terminates, we may not be able to enter into arrangements with alternative CROs or do so on commercially reasonable terms or in a timely manner. We would also incur additional costs and delays while engaging a new CRO, which we may not be able to engage on commercially reasonable terms or at all. In addition, our CROs are not our employees, and except for remedies available to us under our agreements with such CROs, we cannot control whether or not they devote sufficient time and resources to our ongoing pre-clinical and clinical programs. If CROs do not successfully carry out their contractual duties or obligations, meet expected deadlines, conduct our studies in accordance with regulatory requirements or our stated study plans and protocols, if they need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our protocols, regulatory requirements, or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates in a timely manner or at all. For example, due to an error by the CRO responsible for administering blinded placebo and active doses to trial subjects, which reduced the confidence of subsequently collected data, we decided to discontinue a Phase 2a Long Term Extension trial for UB-311. In that case, however, we determined that we had collected sufficient data on UB-311's tolerability and immunogenicity. CROs or any of our other collaborators may also generate higher costs than anticipated. As a result, our results of operations and the commercial prospects for our product candidates could be harmed, our costs could increase and our ability to generate revenue could be delayed.

Though we carefully manage our relationships with our CROs, 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, results of operations and prospects.

We do not have multiple sources of commercial supply for some of the components used in our product candidates, nor long-term supply contracts with our existing suppliers, and certain of our suppliers are critical to our production. If we were to lose a critical supplier or if an approved supplier experiences delays due to raw material constraints, it could have a material adverse effect on our ability to complete the development of our product candidates. If we obtain regulatory approval for any of our product candidates, we cannot guarantee that our suppliers will be able to meet our increased demands for supply.

We do not have multiple sources of commercial supply for each of the components used in the manufacturing of our product candidates, nor do we have long-term supply agreements with all of our component suppliers. Manufacturing suppliers are subject to cGMP quality and regulatory requirements, covering manufacturing, testing, quality control and record keeping relating to our product candidates and are subject to ongoing inspections by applicable regulatory authorities. Manufacturing suppliers are also subject to licensing requirements as well as local, state and federal regulations and regulations in foreign jurisdictions in which they operate. Failure by any of our suppliers to comply with all applicable regulations and requirements may result in long delays and interruptions in supply.

The number of suppliers of the raw material components of our product candidates is limited. In the event it is necessary or desirable to acquire supplies from alternative suppliers, we might not be able to obtain such supply on commercially reasonable terms, if at all. It could also require significant time and expense to redesign our manufacturing processes to work with another company and redesign of processes can trigger the need for conducting additional studies such as comparability or bridging studies. Additionally, certain of our suppliers are critical to our production, and the loss of these suppliers to one of our competitors or otherwise would materially adversely affect our development and commercialization efforts. Further, if such critical suppliers experience delays in their ability to supply of components due to limited availability of raw materials or other difficulties which may be beyond our or their control, our manufacturing efforts may be materially adversely affected.

As part of any marketing approval, regulatory authorities conduct inspections that must be successful prior to the approval of a product candidate. Failure of manufacturing suppliers to successfully complete these regulatory inspections will result in delays. If supply from the approved supplier is interrupted, an alternative vendor would need to be qualified through a NDA amendment or supplement, and this could result in significant disruption in commercial supply. Regulatory authorities may also require additional studies if a new supplier is relied upon for commercial production. Switching vendors may involve substantial costs and is likely to result in a delay in our desired clinical and commercial timelines.

If we are unable to obtain the supplies we need at a reasonable price or on a timely basis, it could have a material adverse effect on our ability to complete the development of our product candidates or, if we obtain regulatory approval for our product candidates, to commercialize them.

Risks Related to Our Intellectual Property Rights

We depend on intellectual property licensed from UBI and its affiliates, the termination of which could result in the loss of significant rights, which would harm our business.

We are dependent on technology, patents, know-how and proprietary information, both our own and those licensed from UBI and its affiliates. We entered into the Platform License Agreement in August 2021 pursuant to which we obtained a worldwide, sublicensable (subject to certain conditions), perpetual, fully paid-up, royalty-free (i) exclusive license (even as to the Licensors) under all patents owned or otherwise controlled by the Licensors or their affiliates existing as of the effective date of the Platform License Agreement, (ii) exclusive license (except as to the Licensors) under all patents owned or otherwise controlled by the Licensors or their affiliates arising after the effective date during the term of the Platform License Agreement, and (iii) non-exclusive license under all know-how owned or otherwise controlled by the Licensors or their affiliates existing as of the effective date or arising during the term of the Platform License Agreement, in each of the foregoing cases, to research, develop, make, have made, utilize, import, export, market, distribute, offer for sale, sell, have sold, commercialize or otherwise exploit peptide-based vaccines in the field of all human prophylactic and therapeutic uses, except for such vaccines related to human immunodeficiency virus, herpes simplex virus and Immunoglobulin E. The patents licensed to us under the Platform License Agreement include patents directed to a CpG delivery system, artificial T helper cell epitopes and certain designer peptides and proteins, each of which is utilized in our COVID-19 product candidates. Any termination of these licenses will result in the loss of significant rights and will restrict our ability to develop and commercialize our product candidates.

Our reliance on in-licensed intellectual property and technology results in a number of risks to the development and commercialization of our product candidates, including the loss of such rights, our licensors' inability or refusal to enforce or defend such rights, and the requirement to pay royalties, milestones, and other amounts.

Agreements under which we license intellectual property or technology to or from UBI, its affiliates and from other 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 intellectual property or technology or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates. Our business may also suffer if any current or future licensors fail to abide by the terms of the license, if the licensors fail to enforce licensed patents against infringing third parties, if the licensed patents or other rights are found to be invalid or unenforceable, or if we are unable to enter into necessary licenses on acceptable terms or at all. In the event of a bankruptcy by one of our licensors, our

intellectual property licenses could also be affected. For example, while the U.S. Bankruptcy Code allows a licensee to retain its rights under its license notwithstanding the bankrupt licensor's rejection of such license, such protections may not be available to us in the event a licensor declares bankruptcy in a foreign jurisdiction. Our licensors may also own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensors' rights.

Furthermore, while we cannot currently determine the amount of the royalty obligations we would be required to pay on sales of future products, if any, the amounts may be significant. The amount of our future royalty obligations will depend on the technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

We believe the growth of our business may depend in part on our ability to acquire or in-license additional intellectual property rights, including to advance our research or allow commercialization of our product candidates. If we are unable to obtain additional licenses we need to develop and commercialize our product candidates, or if we obtain such licenses and they are terminated, we may be required to expend considerable time and resources in an attempt to develop or license replacement technology. We may also need to cease use of the compositions or methods covered by such third-party intellectual property rights, and our ability to license or develop alternative approaches that do not infringe on such intellectual property rights may entail significant additional costs and development delays, even if we were able to develop or license such alternatives, which may not be feasible.

The licensing and acquisition of third-party intellectual property rights is a competitive practice, 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 our product candidates. More established companies may have a competitive advantage over us due to their larger size and cash resources or greater clinical development and commercialization capabilities. There can be no assurance that we will be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to acquire. Even if we are able to obtain a license under such intellectual property rights, any such license may be non-exclusive, which may allow our competitors' access to the same technologies licensed to us.

Licensing of intellectual property is of critical importance to our business and involves complex legal, business and scientific issues and is complicated by the rapid pace of scientific discovery in our industry. Disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including those relating to:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the license agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our compliance with reporting, financial or other obligations under the license agreement;
- the amount and timing of payments owed under license agreements; and
- the allocation of ownership of inventions and know-how resulting from the creation or use of intellectual property by our licensors and by us and our partners.

We may also not be able to fully protect our licensed intellectual property rights or maintain our licenses under our licensing arrangements. Our existing and future licensors could retain the right to prosecute, maintain, defend and enforce the intellectual property rights licensed to us, in which case we would depend on the ability and will of our licensors to do so. Our licensors may take different approaches to prosecuting patents than we would, and it is possible our inability to control such activities could harm our business. Furthermore, our licensors may determine not to pursue litigation against other companies or may pursue such litigation less aggressively than we would. We may also rely upon obtaining the consent of our licensors to settle legal claims. If our licensors do not adequately protect or enforce such licensed intellectual property, competitors may be able to use such intellectual property and erode or negate any competitive advantage we may have, which could materially harm our business, negatively affect our position in the marketplace, limit our ability to commercialize our products and product candidates and delay or render impossible our achievement of profitability.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms or at all, we may be unable to successfully develop and commercialize the affected product candidates. We are generally also subject to all of the same risks with respect to protection of intellectual property that we license as we are for intellectual property that we own, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to develop or commercialize our products could suffer.

Furthermore, our existing license agreements may impose, and we expect that future license agreements will impose, various diligence, milestone payment, royalty and other obligations on us and if our licensors, licensees or collaborators conclude that we have failed to comply with our obligations under these agreements, including due to the impact of the COVID-19 pandemic on our business operations or our use of the intellectual property licensed to us in a manner the licensor believe is unauthorized, or we are subject to a bankruptcy, we may be required to pay damages and the licensor may have the right to terminate the license. Any of the foregoing could result in us being unable to develop, manufacture and sell products that are covered by the licensed technology or enable a competitor to gain access to the licensed technology. We might not have the necessary rights or the financial resources to develop, manufacture or market our current or future product candidates without the rights granted under our licenses, and the loss of sales or potential sales in such product candidates could have a material adverse effect on our business, financial condition, results of operations and prospects.

Moreover, our rights to our in-licensed patents and patent applications may depend, in part, on inter-institutional or other operating agreements between the joint owners of such in-licensed patents and patent applications or the owners of such in-licensed patents and patent applications and their affiliates. We may not be aware of each party's rights and obligations under such inter-institutional or other operating agreements and, as such, the ownership of our in-licensed patents and patent applications may be uncertain. If one or more of these owners breaches such inter-institutional or other operating agreements, our rights to such in-licensed patents and patent applications may be adversely affected. In addition, the development of certain of our product candidates may be funded by grants that impose certain pricing limitations on such product candidates and limit our ability to commercialize such product candidates and to achieve or maintain profitability. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects.

We may be required to license or obtain rights to use third party intellectual property or technology in connection with the development and commercialization of our product candidates.

We may not be aware of all technologies developed or under development by third parties, and other pharmaceutical companies or academic institutions may also have filed or may be planning to file patent applications potentially relevant to our business and product candidates. The technologies used in connection with the formulations of our product candidates may also be covered by intellectual property rights held by others. From time to time, in order to avoid infringing these third-party patents, we may be required to license

technology from additional third parties to further develop, manufacture, use, sell or commercialize our product candidates, or that we otherwise deem necessary for our business operations. We may fail to obtain any such licenses at a reasonable cost or on reasonable terms, if at all, and as a result we may be unable to develop or commercialize the affected product candidates, and we may have to abandon development of the relevant research programs or product candidates, which would harm our business.

If we are unable to obtain and maintain intellectual property protection for our products or product candidates, or if the duration or scope of our intellectual property protection is not sufficiently broad, our ability to commercialize our product candidates successfully and to compete effectively may be materially adversely affected.

Our success depends on our ability to obtain and maintain patent and other intellectual property protection in the United States and other countries with respect to our current and future proprietary product candidates. We rely upon a combination of patents, trade secret protection and confidentiality agreements to protect the intellectual property related to our technology, manufacturing processes, products and product candidates. We, UBI and our other collaborators and licensors have primarily sought to protect our proprietary positions by filing patent applications in the United States and abroad related to our proprietary technology, manufacturing processes and product candidates that are important to our business. Despite our or our third party collaborators' or licensors' efforts to protect these proprietary rights, unauthorized parties may be able to obtain and use information that we regard as proprietary. Third parties may also seek to invalidate our patents or those of our licensors. If we are unable to obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may be required to expend significant time and resources to redesign our technology, product 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. We could also lose expected revenues under license agreements we maintain with third parties. If we are unable to obtain or maintain our intellectual property, we may be unable to develop or commercialize the affected technology and product candidates or could lose revenue, either of which could harm our business, financial condition, results of operations and prospects significantly.

The patent prosecution process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. It is also possible that we may fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. In addition, we, UBI or our other collaborators and licensors, may only pursue, obtain or maintain patent protection in a limited number of countries. Because patent applications in the United States, Europe and many other foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in scientific literature lag behind actual discoveries, we cannot be certain that we or our licensors were the first to make the inventions claimed in any of our owned or any in-licensed issued patents or pending patent applications, or that we or our licensors were the first to file for protection of the inventions set forth in our patents or patent applications. As a result, we may not be able to obtain or maintain protection for certain inventions, and there can be no assurance that the patents we file, or those that are issued, will not be vulnerable to claims of invalidity or unenforceability.

Even if patents do successfully issue, our owned or in-licensed patents may not adequately protect our intellectual property, provide exclusivity for our products or product candidates, prevent others from designing around our claims or otherwise provide us with a competitive advantage. Competitors may use our technologies in jurisdictions where we have not obtained or are unable to adequately enforce 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 and Europe. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing with us. We also cannot offer any assurances about which, if any, patents will issue, the breadth of any such patents or whether any issued patents will be found invalid or unenforceable or will

be threatened by third parties. In addition, third parties may challenge the validity, enforceability, ownership, inventorship or scope of any of our patents. Any successful challenge to any of our patents or our in-licensed patents could deprive us of rights necessary for the successful commercialization of any product candidate that we may develop and could impair or eliminate our ability to collect future revenues and royalties with respect to such products or product candidates. If any of our patent applications with respect to our product candidates fail to issue as patents, if their breadth or strength of protection is narrowed or threatened, or if they fail to provide meaningful exclusivity or competitive position, it could dissuade companies from collaborating with us or otherwise adversely affect our competitive position.

In addition, patents have a limited lifespan. In the United States, for example, the natural expiration of a patent is generally 20 years after its effective filing date. Various extensions may be available, however, the life of a patent and the protection it affords is limited. Given the amount of time required for the development, testing, regulatory review and approval of new product candidates, our patents protecting such candidates might expire before or shortly after such candidates are commercialized. If we encounter delays in obtaining regulatory approvals, the period of time during which we could market a product under patent protection could be further reduced. Even if patents covering our product candidates are obtained, once such patents expire, or if such patents are waived or suspended, we may be vulnerable to competition from similar or biosimilar products. For example, the Biden administration recently indicated its support for a proposal at the World Trade Organization to waive patent rights with respect to COVID-19 vaccines. The current proposal is for a temporary waiver of intellectual property rights that cover COVID-19 vaccines, however, the ultimate timing and scope of the waiver, if approved, is unknown. The scope and timing of such waiver will likely be subject to extensive negotiations given the complexity of the matter, which may result in prolonged uncertainty and therefore could adversely affect our business. Any expiration, waiver or suspension of our patent or other intellectual property protection by the U.S. or other foreign governments could lead to the launch of a similar or biosimilar version of one of our products and would likely result in an immediate and substantial reduction in the demand for our product, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may not be able to protect or enforce our intellectual property rights in all jurisdictions, and we cannot guarantee that the patent rights we have will prevent others from competing with us.

The patent position of pharmaceutical companies is generally uncertain because it involves complex legal, scientific and factual considerations for which legal principles remain unsolved. The standards applied by the United States Patent and Trademark Office (“USPTO”) and foreign patent offices in granting patents are not always applied uniformly or predictably, and can change. Additionally, the laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant challenges in protecting and defending such rights in foreign jurisdictions. We may face similar challenges. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property rights, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement, misappropriation or other violation of our patents or other intellectual property, including the unauthorized reproduction of our manufacturing or other know-how or the marketing of competing products in violation of our intellectual property rights generally. Any of these outcomes could impair our ability to prevent competition from third parties, which may have a material adverse effect on our business, financial condition, results of operations and prospects.

Further, the existence of issued patents does not guarantee our right to practice the patented technology or commercialize a patented product candidate. Third parties may design around our patents, or have or obtain rights to patents which they may use to prevent or attempt to prevent us from practicing our patented technology or commercializing any of our patented product candidates. As a result, we could be prevented from selling our products unless we were able to obtain a license under such third-party patents, which may not be available on commercially reasonable terms or at all. In addition, third parties may seek approval to market their own products similar to or otherwise competitive with our products and such products may not violate our patent rights. We may also need to assert our patents against third parties, including by filing lawsuits alleging patent

infringement. In any such proceeding, a third party may assert, and a court or agency of competent jurisdiction may find, our asserted patents to be invalid or unenforceable. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

There is a substantial amount of intellectual property litigation in the biotechnology and pharmaceutical industries, and we may become party to, or threatened with, litigation or other adversarial proceedings regarding intellectual property rights. Proceedings to defend or enforce our patent rights, whether or not successful and whether or not meritorious, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or held unenforceable, or interpreted more narrowly. There can be no assurance that we will have sufficient financial or other resources to file and pursue such claims, which often last for years before they are concluded. Some claimants may have substantially greater resources than we do and may be able to sustain the costs of complex intellectual property litigation to a greater degree and for longer periods of time than we could. In addition, patent holding companies that focus solely on extracting royalties and settlements by enforcing patent rights may target us, especially as we gain greater visibility and market exposure as a public company. In addition, our enforcement of our patent rights could provoke third parties to assert counterclaims against us. Third parties also may raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. We may not prevail in any lawsuits or administrative proceedings that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. If a third party were to prevail on a legal assertion of invalidity or unenforceability, we could lose part or all of the patent protection on one or more of our product candidates, which could result in our competitors and other third parties using our technology to compete with us. An adverse outcome in a litigation or administrative proceeding involving our patents could limit our ability to assert our patents against competitors, affect our ability to receive royalties or other licensing consideration from our licensees, and may curtail or preclude our ability to exclude third parties from making, using and selling similar or competitive products. Any of these occurrences could have a material adverse effect on our business, financial condition, results of operations and prospects. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop, acquire or license.

Many countries, including certain countries in Asia, 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 is 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.

Our owned and in-licensed patents may be subject to a reservation of rights by one or more third parties. For example, the research resulting in certain of our licensors' patents and technology, including patents and technology relating to our COVID-19 product candidates, was funded in part by the Taiwanese government. As a result, the Taiwanese government may have certain rights to such patent rights and technology.

Furthermore, certain of our patents and technology, including patents and technology relating to UB-312, were funded in part by grants from nonprofit third parties, including the Michael J. Fox Foundation. We are required to fulfill certain contractual obligations with respect to products created using such grant funding, including certain reporting requirements. We also have submitted grant proposals relating to our UB-612 product candidate. If these grant proposals are awarded, or if we receive funding from other nonprofit third parties in the future, we may be required to fulfill other contractual obligations, such as publishing the results of our scientific studies, making certain products available at an affordable price in a list of clearly defined low and lower-middle income countries and ensuring that certain products are available in geographic regions where there has been an outbreak of an infectious disease at certain reduced economic rates.

If we or our licensors infringe, misappropriate, or otherwise violate intellectual property of third parties, we may face increased costs or we may be unable to commercialize our product candidates.

Many of our current and former employees, consultants and independent contractors including our senior management, were previously employed at universities or at other biotechnology or pharmaceutical companies, including some which may be competitors or potential competitors. Although we try to ensure that our employees, consultants and independent contractors 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 employees, consultants or independent contractors have used or disclosed intellectual property, including trade secrets or other proprietary information, of such individual's current or former employers, or that patents and applications we have filed to protect inventions of these individuals, even those related to one or more of our current or future product candidates, are rightfully owned by their former or concurrent employer. In addition, while we typically require our employees, consultants and independent contractors who may be involved in the 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 develops intellectual property that we regard as our own, or such agreements may be breached or alleged to be ineffective, and the assignment may not be self-executing, which may result in claims by or against us related to the ownership of such intellectual property or may result in such intellectual property becoming assigned to third parties.

Third parties have, and may in the future have, U.S. and non-U.S. issued patents and pending patent applications relating to compounds, methods of manufacturing compounds or methods of use for the treatment of the disease indications for which we are developing our product candidates that may cover our product candidates. For example, we are aware of certain third-party U.S. and non-U.S. patents and patent applications, including those of our competitors, that relate to anti-alpha synuclein binding molecules that may be construed to cover the technology used in our anti-alpha synuclein vaccine product candidate. We are also aware of certain third-party U.S. and non-U.S. patents and patent applications, including those of our competitors, that relate to coronavirus vaccines and treatments and vaccines against other infectious diseases and we expect such third parties to have filed additional patent applications, which have not yet been published and to file additional patent applications in the future.

In the event that any of these patent rights were asserted against us, we believe that we have defenses against any such action, including that such patents would not be infringed by our product candidates and/or that such patents are not valid. However, if any such patent rights were to be asserted against us and our defenses to such assertion were unsuccessful, unless we obtain a license to such patents, we could be liable for damages, which could be significant and include treble damages and attorneys' fees if we are found to willfully infringe such patents. We could also be precluded from commercializing any product candidates that were ultimately held to infringe such patents, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Uncertainties resulting from our participation in patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Furthermore, because of the substantial amount of discovery required in certain jurisdictions in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, the perceived value of our product candidates or intellectual property could be diminished. Accordingly, the market price of our Class A common stock could decline. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our business, financial condition, results of operations and prospects.

Changes to the patent law in the United States and other jurisdictions could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, thereby impairing our ability to protect our technologies and product candidates.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involves both technological and legal complexity and is therefore costly, time-consuming and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States or abroad could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. For example, 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. Specifically, these decisions stand for the proposition that patent claims that recite laws of nature are not themselves patentable unless those patent claims have sufficient additional features that provide practical assurance that the processes are genuine inventive applications of those laws. What constitutes a "sufficient" additional feature is uncertain. Furthermore, in view of these decisions, since December 2014, the USPTO has published and continues to publish revised guidelines for patent examiners to apply when examining process claims for patent eligibility. This combination of events has created uncertainty with respect to the validity and enforceability of patents, even once they are 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. In addition, the complexity and uncertainty of European and Asian patent laws have also increased in recent years. For example, in October 2020, China adopted amendments to its patent law (the "Amended PRC Patent Law"), which became effective on June 1, 2021. The Amended PRC Patent Law contains both patent term extension and a mechanism for early resolution of patent disputes. However, the provisions for patent term extension and an early resolution mechanism are unclear and remain subject to the approval of implementing regulations that have yet to be finalized, leading to uncertainty about their scope and implementation. Complying with these laws and regulations could have a material adverse effect on our existing patent portfolio and our ability to protect and enforce our intellectual property in the future.

Obtaining and maintaining our patent protection, including patents licensed from third parties, depends on compliance with various procedural, documentary, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for noncompliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and patent applications will be due to be paid to the USPTO and various government patent agencies outside the United States over the lifetime of our patents and patent applications and any patent rights we may own or license in the future. Additionally, the USPTO and various government patent agencies outside the United States require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In certain cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with rules applicable to the particular jurisdiction. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. For example, certain of our patents which include claims utilized in our UB-311 anti-Ab vaccine product candidate recently lapsed in certain European and Asian countries due to non-payment of fees. Noncompliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official communications within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we or our licensors fail to maintain the patents and patent applications covering or otherwise protecting our technologies or our product candidates, our competitors may be able to enter the market with similar or identical products or technology without infringing our patents, which could have a material adverse effect on our business. In addition, to the extent that we have responsibility for taking any action related to the prosecution or maintenance of patents or patent applications in-licensed from a third party, any failure on our part to maintain the in-licensed intellectual property could jeopardize our rights under the relevant license and may have a material adverse effect on our business, financial condition, results of operations and prospects.

If we do not obtain patent term extensions and data exclusivity for each of our product candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of any FDA marketing approval in the United States of any product candidates we may develop, one or more of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Action of 1984 ("Hatch-Waxman Amendments"). The Hatch-Waxman Amendments permit a patent extension term 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 applicable to an 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. The length of the patent term extension is typically calculated as one half of the clinical trial period plus the entire period of time during the review of the NDA or BLA by the FDA, minus any time of delay by the applicant during these periods. We might not be granted a patent term extension at all, because of, for example, failure to apply within the applicable period, failure to apply prior to the expiration of relevant patents or otherwise failure to satisfy any of the numerous applicable requirements.

In the European Union, a maximum of five and a half years of supplementary protection can be achieved for an active ingredient or combinations of active ingredients of a medicinal product protected by a basic patent, if a valid marketing authorization exists (which must be the first authorization to place the product on the market as a medicinal product) and if the product has not already been the subject of supplementary protection. Although all countries in Europe must provide supplementary protection certificates, there is no unified legislation among European countries and so supplementary protection certificates must be applied for and granted on a country-by-country basis. This can lead to a substantial cost to apply for and receive these certificates, which may vary among countries or not be provided at all. Further, we may not receive an extension because of, for example, 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 otherwise failing to satisfy applicable requirements. Moreover, the length of the extension could be less than we request. If we are unable to obtain patent term extension or if the term of any such extension is less than we request, our competitors may obtain approval of competing products earlier than expected following our patent expiration, and our business, financial condition, results of operations and prospects could be materially harmed.

If we are unable to protect the confidentiality of our proprietary information and trade secrets, the value of our technology and products could be materially adversely affected.

In addition to patent protection, we also rely on trade secrets and confidentiality agreements to protect other proprietary information that is not patentable or that we elect not to patent. To maintain the confidentiality of trade secrets and proprietary information, we enter into confidentiality agreements with our employees, consultants, independent contractors, collaborators, contract manufacturers, CROs and others upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or entity or made known to the individual or entity by us during the course of the individual's or entity's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees as well as our personnel policies also generally provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property or that we may obtain full rights to such inventions at our election. However, we cannot guarantee that we have entered into such agreements with each party that may have or has had access to our trade secrets or proprietary technology and processes and cannot guarantee that individuals with whom we have these agreements will comply with their terms. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets.

We may not have adequate remedies in the event of unauthorized use or disclosure of our proprietary information in the case of a breach of any such agreements and our trade secrets and other proprietary

information could be disclosed to third parties, including our competitors. Many of our partners also collaborate with our competitors and other third parties. The disclosure of our trade secrets to our competitors, or more broadly, would impair our competitive position and may materially harm our business, financial condition, results of operations and prospects. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to maintain trade secret protection could adversely affect our competitive business position. The enforceability of confidentiality agreements may vary from jurisdiction to jurisdiction. Courts outside the United States are sometimes less willing to protect proprietary information, technology and know-how. In addition, others may independently discover or develop substantially equivalent or superior proprietary information and techniques, and the existence of our own trade secrets affords no protection against such independent discovery.

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

We rely on our trademarks for name recognition by potential partners and customers in our markets of interest. However, our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names or marks. During trademark registration proceedings, we may receive rejections that we may be unable to overcome. 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, and our trademarks or trademark applications may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business, financial condition, results of operations and prospects may be adversely affected.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our proprietary and intellectual property rights is uncertain because such rights offer only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to develop products that are similar to, or better than, our product candidates in a way that is not covered by the claims of the patents we license or may own currently or in the future;
- we, or our licensing partners or current or future collaborators, might not have been the first to make or file patent applications for the inventions covered by issued patents or pending patent applications that we license or may own currently or in the future;
- we may not have the financial or other resources necessary to enforce a patent infringement or other proprietary rights violation action;
- we may choose not to file a patent for certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property;
- our trade secrets or proprietary know-how may be unlawfully disclosed, thereby losing their trade secret or proprietary status;
- our competitors or other third parties might conduct research and development activities in countries where we 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;

- it is possible that there are prior public disclosures that could invalidate our or our licensors' patents;
- the patents of third parties or pending or future applications of third parties, if issued, may have an adverse effect on our business;
- third parties could design around our patents, or independently develop trade secrets that provide them with an advantage over us;
- any patents that we obtain may not provide us with any competitive advantages or may ultimately be found not to be owned by us, or to be invalid or unenforceable; or
- we may not develop additional proprietary technologies that are patentable.

Should any of these events occur, they could significantly harm our business, financial conditions, results of operations and prospects.

Risks Related to Our Business and Industry

Even if we, or any current or future collaborators, are able to commercialize any product candidate that we or they develop, the successful commercialization of our product candidates will depend in part on the extent to which governmental authorities, private health insurers and other third-party payors provide coverage and adequate reimbursement levels and implement pricing policies favorable for our product candidates. Failure to obtain or maintain coverage and adequate reimbursement for our product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The healthcare industry is acutely focused on cost containment, both in the United States and elsewhere. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement. The insurance coverage and reimbursement status of newly approved products is uncertain and failure to obtain or maintain adequate coverage and reimbursement for our product candidates could limit our ability to generate revenue. Our business model is also focused on lowering the cost and increasing the accessibility of healthcare. Even if we are successful in driving down the cost of healthcare, third-party payors may still not view our product candidates, if approved, as cost-effective, and coverage and reimbursement may not be available to our patients or may not be sufficient to allow our products, if any, to be marketed on a competitive basis. If coverage and reimbursement are not available, or reimbursement is available only to limited levels, patient subpopulations of labeled indications, or otherwise restricted, we, or any collaborators, may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us, or any collaborators, to establish or maintain pricing sufficient to realize a sufficient return on our or their investments. Cost-control initiatives could also cause us to decrease any price we might establish for our product candidates, which could result in lower than anticipated product revenues. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our costs, including our costs related to research, development, manufacture, sale and distribution. Reimbursement rates may vary, by way of example, according to the use of the product and the clinical setting in which it is used. For products administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be difficult because of the higher costs often associated with administering such drugs. If the prices for our product candidates, if approved, decrease or if governmental and other third-party payors do not provide adequate coverage or reimbursement, our business, financial condition, results of operations and prospects will suffer, perhaps materially.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products. In the United States, the Centers for Medicare and Medicaid Services ("CMS"), the federal agency responsible for administering the Medicare program, makes the principal decisions about coverage and

reimbursement for new treatments under Medicare. Private payors may follow CMS to a substantial degree. It is difficult to predict what CMS will decide with respect to reimbursement for novel products such as ours. In addition, certain Affordable Care Act marketplace and other private payor plans are required to include coverage for certain preventative services, including vaccinations recommended by the U.S. Centers for Disease Control's ("CDC's"), Advisory Committee on Immunization Practices ("ACIP") without cost share obligations (*i.e.*, co- payments, deductibles or co-insurance) for plan members. For Medicare beneficiaries, our product candidates, apart from our COVID-19 product candidates, may be covered for reimbursement under either the Part B program or Part D depending on several criteria, including the type of vaccine and the beneficiary's coverage eligibility. If our product candidates, once approved, are reimbursed 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-payment associated with the Part D program. If our product candidates, once approved, are reimbursed only under the Part B program, certain potential drawbacks associated with the Part B program, such as the time and effort required to seek reimbursement after purchase, may make our product candidates less attractive to clinics or other potential customers. Outside of Medicare, private insurance is likely to raise similar claims adjudication and co-payment considerations, which may also make our product candidates less attractive to potential customers using private insurance.

Outside the United States, certain countries set prices and reimbursement for pharmaceutical products, with limited participation from the marketing authorization holders. We cannot be sure that such prices and reimbursement will be acceptable to us or our collaborators. If the regulatory authorities in these jurisdictions set prices or reimbursement levels that are not commercially attractive for us or our collaborators, our revenues from sales by us or our collaborators, and the potential profitability of our product candidates, in those countries would be negatively affected. Additionally, some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. As a result, we might obtain marketing approval for a product in a particular country, but then may experience delays in the reimbursement approval of our product or be subject to price regulations that would delay our commercial launch of the product, possibly for lengthy time periods, which could negatively impact the revenues we are able to generate from the sale of the product in that particular country.

Moreover, an increasing number of countries are taking initiatives to attempt to reduce large budget deficits by focusing cost-cutting efforts on pharmaceuticals for their state-run healthcare systems. These international price control efforts have impacted all regions of the world, notably in the European Union. In some countries, in particular in many Member States of the European Union, we may be required to conduct a clinical trial or other studies that compare the cost-effectiveness of our product candidates to other available therapies in order to obtain or maintain reimbursement or pricing approval. In addition, publication of discounts by third-party payors or authorities may lead to further pressure on the prices or reimbursement levels within the country of publication and other countries.

If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business, financial condition, results of operations or prospects could be materially adversely affected. Cost-control initiatives could cause us, or any collaborators, to decrease the price we, or they, might establish for products, which could result in lower than anticipated product revenues. Further, our competitors have more experience dealing with and contracting with payors for preferred coverage, which could potentially put us at a competitive disadvantage. An inability to promptly obtain coverage and adequate payment rates from both government-funded and private payors for any of our product candidates for which we, or any future collaborator, obtain marketing approval could significantly harm our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

Our business and current and future relationships with third-party payors, healthcare professionals and customers in the United States and elsewhere will be subject to applicable healthcare laws and regulations, which could expose us to significant penalties.

Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal civil False Claims Act, that may constrain the business or financial arrangements and relationships through which we conduct clinical research, sell, market and distribute any products for which we obtain marketing approval. In addition, we may be subject to physician payment transparency laws and patient privacy regulation by the federal government and by the U.S. states and foreign jurisdictions in which we conduct our business.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices, including our relationships with physicians and other healthcare providers, some of whom may recommend, purchase or prescribe our product candidate, if approved, 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 civil, criminal and administrative penalties, including, without limitation, damages, fines, disgorgement, individual imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of noncompliance with these laws and the curtailment or restructuring of our operations, which could have a material adverse effect on our business. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from participation in government healthcare programs, which could also materially affect our business.

Cyberattacks or other failures in our or our third-party vendors', contractors' or consultants' telecommunications or information technology systems could result in information theft, compromise, or other unauthorized access, data corruption and significant disruption of our business operations, and could harm our reputation and subject us to liability, lawsuits and actions from governmental authorities.

The success of our research and development programs depends on data which is stored and transmitted digitally, the corruption or loss of which could cause significant setback to one or all of our programs. We face a number of risks related to our use, processing, storage and security of this critical information, including loss of access, inappropriate use or disclosure, inappropriate modification corruption, unauthorized access or processing. Because we use third-party vendors and subcontractors to manage our sensitive information, we also may not have the ability to adequately monitor, audit or modify the security controls over this critical information. Despite the implementation of security measures, given the size and complexity of our internal information technology ("IT") systems and those of our third-party vendors, contractors and consultants, such IT systems are potentially vulnerable to breakdown or other damage or interruption from service interruptions, system malfunction, natural disasters, terrorism, war, and telecommunication and electrical failures.

Cyber threats are persistent and constantly evolving. Such threats, which may include ransomware or other malware, phishing attacks, denial of services attacks, man-in-the-middle attacks and others, have increased in frequency, scope and potential impact in recent years, which increase the difficulty of detecting and successfully defending against them. We may not be able to anticipate all types of security threats, and, despite

our efforts, we may not be able to implement preventive measures effective against all such security threats. The techniques used by cyber criminals change frequently, may not be recognized until launched, and can originate from a wide variety of sources, including outside groups such as external service providers, organized crime affiliates, terrorist organizations or hostile foreign governments or agencies. There can be no assurance that we or our third-party service providers, contractors or consultants will be successful in preventing cyberattacks or successfully mitigating their effects. Our IT systems and those of our third-party service providers, contractors or consultants are additionally vulnerable to security breaches from inadvertent or intentional actions by our employees, third-party vendors, contractors, consultants, business partners and/or other third parties. These threats pose a risk to the security of our systems and networks, the confidentiality and the availability, security and integrity of our data, and these risks apply both to us and to third parties on whose systems we rely for the conduct of our business. If the IT 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 a similar nature from occurring. Any cyberattack or destruction or loss of, unauthorized access to, processing of, or exfiltration of data could have a material adverse effect on our business, financial condition, results of operations and prospects. For example, if such an event were to occur and cause interruptions in our operations, or those of our third-party vendors and other contractors and consultants, it could result in a material disruption or delay of the development of our product candidates. In addition, we may suffer reputational harm or face litigation or adverse regulatory action as a result of cyberattacks or other data security breaches, particularly those involving personal information or protected health information, and may incur significant additional expense to implement further data protection measures. As cyber threats continue to evolve, we may be required to incur material additional expenses in order to enhance our protective measures or to remediate any information security vulnerability.

We are subject to stringent privacy laws, information security laws, regulations, policies and contractual obligations related to data privacy and security and changes in such laws, regulations, policies and contractual obligations could adversely affect our business, financial condition, results of operations and prospects.

We are subject to data privacy and security laws and regulations that apply to the collection, transmission, storage, use, processing, destruction, retention and security of personal information, which among other things, including additional laws or regulations relating to health information. The legislative and regulatory landscape for privacy and data protection continues to evolve in jurisdictions worldwide, and these laws may at times be conflicting. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices and our efforts to comply with the evolving data protection rules may be unsuccessful. We must devote significant resources to understanding and complying with this changing landscape. Failure to comply with federal, state and international laws regarding privacy and security of personal information could expose us to penalties under such laws, orders requiring that we change our practices, claims for damages or other liabilities, regulatory investigations and enforcement action, litigation and significant costs for remediation, any of which could adversely affect our business. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which have a material adverse effect on our business, financial condition, results of operations and prospects. Failure to comply with any of these laws and regulations could result in enforcement action against us, including fines, criminal prosecution of employees, claims for damages by affected individuals and damage to our reputation and loss of goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Additionally, if we are unable to properly protect the privacy and security of personal information, including protected health information, we could be found to have breached our contracts with certain third parties.

There are numerous U.S. federal and state laws and regulations related to the privacy and security of personal information. In particular, HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (“HITECH”) and their respective implementing regulations, establish privacy

and security standards that limit the use and disclosure of individually identifiable health information, or protected health information, and require the implementation of administrative, physical and technological safeguards to protect the privacy of protected health information and ensure the confidentiality, integrity and availability of electronic protected health information. Determining whether protected health information has been handled in compliance with applicable privacy standards and our contractual obligations can be complex and may be subject to changing interpretation. If we fail to comply with applicable privacy laws, including applicable HIPAA privacy and security standards, we could face civil and criminal penalties. The HHS has the discretion to impose penalties without attempting to first resolve violations. HHS enforcement activity can result in financial liability and reputational harm, and responses to such enforcement activity can consume significant internal resources. Even when HIPAA does not apply, failing to take appropriate steps to keep consumers' personal information secure can constitute unfair acts or practices in or affecting commerce and be construed as a violation of Section 5(a) of the Federal Trade Commission Act (the "FTCA"), 15 U.S.C § 45(a). The FTC expects a company's data security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business, and the cost of available tools to improve security and reduce vulnerabilities. Individually identifiable health information is considered sensitive data that merits stronger safeguards and the FTC's guidance for appropriately securing consumers' personal information is similar to what is required by the HIPAA Security Rule. In addition, state attorneys general are authorized to bring civil actions seeking either injunctions or damages in response to violations that threaten the privacy of state residents. We cannot be sure how these regulations will be interpreted, enforced or applied to our operations. In addition to the risks associated with enforcement activities and potential contractual liabilities, our ongoing efforts to comply with evolving laws and regulations at the federal and state level may be costly and require ongoing modifications to our policies, procedures and systems.

Internationally, laws, regulations and standards in many jurisdictions apply broadly to the collection, transmission, storage, use, processing, destruction, retention and security of personal information. For example, in the European Union, the collection, transmission, storage, use, processing, destruction, retention and security of personal data is governed by the provisions of the General Data Protection Regulation (the "GDPR") in addition to other applicable laws and regulations. The GDPR came into effect in May 2018, repealing and replacing the European Union Data Protection Directive, and imposing revised data privacy and security requirements on companies in relation to the processing of personal data of European Union data subjects. The GDPR, together with national legislation, regulations and guidelines of the European Union Member States governing the collection, transmission, storage, use, processing, destruction, retention and security of personal data, impose strict obligations with respect to, and restrictions on, the collection, use, retention, protection, disclosure, transfer and processing of personal data. The GDPR also imposes strict rules on the transfer of personal data to countries outside the European Union that are not deemed to have protections for personal information, including the United States. The GDPR authorizes fines for certain violations of up to 4% of the total global annual turnover of the preceding financial year or €20 million, whichever is greater. Such fines are in addition to any civil litigation claims by data subjects. Separately, Brexit has led and could also lead to legislative and regulatory changes and may increase our compliance costs. As of January 1, 2021, and the expiry of transitional arrangements agreed to between the United Kingdom and the European Union, data processing in the United Kingdom is governed by a United Kingdom version of the GDPR (combining the GDPR and the Data Protection Act 2018), exposing us to two parallel regimes, each of which authorizes similar fines and other potentially divergent enforcement actions for certain violations. On June 28, 2021, the European Commission adopted an adequacy decision for the United Kingdom, allowing for the relatively free exchange of personal information between the European Union and the United Kingdom. Other jurisdictions outside the European Union are similarly introducing or enhancing privacy and data security laws, rules and regulations, which could increase our compliance costs and the risks associated with noncompliance. We cannot guarantee that we are, or will be, in compliance with all applicable international regulations as they are enforced now or as they evolve.

We face potential liability related to the privacy of health information we obtain from clinical trials sponsored by us.

Most healthcare providers, including research institutions from which we obtain patient health information, are subject to privacy and security regulations promulgated under HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act. We do not believe that we are currently classified as a covered entity or business associate under HIPAA and thus are not directly subject to its requirements or penalties. However, any person may be prosecuted under HIPAA's criminal provisions either directly or under aiding-and-abetting or conspiracy principles. Consequently, depending on the facts and circumstances, we could face substantial criminal penalties if we knowingly receive individually identifiable health information from a HIPAA-covered healthcare provider or research institution that has not satisfied HIPAA's requirements for disclosure of individually identifiable health information. Even when HIPAA does not apply, according to the FTC failing to take appropriate steps to keep consumers' personal information secure constitutes unfair acts or practices in or affecting commerce in violation of the FTCA. The FTC expects a company's data security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business, and the cost of available tools to improve security and reduce vulnerabilities. Individually identifiable health information is considered sensitive data that merits stronger safeguards.

In addition, we may maintain sensitive personally identifiable information, including health information, that we receive throughout the clinical trial process, in the course of our research collaborations. As such, we may be subject to state laws, including the CCPA, requiring notification of affected individuals and state regulators in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA. Our clinical trial programs outside the United States may implicate international data protection laws, including the GDPR and legislation of the EU member states implementing it.

Our activities outside the United States impose additional compliance requirements and generate additional risks of enforcement for noncompliance. Failure by our CROs and other contractors to comply with the strict rules on the transfer of personal data outside of the EU into the United States may result in the imposition of criminal and administrative sanctions on such collaborators, which could adversely affect our business. Furthermore, certain health privacy laws, data breach notification laws, consumer protection laws and genetic testing laws may apply directly to our operations and/or those of our collaborators and may impose restrictions on our collection, use and dissemination of individuals' health information.

Moreover, patients about whom we or our collaborators obtain health information, as well as the providers who share this information with us, may have statutory or contractual rights that limit our ability to use and disclose the information. We may be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy and data security laws. Claims that we have violated individuals' privacy rights or breached our contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm our business.

If we or our contract manufacturers, CROs or other contractors or consultants fail to comply with applicable federal, state or local regulatory privacy requirements, we could be subject to a range of regulatory actions that could affect our or our contractors' ability to develop and commercialize our product candidates and could harm or prevent sales of any affected products that we are able to commercialize, or could substantially increase the costs and expenses of developing, commercializing and marketing our products. Any threatened or actual government enforcement action could also generate adverse publicity and require that we devote substantial resources that could otherwise be used in other aspects of our business. Increasing use of social media could give rise to liability, breaches of data security or reputational damage. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. We face and will continue to face competition from third parties that use similar platforms and from third parties focused on developing and commercializing other peptide and peptide-based product candidates. The competition is likely to come from multiple sources, including large and specialty pharmaceutical and biotechnology companies, academic research institutions, government agencies and public and private research institutions.

Many of our potential competitors, alone or with their strategic partners, have substantially greater financial, technical and other resources than we do, such as larger research and development, clinical, marketing and manufacturing organizations. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even greater concentration of resources among a smaller number of competitors. Our commercial opportunity could be reduced or eliminated if competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approvals for their products faster or earlier than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. For example, some of our competitors have already received approval from the FDA and other regulatory authorities for their COVID-19 vaccines and are already developing vaccines or boosters to address variants of SARS-CoV-2. Additionally, technologies developed by our competitors may render our product candidates uneconomical or obsolete, and we may not be successful in marketing our product candidates against competitors' products. In addition, the availability of our competitors' products and the lack of complementary products offered by our sales and distribution team as compared to competitors with more extensive product lines, could limit the demand and the prices we are able to charge for any products that we may develop and commercialize.

Developments by competitors may render our products or technologies obsolete or non-competitive or may reduce the size of our markets.

Our industry has been characterized by extensive research and development efforts, rapid developments in technologies, intense competition and a strong emphasis on proprietary products. We expect our product candidates to face intense and increasing competition as new products enter the relevant markets and advanced technologies become available. We face potential competition from many different sources, including pharmaceutical, biotechnology and specialty pharmaceutical companies. Academic research institutions, governmental agencies and public and private institutions are also potential sources of competitive products and technologies. Our competitors may have or may develop superior technologies or approaches and have different business models from us which do not focus on democratizing healthcare and on lower cost, all of which may provide them with competitive advantages. Many of these competitors may also have compounds already approved or in development in the therapeutic categories that we are targeting with our product candidates. The global vaccine market is highly concentrated among a small number of multinational pharmaceutical companies: Pfizer, Merck, GlaxoSmithKline and Sanofi together control most of the global vaccine market. While we are not aware of all of our competitors' efforts, there are twenty-two COVID-19 vaccines already approved for use in one or more countries around the world, including three in the United States. We also face substantial competition in therapeutic areas outside of COVID-19. For example, the FDA approved aducanumab in June 2021 as the first FDA-approved immunotherapy for AD. In addition, many of our competitors, either alone or together with their collaborative partners, may operate larger research and development programs or have substantially greater financial resources than we do, as well as greater experience in:

- developing product candidates;
- undertaking pre-clinical testing and clinical trials;

- obtaining NDA approval by the FDA;
- obtaining comparable foreign regulatory approvals of product candidates;
- formulating and manufacturing products;
- launching, marketing and selling products; and
- competing for market share, obtaining reimbursement and securing payor contractors for preferential coverage.

If these competitors access the marketplace with safer, more effective, or less expensive therapeutics, our product candidates, if approved for commercialization, may not be profitable to sell or worthwhile to continue to develop. Technology in the pharmaceutical industry has undergone rapid and significant change, and we expect that it will continue to do so. Any compounds, products or processes that we develop may become obsolete or uneconomical before we recover any expenses incurred in connection with their development. The success of our product candidates will depend upon factors such as product efficacy, safety, reliability, availability, timing, scope of regulatory approval, acceptance and price, among other things. Other important factors to our success include speed in developing product candidates, completing clinical development and laboratory testing, obtaining regulatory approvals and manufacturing and selling commercial quantities of potential products.

Our product candidates are intended to compete directly or indirectly with existing products and products currently in development. Even if approved and commercialized, our product candidates may fail to achieve market acceptance with hospitals, physicians, patients or third-party payors. Hospitals, physicians or patients may conclude that our products are less safe or effective or otherwise less attractive than existing drugs. If our product candidates do not receive market acceptance for any reason, our revenue potential would be diminished, which would materially adversely affect our ability to become profitable.

Many of our competitors have substantially greater capital resources, robust product candidate pipelines, established presence in the market and expertise in research and development, manufacturing, pre-clinical and clinical testing, obtaining regulatory approvals and reimbursement and marketing approved products than we do. As a result, our competitors may achieve product commercialization or patent or other intellectual property protection earlier than we can. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified clinical, regulatory, scientific, sales, marketing and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient, or are less expensive than any products that we may develop or that would render any products that we may develop obsolete or noncompetitive.

We are subject to anticorruption laws, including the U.S. Foreign Corrupt Practices Act ("FCPA"), and non-U.S. jurisdictions where we conduct business. If we fail to comply with these laws, we could be subject to civil or criminal penalties, other remedial measures, and legal expenses, which could adversely affect our business, financial condition, results of operations and prospects.

We are currently subject to anti-corruption laws, including the FCPA. The FCPA, the U.K. Bribery Act 2010 and other applicable anti-bribery and anti-corruption laws generally prohibit us, our employees and intermediaries from bribing, being bribed or making other prohibited payments to government officials or other persons to obtain or retain business or gain other business advantages. We also participate in collaborations and relationships with third parties whose actions could potentially subject us to liability under the FCPA or other

jurisdictions' anti-corruption laws. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the corporation and to devise and maintain an adequate system of internal accounting controls. Our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-U.S. governments. Additionally, in many other countries, the health care providers who prescribe pharmaceuticals are (directly or indirectly) employed by their government, and the purchasers of pharmaceuticals are government entities; therefore, our dealings with these prescribers and purchasers are subject to regulation under, but not limited to, the FCPA. Recently, the SEC and Department of Justice have also increased their FCPA enforcement activities with respect to pharmaceutical companies.

There is no assurance that we will be completely effective in ensuring our compliance with all applicable anti-corruption laws, including the FCPA, particularly given the high level of complexity of these laws. We have adopted a code of conduct applicable to all of our employees, but it is not always possible to identify and deter misconduct by these parties 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, claims or lawsuits stemming from a failure to comply with such laws or regulations. If we are not in compliance with the FCPA or other anti-corruption laws, we may be subject to criminal and civil penalties, disgorgement and other sanctions and remedial measures, and legal expenses, which could have an adverse impact on our business, financial condition, results of operations and prospects. Similarly, any investigation of any potential violations of the FCPA or other anti-corruption laws by authorities in the United States or other jurisdictions where we conduct business could also have an adverse impact on our reputation, business, financial condition, results of operations and prospects.

As a result of our geographically diverse operations, we are more susceptible to certain risks.

We have offices in two different countries and additional operations in two different countries. If we are unable to manage the risks of our global operations, including fluctuations in foreign exchange and inflation rates, international hostilities, natural disasters, security breaches, our ability to supply our product candidates on a timely and large scale basis in local markets, lead times for shipping, accounts receivable collection times, import or export licensing requirements, language barriers, failure to maintain compliance with our clients' control requirements and multiple legal and regulatory systems, our results of operations and ability to grow could be materially adversely affected. In particular, our business and stock price may be affected by fluctuations in foreign exchange rates between currencies in different jurisdictions in which operate or in which we may have sales in the future.

Certain legal and political risks are also inherent in foreign operations. Foreign sales of our product candidates could be adversely affected by the imposition of governmental controls, political and economic instability, trade restrictions and changes in tariffs. In many countries, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a drug. There is a risk that foreign governments may nationalize private enterprises in certain countries where we may operate. In certain countries or regions, terrorist activities and the response to such activities may threaten our operations more than in the United States. Social and cultural norms in certain countries may not support compliance with our corporate policies, including those that require compliance with substantive laws and regulations. Also, changes in general economic and political conditions in countries where we may operate are a risk to our financial performance and future growth. Additionally, the need to identify financially and commercially strong partners for commercialization outside the United States who will comply with the high manufacturing and legal and regulatory compliance standards we require is a risk to our financial performance. As we operate our business globally, our success will depend, in part, on our ability to anticipate and effectively manage these and other related risks. There can be no assurance that the consequences of these and other factors relating to our international operations will not have an adverse effect on our business, financial condition, results of operations and prospects.

We are exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing and use of pharmaceutical products.

The use of our investigational medicinal products in clinical trials, the sale of our ELISA test and the sale of any approved products in the future may expose us to liability claims. These claims might be made by patients who use the product, health care providers, pharmaceutical companies or others selling such products. Any claims against us, regardless of their merit, could be difficult and costly to defend and could materially adversely affect the market for our product candidates or any prospects for commercialization of our product candidates.

In addition, regulations vary significantly across jurisdictions regarding the clinical trial sponsor's responsibility to provide free medical care and compensation to clinical trial participants who experience an injury or illness during the trial. For example, there is no legal requirement in the United States for sponsors to provide free medical treatment or compensation to a participant injured during a study; as a result, sponsors usually agree to pay for the medical care to diagnose and treat participant injuries to the extent related to the clinical trial and typically do not pay unless the injury is determined to be related to participation in the trial. In contrast, India requires free medical care until it is established that the injury is not related to the study and compensation for any injury that is determined to be related to the study. In 2019, India's Ministry of Health and Family Welfare published the "New Drugs and Clinical Trials Rules," which increased a clinical trial sponsor's liability for injuries related to clinical trial trials. Under the regulation, sponsors are required to (i) provide "free medical management" to participants that experience an injury that, in the investigator's opinion, is related to the study or until it is established that the injury is not related to the study and (ii) "compensate" clinical trial participants for trial-related injuries. Clinical trials conducted in jurisdictions with broad compensation and medical care requirements could result in increased overall research costs and adversely affect our ability to conduct clinical trials.

Although the clinical trial process is designed to identify and assess potential side effects, it is always possible that a product, even after regulatory approval, may exhibit unforeseen side effects, including rare side effects more likely to be seen in commercial use than in clinical studies. If any of our product candidates were to cause adverse side effects during clinical trials or after approval of the product candidate, we may be exposed to substantial liabilities. Physicians and patients may not comply with any warnings that identify known potential adverse effects and patients who should not use our product candidates.

To cover such liability claims, we purchase clinical trial insurances in the conduct of each of our clinical trials, typically through our CROs. It is possible that our liabilities could exceed our insurance coverage or that our insurance will not cover all situations in which a claim against us could be made. We also intend to expand our insurance coverage to include the sale of commercial products if we receive marketing approval for any of our proprietary products. However, we may not be able to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired. Should any of the events described above occur, this could have a material adverse effect on our business, financial condition, results of operations and prospects, including, but not limited to:

- decreased demand for our future product candidates;
- adverse publicity and injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;

- a diversion of management's time and our resources;
- compensation in response to a liability claim;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources; and
- the inability to commercialize our products or product candidates.

We could be adversely affected if we are subject to negative publicity. We could also be adversely affected if any of our products or any similar products distributed by other companies prove to be, or are asserted to be, harmful to patients. Any adverse publicity associated with illness or other adverse effects resulting from patients' use or misuse of our products or any similar products distributed by other companies could have a material adverse impact on our business, financial condition, results of operations or prospects.

We will need to expand our organization, and we may experience difficulties in managing this growth, which could disrupt our operations.

We expect to expand our organization, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations. We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of clinical development and regulatory affairs, as well as to support our public company operations. For example, we may build our own focused sales, distribution and marketing infrastructure to market our product candidates, if approved, in markets around the world, which involves significant expenses and risks. To manage these growth activities, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Our management may need to devote a significant amount of its attention to managing these growth activities. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations, retain key employees or identify, recruit and train additional qualified personnel. Our inability to manage the expansion or relocation of our operations effectively may result in weaknesses in our infrastructure, give rise to operational mistakes, loss of business opportunities, loss of employees and reduced productivity among remaining employees. Our expected growth could also require significant capital expenditures and may divert financial resources from other projects, such as the development of additional product candidates. If we are unable to effectively manage our expected growth, our expenses may increase more than expected, our ability to generate revenues could be reduced and we may not be able to implement our business strategy, including the successful development and commercialization of our product candidates. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects. Future growth would impose significant additional responsibilities on our management, including:

- the need to identify, recruit, maintain, motivate and integrate additional employees, consultants and contractors;
- managing our internal development efforts effectively, including the clinical and regulatory review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain related parties, independent organizations, advisors and consultants to provide certain services, including substantially all aspects of regulatory approval, clinical trial management and manufacturing. There can be no assurance that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval of our product candidates or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all. If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, or we are not able to effectively build out new facilities to accommodate this expansion, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

Many of the biotechnology and pharmaceutical companies that we compete against for qualified personnel and consultants have greater financial and other resources, different risk profiles and a longer history in the industry than we do. If we are unable to continue to attract and retain high-quality personnel and consultants, the rate and success at which we can discover and develop product candidates and operate our business will be limited.

We only have a limited number of employees to manage and operate our business, which may lead to certain operational issues.

As of September 1, 2021, we had 75 full-time employees. Our focus on the development of UB-311, our COVID-19 product candidates and other product candidates requires us to manage and operate our business in a highly efficient manner. We have a limited number of employees upon which we rely to effectively manage and operate our business and we cannot assure you that operational issues will not arise.

While we intend to identify, recruit, maintain, motivate and integrate additional employees, consultants and contractors to support our growth, we cannot assure you that we will be able to hire and/or retain adequate staffing levels to develop our product candidates or run our operations and/or to accomplish all of the objectives that we otherwise would seek to accomplish.

If we lose key management or scientific personnel, cannot recruit qualified employees, directors, officers or other significant personnel or experience increases in our compensation costs, our business may materially suffer.

We are highly dependent on our management and directors. Due to the specialized knowledge each of our officers and key employees possesses with respect to our product candidates and our operations, the loss of service of any of our officers or directors could delay or prevent the successful enrollment and completion of our clinical trials. We do not carry key person life insurance on any officers or directors. In general, the employment arrangements that we have with our executive officers do not prevent them from terminating their employment with us at any time. Our agreements with our employees generally provide for at-will employment.

In addition, our future success and growth will depend in part on the continued service of our directors, employees and management personnel and our ability to identify, hire and retain additional personnel. If we lose one or more of our executive officers or key employees, our ability to implement our business strategy successfully could be seriously harmed. Furthermore, replacing executive officers and key employees may be difficult or costly and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to develop, gain regulatory approval of and commercialize product candidates successfully. Competition to hire from this limited pool is intense, and we may

be unable to hire, train, retain or effectively incentivize these additional key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research, development and commercialization strategy. Our consultants and advisors may be engaged by entities other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to develop and commercialize product candidates will be limited.

Many of our employees have become or will soon become vested in a substantial amount of our Class A common stock or a number of common stock options. Our employees may be more likely to leave us if the shares they own have significantly appreciated in value relative to the original purchase prices of the shares, or if the exercise prices of the options that they hold are significantly below the market price of Class A our common stock, particularly after the expiration of the lock-up agreements described herein. Our future success also depends on our ability to continue to attract and retain additional executive officers and other key employees.

If we engage in future acquisitions, joint ventures or strategic collaborations, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities and subject us to other risks.

We may evaluate various acquisitions and collaborations, including licensing or acquiring complementary products, intellectual property rights, technologies, or businesses. Any potential acquisition, joint venture, or collaboration may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;
- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management’s attention from our existing product programs and initiatives in pursuing such a strategic merger or acquisition;
- retention of key employees, the loss of key personnel and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party and their existing products or investigational medicines and regulatory approvals; and
- our inability to generate revenue from acquired technology or products sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

In addition, if we undertake acquisitions, we may utilize our cash, issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense.

Moreover, we may not be able to locate suitable acquisition or strategic collaboration opportunities, and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

We or the third parties upon whom we depend may be adversely affected by natural disasters or pandemics and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Natural disasters or pandemics, other than or in addition to COVID-19 and including any potential future waves of COVID-19, could severely disrupt our operations and have a material adverse effect on our business, results of operations, financial condition and prospects. If a natural disaster, power outage, pandemic, such as the COVID-19 pandemic, or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as the manufacturing facilities on which we rely, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business.

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

The global economy, including credit and financial markets, has 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. For example, the COVID-19 pandemic has resulted in widespread unemployment, an economic slowdown and extreme volatility in the capital markets. While these effects of COVID-19 have abated in recent months as countries, including the United States, have re-opened and the rate of vaccinations increase, COVID-19 continues to cause significant disruptions both in the United States and globally. If the equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult to obtain in a timely manner or on favorable terms, more costly or more dilutive. In addition, there is a risk that one or more of our CROs, suppliers, contract manufacturers or other third-party providers may not survive an economic downturn, or that industry trends with respect to pricing models, supply chains and delivery mechanisms, among other things, deviate from our expectations. As a result, our business, results of operations and price of our Class A common stock may be adversely affected.

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

Though we have insurance coverage for clinical trial product liability, we do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include general liability, auto, renters', workers' compensation and directors' and officers' insurance.

Any additional product liability insurance coverage we acquire in the future may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and in the future we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. If we obtain marketing approval for any of our product candidates, we intend to acquire insurance coverage to include the sale of commercial products; however, we may be unable to obtain product liability insurance on commercially reasonable terms or in adequate amounts. A successful product liability claim or series of claims brought against us could cause our stock price to decline and, if judgments exceed our insurance coverage, could adversely affect our results of operations and business, including preventing or limiting the development and commercialization of any product candidates we develop. We do not carry specific biological or hazardous waste insurance coverage, and our renters' and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, 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.

We also expect that operating as a public company will make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers. We do not know, however, if we will be able to maintain existing insurance with adequate levels of coverage. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our cash and cash equivalents position and results of operations.

The ongoing coronavirus pandemic has caused interruptions or delays of our business plan. Delays caused by the coronavirus pandemic may have a significant adverse effect on our business.

In December 2019, a strain of coronavirus, COVID-19, was reported to have surfaced in Wuhan, China, and on March 12, 2020, the World Health Organization declared COVID-19 to be a pandemic. In an effort to contain and mitigate the spread of COVID-19, many countries, including the United States, Canada and China, have imposed unprecedented restrictions on travel, quarantines and other public health safety measures. The extent to which the pandemic may impact our business will depend on future developments, which are highly uncertain and cannot be predicted, but the development of clinical supply materials could be delayed and enrollment of patients in our studies may be delayed or suspended, as hospitals and clinics in areas where we are conducting trials shift resources to cope with the COVID-19 pandemic and may limit access or close clinical facilities due to the COVID-19 pandemic. Additionally, if our trial participants are unable to travel to our clinical study sites as a result of quarantines or other restrictions resulting from the COVID-19 pandemic, we may experience higher drop-out rates or delays in our clinical studies. We have manufacturers and collaboration partners located in foreign jurisdictions, and travel restrictions have limited, and may continue to limit, our ability to visit their locations in person and conduct on-site inspections.

Government-imposed quarantines and restrictions may also require us to temporarily suspend or terminate activity at our clinical sites. Furthermore, if we determine that our trial participants may suffer from exposure to COVID-19 as a result of their participation in our clinical trials, we may voluntarily terminate certain clinical sites as a safety measure until we reasonably believe that the likelihood of exposure has subsided. As a result, we may encounter difficulties or delays in initiating, enrolling, conducting or completing our planned and ongoing clinical trials, and our expected development timelines for our product candidates may be negatively impacted. We cannot predict the ultimate impact of the COVID-19 pandemic as consequences of such an event are highly uncertain and subject to change. We do not yet know the full extent of potential delays or impacts on our business, our clinical studies or as a whole; however, the COVID-19 pandemic may materially disrupt or delay our business operations, further divert the attention and efforts of the medical community to coping with COVID-19, disrupt the marketplace in which we operate, and/or have a material adverse effect on our operations.

Moreover, the various precautionary measures taken by many governmental authorities around the world in order to limit the spread of COVID-19 has had and may continue to have an adverse effect on the global markets and global economy generally, including on the availability and pricing of employees, resources, materials, manufacturing and delivery efforts and other aspects of the global economy. There have been business closures and a substantial reduction in economic activity in countries that have had significant outbreaks of COVID-19. Significant uncertainty remains as to the potential impact of the COVID-19 pandemic on the global economy as a whole. It is currently not possible to predict how long the pandemic will last or the time that it will take for economic activity to return to prior levels. The COVID-19 pandemic could materially disrupt our business and operations, interrupt our sources of supply, hamper our ability to raise additional funds or sell or securities, continue to slow down the overall economy or curtail consumer spending.

Due to the vaccination rate, the demand for our COVID-19 product candidates may decrease significantly or disappear entirely.

An EUA for UB-612 was denied by the TFDA in August 2021. In addition to appealing that decision, we plan to pursue regulatory approval for UB-612 from one or more regulators in other jurisdictions that may

accept Phase 2 and immunobridging data as the basis for an EUA submission. We may also pursue approval of UB-612 as a three-dose regimen or as a heterologous boost (boosting the immunity of a subject who has already received a different vaccine). At the same time, we are accelerating our development of our second COVID-19 product candidate, UB-612A. Other companies have also responded to the pandemic at a faster pace, and to date twenty-two vaccines have been approved for use in one or more countries around the world, including three in the United States. As of August 31, 2021, approximately 27% of the global population has been fully vaccinated. As our competitors continue to develop, receive regulatory approval for and commercialize their own COVID-19 vaccines and boosters, vaccination rates are likely to increase, which may result in a material decrease in demand for our COVID-19 product candidates and a corresponding decrease in our revenues. Further, the existence and significance of the opportunity to provide COVID-19 boosters in the future is highly uncertain, and there can be no assurance that we will commercially benefit from the development of a COVID-19 booster market.

Risks Related to Our Class A Common Stock and This Offering

Our Class A common stock has no prior public market, and we cannot assure you that an active trading market for our Class A common stock will develop.

Prior to this offering, there has been no public market for our Class A common stock. Although we intend to apply for listing on the Nasdaq, an active trading market for shares of our Class A common stock may never develop or be sustained following this offering. If an active trading market does not develop, you may have difficulty selling your shares of our Class A common stock at an attractive price, or at all. The price for shares of our Class A common stock in this offering will be determined by negotiations among us and representatives of the underwriters, and it may not be indicative of prices that will prevail in the open market following the completion of this offering. Consequently, you may not be able to sell your shares of our Class A common stock at or above the initial public offering price or at any other price, or at the time that you would like to sell. An inactive market may also impair our ability to raise capital by selling shares of our common stock, our ability to motivate our employees through equity incentive awards, and our ability to acquire other companies, products or technologies by using our common stock as consideration for such acquisitions.

The price of our Class A common stock may be volatile and may be affected by market conditions beyond our control, and the market price of our Class A common stock may drop below the price you pay to purchase shares of our Class A common stock in this offering.

Our results of operations are likely to fluctuate in the future as a publicly traded company. In addition, securities markets worldwide have experienced, and are likely to continue to experience, significant price and volume fluctuations. This market volatility, as well as general economic, market or political conditions, could subject the market price of our shares of Class A common stock to wide price fluctuations regardless of our operating performance, which could cause a decline in the value of your investment. You should also be aware that price volatility may be greater if the public float and trading volume of shares of our Class A common stock is low. Some factors that may cause the market price of our Class A common stock to fluctuate, in addition to the other risks mentioned in this prospectus, include:

- our operating and financial performance and prospects;
- our announcements or our competitors' announcements regarding new products or services, enhancements, significant contracts, acquisitions or strategic investments;
- any delay in our development or regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings;
- if any of our product candidates receives an EUA or regulatory approval, the terms of such approval and market acceptance and demand for such product candidates;

- the success of any efforts to acquire or in-license additional technologies, products or product candidates;
- changes in earnings estimates or recommendations by securities analysts who cover our Class A common stock;
- fluctuations in our financial results or, in the event we provide it from time to time, earnings guidance, or the financial results or earnings guidance of companies perceived by investors to be similar to us;
- changes in our capital structure, such as future issuances of securities, sales of large blocks of common stock by our stockholders, including our principal stockholders, or the incurrence of additional debt;
- additions and departure of key personnel;
- any disputes relating to our intellectual property, including any intellectual property infringement lawsuit or opposition, interference or cancellation proceeding in which we may become involved;
- reputational issues, including reputational issues involving our competitors and their products;
- actions by institutional stockholders;
- changes in general economic and market conditions, including related to the COVID-19 pandemic;
- changes in industry conditions or perceptions or changes in the market outlook for the industry in which we compete, including changes in the structure of healthcare payment systems; and
- changes in applicable laws, rules or regulations or regulatory actions affecting us or our clients and other dynamics.

These and other factors may cause the market price for shares of our Class A common stock to fluctuate substantially, which may limit or prevent investors from readily selling their shares of our Class A common stock and may otherwise negatively affect the liquidity of our Class A common stock. In addition, in the past, when the market price of a stock has been volatile, holders of that stock sometimes have instituted securities class action litigation against the company that issued the stock. Securities litigation against us, regardless of the merits or outcome, could result in substantial costs and divert the time and attention of our management from the business, which could significantly harm our business, results of operation, financial condition or reputation.

The dual-class structure of our common stock and the Voting Agreement will have the effect of concentrating voting power, which will significantly limit your ability to influence the outcome of matters submitted to our stockholders for approval, including the election of our board of directors, the adoption of amendments to our Charter and Bylaws and the approval of any merger, consolidation, sale of all or substantially all of our assets or other major corporate transaction.

Our Class A common stock, which is the stock we are offering by means of this prospectus, will have one vote per share, and our Class B common stock will have ten votes per share. Our principal stockholders have entered into the Voting Agreement, which will be effective upon the completion of this offering. Upon the completion of this offering, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, the Voting Agreement will cover, in the aggregate, approximately % of the total voting power of our outstanding capital stock (or % if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us). The Voting Agreement provides Ms. Hu with the authority (and irrevocable proxies) to direct the vote and vote the shares of capital stock held by the

parties to the voting agreement at her discretion on all matters to be voted upon by stockholders. The voting power covered by the Voting Agreement may increase over time as the UBI Warrant is exercised and as our principal stockholders exercise or vest equity awards outstanding at the time of the completion of this offering. If all such equity awards held by our principal stockholders had been exercised or vested and exchanged for shares of common stock and the UBI Warrant had been exercised in full for shares of Class A common stock as of the date of the completion of this offering, assuming no other equity awards had been exercised or vested, the Voting Agreement would cover, in the aggregate as of the completion of this offering, approximately % of the total voting power of our outstanding capital stock (or % if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us). As a result, if our principal stockholders retain all or a large portion their common stock, including the common stock issuable upon the exercise or vesting of such principal stockholders' outstanding equity awards or upon the exercise of the UBI Warrant, our principal stockholders will be able to significantly influence (if not control) any action requiring the approval of our stockholders, including the election of our board of directors, the adoption of amendments to our Charter and Bylaws and the approval of any merger, consolidation, sale of all or substantially all of our assets or other major corporate transaction. Assuming our principal stockholders retain their equity interests and the Voting Agreement remains in effect, our principal stockholders will effectively control all such matters submitted to the stockholders for the foreseeable future. Our principal stockholders will also have the voting power to determine the composition of our board of directors, which in turn will be able to determine matters affecting us, including, among others:

- any determination with respect to our business direction and policies, including the appointment and removal of officers;
- the adoption of amendments to our Charter and Bylaws;
- determinations with respect to mergers, business combinations or disposition of assets;
- compensation and benefit programs and other human resources policy decisions;
- the payment of dividends on our common stock; and
- determinations with respect to tax matters.

Our principal stockholders may have interests that differ from yours and may vote in a way with which you disagree and which may be adverse to your interests. This concentrated control may have the effect of delaying, preventing or deterring a change in control of the Company, could deprive our stockholders of an opportunity to receive a premium for their capital stock as part of a sale in the Company and might ultimately affect the market price of our Class A common stock. In addition, each share of Class B common stock will automatically convert into one share of Class A common stock upon any transfer, whether or not for value and whether voluntary or involuntary or by operation of law, except for certain transfers described in our Charter, including, without limitation, certain transfers for tax and estate planning purposes. Such issuances will be dilutive to holders of our Class A common stock. For information about our dual-class structure, see the section titled "Description of Capital Stock."

We are an "emerging growth company" and a "smaller reporting company" and will be able to avail ourselves of reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies, which could make our Class A common stock less attractive to investors and adversely affect the market price of our Class A common stock.

We are an "emerging growth company," as defined in the JOBS Act. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year in which we have annual gross revenues of $1.07 billion or more; (ii) the date on which we have issued more than $1.0 billion in non-convertible debt in the previous three years; (iii) the date we qualify as a "large accelerated filer" under the Exchange Act, which would

occur at the end of a given fiscal year if the market value of our common stock that is held by non-affiliates is $700 million or more as of the last business day of the second fiscal quarter of such year (and we have been a public company for at least 12 months and have filed one annual report on Form 10-K); and (iv) the last day of the fiscal year ending after the fifth anniversary of this offering. 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:

- not being required to comply with the auditor attestation requirements of Section 404 of 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;
- being required to provide only two years of audited financial statements in addition to any required unaudited interim financial statements;
- permitting an extended transition period for complying with new or revised accounting standards, which allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies;
- 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 may choose to take advantage of some, but not all, of the available exemptions. We relied on exemptions from certain disclosure requirements in this prospectus. In particular, we have provided only two years of audited financial statements and have not included all of the executive compensation information that would be required if we were not an emerging growth company. We have elected to use the extended transition period for new or revised accounting standards during the period in which we remain an emerging growth company. To the extent that we continue to qualify as a "smaller reporting company," as such term is defined in Rule 12b-2 under the Exchange Act, after we cease to qualify as an emerging growth company, we will continue to be permitted to make certain reduced disclosures in our periodic reports and other documents that we file with the SEC. We cannot predict whether investors will find our Class A common stock less attractive as a result of our reliance on these exemptions. If some investors find our Class A common stock less attractive as a result, there may be a less active trading market for our Class A common stock and our stock price may be more volatile.

As long as our principal stockholders hold a majority of the voting power of our capital stock, we may rely on certain exemptions from the corporate governance requirements of the Nasdaq available for "controlled companies."

Upon the completion of this offering, we expect to be a "controlled company" within the meaning of the corporate governance requirements of the Nasdaq because our principal stockholders will continue to hold more than 50% of the voting power of our outstanding shares of capital stock as a result of our dual-class common stock structure and the Voting Agreement. A controlled company may elect not to comply with certain corporate governance requirements of the Nasdaq. Accordingly, our board of directors will not be required to have a majority of independent directors and our Compensation Committee and Nominating and Governance Committee will not be required to meet the director independence requirements to which we would otherwise be subject until such time as we cease to be a "controlled company." Accordingly, you will not have certain of the protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of the Nasdaq.

If you purchase shares of our Class A common stock in this offering, you will suffer immediate and substantial dilution of your investment.

The initial public offering price of our Class A common stock is substantially higher than the net tangible book deficit per share of our common stock. Therefore, if you purchase shares of our Class A common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book deficit per share after this offering. Based on the initial public offering price of $ per share of Class A common stock, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, less the underwriting discounts and commissions and estimated offering expenses payable by us, you will experience immediate dilution of $ per share, representing the difference between our as further adjusted net tangible book deficit per share after giving effect to this offering and the initial public offering price (less the underwriting discounts and commissions and estimated offering expenses payable by us). See "Dilution" for more detail.

Your percentage ownership in us may be diluted by future issuances of capital stock, which could reduce your influence over matters on which stockholders vote.

Pursuant to our Charter and Bylaws, our board of directors has the authority, without action or vote of our stockholders, to issue all or any part of our authorized but unissued shares of common stock, including shares issuable upon the exercise of options, or shares of our authorized but unissued preferred stock. Issuances of shares of common stock or shares of voting preferred stock would reduce your influence over matters on which our stockholders vote and, in the case of issuances of shares of preferred stock, would likely result in your interest in us being subject to the prior rights of holders of that preferred stock.

Participation in this offering by our existing stockholders and their affiliated entities may reduce the public float for our Class A common stock.

To the extent certain of our existing stockholders and their affiliated entities participate in this offering, including through the directed share program, such purchases would reduce the non-affiliate public float of our shares of Class A common stock, or the number of shares of our Class A common stock that are not held by officers, directors and principal stockholders. A reduction in the public float could reduce the number of shares of Class A common stock that are available to be traded at any given time, thereby adversely impacting the liquidity of our common stock and depressing the price at which you may be able to sell shares of common stock purchased in this offering.

Future sales of a substantial number of shares of our Class A common stock may depress the price of our shares.

If our stockholders sell a large number of shares of our Class A common stock, or if we issue a large number of shares of our Class A common stock in connection with future acquisitions, financings or other circumstances, the market price of shares of our Class A common stock could decline significantly. Moreover, the perception in the public market that our stockholders might sell shares of our Class A common stock could depress the market price of those shares. In addition, sales of a substantial number of shares of our common stock by our principal stockholders could adversely affect the market price of our Class A common stock.

All the shares of Class A common stock sold in this offering will be freely tradable without restriction, except for shares acquired by any of our "affiliates," as defined in Rule 144 under the Securities Act, including our principal stockholders. Immediately after this offering, assuming the shares of Class A common stock offered hereby that are being reserved for issuance pursuant to the directed share program are not acquired by affiliates, the public market for our Class A common stock will include only the shares of Class A common stock that are being sold in this offering, or shares of Class A common stock if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us. Once

we register these shares of Class A common stock, they can be sold in the public market, subject to restrictions under the securities laws applicable to resales by affiliates and the terms of the lock-up agreements entered into in connection with this offering. See "Shares Eligible for Future Sale" for more detail.

We expect that we, our directors, executive officers and certain other existing stockholders will enter into lock-up arrangements under which we and they will agree that we and they will not sell any common stock for a period of 180 days from the date of this prospectus (subject to certain exceptions) without the prior written consent of BofA Securities, Inc., Jefferies LLC and Evercore Group L.L.C. See "Underwriting—No Sales of Similar Securities."

We do not anticipate declaring or paying regular dividends on our Class A common stock in the near term, and any indebtedness could limit our ability to pay dividends on our Class A common stock.

We have never declared and do not anticipate declaring or paying regular cash dividends on our Class A common stock in the near term. We currently intend to use our future earnings, if any, to pay any debt obligations, to fund our growth and develop our business and for general corporate purposes. Therefore, you are not likely to receive any cash dividends on your Class A common stock in the near term, and the success of an investment in shares of our Class A common stock will depend upon any future appreciation in their value, which is not certain to occur. There is no guarantee that shares of our Class A common stock will appreciate in value or even maintain the price at which they are initially offered. Any future declaration and payment of cash dividends or other distributions of capital will be at the discretion of our board of directors and the payment of any future cash dividends or other distributions of capital will depend on many factors, including our financial condition, earnings, cash needs, regulatory constraints, capital requirements (including requirements of our subsidiaries) and any other factors that our board of directors deems relevant in making such a determination. For more information, see "Dividend Policy." We cannot assure you that we will establish a dividend policy or pay cash dividends in the future or continue to pay any cash dividend if we do commence paying cash dividends pursuant to a dividend policy or otherwise.

Our Charter will designate courts in the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, and also provide that the federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, each of which could limit our stockholders' ability to choose the judicial forum for disputes with us or our directors, officers, stockholders or employees.

Our Charter will provide that, subject to limited exceptions, the Court of Chancery for the State of Delaware or other specified courts in the State of Delaware will be the sole and exclusive forum to the fullest extent of the law for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders;
- any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law (the "DGCL"), our Charter or our Bylaws;
- any action to interpret, apply, enforce or determine the validity of our Charter or Bylaws; and
- any other action asserting a claim against us that is governed by the internal affairs doctrine.

Our Charter will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors,

officers, employees or agents and arising under the Securities Act. However, Section 22 of the Securities Act provides that federal and state courts have concurrent jurisdiction over lawsuits brought pursuant to the Securities Act or the rules and regulations thereunder. To the extent the exclusive forum provision restricts the courts in which claims arising under the Securities Act may be brought, there is uncertainty as to whether a court would enforce such a provision. We note that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. This provision does not apply to claims brought under the Exchange Act.

Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to these provisions. These 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 employees. Alternatively, if a court were to find these provisions of our Charter inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business or financial condition.

Delaware law and provisions in our Charter and Bylaws might discourage, delay or prevent a change in control of the Company or changes in our management and, therefore, depress the trading price of our Class A common stock.

Provisions of our Charter and Bylaws and of state law may delay, deter, prevent or render more difficult a takeover attempt that our stockholders might consider in their best interests, including the following provisions:

- our dual-class common stock structure and the Voting Agreement, which provide our principal stockholders with a majority of the voting power of our capital stock following this offering, will enable our principal stockholders to influence the outcome of matters submitted to our stockholders for approval even if they own significantly less than a majority of the number of shares of our outstanding common stock;

- our Charter will not provide for cumulative voting in the election of directors;

- vacancies on our board of directors will be able to be filled only by our board of directors and not by stockholders;

- our stockholders may act by written consent only so long as the Voting Agreement is in effect and our principal stockholders hold a majority of the voting power of then-outstanding shares of our capital stock;

- a special meeting of our stockholders may only be called by the chairperson of our board of directors, our Chief Executive Officer, our President, a majority of our board of directors or, so long as the Voting Agreement is in effect and our principal stockholders hold a majority of the voting power of then-outstanding shares of our capital stock, our stockholders;

- amendments to certain provisions of our Charter and stockholder-proposed amendments to our Bylaws will require the affirmative vote of the holders of at least 66 2/3% in voting power of all the then outstanding shares of our capital stock entitled to vote thereon at any time the Voting Agreement is not in effect or our principal stockholders do not hold, in the aggregate, a majority of the voting power of then-outstanding shares of our capital stock;

- our Charter will authorize our board of directors, subject to the limitations imposed by Delaware law or the Nasdaq's listing rules, without any further vote or action by our stockholders, to issue preferred stock in one or more series and to fix the designations, powers, preferences, limitations and rights of the shares of each series; and

- advance notice procedures apply for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of stockholders.

Such provisions or laws may prevent our stockholders from receiving the benefit from any premium to the market price of our Class A common stock offered by a bidder in a takeover context. Even in the absence of a takeover attempt, the existence of these provisions may adversely affect the prevailing market price of our Class A common stock if they are viewed as discouraging takeover attempts in the future.

See "Description of Capital Stock—Certain Anti-Takeover Provisions of our Charter, our Bylaws and Delaware Law."

Provisions in our Charter and Bylaws, including the dual-class structure of our common stock, might discourage or prevent institutional investors from purchasing or holding our Class A common stock, and, therefore, depress the trading price of our Class A common stock.

Our governance structure and the adoption of our Charter may negatively affect the decision by certain institutional investors to purchase or hold shares of our Class A common stock. The holding of low-voting stock, such as our Class A common stock, may not be permitted by the investment policies of certain institutional investors or may be less attractive to the portfolio managers of certain institutional investors. In addition, in July 2017, FTSE Russell and Standard & Poor's announced that they would cease to allow most newly public companies utilizing dual- or multi-class capital structures to be included in their indices. Affected indices include the Russell 2000 and the S&P 500, S&P MidCap 400 and S&P SmallCap 600, which together make up the S&P Composite 1500. Our dual-class common stock capital structure may make us ineligible for inclusion in any of these and certain other indices, and as a result, mutual funds, exchange-traded funds and other investment vehicles that attempt to passively track these indices would not invest in our stock. These policies may depress our valuation compared to those of other similar companies that are included in such indices.

We have broad discretion in the use of the net proceeds from this offering, and our use of those proceeds may not yield a favorable return on your investment.

Our management has broad discretion in the application of the net proceeds from this offering, including for any purpose described in "Use of Proceeds," and we could utilize such proceeds in ways with which you may not agree. In addition, we might not use the net proceeds from this offering effectively or in a manner that increases our market value or enhances our profitability. You may not agree with our decisions, and our use of the net proceeds may not yield any return on your investment. Our failure to apply the net proceeds from this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, in our investment of these net proceeds. You will not have the opportunity to influence our decisions on how to use our net proceeds from this offering.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about us, our business or our market, or if they change their recommendation regarding our Class A common stock adversely, the trading price and trading volume of our Class A common stock could decline.

The trading market for our Class A 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. If no or few securities or industry analysts commence coverage of us, the price and trading volume of our Class A common stock likely would be negatively impacted. If securities or industry analysts initiate coverage and one or more of the analysts who cover us downgrade our Class A common stock or publish inaccurate or unfavorable research about us, the trading price of our Class A common stock would likely decline. If analysts publish target prices for our Class A common stock that are below our then-current public price of our Class A common stock, it could cause the trading price of our Class A common stock to decline significantly. Further, if one or more of these analysts cease coverage of the Company or fail to publish reports on us regularly, demand for our Class A common stock could decrease, which might cause our Class A common stock trading price and trading volume to decline.

General Risk Factors

We will incur 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, and particularly after we are no longer an "emerging growth company" or "smaller reporting company," we will incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act and rules subsequently implemented by the SEC and the Nasdaq impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance.

Pursuant to Section 404, we will be required to furnish a report by our management on our internal control over financial reporting, including an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. Further, despite our efforts, there is a risk that neither we nor our independent registered public accounting firm will be able to conclude within the prescribed timeframe that our internal control over financial reporting is effective as required by Section 404. This could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements. In addition, if we are not able to continue to meet these requirements, we may not be able to remain listed on the Nasdaq.

Our internal controls over financial reporting are not currently effective and our independent registered public accounting firm may not be able to certify as to their effectiveness, which could have a significant and adverse effect on our business and reputation.

We are not currently required to comply with SEC rules that implement Section 404 of the Sarbanes-Oxley Act and are therefore not required to make a formal assessment of the effectiveness of our internal controls over financial reporting for that purpose. Upon becoming a public company, we will be required to comply with the SEC's rules implementing Sections 302 and 404 of the Sarbanes-Oxley Act, which will require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of internal control over financial reporting. Although we will be required to disclose changes that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting on a quarterly basis, we will not be required to make our first annual assessment of our internal control over financial reporting pursuant to Section 404 until at least our second annual report required to be filed with the SEC, and we will not be required to have our independent registered public accounting firm formally assess our internal controls for as long as we remain an "emerging growth company" as defined in the JOBS Act.

When formally evaluating our internal controls over financial reporting, we have identified and may identify further material weaknesses that we may not be able to remediate in time to meet the applicable deadline imposed upon us for compliance with the requirements of Section 404 of the Sarbanes-Oxley Act. In addition, if we fail to achieve and maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act. We cannot be certain as to the timing of completion of our evaluation, testing and any

remediation actions or the impact of the same on our operations. If we are not able to implement the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner or with adequate compliance, our independent registered public accounting firm may issue an adverse opinion due to ineffective internal controls over financial reporting, and we may be subject to sanctions or investigation by regulatory authorities, such as the SEC. As a result, there could be a negative reaction in the financial markets due to a loss of confidence in the reliability of our financial statements. In addition, we may be required to incur additional costs in improving our internal control system and the hiring of additional personnel. Any such action could have a significant and adverse effect on our business and reputation, which could negatively affect our results of operations or cash flows.

Further, we believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the facts that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

We have identified a material weakness, and have previously identified other material weaknesses, in our internal control over financial reporting. If we are unable to remediate our existing material weakness and otherwise develop and maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud, and as a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our Class A common stock.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations. A material weakness is a deficiency or a combination of deficiencies in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis. In connection with the audits performed for UNS for the fiscal years ended December 31, 2017, 2018 and 2019 and for COVAXX for the period ended June 30, 2020, we concluded that there were material weaknesses in the design of our internal control over financial reporting relating to (i) documenting and performing the monthly financial close, account reconciliation and analysis processes on a timely basis; (ii) ensuring that formal processes for identifying and analyzing complex transactions exist; (iii) ensuring proper segregation of duties and responsibilities within our finance department; (iv) ensuring that a process exists for determining whether key contracts, documents and agreements are considered for accounting and disclosure and accurately supported by accounting records; and (v) ensuring that a process existing to document accurate accruals for all internal related-party resources across our affiliated entities.

We subsequently remediated these material weaknesses described above through a combination of hiring and training additional qualified accounting and financial reporting personnel and further evolving and refining our accounting processes and policies. In connection with our preparation of our unaudited combined consolidated financial statements for the six months ended June 30, 2021 and 2020, we identified a material weakness in the design of our internal controls related to the recording of stock-based compensation expenses. We are in the process of implementing measures designed to improve internal control over financial reporting to remediate the control deficiencies that led to this material weakness by designing and implementing improved processes and internal controls. We cannot assure you that we will be able to successfully remediate this material weakness or other material weaknesses that may be discovered in the future as we continue to grow. If we are unable to successfully remediate this issue or future issues or if we fail to design and operate effective internal controls, it could result in material misstatements in our financial statements and potentially require us to restate our financial statements, which may result in the trading value of our Class A common stock being materially adversely affected.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our Class A common stock.

The preparation of financial statements in conformity with U.S. generally accepted accounting principles ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in our combined consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. If our assumptions change or if actual circumstances differ from our assumptions, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our Class A common stock.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies and other future conditions. In some cases, you can identify forward-looking statements because they contain words such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “predict,” “project,” “target,” “potential,” “seek,” “will,” “would,” “could,” “should,” “continue,” “contemplate,” “plan,” other words and terms of similar meaning and the negative of these words or similar terms.

Forward-looking statements are subject to known and unknown risks and uncertainties, many of which may be beyond our control. We caution you that forward-looking statements are not guarantees of future performance or outcomes and that actual performance and outcomes may differ materially from those made in or suggested by the forward-looking statements contained in this prospectus. In addition, even if our results of operations, financial condition and cash flows, and the development of the markets in which we operate, are consistent with the forward-looking statements contained in this prospectus, those results or developments may not be indicative of results or developments in subsequent periods. New factors emerge from time to time that may cause our business not to develop as we expect, and it is not possible for us to predict all of them. Factors that could cause actual results and outcomes to differ from those reflected in forward-looking statements include, among others, the following:

- the prospects of UB-612, UB-612A and other product candidates, including the timing of data from our clinical trials for UB-612, UB-612A and other product candidates and our ability to obtain and maintain regulatory approval for our product candidates;
- our ability to develop and commercialize new products and product candidates;
- our ability to leverage our Vaxxine Platform;
- the rate and degree of market acceptance of our products and product candidates;
- our status as a clinical-stage company and estimates of our addressable market, market growth, future revenue, expenses, capital requirements and our needs for additional financing;
- our ability to hire and retain key personnel and to manage our future growth effectively;
- competitive companies and technologies and our industry and our ability to compete;
- our and our collaborators’, including UBI’s, ability and willingness to obtain, maintain, defend and enforce our intellectual property protection for our proprietary and collaborative product candidates, and the scope of such protection;
- the performance of third party suppliers and manufacturers and our ability to find additional suppliers and manufacturers;
- our ability and the potential to successfully manufacture our product candidates for pre-clinical use, for clinical trials and on a larger scale for commercial use, if approved;
- the ability and willingness of our third-party collaborators, including UBI, to continue research and development activities relating to our product candidates;

- general economic, political, demographic and business conditions in the United States, Taiwan and other jurisdictions;
- the potential effects of government regulation, including regulatory developments in the United States and other jurisdictions;
- ability to obtain additional financing in future offerings;
- our use of proceeds from this offering;
- expectations about market trends; and
- the effects of the COVID-19 pandemic on business operations, the initiation, development and operation of our clinical trials and patient enrollment of our clinical trials.

We discuss many of these risks in greater detail under the section titled “Risk Factors.” Given these uncertainties, you should not place undue reliance on these forward-looking statements.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We estimate that the net proceeds we will receive from the issuance and sale of the shares of Class A common stock offered by us in this offering will be approximately $ million, assuming an initial public offering price of $ per share, which is the midpoint of the 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.

A $1.00 increase or decrease in the assumed initial public offering price of our Class A common stock of $ per share would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $, assuming that the number of shares offered, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase or decrease of 1,000,000 shares in the number of shares of Class A common stock offered by us in this offering, as set forth on the cover page of this prospectus, would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $, assuming an initial public offering price of $ per share, which is the midpoint of the estimated 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.

We currently intend to use the net proceeds from this offering and our existing cash and cash equivalents to advance our existing product candidates, invest in our Vaxxine Platform and new product candidates and for general working capital, capital expenditures and other general corporate purposes as follows:

- approximately $ million on advancing our existing chronic disease product candidates, with the majority going towards advancing UB-311;
- between $ million and $ million on advancing UB-612A;
- between $ million and $ million on investment in our Vaxxine Platform and new product candidates; and
- the remainder for general working capital, capital expenditures and other general corporate purposes.

The expected use of net proceeds from this offering and our existing cash and cash equivalents represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. As of the date of this prospectus, we cannot specify with certainty the particular uses of the net proceeds to be received upon the closing of this offering. The amounts and timing of our actual expenditures will depend on numerous factors, including the progress of our development efforts, the status of and results from clinical trials and pre-clinical studies, whether we successfully commercialize a COVID-19 product candidate, any collaborations that we may enter into with third parties for our product candidates and any unforeseen cash needs. Accordingly, our management will have broad discretion in the application of the net proceeds and investors will be relying on the judgment of our management regarding the application of the net proceeds from this offering.

We believe the net proceeds from this offering and our existing cash and cash equivalents will be sufficient to enable us to fund our operating expenses and capital expenditure requirements into 2024. Based upon our current plans and business conditions, we expect the net proceeds from this offering and our existing cash and cash equivalents will not be sufficient for us to advance any of our product candidates through regulatory approval, and we will need to raise additional capital to complete the development and potential commercialization of our product candidates.

Until we use the net proceeds from this offering for the above purposes, we intend to invest the funds in short-term, investment-grade, interest-bearing instruments, U.S. government securities and money market funds.

DIVIDEND POLICY

We do not anticipate declaring or paying regular cash dividends on our Class A common stock in the near term. Any future declaration and payment of cash dividends or other distributions of capital will be at the discretion of our board of directors and will depend on our financial condition, earnings, cash needs, capital requirements (including requirements of our subsidiaries), contractual, legal, tax and regulatory restrictions, and any other factors that our board of directors deems relevant in making such a determination. Therefore, we cannot assure you that we will pay any cash dividends or other distributions to holders of our Class A common stock, or as to the amount of any such cash dividends or other distributions if and when paid.

CAPITALIZATION

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

- on an actual basis;
- on an as adjusted basis, after giving effect to (i) the Stock Split, (ii) the Preferred Stock Conversion, (iii) the Warrant Exercise and (iv) the filing and effectiveness of our Charter; and
- on an as further adjusted basis, after giving effect to (i) the adjustments set out above and (ii) the issuance and sale by us of shares of Class A common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and the initial investment of the estimated net proceeds from that sale (after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us) in cash and cash equivalents.

The as further adjusted information set forth in the table below is illustrative only and our cash and cash equivalents and capitalization following the completion of this offering will be adjusted based on the actual initial public offering price, the number of shares of Class A common stock issued and sold in this offering and other terms of this offering determined when the initial public offering price is determined. You should read the following table in conjunction with the sections of this prospectus titled "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Description of Capital Stock" and our combined consolidated financial statements and related notes included elsewhere in this prospectus.

	As of June 30, 2021		
(in thousands, except share amounts)	Actual	As Adjusted	As Further Adjusted(1)
Cash and cash equivalents	$ 110,845	$	$
Long-term debt (including current portion)	11,139		
Warrants to purchase Class A common stock(2)	—		
Preferred Stock(3):			
Series A preferred stock; $0.0001 par value; 62,223,095 shares designated, issued and outstanding on an actual basis; no shares authorized, issued or outstanding on an as adjusted or as further adjusted basis	128,206		
Series B preferred stock; $0.0001 par value; 25,000,000 shares designated and 15,365,574 shares issued and outstanding on an actual basis; no shares authorized, issued or outstanding on an as adjusted or as further adjusted basis	122,843		
Stockholders' (deficit) equity:			
Class A common stock; $0.0001 par value; 226,918,839 shares designated and 85,339,665 shares issued and outstanding on an actual basis; shares authorized and shares issued and outstanding on an as adjusted basis; shares authorized and shares issued and outstanding on an as further adjusted basis	255		
Class B common stock; $0.0001 par value; 21,588,153 shares designated, shares issued and outstanding on an actual basis; shares authorized and shares issued and outstanding on an as adjusted basis; shares authorized and shares issued and outstanding on an as further adjusted basis	—		
Additional paid-in capital	8,825		
Accumulated deficit	(150,898)		
Total stockholders' equity (deficit)	(141,818)		
Total capitalization	$ 141,889	$	$

(1) Each $1.00 increase or decrease in the assumed initial public offering price of our Class A common stock of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization on an as further adjusted basis by approximately $, assuming that the number of shares of Class A common stock 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. Similarly, each 1,000,000-share increase or decrease in the number of shares of Class A common stock offered by us in this offering would increase or decrease, as applicable, each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization on an as further adjusted basis by approximately $, assuming an initial public offering price per share of our Class A common stock of $, which is the midpoint of the estimated 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.

(2) In August 2021, as partial consideration for the rights and licenses we received pursuant to the Platform License Agreement, we granted UBI a warrant to purchase 3,000,000 shares of our Class A common stock. As of , all 3,000,000 shares of Class A common stock underlying the UBI Warrant are exercisable, and are not subject to vesting. The UBI Warrant has a term of five years, and will not expire or be automatically exercised in connection with this offering.

(3) On an as adjusted and as further adjusted basis, there will be shares of preferred stock authorized, no series of preferred stock will be designated and no shares of preferred stock will be issued or outstanding.

The as adjusted and as further adjusted columns in the table above are based on the number of shares of our common stock to be outstanding after this offering, which in turn is based on shares of common stock issued and outstanding as of , which gives effect to the Assumed Share Events set forth under the section titled "Prospectus Summary—The Offering" and excludes:

- 3,000,000 shares of our Class A common stock issuable upon the exercise of the UBI Warrant;
- shares of our Class A common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of with a weighted-average exercise price of $ per share; and
- shares of our common stock reserved for future issuance under our Existing 2021 Plan as of .

DILUTION

If you invest in our Class A 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 Class A common stock in this offering and the as further adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value (deficit) as of June 30, 2021 was $, or $ per share of common stock. Our historical net tangible book value (deficit) represents our total tangible assets less our total liabilities, which is not included within our stockholders' equity. Historical net tangible book value (deficit) per share represents historical net tangible book value divided by the shares of common stock outstanding as of .

Our as adjusted net tangible book value (deficit) as of June 30, 2021 was $, or $ per share of common stock. As adjusted net tangible book value represents the amount of our total tangible assets less total liabilities. As adjusted net tangible book value (deficit) per share represents our as adjusted net tangible book value (deficit) divided by , the total number of shares of common stock outstanding as of June 30, 2021, after giving effect to (i) the Stock Split, (ii) the Preferred Stock Conversion, (iii) the Warrant Exercise and (iv) the filing and effectiveness of our Charter.

After giving further effect to the sale of shares of our Class A common stock in this offering at the initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, less the underwriting discounts and commissions and estimated offering expenses payable by us, our as further adjusted net tangible book value (deficit) as of June 30, 2021 would have been approximately $ million, or $ per share of Class A common stock. This amount represents an immediate increase (decrease) in the as further adjusted net tangible book value (deficit) of $ per share of our common stock to the existing stockholders and immediate dilution of $ per share of our Class A common stock to investors purchasing shares of our Class A common stock in this offering.

The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share of Class A common stock		$
Historical net tangible book value (deficit) per share as of	$	
Increase (decrease) per share attributable to the adjustments described above		
As adjusted net tangible book value (deficit) per share as of		
Increase (decrease) in as adjusted net tangible book value (deficit) per share of Class A common stock attributable to new investors purchasing shares of Class A common stock in this offering		
As further adjusted net tangible book value (deficit) per share of Class A common stock immediately after this offering		
Dilution in as further adjusted net tangible book value (deficit) per share of Class A common stock to new investors in this offering		$

The dilution information discussed above is illustrative only and will change based on the actual initial public offering price, the number of shares of Class A common stock sold by us in this offering and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of our Class A common stock of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the as further adjusted net tangible book value per share after this offering by approximately $ and the dilution per share to new investors by $, assuming that the number of shares of Class A common stock 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. Each increase of 1,000,000 shares in the number of shares of Class A common stock offered by us would increase our as further adjusted net tangible book value per share after this offering by $ and decrease the dilution per share to new investors by $, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each decrease of 1,000,000 shares in the number of shares of Class A common stock offered by us would decrease our as further adjusted net tangible book value per share after this offering by $ and increase the dilution per share to new investors by $, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise in full their option to purchase additional shares of Class A common stock from us, our as further adjusted net tangible book value (deficit) per share of Class A common stock after the offering would be $, and the dilution per share of Class A common stock to new investors would be $, in each case assuming an initial public offering price of $ per share of Class A common stock, which is the midpoint of the estimated 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.

The following table summarizes, as of June 30, 2021, on the as further adjusted basis described above, the total number of shares of our Class A common stock purchased from us, the total consideration paid to us and the average price per share of our Class A common stock paid by purchasers of such shares and by new investors purchasing shares of our Class A common stock in this offering:

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders			$		$
New investors					
Total		100%		$ 100%	$

The number of shares of our common stock that will be outstanding after this offering is based on shares of common stock issued and outstanding as of , which gives effect to the Assumed Share Events set forth under the section titled “Prospectus Summary—The Offering” and excludes:

- 3,000,000 shares of our Class A common stock issuable upon the exercise of the UBI Warrant;
- shares of our Class A common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of with a weighted-average exercise price of $ per share; and
- shares of our common stock reserved for future issuance under our Existing 2021 Plan as of .

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with our combined consolidated financial statements and related notes and other financial information appearing elsewhere in this prospectus. We intend for this discussion to provide you with information that will assist you in understanding our combined consolidated financial statements, the changes in key items in those combined consolidated financial statements from year to year and the primary factors that accounted for those changes. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks, uncertainties and assumptions. See the section of this prospectus titled "Special Note Regarding Forward-Looking Statements" for a discussion of forward-looking statements. As a result of many factors, including those factors set forth in the "Risk Factors" section of this prospectus, our actual results could differ materially from management's expectations and the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

Vaxxinity is engaged in the development and commercialization of rationally designed prophylactic and therapeutic vaccines to combat chronic disorders and infectious diseases with large patient populations and unmet medical needs. Our Vaxxine Platform relies on a synthetic peptide vaccine technology first developed by UBI and subsequently refined over the last two decades. Our pipeline primarily consists of five programs focused on chronic disease, particularly neurodegenerative disorders, in addition to other neurology and cardiovascular indications. Given the global COVID-19 pandemic and our Vaxxine Platform's applicability to infectious disease, we are also opportunistically advancing product candidates that address SARS-CoV-2.

We separated our business from UBI through two separate transactions: a spin-out from UBI in 2014 of operations focused on developing chronic disease product candidates that resulted in UNS, and a second spin-out from UBI in 2020 of operations focused on the development of a COVID-19 vaccine that resulted in COVAXX. On February 2, 2021, Vaxxinity was incorporated for the purpose of reorganizing and combining UNS and COVAXX and did so on March 2, 2021 through the Reorganization. In connection with the Reorganization, (i) all outstanding shares of UNS and COVAXX preferred stock and common stock were contributed to Vaxxinity and exchanged for an aggregate of 89,785,026 shares of our Class A common stock, 17,114,677 shares of our Class B common stock and 58,175,751 shares of our Series A preferred stock, (ii) the outstanding options to purchase shares of UNS and COVAXX common stock were terminated and substituted with options to purchase an aggregate of 30,672,657 shares of our Class A common stock, (iii) the outstanding warrant to purchase shares of COVAXX common stock was cancelled and exchanged for the Reorg. Warrant, which is exercisable for 200,261 shares of our Class A common stock, and (iv) the outstanding Convertible Notes and the Related Note were contributed to Vaxxinity and the former holders of such notes received an aggregate of 4,047,344 shares of our Series A preferred stock. As a result of the Reorganization, COVAXX and UNS became our wholly-owned subsidiaries. All shares of our Series A preferred stock will convert into shares of our Class A common stock concurrently with the closing of this offering. The Reorganization was determined to be a common control transaction, so the carrying values of all contributed assets and assumed liabilities remained unchanged and the financial information for all periods in this section of the prospectus presented prior to the Reorganization are presented on a combined consolidated basis. COVAXX was incorporated on March 23, 2020, so periods prior to March 23, 2020 in this section of the prospectus only reflect the historical financial information of UNS. Unless the context requires otherwise, in this section we use the terms "Vaxxinity," "we," "us" and "our" to refer to our operations (including through UNS and COVAXX) both prior to and after the Reorganization.

Since our spin-out transactions from UBI, we have focused on organizing and staffing our business, business planning, raising capital, developing our Vaxxine Platform, identifying and testing potential product candidates and conducting clinical trials. We have also developed a SARS CoV-2 antibody ELISA test, which received an EUA from the FDA in January 2021 and is currently being marketed in the United States.

Our current pipeline consists of six programs from early to late-stage development, including five programs focused on chronic disease. Our neurodegenerative chronic disease program has three primary programs: UB-311, our leading neurology product candidate, which targets AD; UB-312, which targets PD; and an anti-tau product candidate which has the potential to address multiple neurodegenerative conditions, including AD. Additionally, we have two other primary programs focused on chronic disease: UB-313, which targets CGRP to prevent migraines; and our Anti-PCSK9 program, which targets hypercholesterolemia to reduce the risk of cardiac events. Through our Vaxxine Platform, we believe we may be able to address a wide range of other chronic diseases, including chronic diseases that are or could potentially be successfully treated by mAbs, which increasingly dominate the treatment paradigm for many chronic diseases.

In addition to our chronic disease pipeline, given our Vaxxine Platform's applicability to infectious disease and the global need for additional vaccines to address SARS-CoV-2, we are advancing infectious disease product candidates. We have reported interim results and expect to report the complete results of our UB-612 Phase 2 clinical trial in Taiwan in the coming months. An EUA application for UB-612 was denied by the TFDA in August 2021. We are appealing the TFDA's decision in partnership with UBIA. At the same time, we are exploring paths to authorization for UB-612 as a heterologous boost and a 3-dose regimen, and accelerating development of our second COVID-19 product candidate, UB-612A.

To date, our revenue has been generated from the modest sales of our ELISA test and the sale of an option to negotiate a license with UNS (which option has expired). As a result, our ability to generate revenue sufficient to achieve profitability will depend on the eventual regulatory approval, and commercialization of one or more of our product candidates. We have not yet obtained any regulatory approvals for our product candidates or conducted sales and marketing activities for our product candidates.

We have principally funded our operations through financing transactions. Through December 31, 2020, we received gross proceeds of $99.3 million in connection with various financial instruments, including the sale of preferred stock, the issuance of promissory notes (including convertible promissory notes ("Convertible Notes")), the entry into simple agreements for future equity ("SAFEs") and a loan pursuant to the Paycheck Protection Program under the Coronavirus Aid, Relief, and Economic Security Act ("Paycheck Protection Program"). During the first half of 2021, we have continued to finance our operations through the issuance of our Series B preferred stock, raising gross proceeds of $43.5 million and $79.4 million during the first and second quarter of 2021, respectively. In addition, during the three months ended March 31, 2021, we also financed our operations through the issuance of Convertible Notes and SAFEs, raising gross proceeds of $2.0 million and $2.9 million, respectively.

Costs associated with research and development are the most significant component of our expenses. These costs can vary greatly from period to period depending on the timing of various trials for our product candidates. In the near-term, we expect our allocated research and development costs to be similar to or less than second quarter levels for the next several quarters, with a mix shift from UB-612 to our other product candidates. We also expect our general and administrative expenses to increase over time as we expand the number of product candidates that we are advancing and incur increased costs as a result of operating as a public company. Further, we anticipate incurring greater selling and marketing expenses if we commercialize any of our product candidates in the future. Our product candidates are in clinical stage or pre-clinical stage development, and we have generated limited revenue to date and have incurred significant operating losses since inception. Net losses were $14.2 million and $40.0 million for the years ended December 31, 2019 and 2020, respectively, and $14.5 million and $58.6 million for the six months ended June 30, 2020 and 2021, respectively. As of June 30,

2021, we had an accumulated deficit of $150.9 million. We expect our expenses and capital requirements will increase over time in connection with our planned operations, which include:

- continuing pre-clinical studies, existing clinical trials, or initiating new clinical trials for product candidates UB-311, UB-312, our COVID-19 product candidates and other product candidates;
- advancing the development of our product candidate pipeline of other product candidates, including through business development efforts to invest in or in-license other technologies or product candidates;
- hiring additional clinical, quality control, medical, scientific and other technical personnel to support clinical and research and development programs;
- expanding operational, financial and management systems and infrastructure, expanding our facilities and increasing personnel to support operations;
- undertaking actions to meet the requirements and demands of being a public company;
- maintaining, expanding and protecting our intellectual property portfolio;
- seeking regulatory approvals for any product candidates that successfully complete clinical trials; and
- undertaking pre-commercialization activities to establish sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we elect to commercialize products on our own or jointly with third parties.

As of the date of this prospectus, we expect our existing cash and cash equivalents will be sufficient to fund our operating expenses and capital expenditure requirements for at least the next 12 months. We also believe that net proceeds from this offering and existing cash and cash equivalents will enable us to fund our operating expenses and capital expenditure requirements into 2024. Thereafter, our viability will be dependent on our ability to raise additional capital to finance operations, to successfully commercialize our product candidates and/or to enter into collaborations with third parties for the development of our product candidates. If we are unable to do any of the foregoing, we would be forced to delay, limit, reduce or terminate our product candidate development or future commercialization efforts. Our estimates are based on a variety of assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than expected. See "— Liquidity and Capital Resources."

Business Update Regarding COVID-19 Pandemic

In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic. The onset of the pandemic led to our institutional prioritization of COVID-19 vaccine development efforts, which correlated to a decline in research and development expenditures for our chronic disease product candidates. To date, our operations have not been negatively impacted by the COVID-19 pandemic in a material manner. However, at this time, we cannot predict the specific extent, duration or full impact that the COVID-19 pandemic will have on our financial condition and operations, but the development of clinical supply materials could be delayed and enrollment of patients in our studies may be delayed or suspended, as hospitals and clinics in areas where we are conducting trials shift resources to cope with the COVID-19 pandemic and may limit access or close clinical facilities due to the COVID-19 pandemic. Additionally, if our trial participants are unable to travel to our clinical study sites as a result of quarantines or other restrictions resulting from the COVID-19 pandemic, we may experience higher drop-out rates or delays in our clinical studies. The impact of the COVID-19 pandemic on our financial performance will depend on future developments, including the duration and spread of

the pandemic and related governmental advisories and restrictions. These developments and the impact of the COVID-19 pandemic on the financial markets and the overall economy are highly uncertain and cannot be predicted. If the financial markets and/or the overall economy are impacted for an extended period, our results may be materially adversely affected. See "Risk Factors—Risks Related to Our Business and Industry—The ongoing coronavirus pandemic has caused interruptions or delays of our business plan. Delays caused by the coronavirus pandemic may have a significant adverse effect on our business."

Recent Developments

Since the Reorganization, we have raised gross proceeds of $122.9 million through the sale and issuance of 15,365,574 shares of our Series B preferred stock at a purchase price of $8.00 per share. All shares of our Series B preferred stock will convert into shares of our Class A common stock concurrently with the closing of this offering.

In June 2021, pursuant to a share exchange agreement entered into by and among us, Ms. Hu and Mr. Reese, we exchanged an aggregate of 4,473,476 shares of our Class A common stock held by Ms. Hu and Mr. Reese on a one-to-one basis for shares of our Class B common stock.

In June 2021, we issued stock options under our 2021 Stock Option and Grant Plan entitling the holders thereof to purchase, in aggregate, 1,074,055 shares of our Class A common stock in accordance with the terms of such stock options. In addition, in July 2021, we issued stock options under our 2021 Stock Option and Grant Plan entitling the holders thereof to purchase, in aggregate, 1,315,414 shares of our Class A common stock in accordance with the terms of such stock options. See "Executive Compensation—Equity Plans—2021 Stock Option and Grant Plan."

In August 2021, we canceled existing options to purchase, in aggregate, 9,899,982 shares of our Class A common stock held by Ms. Hu and Mr. Reese in exchange for an equal number of options to purchase shares of our Class B common stock. The new options to purchase shares of our Class B common stock were issued with exercise prices equal to the fair value of our Class B common stock on the new grant date.

In August 2021, we entered into a Platform License Agreement with UBI and certain of its affiliates that expanded intellectual property rights previously licensed under the Original UBI Licenses (as defined below). The licenses granted under the Original UBI Licenses were terminated in connection with the Platform License Agreement. As partial consideration for the rights and licenses we received pursuant to the Platform License Agreement, we granted UBI a warrant to purchase 3,000,000 shares of our Class A common stock, at an exercise price of $8.00 per share (subject to adjustment for the Stock Split and other adjustments pursuant thereto).

Components of Our Combined Consolidated Results of Operations

Revenue

Revenue for the six months ended June 30, 2021 and 2020 was less than $0.1 million and $0.4 million, respectively, and consisted of commercial sales of our ELISA tests. Our total revenue for the year ended December 31, 2020 was $0.6 million and consisted of commercial sales of our ELISA tests. We had no revenue in 2019. While we continue to expect some near-term revenue from sales of our ELISA tests, we do not expect to generate any meaningful revenue unless and until we obtain regulatory approval of and commercialize our product candidates, and we do not know when, or if, this will occur. If our development efforts for our product candidates are successful and result in commercialization, we may generate additional revenue in the future from a combination of product sales or payments from collaboration or license agreements that we have entered into or may enter into with third parties. See Risk Factors—Risks Related to the Discovery and Development of Product Candidates—We have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Cost of Revenue

Cost of revenue consists of kit production costs consisting of materials, labor and overhead expenses directly related to ELISA tests sold and the costs of expired ELISA tests, which are not available for commercial sale.

If our development efforts in respect of our current pipeline of product candidates are successful and result in regulatory approval, we expect our cost of revenue will increase in relative proportion to the level of our revenue as we commercialize the applicable product candidate. We expect that cost of revenue will increase in absolute dollars as and if our revenue grows and will vary from period to period as a percentage of revenue.

Research and Development Expenses

The design, initiation and execution of candidate discovery and development programs of our future potential product candidates is key to our success and involves significant expenses. Prior to initiating these programs, project teams incorporating individuals from the essential disciplines within Vaxxinity scope out the activities, timing, requirements, inclusion and exclusion criteria and the primary and secondary endpoint. Once we have decided to proceed, our Vaxxine Platform enables the iteration of drug candidates in the discovery phase through rapid, rational design and formulation. After we have identified drug candidates, the costs of scaling the formulation from research grade to clinical grade, then to commercial grade, typically consumes significant resources. In addition, to internal research and development, we utilize service providers, including related parties, to complete activities we do not have the internal resources to handle.

Research and development expenses consist primarily of costs incurred for research activities, including drug discovery efforts and the development of our product candidates. We expense research and development costs as incurred, which include:

- expenses incurred to conduct the necessary preclinical studies and clinical trials required to obtain regulatory approval;
- expenses incurred under agreements with CROs that are primarily engaged in the oversight and conduct of our clinical trials, preclinical studies and drug discovery efforts and contract manufacturers that are primarily engaged to provide preclinical and clinical drug substance and product for our research and development programs;
- other costs related to acquiring and manufacturing materials in connection with our drug discovery efforts and preclinical studies and clinical trial materials, including manufacturing validation batches, as well as investigative sites and consultants that conduct our clinical trials, preclinical studies and other scientific development services;
- payments made in cash or equity securities under third-party licensing, acquisition and option agreements;
- employee-related expenses, including salaries and benefits, travel and stock-based compensation expense for employees engaged in research and development functions;
- costs related to compliance with regulatory requirements; and
- facilities-related costs, depreciation and other expenses, which include rent and utilities.

We recognize external development costs based on an evaluation of the progress to completion of specific tasks using information provided to us by service providers. This process involves reviewing open

contracts and purchase orders, communicating with personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual costs. Any nonrefundable advance payments that we make for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. Such amounts are expensed as the related goods are delivered or the related services are performed, or until it is no longer expected that the goods will be delivered or the services rendered, at which point the net remainder is expensed.

We are heavily reliant on related parties for the advancement of our research and development programs, including for manufacturing, quality control, testing, validation, supply services, research support, development and clinical functions. See "Certain Relationships and Related Party Transactions." During the years ended December 31, 2020 and December 31, 2019, related party expenses were approximately 56% and 29% of our operating expenses, respectively and during the six months ended June 30, 2021 and June 30, 2020, related party expenses were approximately 50.2% and 19.0% of our operating expenses, respectively.

Where appropriate, we allocate our third-party research and development expenses on a program-by-program basis. These expenses primarily relate to outside consultants, CROs, contract manufacturers and research laboratories in connection with pre-clinical development, process development, manufacturing and clinical development activities. We do not allocate our internal costs, such as employee costs, costs associated with our discovery efforts, laboratory supplies and facilities, including depreciation or other indirect costs, to specific programs because these costs often relate to platform development, to multiple programs simultaneously or to discovery of new programs, and any such allocation would necessarily involve significant estimates and judgments and, accordingly, would be imprecise. When we refer to the research and development expenses associated with a specific program, these refer exclusively to the allocated third-party expenses associated with that product candidate. All other research and development costs are referred to as unallocated costs.

Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. Additionally, greater research and development overhead is required to support broader and more rapid development of our Vaxxine Platform and new product candidates. As a result, we expect that our research and development expenses will increase substantially over the next several years as we continue our existing and planned clinical trials and conduct increased pre-clinical and clinical development activities, including submitting regulatory filings for product candidates. A significant driver of such increases would be the initiation of our Phase 2b trial for UB-311. We currently expect to initiate a Phase 2b early AD efficacy trial in . If we decide to advance UB-311 through the clinic without a strategic partner, our costs would increase more significantly than if we engage a partner to fund the development of UB-311.

Despite the expectation that these expenses will rise over the coming years, we expect a near-term decline in research and development expenses from second quarter 2021 levels, with a shift of expenses from our UB-612 product candidate to other product candidates.

At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the pre-clinical and clinical development of any of our product candidates or when, if ever, material net cash inflows may commence from any of our product candidates.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and benefits, travel and stock-based compensation expense for personnel in executive, business development, finance, human resources, legal, information technology and administrative functions. General and administrative expenses also include facility-related costs as well as insurance costs and professional fees for legal, patent, consulting, investor and public relations, accounting and audit services and other general operating expenses not otherwise classified as research and development expenses. We expense general and administrative costs as incurred.

We expect that our general and administrative expenses will increase as we increase our headcount to support the continued development of our product candidates and continued research and development activities. We also anticipate that our general and administrative expenses will increase in the future as a result of increased costs associated with being a public company. In each case these increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, personnel-related stock-based compensation costs, lawyers and accountants, among other expenses, and, in the case of public company-related expenses, services associated with maintaining compliance with Nasdaq listing and SEC requirements, director and officer liability insurance costs and investor and public relations costs.

Other Expense (Income)

Interest Expense, Net

Net interest expense (income) consists of (i) interest income earned on our cash and cash equivalents, (ii) interest expense recognized on the note payable entered into during June 2020 for the acquisition of an airplane (the "2025 Note"), (iii) interest expense recognized on the Convertible Notes and (iv) interest expense recognized on other promissory notes, including $0.1 million borrowed from our Chief Executive Officer (the "Executive Note") and a related party note payable for $2.0 million in aggregate proceeds that was received in three tranches (the "Related Note").

Change in Fair Value of Convertible Notes, SAFEs and Series A-1 Warrant Liability

We issued a series of Convertible Notes during the years ended December 31, 2018, 2019 and 2020, a series of SAFEs during the year ended December 31, 2020, and warrants to purchase shares of our Series A-1 preferred stock ("Series A-1 Warrants") during the year ended December 31, 2020, each of which were measured and accounted for at fair value. We remeasured the fair value of each of the Convertible Notes, SAFEs and Series A-1 Warrants at each reporting date and recognize changes in the fair value in our combined consolidated statements of operations. Inputs to the calculation of fair value generally include market and acquisition comparable(s) as well as other variables. In connection with the Reorganization, all outstanding Convertible Notes and SAFEs were exchanged for Series A preferred stock and all outstanding Series A-1 Warrants were exchanged for shares of Series A preferred stock.

Foreign Currency Losses

Our foreign subsidiaries, which are wholly-owned by COVAXX and UNS, use the U.S. dollar as their functional currency and maintain records in the local currency. Nonmonetary assets and liabilities are remeasured at historical rates and monetary assets and liabilities are remeasured at exchange rates in effect at the end of the reporting period. Income statement accounts are remeasured at average exchange rates for the reporting period. The resulting gains or losses are included in foreign currency (losses) gains in the combined consolidated financial statements.

Provision for Income Taxes

We have not recorded any significant amounts related to income tax but have reserved $0.6 million of unrecognized tax benefits against NOLs. We have not recorded any income tax benefits for the majority of our net losses we incurred to date.

We account for income taxes using 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 combined consolidated financial statements or our tax returns.

Deferred tax assets and liabilities are determined based on the difference between the financial statement carrying amounts and tax bases of existing assets and liabilities and for loss and credit carryforwards,

which are measured using the enacted tax rates and laws in effect in the years in which the differences are expected to reverse. The realization of our deferred tax assets is dependent upon the generation of future taxable income, the amount and timing of which are uncertain. Valuation allowances are provided, if, based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. As of December 31, 2020, we continue to maintain a full valuation allowance against all of our deferred tax assets based on evaluation of all available evidence. We file income tax returns in the U.S. federal and state jurisdictions and may become subject to income tax audit and adjustments by related tax authorities. Our tax return periods (for entities then in existence) for U.S. federal income taxes for the tax years since 2015 remain open to examination under the statute of limitations by the Internal Revenue Service and state jurisdictions. We record reserves for potential tax payments to various tax authorities related to uncertain tax positions, if any. The nature of uncertain tax positions is subject to significant judgment by management and subject to change, which may be substantial. These reserves are based on a determination of whether and how much a tax benefit taken by us in our tax filings or positions is more likely than not to be realized following the resolution of any potential contingencies related to the tax benefit. We develop our assessment of uncertain tax positions, and the associated cumulative probabilities, using internal expertise and assistance from third-party experts. As additional information becomes available, estimates are revised and refined. Differences between estimates and final settlement may occur resulting in additional tax expense. Potential interest and penalties associated with such uncertain tax positions is recorded as a component of our provision for income taxes.

Factors Affecting the Comparability of Our Combined Consolidated Results of Operations

On March 2, 2021, Vaxxinity entered into the Contribution and Exchange Agreement, pursuant to which the outstanding equity interests of UNS and COVAXX were contributed to Vaxxinity in return for equity interests in Vaxxinity, resulting in UNS and COVAXX becoming wholly owned subsidiaries of Vaxxinity. Accordingly, all share and per share amounts prior to the Reorganization have been adjusted to reflect the Reorganization. In addition, we formed COVAXX, and commenced our COVAXX business, on March 23, 2020. As a result, the historical financial information between March 23, 2020 and March 2, 2021 described in this prospectus refers to the combined historical financial information of UNS and COVAXX and the historical financial information prior to March 23, 2020 described in this prospectus refers only to the historical financial information of UNS. As such, our business operations for the three months ended June 30, 2020 reflect the operations of our UNS and COVAXX businesses on a combined consolidated basis for that period, while our operations for the three months ended June 30, 2021 reflect the operations of Vaxxinity and its subsidiaries. Our business operations for the six months ended June 30, 2020 reflect the operations of our UNS business from January 1, 2020 to March 22, 2020 and our UNS and COVAXX businesses on a combined consolidated basis for the remainder of that six-month period, while our operations for the six months ended June 30, 2021 reflect the operations of our UNS and COVAXX businesses on a combined consolidated basis for the period from January 1, 2021 to March 1, 2021 and of Vaxxinity and its subsidiaries for the remainder of that six-month period. See Note 1 to our combined consolidated financial statements included elsewhere in this prospectus.

Combined Consolidated Results of Operations

Comparison of the Three and Six Months Ended June 30, 2020 and 2021

The following table summarizes our combined consolidated results of operations for the three and six months ended June 30, 2020 and 2021, together with the dollar change in those items from period to period:

(amounts in thousands)	Three months ended June 30,			Six months ended June 30,		
	2020	2021	Change	2020	2021	Change
Revenue:	$ 440	$ —	$ (440)	$ 440	$ 17	$ (423)
Costs of revenue	229	1,927	1,698	229	1,928	1,699
Gross profit	211	(1,927)	(2,138)	211	(1,911)	(2,122)
Operating expenses:						
Research and development	4,243	18,944	14,701	6,071	30,605	24,534
General and administrative	4,331	5,924	1,593	5,048	14,430	9,382
Total operating expenses	8,574	24,868	16,294	11,119	45,035	33,916
Loss from operations	(8,363)	(26,795)	(18,432)	(10,908)	(46,946)	(36,038)
Other expense:						
Interest expense, net	406	107	(299)	595	384	(211)
Change in fair value of convertible notes	1,995	—	(1,995)	2,965	2,667	(298)
Change in fair value of SAFE	—	—	—	—	8,365	8,365
Change in fair value of warrant liability	—	—	—	—	214	214
Foreign currency loss	9	8	(1)	14	16	2
Other expense, net	2,410	115	(2,295)	3,574	11,646	8,072
Net loss	$(10,773)	$(26,910)	$(16,137)	$(14,482)	$(58,592)	$(44,110)

Revenue

Total revenue was less than $0.1 million and $0.4 million for the six months ended June 30, 2021 and 2020, respectively. Total revenue was $0.4 million for the three months ended June 30, 2020. There was no revenue recorded for the three months ended June 30, 2021. All revenue and comparable increases were due to sales of our ELISA tests.

Gross Profit

During the three months ended June 30, 2021, we wrote off $1.9 million in expired ELISA tests that had no commercial value. Prior to the write-off, gross profit as a percentage of total revenues was 94.1% and 48.0% in the six months ended June 30, 2021 and 2020, respectively and 48.0% for the three months ended June 30, 2020. There was no gross profit for the three months ended June 30, 2021. Although the change in gross profit percentage was significant, the change in gross profit dollars was minimal.

Research and Development Expenses

Comparison of Three Months Ended June 30, 2021 to Three Months Ended June 30, 2020

Research and development expenses were $18.9 million and $4.2 million for the three months ended June 30, 2021 and 2020, respectively. The $14.7 million increase was primarily due to an increase of

$16.4 million in costs related to UB-612, primarily consisting of CRO costs associated with our ongoing clinical trial in Taiwan, which program was only in early development in the corresponding 2020 period and materials and manufacturing costs relating to the trial and potential commercialization. This increase was partially offset by a decline of $1.0 million in costs spread across our other product candidates driven largely by the exogenous timing of trial schedules and a reallocation of resources to UB-612, as well as by a decrease in unallocated costs of $0.7 million, driven primarily by increased salaries and personnel-related costs in connection with the ramp-up of our UB-612 development efforts offset by the reversal of a $1.3 million payroll tax liability. We expect allocated research and development costs to be similar to or less than second quarter levels for the next several quarters, with a mix shift from UB-612 to our other product candidates.

Comparison of Six Months Ended June 30, 2021 to Six Months Ended June 30, 2020

Research and development expenses were $30.6 million and $6.1 million for the six months ended June 30, 2021 and 2020, respectively. The $24.5 million increase was primarily due to an increase of $26.2 million in costs related to UB-612, primarily consisting of CRO costs associated with our ongoing clinical trial in Taiwan, which program was only in early development in the corresponding 2020 period and materials and manufacturing costs relating to the trial and potential commercialization. This increase was partially offset by a decline of $1.1 million in mostly trial-related CRO and material costs associated with UB-311 and a decline of $0.7 million of expenses associated with our other product candidates, in each case driven primarily by the exogenous timing of trial schedules and a reallocation of resources to UB-612. Unallocated costs increased by less than $0.1 million, driven primarily by increased personnel costs in connection with the ramp-up of our UB-612 development efforts, mostly offset by the reversal of a $1.3 million payroll tax liability. We expect allocated research and development costs to be similar to or less than second quarter levels for the next several quarters, with a mix shift from UB-612 to our other product candidates.

General and Administrative Expenses

Comparison of Three Months Ended June 30, 2021 to Three Months Ended June 30, 2020

General and administrative expenses were $5.9 million and $4.3 million for the three months ended June 30, 2021 and 2020, respectively. The $2.4 million increase was primarily due to increased salaries and personnel-related costs and professional services costs partially offset by a reversal of $0.8 million in payroll tax liability. The net increase was related to our continued organizational growth to support our ramp-up in research and development efforts, as well as increased costs for preparations for being a public company.

Comparison of Six Months Ended June 30, 2021 to Six Months Ended June 30, 2020

General and administrative expenses were $14.4 million and $5.0 million for the six months ended June 30, 2021 and 2020, respectively. The $9.4 million increase was primarily due to increased salaries and personnel-related costs and professional services costs related to our continued organizational growth to support our ramp-up in research and development efforts, as well as increased costs for preparations for being a public company.

Interest Expense, Net

Comparison of Three Months Ended June 30, 2021 to Three Months Ended June 30, 2020

Interest expense was $0.1 million and $0.4 million for the three months ended June 30, 2021 and 2020, respectively. The $0.3 million decrease was primarily due to interest expense related to a lower principal balance on the Convertible Notes as a result of being exchanged for Series A preferred stock in connection with the Reorganization. Interest income on cash was negligible for each of the three months ended June 30, 2021 and 2020.

Comparison of Six Months Ended June 30, 2021 to Six Months Ended June 30, 2020

Interest expense was $0.4 million and $0.6 million for the six months ended June 30, 2021 and 2020, respectively. The $0.2 million decrease was primarily due to interest expense related to a lower principal balance on the Convertible Notes as a result of being exchanged for Series A preferred stock in connection with the Reorganization. Interest income on cash was negligible for each of the six months ended June 30, 2021 and 2020.

Change in Fair Value of Convertible Notes, SAFEs and Series A-1 Warrant Liability

Comparison of Three Months Ended June 30, 2021 to Three Months Ended June 30, 2020

The $2.0 million decrease in the change in fair value of the Convertible Notes for the three months ended June 30, 2021 was a result of the conversion of the Convertible Notes occurring prior to the second quarter of 2021. In connection with the Reorganization, all outstanding Convertible Notes, SAFEs and Series A-1 Warrants were exchanged for Series A preferred stock.

Comparison of Six Months Ended June 30, 2021 to Six Months Ended June 30, 2020

The decrease in the change in fair value of the Convertible Notes of $0.3 million for the six months ended June 30, 2021 was primarily related to the change in probability that the Convertible Notes will be converted to equity and have a higher rate of return. The increase in fair value in each period was primarily driven by increased insight into the pricing of Vaxxinity's next stock issuance at a higher valuation. The increase in the change in fair value of SAFEs of $8.4 million for the six months ended June 30, 2021 compared to the six months ended June 30, 2020 (when there were no outstanding SAFEs) was primarily related to insight into the pricing of Vaxxinity's next stock issuance at a higher valuation. The increase in the change in fair value of Series A-1 Warrants of $0.2 million for the six months ended June 30, 2021 compared to the six months ended June 30, 2020 was primarily related to an increase in value of the Series A-1 preferred stock. In connection with the Reorganization, all outstanding Convertible Notes, SAFEs and Series A-1 Warrants were exchanged for Series A preferred stock.

Foreign Currency Loss (Gain)

Comparison of Three Months Ended June 30, 2021 to Three Months Ended June 30, 2020

The change in foreign currency loss reflected *a de minimis* decrease in the foreign exchange rate for the three months ended June 30, 2021 compared to the three months ended June 30, 2020.

Comparison of Six Months Ended June 30, 2021 to Six Months Ended June 30, 2020

The change in foreign currency loss reflected *a de minimis* increase in the foreign exchange rate for the six months ended June 30, 2021 compared to the six months ended June 30, 2020.

Comparison of the Years Ended December 31, 2019 and 2020

The following table summarizes our combined consolidated results of operations for the years ended December 31, 2019 and 2020, together with the dollar change in those items from period to period:

(amounts in thousands)	**Year Ended December 31,**		
	2019	**2020**	**Change**
Revenue:	$ —	$ 557	$ 557
Costs of revenue	—	52	52
Gross profit	—	505	505
Operating expenses:			

(amounts in thousands)	Year Ended December 31, 2019	2020	Change
Research and development	$ 10,656	$ 20,570	$ 9,914
General and administrative	3,005	12,217	9,212
Total operating expenses	13,661	32,787	19,126
Loss from operations	(13,661)	(32,282)	(18,621)
Other expense:			
Interest expense, net	435	1,181	746
Change in fair value of convertible notes	27	5,761	5,734
Change in fair value of SAFE	—	615	615
Change in fair value of warrant liability	—	41	41
Foreign currency loss	40	77	37
Other expense, net	502	7,675	7,173
Loss before income taxes	(14,163)	(39,957)	(25,794)
Provision for income taxes	56	—	(56)
Net loss	$ (14,219)	$ (39,957)	$(25,738)

Revenue

Total revenue was $0.6 million and $0 for the year ended December 31, 2020 and 2019, respectively. The $0.6 million increase was due to revenue attributable to sales of our ELISA tests, which began commercialization after December 31, 2019.

Gross Profit

Gross profit as a percentage of total revenues was 90.7% for the year ended December 31, 2020. No gross profit was recorded during the year ended December 31, 2019.

Research and Development Expenses

Research and development expenses were $20.6 million and $10.7 million for the year ended December 31, 2020 and 2019, respectively. The $9.9 million increase was driven by the introduction of $15.4 million in expenses related to UB-612, which program was not in development in 2019, largely consisting of CRO costs relating to our UB-612 clinical trials in Taiwan and materials and manufacturing costs relating to the trial and potential commercialization. This increase was partially offset by declines of $2.2 million in costs relating to UB-311, $1.1 million in costs relating to UB-312 and $0.6 million in costs relating to our other product candidates, and a decline of $1.7 million in unallocated costs. The product candidate-related cost declines primarily resulted from the exogenous timing of trial schedules, as well as a general reallocation of resources toward UB-612. The decline in unallocated costs was driven by a variety of factors, including a decrease in personnel costs.

General and Administrative Expenses

General and administrative expenses were $12.2 million and $3.0 million for the year ended December 31, 2020 and 2019, respectively. The $9.2 million increase was due primarily to increased salaries and personnel related costs and professional services costs related to our continued organizational growth to support our research and development efforts, fundraising and preparations for being a public company.

Interest Expense, Net

Interest expense was $1.2 million and $0.4 million for the year ended December 31, 2020 and 2019, respectively. The $0.7 million increase was primarily due to $0.3 million in interest expense related to the 2025

Note and $0.4 million full year of interest in 2020 for the Related Note issued in 2019 coupled with an additional $6.5 million, net of repayments, of the Convertible Notes issued during 2020. Interest income on cash was negligible the years ended December 31, 2020 and 2019.

Change in Fair Value of Convertible Notes, SAFEs and Series A-1 Warrant Liability

The increase in the fair value of the Convertible Notes of $5.7 million for the year ended December 31, 2020 compared to the prior year primary related to the increased probability that the Convertible Notes will be converted to equity and have a higher rate of return. The increase in fair value was primarily driven by increased insight into the pricing of Vaxxinity's stock issuances at a higher valuation. The increase in fair value of SAFEs of $0.6 million for the year ended December 31, 2020 compared to the prior year, in which no SAFEs were issued, was primarily due to insight into the pricing of Vaxxinity's next stock issuance. The increase in fair value of the Series A-1 Warrant reflected a *de minimis increase for the year ended December 31, 2020 compared to the prior year, in which no warrants were issued.*

Foreign Currency Loss (Gain)

Foreign currency loss reflects a *de minimis* increase primarily related to foreign exchange rate fluctuations.

Liquidity and Capital Resources

Sources of Liquidity

We have generated, and expect to continue to generate, limited revenue from sales of our ELISA tests and have not yet commercialized any of our product candidates, which are in various phases of pre-clinical and clinical development. We have financed operations primarily through the issuance of convertible preferred stock, borrowings under promissory notes (including Convertible Notes) and the execution of SAFEs. Through December 31, 2020, we received gross proceeds of $99.3 million in connection with the issuance of various financial instruments, including the sale of preferred stock, the issuance of promissory notes (including Convertible Notes), the execution of SAFEs and a loan pursuant to the Paycheck Protection Program. In addition, we also generated revenue from the sale of an option to negotiate a license with UNS (which option has expired) and the sales of ELISA tests in 2020 and 2021. During the six months ended June 30, 2021, we raised a total of $127.8 million, which consisted of $122.9 million in gross proceeds from the issuance of our Series B preferred stock and $2.0 million and $2.9 million in net proceeds from the issuance of Convertible Notes and SAFEs, respectively. At June 30, 2021, we had $110.8 million in cash and cash equivalents, compared to $31.1 million as of December 31, 2020 and $0.5 million as of December 31, 2019. The increase in cash and cash equivalents balances for the periods reported are primarily due to the factors described under "—Cash Flows" below.

Cash Flows

The following table provides information regarding our cash flows for the six months ended June 30, 2020 and 2021 and for the years ended December 31, 2019 and 2020:

(amounts in thousands)	Six Months Ended June 30,		Year Ended December 31,	
	2020	2021	2019	2020
Net cash provided by (used in):				
Operating activities	$ (11,253)	$ (45,952)	$ (12,265)	$ (33,910)
Investing activities	—	—	—	(1,477)
Financing activities	24,205	125,657	11,137	66,109
Net increase (decrease) in cash:	$ 12,952	$ 79,705	$ (1,128)	$ 30,722

Operating Activities

Net cash used in operating activities for the six months ended June 30, 2021 was $46.0 million, primarily due to a $58.6 million net loss and a decrease of $3.6 million in net operating assets and liabilities, partially offset by an increase in total non-cash items of $16.2 million. The cash flow impact from changes in net operating assets and liabilities were primarily driven by increases of $12.1 million in prepaid expenses for UB-612 production deposits and our ELISA tests and $0.5 million in deferred offering costs and other liabilities, partially offset by an increase of $6.3 million in payables and accrued expenses and $5.3 million due to related parties. The primary non-cash adjustments to net loss included an $11.2 million change in the fair market value of financial instruments, $4.1 million of stock-based compensation, $0.6 million in depreciation expense and $0.3 million in non-cash interest expense.

Net cash used in operating activities for the six months ended June 30, 2020 was $11.3 million, primarily due to a $14.5 million net loss and a decrease of $0.9 million in net operating assets and liabilities, partially offset by an increase in total non-cash items of $4.1 million. The cash flow impact from changes in net operating assets and liabilities were primarily driven by increases of $6.0 million in prepaid expenses for UB-612 production deposits and our ELISA tests, partially offset by an increase of $2.6 million due to related parties, $2.1 million in payables and accrued expenses and $0.5 million due to other liabilities. The primary non-cash adjustments to net loss included a $3.0 million change in the fair market value of financial instruments, $0.6 million in non-cash interest expense, $0.4 million of stock-based compensation and $0.2 million in depreciation expense.

Net cash used in operating activities for the year ended December 31, 2020 was $33.9 million, primarily due to a $40.0 million net loss and an increase of $2.8 million in net operating assets, partially offset by total non-cash items of $8.8 million. The cash flow impact from changes in net operating assets and liabilities were primarily driven by increases of $3.5 million in prepaid expenses for deposits on our ELISA tests and $2.3 million in deferred offering costs, partially offset by an increase in the net amount due to related parties of $4.6 million and $0.1 million in other liabilities. The primary non-cash adjustments to net loss included a $6.4 million change in the fair market value of financial instruments, $1.0 million stock-based compensation, $0.8 million in depreciation and amortization and $0.6 million in interest expense.

Net cash used in operating activities for the year ended December 31, 2019 was $12.3 million, primarily due to the $14.2 million net loss, partially offset by an increase of $0.2 million in net operating liabilities and total non-cash items of $1.8 million. The cash flow impact from changes in net operating assets and liabilities were primarily driven by a net increase in amounts due to related parties of $0.9 million and $0.1 million in other liabilities, offset by a decrease of $0.8 million in accounts payable and accrued expenses. The primary non-cash adjustments included $1.2 million in stock-based compensation, $0.4 million in interest expense and $0.1 million in depreciation.

Investing Activities

There was no net cash used in investing activities for the six months ended June 30, 2021 and 2020.

Net cash used in investing activities totaled $1.5 million for the year ended December 31, 2020. The cash used in investing activities consisting primarily of the acquisition of equipment. There were no investing activities for the year ended December 31, 2019.

Financing Activities

Net cash provided by financing activities totaled $127.8 million for the six months ended June 30, 2021. We raised cash through the issuance of Series B preferred stock, with gross proceeds of $122.9 million, and the issuance prior to the Reorganization of SAFEs and Convertible Notes, with net proceeds of $2.9 million and

$2.0 million, respectively. Net cash provided by financing activities totaled $24.2 million for the six months ended June 30, 2020. During the six months ended June 30, 2020, we raised capital to support our operations from the issuance of Convertible Notes of $2.0 million, the issuance of SAFEs of $5.4 million, the issuance of Series Seed-1 preferred stock of $4.5 million and the issuance of Series Seed-2 preferred stock of $11.0 million. Our capital was further augmented by a $1.0 million refund for a returned deposit.

Net cash provided by financing activities totaled $66.1 million for the year ended December 31, 2020. We raised $39.3 million through the issuance of multiple SAFEs, $20.4 million through issuance of convertible preferred stock and $12.0 million through the issuance of Convertible Notes, partially offset by the repayment of existing Convertible Notes and a promissory note of $5.7 million. Net cash provided by financing activities totaled $11.1 million for the year ended December 31, 2019 from the issuance of Convertible Notes, the Related Note and the Executive Note.

Funding Requirements

We have generated approximately $3.6 million in revenue since inception and have incurred net losses in each reporting period since inception. We expect to generate only modest near-term revenue from sales of our ELISA tests, and do not expect to generate any meaningful revenue unless and until we obtain regulatory approval of and commercialize our product candidates. We do not know when, or if, this will occur. If we do not receive regulatory approval for any of our product candidates, or if we receive approval but our commercialization results fall short of our expectations, we will continue to incur significant losses for the foreseeable future, and we expect the losses to increase as we continue the development of, and seek regulatory approvals for, our product candidates and begin to commercialize any approved products.

As of the date of this prospectus, we expect our existing cash and cash equivalents will be sufficient to fund our operating expenses and capital expenditure requirements for at least the next 12 months. We also believe that net proceeds from this offering together with existing cash and cash equivalents will enable us to fund our operating expenses and capital expenditure requirements into 2024. As of June 30, 2021, other than our 2025 Note, we have no material debt obligations.

We have based our projections of operating capital requirements on assumptions that may prove to be incorrect, and we may use all of our available capital resources sooner than we expect. Our future capital requirements will depend on many factors, which include:

- the pre-clinical development of our early-stage programs;
- necessary regulatory approvals for any product candidates that successfully complete clinical trials;
- the manufacture of our pre-clinical and clinical drug material and development of processes for late stage and commercial manufacturing;
- the establishment of a sales, marketing, medical affairs and distribution infrastructure to commercialize any product candidates for which we may obtain marketing approval and intend to commercialize on our own;
- the expansion of operational, financial and management systems and infrastructure, our facilities and the increase of personnel to support operations, including as necessary to operate as a public company; and
- the maintenance, expansion and protection of our intellectual property portfolio, and the costs of preparing, filing and prosecuting patent applications, maintaining and protecting our intellectual property rights, including enforcing and defending intellectual property related claims.

Until such time, if ever, as we can generate positive cash flows from operations, we expect to finance our cash needs through public or private equity offerings, strategic collaborations and debt financing. To the extent that we raise additional capital through the sale of our Class A common stock, convertible securities or other equity securities, your ownership interest will be diluted and the terms of these securities could include liquidation or other preferences and anti-dilution protections. In addition, debt financing, if available, may result in fixed payment obligations and may involve agreements that include restrictive covenants that limit our ability to take specific actions, such as incurring additional debt, making capital expenditures, creating liens, redeeming shares or declaring dividends.

If we raise additional funds through strategic collaborations or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds when needed, we may be required to delay, limit, reduce or terminate our product candidate development or future commercialization efforts or grant rights to third parties to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contract Research and Manufacturing Organizations

We recorded accrued expenses of $0.3 million and $0.6 million in our balance sheet for expenditures incurred by CROs and contract manufacturers as of December 31, 2020 and June 30, 2021, respectively.

Tax-Related Obligations

We have reserved $0.6 million of unrecognized tax benefits against NOLs. Additionally, as of December 31, 2020, we accrued $0.2 million in interest and penalties related to prior year tax filings.

Off-Balance Sheet Arrangements

We do not have during the periods presented, and do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported in our combined consolidated financial statements and accompanying notes. Management bases its estimates on historical experience, market and other conditions, and various other assumptions it believes to be reasonable. Although these estimates are based on management's best knowledge of current events and actions that may impact us in the future, the estimation process is, by its nature, uncertain given that estimates depend on events over which we may not have control. In addition, if our assumptions change, we may need to revise our estimates, or take other corrective actions, either of which may also have a material effect on our combined consolidated financial statements. Significant estimates contained within these combined consolidated financial statements include, but are not limited to, the estimated fair value of our common stock, convertible notes payable and SAFEs, stock-based compensation, warrant liabilities, income tax valuation allowance and the accruals of research and development expenses. We base our estimates on historical experience, known trends and other market-specific or other relevant factors that we believe to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates, as there are changes in facts and circumstances. If market and other conditions change from those that we anticipate, our combined consolidated financial statements may be materially affected.

While our significant accounting policies are described in more detail in the notes to our combined consolidated financial statements appearing elsewhere in this prospectus, we believe that the following critical accounting policies and estimates have a higher degree of inherent uncertainty and require our most significant judgments.

Accrued Research and Development Expenses

As part of the process of preparing our combined consolidated financial statements, we are required to estimate accrued research and development expenses. As we advance our programs, we anticipate more complex clinical studies resulting in greater research and development expenses, which will place even greater emphasis on the accrual. This process involves reviewing open contracts and purchase orders, communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual costs. The majority of our service providers invoice in arrears for services performed, on a pre-determined schedule or when contractual milestones are met; however, some require advance payments. We make estimates of accrued expenses as of each balance sheet date in the combined consolidated financial statements based on facts and circumstances known to us at that time. We periodically confirm the accuracy of the estimates with the service providers and make adjustments if necessary. Examples of estimated accrued research and development expenses include fees paid to:

- vendors, including research laboratories, in connection with pre-clinical development activities;
- CROs and investigative sites in connection with pre-clinical studies and clinical trials; and
- contract manufacturers in connection with drug substance and drug product formulation of pre-clinical studies and clinical trial materials.

We base our expenses related to pre-clinical studies and clinical trials on our estimates of the services received and efforts expended pursuant to quotes and contracts with multiple research institutions and CROs that supply, conduct and manage pre-clinical studies and clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, it adjusts the accrual or the prepaid expense accordingly. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low in any particular period. To date, our estimated accruals have not differed materially from actual costs incurred.

Stock-Based Compensation

We measure all stock-based awards granted to employees, directors and non-employees based on their fair value on the date of the grant and recognize the corresponding compensation expense of those awards over the requisite service period, which is generally the vesting period of the respective award. Forfeitures are accounted for as they occur. We grant stock options and restricted stock awards that are subject to service vesting conditions.

We classify stock-based compensation expense in our combined consolidated statements of operations in the same manner in which the award recipient’s payroll costs are classified or in which the award recipient’s service payments are classified.

We estimate the fair value of each stock option grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions for the volatility of common stock, the expected term of stock options, the risk-free interest rate for a period that approximates the expected term of stock options and its expected dividend yield.

Determination of the Fair Value of Common Stock

As there has been no public market for our common stock to date, the estimated fair value of common stock has been determined by its most recently available third-party valuations of common stock. These third-party valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Our common stock valuations were prepared using an option pricing method ("OPM"). The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceeded the value of the preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock. These third-party valuations were performed at various dates, which resulted in valuations of our common stock detailed in the table below.

In addition to considering the results of these third-party valuations, our board of directors considered various objective and subjective factors to determine the fair value of our common stock as of each grant date, including:

- the prices at which we sold shares of preferred stock and the superior rights and preferences of the preferred stock relative to our common stock at the time of each grant;
- the progress of our research and development programs, including the status and results of pre-clinical studies and clinical trials for our product candidates;
- our stage of development and commercialization and our business strategy;
- external market conditions affecting the biopharmaceutical industry and trends within the biopharmaceutical industry;
- our financial position, including cash on hand, and our historical and forecasted performance and results of operations;
- the lack of an active public market for our common stock and our preferred stock;
- the likelihood of achieving a liquidity event, such as an initial public offering or our sale in light of prevailing market conditions; and
- the analysis of initial public offerings and the market performance of similar companies in the biopharmaceutical industry.

The assumptions underlying these valuations represented management's best estimate, which involved inherent uncertainties and the application of management's judgment. As a result, if we had used significantly different assumptions or estimates, the fair value of our common stock and our stock-based compensation expense could have been materially different.

Once a public trading market for our common stock has been established for a sufficient period of time, it will no longer be necessary to estimate the fair value of our common stock in connection with its accounting for granted stock options and other such awards we may grant, as the fair value of our common stock will be determined based on the quoted market price of our common stock.

Awards Granted

The following table sets forth information on stock options awarded to employees since January 1, 2019:

Grant Date	Number of shares subject to award	Per share exercise price of options	Per share fair value of common stock on grant date	Per share estimated fair value of award on grant date
December 30, 2019	1,773,401	$ 0.365	$ 0.411	$ 0.259
September 2, 2020	249,211	$ 0.365	$ 0.913	$ 0.755
August 22, 2020	3,899,273	$ 0.777	$ 1.057	$ 0.482
January 6, 2021	14,072,334	$ 2.647	$ 2.647	$ 1.452
February 11, 2021	2,185,078	$ 2.577	$ 2.577	$ 1.620
June 16, 2021	1,074,055	$ 3.090	$ 3.090	$ 2.306
July 16, 2021	440,000	$ 3.090	$ 3.090	$ 2.332
July 28, 2021	875,414	$ 6.470	$ 6.470	$ 4.800

Simple Agreement for Future Equity

During the year ended December 31, 2020, we entered into SAFEs. The SAFEs were not mandatorily redeemable, nor did they require us to repurchase a fixed number of shares. We determined that the SAFEs contained a liquidity event provision that embodied an obligation indexed to the fair value of the equity shares and could require us to settle the SAFE obligation by transferring assets or cash. Our SAFEs represented a recurring measurement that is classified within Level 3, disclosed and defined in Note 2 to our combined consolidated financial statements included elsewhere in this prospectus, of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs, including an estimate of the number of months to a liquidity event, volatility rates and the estimation of the most likely conversion feature for converting the SAFE.

The fair value of the SAFEs on the date of issuance was determined to equal the proceeds we received. The value of the SAFEs on the date of conversion into Series A preferred stock was determined to be equal to the fair value of the Series A preferred stock issued in connection with the Reorganization.

Convertible Notes

Beginning in 2018, we issued Convertible Notes that bore simple interest at annual rates ranging from 4.8% to 6%. All unpaid principal, together with the accrued interest thereon, for the Convertible Notes were payable upon the event of default or upon maturity, which ranged from one to three years. The Convertible Notes contained a number of provisions addressing automatic and optional conversion, events of default and prepayment provisions. We determined that a portion of the Convertible Notes contained a liquidity event provision, requiring them to be measured and accounted for at fair value at each reporting date. We determined the Convertible Notes requiring a measurement to fair value represented a recurring measurement that was classified within Level 3, disclosed and defined in Note 2 to our combined consolidated financial statements included elsewhere in this prospectus, of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs.

Taiwan Centers for Disease Control Grant

UBIA, which is responsible for applying for and managing grants on our behalf, was awarded a grant by the Taiwan Centers for Disease Control (“TCDC”) for COVID-19 vaccine development. The grant provides that costs incurred to complete the two phases of the clinical trial will be reimbursed based on the achievement of certain milestones as defined in the agreement. We are entitled to reimbursement under the TCDC grant. At each reporting date, we assess the status of all of the activities involved in completing the clinical study in relation to the milestones. We account for the amounts that have been received from the TCDC to reimburse costs incurred on the clinical study and not expected to be refunded back to the TCDC as contra research and development expenses in the accompanying combined consolidated statement of operations.

Quantitative and Qualitative Disclosures about Market Risks

We are exposed to market risk in the ordinary course of our business. These risks primarily relate to foreign currency and changes in interest rates.

Foreign Currency Exchange Risk

We have limited exposure to foreign currency exchange risk as most of our operating activities are primarily denominated in U.S. dollars. We believe actual foreign exchange gains and losses did not have a significant impact on our results of operations for any periods presented herein. The results of the analysis based on our financial position as of June 30, 2021 indicated that a hypothetical 10% increase or decrease in applicable foreign currency exchange rates would not have a material effect on our financial results.

Interest Rate Risk

We are exposed to market risk related to changes in interest rates. As of December 31, 2019 and 2020 and June 30, 2021, our cash equivalents consisted of interest-bearing checking accounts. We issued Convertible Notes, which Convertible Notes were exchanged for Series A preferred stock in connection with the Reorganization. The Convertible Notes bore simple interest at the annual rates ranging from 5% to 6%, with redemption terms payable at the earlier of one year, or upon the event of default. In addition, the Convertible Notes contained provisions addressing automatic and optional conversion. Given the redemption of the Convertible Notes, and the short-term nature and fixed interest rate, we believe there is no material exposure to interest rate risk. Additionally, the 2025 Note we entered into for the year ended December 31, 2020 bears an annual interest rate of 3.4% and matures in June 2025. Given the fixed interest rate of the 2025 Note, we believe there is no material exposure to interest rate risk. The results of the analysis based on our financial position as of June 30, 2021 indicated that a hypothetical 100 basis point increase or decrease in risk-free rates would not have a material effect on our financial results.

Our measurement of interest rate risk involves assumptions that are inherently uncertain and, as a result, cannot precisely estimate the impact of changes in interest rates on net interest revenues. Actual results may differ from simulated results due to balance growth or decline and the timing, magnitude, and frequency of interest rate changes, as well as changes in market conditions and management strategies, including changes in asset and liability mix.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our combined consolidated financial statements included elsewhere in this prospectus.

The JOBS Act

The JOBS Act permits an emerging growth company such as ours to take advantage of specified exemptions from various requirements that are otherwise applicable generally to public companies in the United States. We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus. 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, while we are an emerging growth company, we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies. See “Prospectus Summary—Implications of Being an Emerging Growth Company and a Smaller Reporting Company” and “Risk Factors—Risks Related to Our Class A Common Stock and This Offering—We are an “emerging growth company” and a “smaller reporting company” and will be able to avail ourselves of reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies, which could make our Class A common stock less attractive to investors and adversely affect the market price of our Class A common stock.”

BUSINESS

Overview

We are a purpose-driven biotechnology company committed to democratizing healthcare across the globe. Our vision is to disrupt the existing treatment paradigm for chronic diseases, increasingly dominated by drugs, particularly mAbs, which suffer from prohibitive costs and cumbersome administration. We believe our Vaxxine Platform has the potential to enable a new class of therapeutics that will improve the quality and convenience of care, reduce costs and increase access to treatments for a wide range of indications. Our Vaxxine Platform is designed to harness the immune system to convert the body into its own "drug factory," stimulating the production of antibodies with a therapeutic or protective effect. While traditional vaccines have been able to leverage this approach against infectious diseases, they have historically been unable to resolve key challenges in the fight against chronic diseases. We believe our Vaxxine Platform has the potential to overcome these challenges, and has the potential to bring the efficiency of vaccines to a whole new class of medical conditions. Specifically, our technology uses synthetic peptides to mimic and optimally combine biological epitopes in order to selectively activate the immune system, producing antibodies against only the desired targets, including self-antigens, making possible the safe and effective treatment of chronic diseases by vaccines. The modular and synthetic nature of our Vaxxine Platform generally provides significant speed and efficiency in candidate development and has generated multiple product candidates that we are designing to have safety and efficacy equal to or greater than the standard-of-care treatments for many chronic diseases, with more convenient administration and meaningfully lower costs. Our current pipeline consists of five chronic disease product candidates from early to late-stage development across multiple therapeutic areas, including AD, PD, migraine and hypercholesterolemia. Additionally, we believe our Vaxxine Platform may be used to disrupt the treatment paradigm for a wide range of other chronic diseases, including any that are or could potentially be successfully treated by mAbs. We also will opportunistically pursue infectious disease treatments. When the COVID-19 pandemic struck the world in March 2020, we quickly reallocated our resources to develop vaccine candidates for the condition. We have assembled an industry-leading team with extensive experience developing and commercializing successful drugs that is committed to realizing our mission of democratizing healthcare.

Limitations of the Current Healthcare Paradigm

The current healthcare paradigm favors the development of drugs that are primarily intended for the U.S. market, for niche indications and for treatment of disease rather than prevention. Furthermore, these drugs are expected to be sold at price points that are only accessible to healthcare systems in developed countries. One class of drugs in particular exemplifies the current environment: biologics, particularly mAbs. In 2019, biologics represented eight of the ten top selling drugs in the United States, of which seven were mAbs. The global market for mAbs totaled approximately $163 billion in 2019, representing approximately 70% of the total sales for all biopharmaceutical products.

While mAbs can provide life-altering care with generally favorable safety characteristics and significant health benefits for the patients who receive them, regular in-office transfusions and annual treatment costs, which can exceed hundreds of thousands of dollars, present challenges to both patients and payors. These price and administration hurdles cause mAb treatments to be available to only a fraction of the population who could benefit from them. Furthermore, mAbs are often restricted to moderate to severe disease and to later lines of treatment due to their high cost. Based on internal estimates, less than 1% of the worldwide population is on mAbs. Meanwhile, the alternative to mAbs treatments tends to be small molecules, which are accessible to most patients, but are often comparatively less effective with more significant side effects. Collectively, this perpetuates a profound inequity in healthcare access, domestically but even more so globally, that we believe represents a tremendous social and market opportunity.

Our Solution

Monoclonal antibodies are developed, produced and purified outside the body and then transfused into the patient on a regular basis, as frequently as bi-weekly. Therefore, mAbs are inherently less efficient than vaccines, which instead stimulate antibody production within the patient's immune system, requiring both less active material and less frequent treatments. However, while traditional vaccines have historically been successful addressing infectious diseases, previous attempts to utilize vaccines to address chronic disease have not achieved both acceptable safety and efficacy. This limitation is driven by a traditional vaccine's inability to either stimulate the requisite antibody response against harmful self-antigens, that is, break immune tolerance, or produce acceptable levels of reactogenicity, the physical manifestation of the immune response to vaccination. Our Vaxxine Platform technology contains modular components custom-designed to mimic select biology and activate the immune system, enabling our product candidates to break immune tolerance when targeting self-antigens, a property observed across multiple clinical and pre-clinical studies. Our Vaxxine Platform depends heavily on intellectual property licensed from UBI and its affiliates, a related party and a significant commercial partner for us, who first developed the peptide vaccine technology utilized by our Vaxxine Platform. The formulation of peptide-based medicines is also complex, requiring significant expertise from UBI, its affiliates and our other contract manufacturers to produce our product candidates.

We believe our Vaxxine Platform has the potential to generate product candidates with attributes that collectively offer significant advantages over both mAbs and small molecule therapeutics:

- *Cost*: Monoclonal antibodies require costly and complex biological manufacturing processes. Our manufacturing process is chemically based and highly scalable and requires lower capital expenditures. In addition, we designed our product candidates to generate antibody production in the body, thus requiring meaningfully less drug substance relative to mAbs, leading to commensurately lower costs.

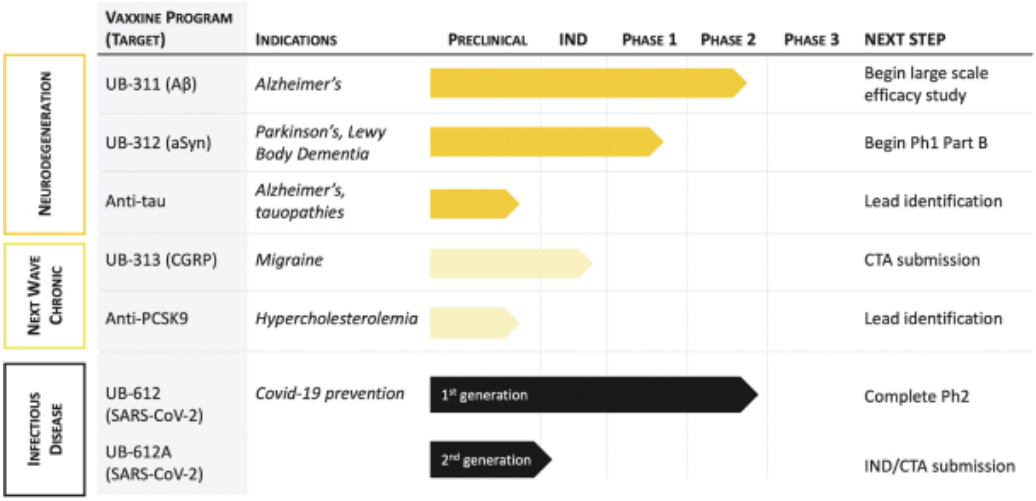
- *Administration*: Our product candidates are designed to be injected in quarterly or longer intervals via intramuscular injection similar to a flu shot. We believe this offers considerable convenience compared to mAbs, which can require up to bi-weekly dosing via intravenous infusion or subcutaneous injections, and small molecules, which often require daily dosing.

- *Efficacy*: In clinical trials conducted to date, our product candidates have yielded comparatively high response rates, high target-specific antibodies against self-antigens and relatively long durations of action. We also believe that the improved convenience of our product candidates as compared to mAbs has the potential to lead to increased adherence by patients. Furthermore, our Vaxxine Platform enables the combining of target antigens into a single formulation. For indications that could be treated more effectively with a multivalent approach, we believe our Vaxxine Platform would have an advantage over other modalities. Finally, because our Vaxxine Platform is designed to elicit endogenous antibodies, we believe our product candidates may lessen or avoid altogether the phenomenon of anti-drug antibodies which has limited the efficacy of certain mAbs over time.

- *Safety*: Based on our clinical trials to date, our product candidates have been well tolerated, with safety profiles comparable to placebo. We aim to offer product candidates with safety profiles at least comparable to the competing mAb or small molecule alternative for the relevant disease.

Our Pipeline

The following chart reflects our current product candidate pipeline:



As used in the chart above, "IND" signifies a program has begun IND-enabling studies.

Our pipeline consists of five programs focused on chronic disease, particularly neurodegenerative disorders, in addition to other neurology and cardiovascular indications.

Neurodegenerative Disease Programs:

- *UB-311*: Targets toxic forms of aggregated Ab in the brain to fight AD. Phase 1, Phase 2a and Phase 2a LTE trials have shown UB-311 to be well tolerated in mild-to-moderate AD subjects over three years of repeat dosing, with a safety profile comparable to placebo, with no cases of amyloid-related imaging abnormalities-edema ("ARIA-E"), and immunogenic, with a high responder rate and antibodies that bind to the desired target. We expect to initiate a Phase 2b early AD efficacy trial in .

- *UB-312*: Targets toxic forms of aggregated α-synuclein in the brain to fight PD and other synucleinopathies, such as DLB and MSA. The first part of a Phase 1 trial in healthy volunteers has shown UB-312 to be well tolerated, with no significant safety findings, and immunogenic, with a high responder rate and antibodies that cross the BBB. No serious adverse events were observed in Part A of the Phase 1 trial. We expect to initiate the second part of this Phase 1 trial in PD subjects in .

- *Anti-tau*: We are developing an anti-tau product candidate that has the potential to address multiple neurodegenerative conditions, including AD, by targeting abnormal tau proteins alone and in potential combination with other pathological proteins such as Ab to combat multiple pathological processes at once. We expect to identify a lead product candidate in .

Next Wave Chronic Disease Programs:

- *UB-313*: Targets CGRP to fight migraines. We have initiated IND-enabling studies and expect to begin a first-in-human Phase 1 clinical trial in .

- *Anti-PCSK9*: Targets PCSK9 to lower LDL cholesterol and reduce the risk of cardiac events. We expect to initiate IND-enabling studies for this program in .

Given the global COVID-19 pandemic and our Vaxxine Platform's applicability to infectious disease, we also have advanced product candidates that address SARS-CoV-2.

COVID-19

- *UB-612*/*UB-612A*: Employ a "multitope" approach to neutralizing the SARS-CoV-2 virus, meaning the product candidates are designed to activate both antibody and cellular immunity against multiple viral epitopes. Phase 1 and Phase 2 trials of UB-612 have shown UB-612 to be well tolerated, with no significant safety findings to date. No serious adverse events were observed in the Phase 1 trial. In the Phase 2 trial, twenty serious adverse events were observed through interim analysis. Only one led to discontinuation of the study, and none were considered UB-612-related. In these trials we observed that UB-612 generated antibodies that can bind to the S1-RBD protein and neutralize SARS-CoV-2, in addition to driving T-cell response. An EUA application for UB-612 was denied by the TFDA in August 2021, but, in collaboration with our partner UBIA, we are appealing that decision. At the same time, we are accelerating our development of our second COVID-19 product candidate, UB-612A, with pre-clinical data showing multifold higher neutralizing titers than UB-612 against multiple variants. UB-612A employs the same mix of proteins and peptides as UB-612 with a new formulation using different adjuvants.

We believe our Vaxxine Platform has application across a multitude of chronic and infectious disease indications beyond our existing pipeline. We also are developing additional product candidates that we believe may address significant unmet needs both within and beyond our current pipeline's therapeutic areas.

Our Team

We have assembled an experienced group of executives with deep scientific, business and leadership expertise in pharmaceutical and vaccine discovery and development, manufacturing, regulatory and commercialization. Mei Mei Hu, our co-founder and Chief Executive Officer, has been a member of the executive committee of UBI since 2010. Our board of directors is chaired by our co-founder Louis Reese, who has been a member of the executive committee of UBI since 2014. Our research efforts are guided by highly experienced scientists and physicians on our leadership team including Dr. Peter Powchik, our Executive Vice President of Research & Development, who previously ran the anti-PCSK9 mAb program at Regeneron, Dr. Ulo Palm, our Chief Medical Officer, and Dr. Farshad Guirakhoo, our Chief Scientific Officer. Our leadership team contributes a diverse range of experiences from leading companies including Acambis, Amgen, Dendreon, Eli Lilly, Merck, Novavax, Novartis, Regeneron and Sanofi, and were executives in multiple successful mAb and vaccine launches, including Eyelea, Pralulent, Dupixent, Kevzara, Provenge, PreveNile, Ervebo, Imojev and Dengvaxia. As of September 1, 2021, we have assembled an exceptional team of approximately 75 employees, the majority of whom hold Ph.D., M.D., J.D. or Master's degrees, and we are regularly hiring additional personnel. We also have a highly experienced scientific advisory board consisting of 13 doctors and scientists.

Our Strategy

Our mission is to develop product candidates that improve the quality of care for chronic diseases and are accessible to all patients across the globe. In order to achieve this mission, we seek to:

- *Advance our chronic disease pipeline through clinical stage development*: We plan to advance UB-311 and UB-312 through clinical stage development for the treatment of neurodegenerative disorders. In addition, we are conducting IND-enabling studies on multiple pre-clinical product

candidates that are focused on the treatment of chronic migraines, hypercholesterolemia and additional neurodegenerative disorders. We believe that our differentiated Vaxxine Platform will enable our product candidates, if successful, to potentially disrupt the treatment paradigm for their respective indications. However, there can be no guarantee that we will achieve commercialization of any such product candidates.

- *Expand our pipeline of product candidates*: Chronic diseases are prevalent globally and expected to worsen over the next several decades. In furtherance of our mission, we plan to expand our pipeline by developing new product candidates that address additional indications. In expanding our pipeline, we rely on our proprietary filtering methodology, which evaluates potential product candidates across five principal criteria – (i) probability of technical and regulatory success, (ii) addressable market, (iii) development cost, (iv) competitive dynamics and (v) disruptive potential.

- *Opportunistically develop treatments for infectious diseases*: While our core mission focuses on the treatment of chronic diseases, we are committed to bringing accessible medicines to people around the world and will address infectious diseases opportunistically. For example, when the COVID-19 pandemic struck the world, we rapidly deployed resources in pursuit of product candidates currently embodied in UB-612 and UB-612A.

- *Expand and scale our existing capabilities*: We are investing in our operational processes, facilities and human capital to accelerate the speed with which we can bring product candidates through the development pipeline, and to expand the capacity for developing more product candidates simultaneously.

- *Continue to improve our Vaxxine Platform*: In addition to, and in conjunction with, our product candidate development efforts, we are continuously working to improve and enhance the richness, breadth and effectiveness of our Vaxxine Platform. As our Vaxxine Platform further develops, we believe that we can both increase the number of product candidates in concurrent development and accelerate the process of advancing product candidates through pre-clinical and clinical development.

- *Maximize the value of our product candidates through potential partnerships*: We currently retain worldwide rights for the majority of our product candidates and will consider entering into development and commercialization partnerships with third parties that align with our mission on an opportunistic basis.

Background and Limitations of Traditional Vaccines and Monoclonal Antibodies

The immune system, the body's mechanism for fighting off potential threats, is comprised of cells that form the innate and adaptive immune responses. The main purpose of the innate immune system is to immediately prevent the spread and movement of foreign pathogens throughout the body. The adaptive immune response is specific to the pathogen presented to T-cells and B lymphocytes ("B-cells"), and leads to an enhanced response upon future encounters with those antigens. Antibodies represent an important tool within the adaptive immune system's arsenal. Upon detection of a potential threat, B-cells produce antibodies that recognize, bind to and eliminate the threatening pathogen. Over time, the immune system develops the ability to produce countless types of antibodies, each finely tuned against a specific threat.

Generally, the immune system is able to function effectively by neutralizing viruses, bacteria and even self-generated cells and proteins from within our own bodies that could cause harm if unchecked. However, as powerful as the immune system is, there are threats that it cannot overcome on its own, generating the need for medicine. Conventional forms of medicine include small molecules (e.g., antibiotics), which can inhibit or

promote action within the body by, for instance, binding to a receptor on the surface of a cell, or directly inducing toxic effects upon bacteria. These medicines do not necessarily modulate the immune system directly in order to work. Instead, they work alongside it. While small molecules have provided substantial benefits to human health, they are not designed to interact with the immune system. They may also have limited efficacy in cases where an immune response to a target can be used against a chronic condition.

Vaccines

In the first part of the twentieth century, vaccines revolutionized healthcare by directly interacting with, and modulating, the immune system — training it to recognize a dangerous pathogen by introducing the immune system to a relatively harmless form of the pathogen, its toxins or one of its surface proteins, thereby promoting the body's own production of binding antibodies. Once immunized to a specific pathogen, the immune system can recognize it and generate the antibodies to fight it more quickly and robustly.

Traditional vaccine technologies have generally focused on the prevention of bacterial and viral infections and not on chronic disease. In chronic disease settings, the disease-causing agents frequently come from within the body. These self-antigens are proteins that become too abundant, misfolded or aggregated such that they can no longer perform their healthy function and even may induce toxic effects. The body can sometimes produce antibodies against such proteins, but this often falls short of providing the right types of antibodies in the right concentrations to ward off disease. Historically, vaccine technologies developed to target these proteins have been unable to break immune tolerance — that is, the immune system's general avoidance of reactivity towards self-antigens — with an acceptable level of reactogenicity. The challenges faced by prior efforts to advance vaccine technologies for chronic diseases included low response rates, low titer levels, off-target responses and other safety concerns such as T-cell mediated inflammation.

Monoclonal Antibodies

The first mAbs were developed in the later part of the twentieth century. In contrast to vaccines, which prompt the body to produce antibodies, mAbs are antibodies manufactured outside of the patient's body and then injected or infused into the body to recognize and eliminate harmful targets. Monoclonal antibodies have revolutionized the standard-of-care treatment for many chronic diseases. However, manufacturing mAbs is often an expensive and complex process and administering mAbs is cumbersome, sometimes requiring infusions as frequently as bi-weekly. These factors have generally limited mAbs' availability to moderate-to-severe disease, to later lines of therapy and to wealthier geographies, thus denying access to a substantial portion of the patients who could benefit from them. Finally, patients on mAbs often experience a loss of effectiveness over time due to a phenomenon known as anti-drug antibodies, whereby the immune system begins to recognize therapeutic mAbs as foreign, and mounts a response against them, eventually mitigating their efficacy.

Our Vaxxine Platform

Our Vaxxine Platform is designed to stimulate the patient's own immune system to generate antibodies and overcome the limitation of traditional vaccines to effectively and safely target self-antigens in chronic diseases. Our product candidates have broken immune tolerance against self-antigens consistently. As described in the section titled "Our Product Candidates" below, across six clinical trials, we have consistently observed that our product candidates have stimulated the development of antibodies against the desired target at relevant doses in clinical trial subjects, including the elderly. We have observed favorable tolerability and reactogenicity of our product candidates across studies of UB-311, UB-312 and UB-612, with no significant safety findings to date. We aim to develop product candidates that possess clinical advantages against, and safety profiles at least comparable to, relevant mAbs and small molecule treatments. We believe our product candidates have the potential to eventually capture meaningful market share from mAbs and small molecules, and to provide therapeutic benefit to large patient populations who currently receive neither form of treatment. This would represent an unprecedented shift in the treatment paradigm, potentially providing better global access to

treatments that have been previously limited to the wealthiest nations. In particular, we believe our treatments for chronic disease could reflect the following benefits as compared with the relevant mAbs and small molecule alternatives:

Characteristics of our Product Candidates versus Monoclonal Antibodies and Small Molecules

	Vaxxinity Product Candidates	Monoclonal antibodies	Small molecules
Cost			
Stability	✓ Stable	✗ Unstable, sensitive to external factors	✓ Stable
Manufacturability	✓ Simple, scalable, chemical process	✗ Complex biologic process	✓ Simple, chemical process
Accessibility	✓ Cost-effective	✗ Expensive	✓ Cost-effective
Distribution	✓ No new infrastructure requirements	✗ Requires infusion clinics	✓ Strong existing network
Administration			
Dose frequency	✓ **Quarterly to annually**	✗ Bi-weekly or monthly	✗ Daily
Route	✓ IM injection	✗ IV infusion or SC	✓ Oral
Safety Mechanism	• Target-specific	• Target-specific	• Toxic off-target effects • Drug-drug interactions
Efficacy Mechanism	• Specific and targeted • Penetrates BBB at higher rate than mAb	• Specific and targeted	• Generally less specific than biologics

History and Design

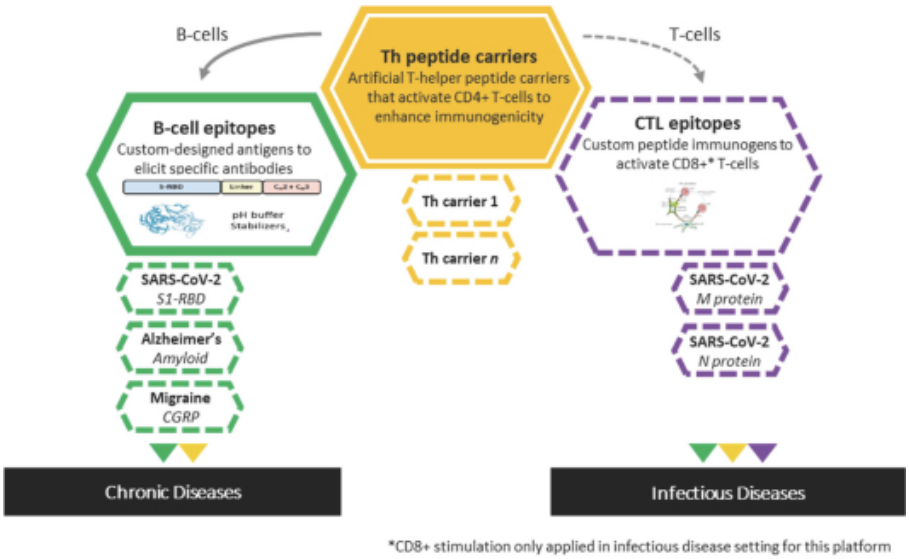
Our Vaxxine Platform utilizes a peptide vaccine technology first developed by UBI and subsequently refined over the last two decades, with more than three billion doses of animal vaccines sold to date. UBI initiated the development of this technology for human use; the business focused on human use was then separated from UBI through two separate transactions: a spin-out from UBI in 2014 of operations focused on developing chronic disease product candidates that resulted in UNS, and a second spin-out from UBI in 2020 of operations focused on the development of a COVID-19 vaccine that resulted in COVAXX. The combination of UNS and COVAXX in March of 2021 resulted in our current company, Vaxxinity.

We believe that UBI, with its extensive background developing and commercializing products, will continue to be a significant commercial partner for us in the future. UBI has used its capabilities in peptide technology for innovations across an array of business endeavors: antibody testing for human diagnostics, animal health vaccines and the manufacture of medical products. Its innovative products include one of the first approved peptide-based blood antibody tests in the world (for HIV), one of the first approved peptide vaccines against an infectious disease in the world in animal health (for a food-and-mouth disease virus) and one of the first approved peptide vaccines against a self-antigen in the world in animal health (an anti-luteinizing hormone-releasing hormone ("LHRH") vaccine used for the immunocastration of swine). Grant funding from the National Institutes of Health supported some of UBI's work in the fields of vaccines and antibody testing. To commercialize its animal health vaccine business, UBI and its affiliates scaled up GMP vaccine manufacturing to over 500 million doses per year and partnered with a top-ten animal health company for commercialization of its anti-LHRH vaccine; all together, UBI's technology platform is utilized for the vaccination of approximately 25% of the global swine population annually. The preliminary work that UBI performed in the human vaccine sector, prior to the spin-out that resulted in UNS in 2014, resulted in a high throughput discovery/development platform that now allows Vaxxinity to generate and screen product candidates for its pipeline.

We are advancing our peptide-based Vaxxine Platform to develop product candidates that target chronic diseases and COVID-19. Our Vaxxine Platform comprises a custom, rationally designed antigen capable of evoking an immune response (an "immunogen") formulated with a proprietary CpG oligonucleotide. The immunogen contains several advanced synthetic peptides, including B-cell epitopes, T-helper ("Th") antigen

carrier constructs and epitope linker configurations. This composition enables us to achieve a highly specific immune response to the target antigen, with limited inflammation and off-target effects that could cause reactogenicity. This design process has evolved into a repeatable series of well-defined steps, which has enabled the development of our current pipeline of product candidates.

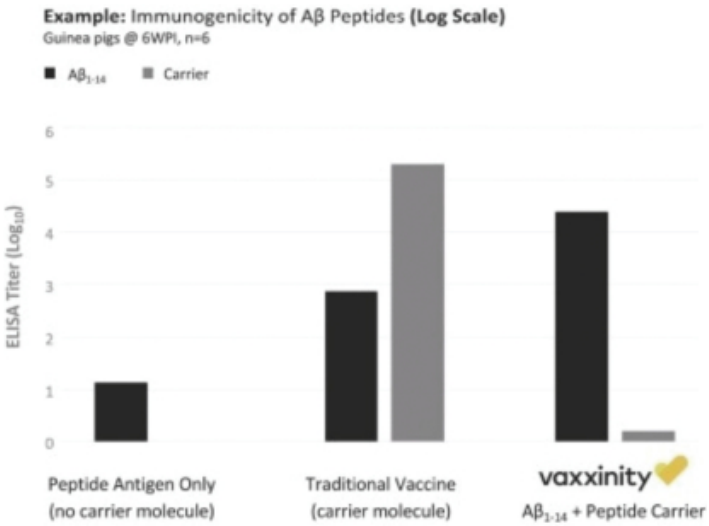
Key Elements of our Vaxxine Platform Constructs and Formulations



When developing a product candidate, we use publicly available information and sophisticated bioinformatics tools to investigate the entire protein structure of a target in a comprehensive manner to identify functional B-cell epitopes that may provide optimal antigens. We then synthesize custom peptides that mimic these identified antigens to elicit highly specific antibodies against these B-cell epitopes. To yield favorable tolerability profiles, we design our product candidates such that they lack T-cell epitopes and screen them for lack of T-cell mediated inflammation and toxicity, as well as reactogenicity. Such screening tests include the measuring of immunogenicity of each B-cell antigen with and without conjugation to a Th carrier peptide (a response only when conjugated to a Th carrier peptide is desired), epitope mapping assays and *in vivo* and *ex vivo* tests of lymphocyte proliferation, pro-inflammatory cytokine release and T-cell infiltration. To enhance effectiveness, we seek to optimize the size and sequence of our custom peptides to elicit a robust, specific antibody response when linked to a carrier molecule.

We then attach a proprietary carrier molecule, an artificial Th carrier peptide that delivers the synthetic peptide into cells. Carrier molecules used in traditional vaccines often elicit a strong T-cell mediated immune response, resulting in significant off-target activity. In our pre-clinical trials and clinical trials to date, our product candidates have displayed specific immunogenicity, or the ability to stimulate an immune response, thereby greatly reducing potential off-target effects and increasing the potential for our product candidates to be well tolerated and efficacious. We have observed that our carrier molecules have produced consistent results across multiple species, against multiple targets and to date from our six human clinical trials. Traditional vaccines have faced challenges in achieving specific responses because they rely on conjugating the antigen to a large toxoid molecule carrier protein, to which most of the antibody response is directed, causing off-target effects such as inflammation.

Our Product Candidate Does not Induce an Antibody Response against its Carrier Molecule



The graph above illustrates that our peptide carriers induce a strong immune response against the target antigen, and a minimal immune response against themselves, as compared to traditional vaccines formulated with other types of carrier molecules.

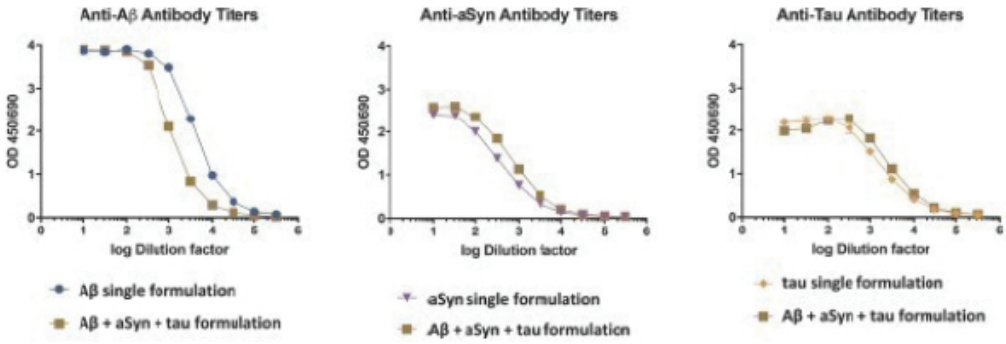
Our peptide carriers have short sequence lengths, which contribute to their immunosilence and ability to avoid a direct response by cytotoxic T-cells. However, the carriers' sequences mirror those found in naturally ubiquitous pathogens, so they are easily recognized by T-helper cells. This encourages robust T-helper cell exposure to the carrier peptide and promotes activation of other immune cells. In turn, B-cells are exposed to the B-cell antigen and begin antibody production against the antigen, while avoiding exposure to the carrier peptide, which avoids antibody response to the carrier. We believe that B-cell exposure to the carrier peptide is avoided because of its relatively small size and its high affinity to T-helper cells, such that T-helper cells are exposed to the carrier peptide rapidly and robustly, more so than other cell types. UBI first developed a library of such peptide carriers, which contain various Th cell epitopes and are of critical importance to our vaccine configuration. Our library of peptide carriers enables the use of different carrier molecules or different combinations of carrier molecules, which allows us to potentially regulate the speed of immune response onset as well as the magnitude and duration of that response. For example, a longer duration of response would allow for less frequent dosing. Other variables that can be adjusted to modulate the immune response include dosing and formulation optimization. In the case of vaccines targeting infectious diseases, T-cell mediated activity is desirable, while in the case of chronic diseases, it is not. Our Vaxxine Platform affords the flexibility to design immunogen constructs that specifically promote cytotoxic T-cell activity when warranted (e.g., for infectious diseases).

We utilize our linker construct to attach our peptide carriers with our custom antigens. In addition to their binding function, these linkers also enhance the immune system response further by enabling conformational changes to optimize presentation of the B-cell epitope to antigen-presenting cells ("APCs"), such as B-cells and dendritic cells ("DC").

Our Vaxxine Platform also enables the construction of multitope configurations, whereby we can attach multiple immunogens targeting multiple B-cell epitopes simultaneously, each with different targets, within a single product candidate. Combinations of therapies targeting different molecular mechanisms are common in treating neurologic, cardiovascular, psychiatric, metabolic, respiratory, infectious and oncologic disease. Our

Vaxxine Platform's favorable cost of goods and efficient manufacturing process could allow for viable combinations of targeted therapies in a single formulation. This concept could be applied in an array of potential therapeutic areas. Our current pipeline has candidates against b-amyloid, α-synuclein and tau; combinations of two or more of these might prove more effective than any single therapy in some patients. Pre-clinical data to date suggests that we can elicit antibody titers against all three targets in a single formulation. For mAb-based treatments, such combinations might require the individual dosing of multiple separate mAb therapies, thereby compounding cost and administration burdens.

Immunogenicity of Single- Versus Combination-Target Formulations in Guinea Pigs



Guinea pigs (three per dose) were tested with either single-target or combination-target formulations, then serum was drawn and antibody titers compared via enzyme immunoassays ("EIA"). Combination-target formulations elicited similar titer levels against each target as corresponding single-target formulations. This suggests we can create product candidates with multiple neurodegenerative targets in a single formulation and achieve sustainable titer levels.

Product Candidate Formulations

In addition to our immunogen construct, each product candidate formulation includes custom CpG oligonucleotides and adjuvant selection. CpG oligonucleotides are negatively charged, and we utilize proprietary CpG configurations to stabilize the positively charged peptides. This stabilization acts to optimize display of the B-cell epitope to APCs. In this way, the primary function of CpG oligonucleotides in our formulations is that of an excipient, even though it has the secondary function of an adjuvant.

A potential secondary function of CpG is that of an adjuvant. Certain CpG configurations are known to act as immunostimulants and promote direct cytotoxic T-cell activity, while others do not. Accordingly, our selection of the specific CpG modality is highly dependent on the target indication. For infectious disease indications, the T-cell response generated by the CpG configuration is independent and in addition to that of the T-cell response generated by the peptide carrier.

The final formulation includes the addition of an adjuvant, such as a well-recognized, alum-derived Adju-Phos or Alhydrogel to further enhance the immunogenicity of our product candidate. Alum-derived adjuvants are commonly used in vaccines to enhance the stimulation of an immune response. This is not the same adjuvant used in other companies' failed neurodegenerative vaccine candidates.

How our Product Candidates Function

Our immunogens stimulate the body's adaptive immune system to produce antibodies against a variety of antigen targets, including secreted peptides or proteins, degenerative or dysfunctional proteins and membrane proteins, as well as infectious pathogens. The mechanism of action involves the following sequence of steps:

1. The immunogen is taken up by an APC, such as a DC. Antigen uptake leads to DC maturation and migration to the draining lymph nodes where the DCs interact with CD4+ T-helper cells.

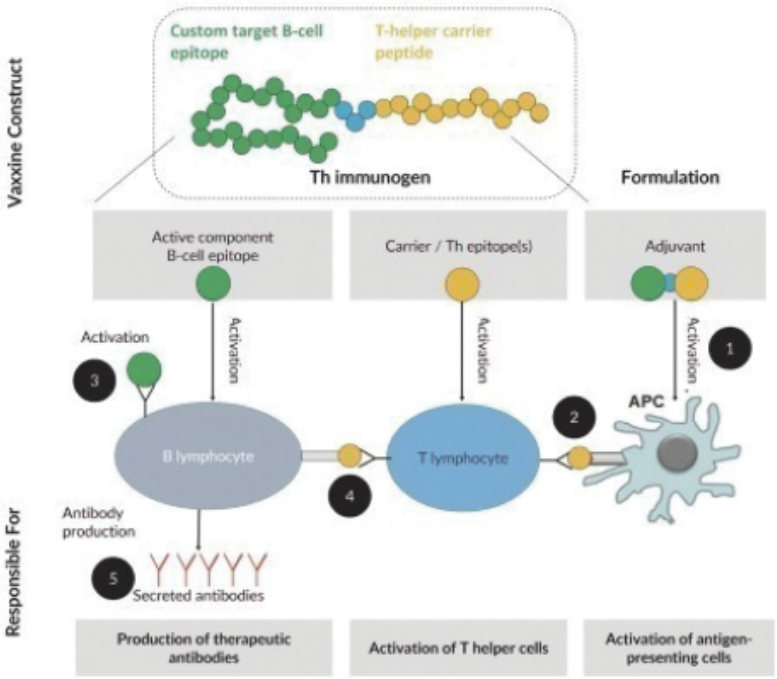
2. DCs engulf and process the antigen internally and present the T-helper epitope on major histocompatibility complex ("MHC") Class II molecules. The presentation activates immunogen-specific CD4+ T-helper cells causing them to mature, proliferate and promote B-cell stimulatory activity.

3. B-cells with receptors that recognize the target B-cell epitope bind, internalize and process the immunogen. The binding of the B-cell receptor to the immunogen provides the first activation signal to the B-cells.

4. When B-cells function as APCs and present the T-helper epitope on MHC Class II molecules, interaction with immunogen-specific CD4+ T-helper cells provides a second activation signal to B-cells, which causes them to differentiate into plasma cells.

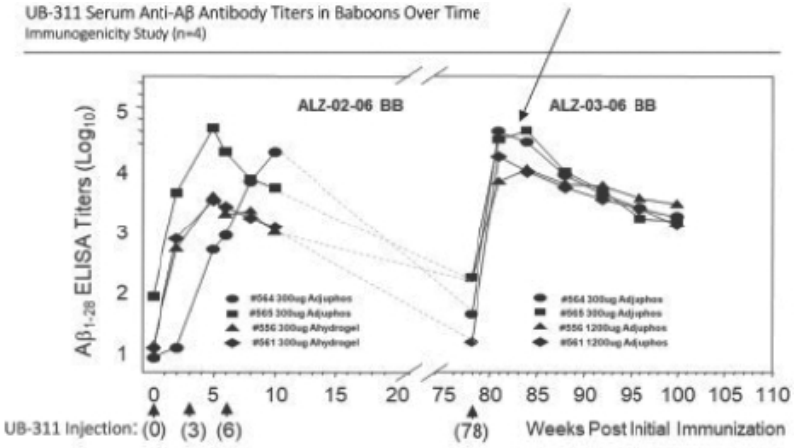
5. B-cell epitope-specific plasma cells produce high affinity antibodies against the target B-cell epitope. Of particular importance for neurodegeneration targets, these antibodies are produced in sufficient concentrations to cross the BBB.

Overview of How our Product Candidates Function



Importantly, from both clinical trials and pre-clinical studies, we have observed the rapid expansion of antibodies upon administration of a booster of our product candidates. Based on the available data to date, we can infer that while antibody titers decline with time after administration, a small number of memory B-cells and antibody secreting cells are maintained in the lymphoid organs, spleen or bone marrow. We believe this is important because if a patient misses a dose of our product candidate, they may be able to recall the antibody response, and therefore the therapeutic effect of the antibodies, with a single booster, even after a long period of time has passed.

Vaxxine Platform Immunogenicity upon Re-dosing



As shown in the above graph, a repeatable immune response elicited from our product candidates has been observed with a booster dose over one year after the priming regimen.

Furthermore, the antibodies elicited by our product candidates have different properties than those of mAbs targeting similar pathology. In general, we aim to achieve binding affinity, specificity and functionality similar or improved compared to mAbs targeting similar pathology. We use Bio-Layer Interferometry (ForteBio®) to compare k_{on}, k_{off} and k_D values of antibodies elicited by our product candidates versus mAbs. We also use Western blot or slot blot to evaluate the binding specificity of antibodies elicited by our product candidates against the toxic, misfolded or aggregated forms of the target protein, and avoidance of monomers or healthy forms. We use immunohistochemical analyses to observe the binding of antibodies to pathological inclusions on brain sections of patients. Moreover, we use cell-based models and animal models to measure the induced antibodies' functionality. Moreover, a major challenge in mAb drug discovery is that mAbs are prone to induce an immune response against themselves, resulting in a potential inactivation/neutralization of the mAb by the host (*i.e.*, the patient). This is not a concern with our vaccine approach as each patient will produce its own antibodies against the target. Finally, mAbs have a potential for off-target binding, which could result in non-specific safety and toxicity issues. We believe that this is unlikely to happen using our vaccine approach since antibodies elicited by our product candidates come from the body's own B-cells, and are therefore unlikely to induce antibodies against other self-proteins as a foreign antibody may.

Product Candidate Selection Process

Because our Vaxxine Platform may have applicability across a range of chronic diseases, we employ a proprietary filtering methodology to best identify new product candidates for development.

We evaluate potential product candidates across five principal criteria:

- *Probability of technical and regulatory success*: We examine the probability of success for a product candidate based on stage of development and therapeutic area, and then make target-specific adjustments for design difficulty, industry knowledge and clarity of biological mechanism, general safety risk and estimated titer level required for therapeutic effect. This criterion accounts for the known validity of a given target in the relevant disease context.

- *Market opportunity*: We account for the prevalence, unmet need and drug market size for each likely indication associated with a given target, as well as the number of potential indications.

- *Development cost*: We estimate the cost of development through BLA submission, the time to submission and the number of patient-years to proof-of-concept.

- *Competitive advantages*: We evaluate the extent to which the advantages of our Vaxxine Platform compare to the current and potential future standard of care, including convenience, dosing, safety, efficacy and cost.

- *Disruptive opportunities*: We evaluate the extent to which the potential disruptive properties of our Vaxxine Platform may play a role in treatment paradigms, including the ability to "leap-frog" mAbs and treat patients in earlier lines of treatment, to be used as a prophylactic, to combine multiple targets into a single formulation and to be used as an adjuvant therapy.

After assigning values to each criterion for a given product candidate, we weight each criterion according to a confidential algorithm, and thereby prioritize product candidates for development. We update these values on a regular basis based on new scientific literature, trial results and our Vaxxine Platform advancements.

As an example, in light of these criteria, AD and other neurodegenerative diseases that involve misfolded proteins are an attractive area for development. First, as the field has gained knowledge and clinical experience around the biology of targeting aberrant proteins with antibodies, the relative technical, safety and regulatory risk has decreased. AD and PD have high prevalence worldwide, and large unmet need with no disease-modifying products readily available to patients. Moreover, the underlying pathologies often begin years or decades before symptoms may appear and as a result, early intervention in the disease state, as well as prevention or delay of onset strategies, may be optimal and more practically achievable with a vaccine approach. While mAbs can target the pathology, they face the limitations of high cost, cumbersome and inefficient administration and limited access, and are not suited for early treatment or prevention, which we believe provides a disruptive opportunity for our Vaxxine Platform.

We do not currently evaluate oncology and infectious diseases through the above framework. We generally do not pursue oncology targets given the hyper-segmentation of subjects common in clinical development efforts in oncology that leads to relatively narrow labels, and due to the strengths of other new modalities such as cell-based therapy in this area. We only consider infectious disease opportunistically. However, our approach with respect to oncology and infection diseases could change in the future.

We believe that our Vaxxine Platform, and our strategy more generally, will create a significant opportunity for drug development well beyond our current pipeline of clinical and pre-clinical indications, in therapeutic areas including allergy (*e.g.*, chronic rhinosinusitis, atopic dermatitis, food allergy), autoimmune disease (*e.g.*, psoriasis, psoriatic arthritis, Crohn's disease), pain (*e.g.*, peripheral neuropathy, diabetic neuropathy) and bone and muscle atrophy (*e.g.*, sarcopenia of aging, osteopenia).

Underlying Drivers of Our Platform Advantages

Our Vaxxine Platform's properties drive the unique combination of attributes that we believe will be reflected in our product candidates:

1. *Cost*: Our reliance on chemically linked, custom peptide sequences fuels cost efficiencies that we expect to enable broad accessibility to our product candidates. Foremost among these relates to dosing. Monoclonal antibodies require more physical material for annual dosing because the patient needs to be delivered the externally manufactured therapeutic antibodies, which have high molecular weight. In contrast, our product candidates are designed to stimulate the body's immune system to produce its own antibodies, and have relatively low molecular weight. While an annual supply of mAbs doses may include grams or tens of grams of drug substance, our current product candidates only require 1 to 2 milligrams each, or even less, leading to a relatively low annual cost of goods. In our development programs to date, we have achieved a cost of goods amounting to a small fraction of the typical cost of mAbs (as low as <1%).

2. *Administration*: Administration of our product candidates generally requires three priming doses, each in the range of several hundred micrograms, followed by booster doses of a similar magnitude 2 to 4 times per year. As described in the section titled "Our Product Candidates" below, in clinical trials we have observed that our product candidates elicited a sustained antibody response, with elevated antibody levels lasting six months or longer. We believe this presents a meaningful advantage over many mAbs, which commonly require either bi-weekly or monthly injections, or monthly or quarterly infusions, and many small molecules, which commonly require a daily pill.

3. *Safety*: The antibodies generated by our product candidates are designed to be highly specific to the target antigen and to avoid an off-target immune response to the peptide carrier, thereby limiting inflammation and other off-target activity. We believe these characteristics have yielded the high tolerability observed in the clinical studies of our product candidates to date. Furthermore, the titer response to our product candidates is naturally titrated, which may reduce the likelihood of an antibody C_{max} safety side effect, and is naturally reversible, thus avoiding an uncontrolled or permanent immune response.

4. *Efficacy*: In clinical trials conducted to date, our product candidates have yielded comparatively high response rates, highly target-specific antibodies and relatively long durations of action. Furthermore, our Vaxxine Platform enables the combining of target antigens into a single formulation. For indications that could be treated more effectively with a multivalent approach, we believe our Vaxxine Platform would have an advantage over other modalities. Finally, because our Vaxxine Platform is designed to elicit endogenous antibodies, we believe our product candidates may lessen or avoid altogether the phenomenon of anti-drug antibodies which has limited the efficacy of certain mAbs over time.

Additionally, our Vaxxine Platform possesses important benefits reflected at the platform level, as opposed to the product candidate level:

1. *Product Candidate Discovery*: Our Vaxxine Platform enables the efficient iteration of product candidates in the discovery phase through rapid, rational design and formulation. We are able to screen in high throughput rapidly and at low cost. Upon nominating a target for drug discovery, we can formulate several dozen product candidate compounds for preliminary *in vivo* immunogenicity and cross-reactivity screening within 2 to 3 months. This process allows nonviable product candidates to "fail fast" and allows us to carry top product candidates forward through subsequent pre-clinical development to lead identification. In contrast, biologics require the maintenance and adjustment of living cultures to design, formulate and iterate, and therefore discovery and early development is inherently less efficient.

2. *Process Development*: Scaling the formulation of a drug product from research grade to clinical grade, then to commercial grade, typically consumes a great deal of resources. This, together with the

development of assays for quality control and quality assurance, comprise process development. Through our manufacturing partnership with UBI and certain of its affiliates, we leverage extensive experience scaling the manufacture of both clinical and commercial compounds that use our Vaxxine Platform technology. Unlike process development for mAbs, which has inherent challenges such as risk of contamination in cell culture or bioreactors and time-consuming adjustments to cell lines for any formulation adjustment, our peptide platform relies on chemical synthesis which is more reproducible and scalable, and relatively quick to manipulate for any modifications.

Our Product Candidates

Neurodegenerative Disease Programs

Neurodegenerative diseases are a collection of conditions defined by progressive nervous system dysfunction, degeneration or death of neurons, which can cause cognitive decline, functional impairment and eventually death. Neurodegeneration represents one of the most significant unmet medical needs of our time due to an aging population and lack of effective therapeutic options.

Two of the most common neurodegenerative diseases are AD and PD. In the United States, currently more than six million people suffer from AD, and approximately one million people suffer from PD according to estimates from the Alzheimer's Association and the Parkinson's Disease Foundation, respectively. As a result, AD and PD bring a heavy burden on our society's cost of care. The direct costs of caring for individuals with AD and other dementias in the United States were estimated at $305 billion in 2020 according to a study published by the American Journal of Managed Care, and are projected to increase to $1.1 trillion by 2050 according to the Alzheimer's Association. The financial burden of PD exceeded $50 billion in the United States in 2019. Many more people around the world suffer from these two diseases and their related social and economic implications.

UB-311

An Overview of Alzheimer's Disease

Alzheimer's disease is a progressive neurodegenerative disorder that slowly destroys memory and cognitive skills and eventually the ability to carry out simple tasks. Its symptoms include cognitive dysfunction, memory abnormalities, progressive impairment in activities of daily living and a host of other behavioral and neuropsychiatric symptoms. The exact cause of AD is unknown, but genetic and environmental factors are established contributors. AD affects more than six million people in the United States and 44 million worldwide. The economic burden of AD is expected to surpass $2.8 trillion by 2030.

Many molecular and cellular changes take place in the brain of a person with AD. Ab plaques and neurofibrillary tangles of tau protein in the brain are the pathological hallmarks of the disease. These abnormal depositions lead to loss of neurons and neuronal connectivity and the signs and symptoms of AD.

The Ab protein involved in AD comes in several different molecular forms that accumulate between neurons. One form, Ab 42, is thought to be especially toxic. In the brains of patients with AD, abnormal levels of this naturally occurring protein clump together to form plaques that collect between neurons and disrupt cell function. Research is ongoing to better understand how, and at what stage of the disease, the various forms of Ab influence AD.

Neurofibrillary tangles are abnormal accumulations of a protein called tau that collect inside neurons. Healthy neurons are supported internally, in part, by structures called microtubules, which help to guide nutrients and molecules from the cell body to the axon and dendrites. In healthy neurons, tau normally binds to and stabilizes microtubules. In AD, abnormal chemical changes cause tau to detach from microtubules and to stick to other tau molecules, forming threads that eventually join to form tangles inside neurons. These tangles block the neuron's transport system, which harms the synaptic communication between neurons.

Converging lines of evidence suggests that AD-related brain changes may result from a complex interplay among abnormal tau, Ab proteins and several other factors. It appears that abnormal tau accumulates in specific brain regions involved in memory. Concurrently, Ab clumps into plaques between neurons. As the level of Ab reaches a tipping point, tau rapidly spreads throughout the brain. In addition to the spread of Ab and tau, chronic inflammation and its effect on the cellular functions of microglia and astrocytes, as well as changes to the vasculature, are thought to be involved in AD's pathology and progression.

Limitations of Current Therapies

Two classes of small molecules approved for the treatment of AD's symptoms are acetylcholinesterase inhibitors ("AChEIs") and glutamatergic modulators. AChEIs are designed to slow the degradation of the neurotransmitter acetylcholine, helping to preserve neuronal communication and function temporarily. Glutamatergic modulators are designed to block sustained, low-level activation of the N-methyl-D-aspartate ("NMDA") receptor, without inhibiting the normal function of the receptor in memory and cognition. However, these therapeutic products only address the symptoms of AD and do not modify or alter the progression of the underlying disease.

Aducanumab, marketed under the trade name Aduhelm, is a mAb developed by Biogen, Inc. ("Biogen") that targets aggregated forms of Aß. The FDA approved aducanumab in June 2021, making it the first approved immunotherapy for AD, the first new FDA-approved treatment since 2003 and, importantly, the first to receive accelerated approval based on a biomarker. By approving aducanumab on the basis of biomarker evidence, we believe the FDA set a precedent for developers of anti-Ab immunotherapies. Soon after the FDA's decision, Eli Lilly and Company ("Lilly") announced that it would file for approval of its anti-Ab mAb, donanemab, by the end of 2021 on the basis of Phase 2 data. Despite the milestone in the treatment of AD that aducanumab's approval represents, the drug has several limitations. Approximately one-third of patients experience ARIA-E related adverse events, which can manifest as symptoms ranging from headaches to confusion to coma. In addition, the drug must be administered monthly via intravenous infusion in locations with healthcare professionals trained to administer infusion therapies in facilities specifically configured to support an hours-long infusion process, creating a burden for patients and additional costs resulting from the complex administration process. Because of the risk of developing ARIA-E, physicians who prescribe aducanumab must titrate dosing and carefully monitor each patient using magnetic resonance imaging ("MRI"). This process is costly and burdensome, and thus expected to limit the prescribing of and regular access to aducanumab. In addition, aducanumab is priced at $56,000 annually for the drug product only, not including administration and ongoing monitoring costs such as positron emission topography ("PET") and MRI scans. The combination of price, side effects, extra costs and extra administration burden highlight the challenges of, and likely limited access to, this mAb.

Our Product Candidate: UB-311

We are developing a novel product candidate, UB-311, as a potential disease-modifying therapy for the treatment of AD. We have completed a Phase 1 open label trial and a Phase 2a randomized, double-blinded, placebo-controlled trial (the "Phase 2a Main Trial") and believe that UB-311 may offer several benefits relative to aducanumab, including the preferential targeting of aggregated Ab oligomers over monomers with moderate clearance of Ab plaques, and a tolerability profile comparable to placebo. No signs of ARIA-E related adverse events were reported in the Phase 2a Main Trial despite more than two-thirds of the study participants being APOE4 carriers. Exploratory (*i.e.*, unplanned) analyses of UB-311's Phase 2a clinical data also suggest that quarterly dosing of UB-311 might slow cognitive decline in some subjects by up to 50% when compared to placebo, as measured by Clinical Dementia Rating Sum of Boxes ("CDR-SB"), Alzheimer's Disease Assessment Scale – Cognitive Subscale ("ADAS-Cog"), Alzheimer's Disease Cooperative Study – Activities of Daily Living ("ADCS-ADL") and Mini-Mental State Examination ("MMSE") scores, all clinically validated measures of cognition or function in AD. In this small Phase 2a study, these were secondary measures, as the study was not designed to assess cognitive decline. However, even though our Phase 2a trial was not powered to demonstrate significant changes in cognitive functions, we believe the data are suggestive of therapeutic benefit.

UB-311 is formulated for intramuscular administration on a dosing schedule of every three or six months. In addition, lower manufacturing costs may support meaningfully lower pricing. We believe such advantages of UB-311, if ever approved for use, could position it not only to disrupt the emerging mAb-based treatment for early AD as both a monotherapy and adjuvant therapy to existing mAbs, but also to open up a new paradigm (*i.e.*, for potential prophylactic use to delay or interrupt early disease onset).

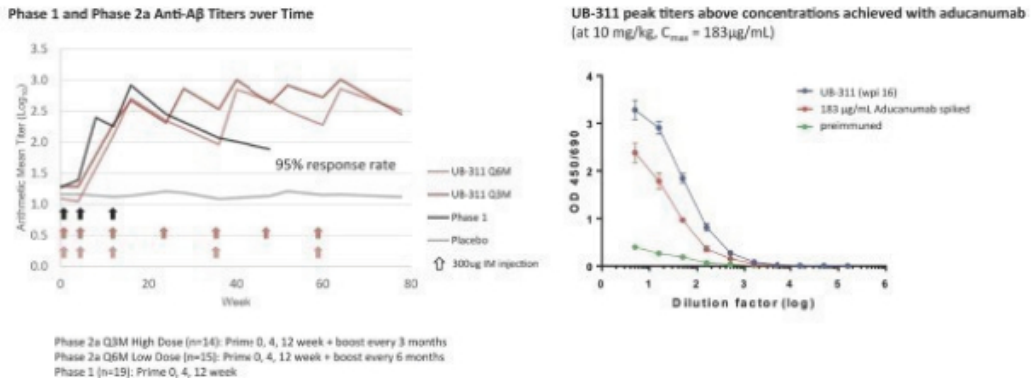
Clinical Development

We completed a randomized, double-blind, placebo-controlled Phase 2a trial of two dosing regimens of UB-311 in subjects with mild AD. The primary objective of this trial was to assess safety and immunogenicity. Secondary measures for exploratory analyses included assessment of changes in the ADAS-Cog, CDR-SB, ADCS-ADL and MMSE ratings, along with amyloid PET imaging evaluations. This study was not powered for statistical significance on any of these secondary measures. However, exploratory analyses suggested positive trends as described below.

The first portion of the randomized, double-blinded, placebo-controlled trial involved 43 subjects diagnosed with mild AD. Subjects in the 78-week long trial were divided roughly evenly into three cohorts: high-frequency (quarterly dosing), low-frequency (every six month dosing) and placebo. The high-frequency cohort, which included 14 subjects, received an initial regimen of three 300µg injections, one injection at the trial start, one at week 4 and the final at week 12, followed by four single 300µg booster doses administered in three-month intervals over the subsequent 12 months. The low-frequency cohort, which included 15 subjects, involved the same initial schedule of three 300µg injections administered over the first 12-week period, followed by the administration of two 300µg booster doses given at six-month intervals. The placebo group comprised 14 subjects.

In the Phase 2a Main Trial, UB-311 generated an immune response as measured by ELISA in 28 out of 29 subjects. Across this trial and the Phase 1 trial, 47 of the 48 subjects (98%) that received UB-311 registered an immune response (which we which we define as a 95% confidence interval separation from placebo) as measured by ELISA. The intramuscular injection produced appreciable antibody titers against Ab. The antibody titers remained elevated through the trial's duration. Moreover, *in vitro* studies demonstrate that UB-311 generated serum anti-Ab antibody titers against oligomers, the components that form Ab, comparable or greater than those measured after maximum therapeutic dosing with aducanumab. We believe these results underscore the significant promise of our therapeutic approach.

Generation of Antibodies Repeatable Across Clinical Studies, and Antibodies Bind Target with High Specificity as Compared to Monoclonal Antibody



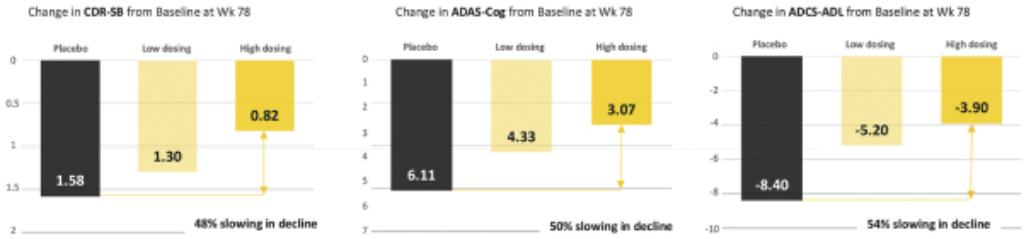
Phase 2a Q3M High Dose (n=14): Prime 0, 4, 12 week + boost every 3 months
Phase 2a Q6M Low Dose (n=15): Prime 0, 4, 12 week + boost every 6 months
Phase 1 (n=19): Prime 0, 4, 12 week

Across Phase 1 and Phase 2a trials, UB-311 generated an over 95% response rates in subjects. In a comparative in vitro study with aducanumab, we observed that UB-311 elicited titer levels comparable to mAbs.

Our Phase 1 and Phase 2a trials demonstrated a repeatable anti-Ab titer response. In an *in vitro* comparison of titers in serum from subjects dosed with UB-311 versus pre-immune serum spiked with aducanumab at the published C_{max} concentration following 10mg/kg administration (183µg/mL), antibodies generated by UB-311 bond to Ab oligomers similarly to or greater than aducanumab as measured by EIA.

Exploratory analyses of clinical and imaging measures were conducted. Trends of changes in disease assessment scores suggest showing of cognitive decline. Changes in the CDR-SB assessment at week 78 of the Phase 2a Main Trial showed a 48% slowing in cognitive decline from baseline relative to the placebo group; changes in ADAS-Cog measurements showed a 50% slowing in decline relative to placebo and showed a 54% slowing in decline in ADCS-ADL relative to placebo.

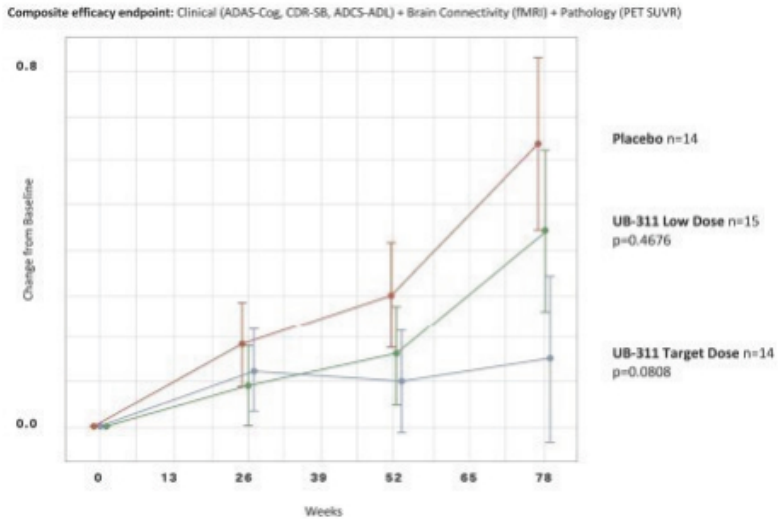
UB-311 Phase 2a Suggests Slowing of Cognitive Decline in Mild Alzheimer's Subjects



UB-311 Phase 2a secondary endpoint data suggested possible slowing of clinical decline by up to 50% in subjects with mild AD. These are exploratory analyses and not statistically significant.

In addition, functional MRI suggested marginal increases in connectivity in some brain regions and PET imaging showed a modest reduction in amyloid plaque burden as measured by standard uptake value ratio. We believe these clinical and biomarker endpoints suggest a causal effect of UB-311 impacting the underlying molecular pathology of the disease and slowing of clinical decline. Together, these findings offer some evidence that UB-311 may exhibit disease-modifying effects.

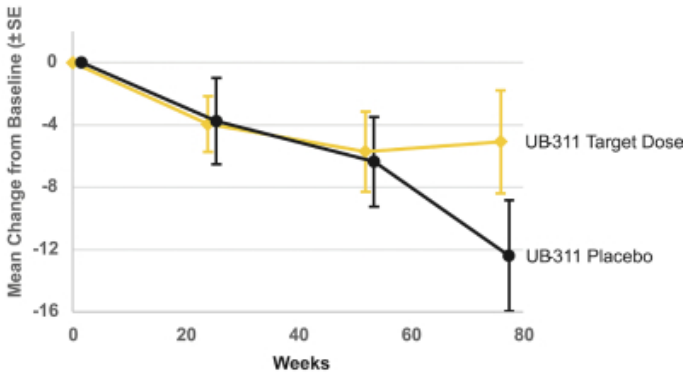
UB-311 Phase 2a Analysis of Clinical and Biomarker Endpoints Suggests Overall Disease-Modifying Effect



Compared to placebo, UB-311 low-frequency dosing and high-frequency dosing demonstrated slowing of overall disease progression in an independent analysis conducted by Pentara Corporation.

In addition to the composite above, Pentara Corporation performed a *post hoc* analysis to estimate the performance of UB-311 on the integrated Alzheimer's Disease Rating Scale ("iADRS") versus placebo in the Phase 2a trial. The results of this analysis suggested that the UB-311 target dosing regimen (quarterly dosing) on average slowed decline versus placebo by approximately 59% over 78 weeks.

iADRS-Like Endpoint, Change from Baseline over Time vs. Placebo



Compared to placebo, UB-311 (quarterly dosing) declined less on an iADRS-like clinical endpoint over 78 weeks in mild-moderate AD subjects in the Phase 2a Main Trial. This analysis was performed by Pentara Corporation.

We have also performed various side-by-side analyses with anti-Ab mAbs using data from the exploratory endpoints of the Phase 2a Main Trial, in particular CDR-SB, as well as using the *post hoc*

iADRS-like endpoint (no head-to-head clinical trials of UB-311 against mAbs have been performed). Given the June 2021 FDA approval of aducanumab, and Eli Lilly's planned BLA filing of donanemab announced June 2021, we believe the performance of aducanumab and donanemab on CDR-SB and iADRS change from baseline over time, the respective primary endpoints from the pivotal trials of those mAbs, represent meaningful benchmarks. These side-by-side analyses suggested that UB-311 has the potential to perform comparably to aducanumab on CDR-SB change from baseline over time, and comparably to donanemab on iADRS change from baseline over time, in an appropriately powered study, noting that the UB-311 Phase 2a Main Trial was not powered to detect statistically significant changes in these endpoints, and featured a far smaller sample size than the aducanumab and donanemab trials from which these side-by-side comparisons were drawn. We have provided an overview of the sample sizes and baseline characteristics of the UB-311 Main Trial and various anti-Ab mAb trials below.

Baseline Characteristics of Various Anti-Ab Immunotherapy Clinical Trials

	UB-311 Ph2a			Aducanumab			BAN2401	Donanemab	Solanezumab
	Placebo	Low Dosing (Q6M)	High Dosing (Q3M)	PRIME	ENGAGE	EMERGE	G000-201 Ph2b	TRAILBLAZER	EXPEDITION3
N	14	15	14	165	1,647	1,638	854	257	2,129
Age Inclusion		60 – 90yo		50 – 90yo		50 – 85yo	50 – 90yo	60 – 85yo	55 – 90yo
Mean Age (SD)	72.0 (7.6)	72.5 (6.8)	73.4 (6.8)	72.5	70.1	70.7	71.3	75.2 (5.5)	73.0
MMSE Inclusion		20 – 26		pAD: 24 – 30 mAD: 20 – 26		24 – 30	22 – 30	20 – 28	20 – 26
Mean MMSE (SD)	21.9 (1.8)	22.4 (2.4)	23.3 (2.1)	24.1	26.4	26.3	25.7	23.5 (3.1)	22.7
CDR Inclusion		0.5 – 1.0		pAD: 0.5 mAD: 0.5 – 1.0		0.5	MCI: 0.5 mAD: 0.5 – 1.0	NA	NA
Share of CDR=0.5	71%	67%	86%	77%	NR	NR	85%	NR	NR
Mean CDR-SB (SD)	3.39 (1.87)	3.50 (2.20)	3.11 (1.26)	3.18	2.41	2.48	2.93	3.5 (1.9)	3.9
Mean ADAS-Cog13 (SD)	23.6 (6.1)	20.1 (6.2)	23.7 (7.8)	NR	22.5	22.2	22.3*	27.6 (7.6)	29.3**
ApoE4 Carriers %	93%	80%	71%	65.1%	69.5%	66.8%	72%	73%	67.8%
Mean PET SUVR	1.362	1.388	1.404	1.443	1.39	1.38	1.41	100% PET+	100% PET+

The Phase 2a Main Trial recapitulated the acceptable tolerability of UB-311 that was observed in an earlier Phase 1 trial. No subjects discontinued trial participation due to a treatment emergent adverse effect ("TEAE"). No ARIA-E was observed in quarterly MRI scans. Ab-related imaging abnormalities related to microhemorrhages or hemosiderosis were observed at similar rates in the high-frequency treatment, the low-frequency treatment and placebo cohorts. In the Phase 2a Main Trial, six serious adverse events were observed, including three in the Q6M dosing arm and one in the Q3M dosing arm. None was deemed related or likely related to UB-311.

Titers generated by UB-311 ramped up gradually over the course of several months, as opposed to titers following the administration of anti-Ab mAbs, which immediately reach C_{max}. We believe this lead to the relatively low rates of ARIA-E observed in our clinical studies of UB-311 as compared to those observed in clinical studies of mAbs. No meningoencephalitis was observed.

Summary of Safety Data from UB-311 Phase 1 and Phase 2a Trials

	UB-311 Ph1	UB-311 Ph2a Main Study		
n (%)	UB-311 n=19	Placebo n=14	Low Dosing (Q6M) n=15	High Dosing (Q3M) n=14
Patients with an AE	16 (84.2)	13 (92.9)	13 (86.7)	10 (71.4)
Patients with an SAE	1 (5.3)	2 (14.3)	3 (20.0)	1 (7.1)
Patients permanently discontinuing treatment due to AE	0	1 (7.1)	0	0
Patients permanently discontinuing treatment due to ARIA	0	0	0	0
Number of all-cause deaths	0	0	0	0
ARIA-E	NR	0	0	0
ARIA-H*	NR	2 (14.3)	2 (13.3)	2 (14.3)

As depicted in the table above, UB-311 was well tolerated across Phase 1 and Phase 2a trials. The most common TEAE was site injection reactivity, and there were no discontinuations or withdrawals due to TEAEs

An extension of the Phase 2a Main Trial, the Phase 2a LTE trial, involved the continued participation by 34 of the subjects who participated in the Phase 2a Main Trial for an additional 78 weeks. The objectives of the Phase 2a LTE trial were to assess the longer-term tolerability of extended treatment with UB-311. Following a non-treatment period of up to 26 weeks, participants in the LTE trial were segmented into two groups: those previously on drug in the Phase 2a Main Trial would receive two placebo doses and a single 300µg priming dose at the start of the LTE treatment period and those previously on placebo would receive three 300µg priming doses over an initial 12-week period. Due to an error by the CRO responsible for administering blinded placebo and active doses to trial subjects, which reduced the confidence of subsequently collected data, we decided to discontinue the LTE trial, having determined that we had collected sufficient data on UB-311's tolerability and immunogenicity. Analysis of the data collected before trial discontinuation indicated that UB-311 was well tolerated, with return of anti-Ab antibody titers to peak levels achieved after a gap of as much as 12 months between doses and a continued trend toward evidence of disease modification. In the Phase 2a LTE trial, six serious adverse events were observed. None was deemed related or likely related to UB-311, and all such events were recovered/resolved by the end of the study. Exploratory analyses of the clinical data generated in this portion of the trial suggested that subjects in the treatment cohorts showed sustained improvement, as measured by the change in CDR-SB from baseline.

We completed an open-label Phase 1 trial of UB-311 in 19 subjects with mild-to-moderate AD between the ages of 51 to 78 years. The primary objective of the trial was to assess safety and tolerability. Secondary measures included UB-311 antibody titers along with changes in the ADAS-Cog, MMSE and the Alzheimer's Disease Cooperative Study-Clinician's Global Impression of Change disease assessment ratings. The 24-week, open label trial was designed as three intramuscular injections of 300µg, the first dose administered at the start of the trial, a second at week four and a third at week 12. An observation study included additional follow-up visits up to 48 weeks after the first injection to assess the long-term immunogenicity and safety of UB-311. In this trial, UB-311 was well tolerated, with the most common TEAE being injection site redness and swelling. No TEAE resulted in the discontinuation or withdrawal of any study participant in the trial. In the Phase 1 trial, one serious adverse event was observed: a case of herpes zoster deemed unlikely related to UB-311.

Anti-Ab antibody titers, recorded among all study participants, approached a 100-fold increase during weeks 16 to 48 after administration of the third 300µg injection at week 12, demonstrating the ability of UB-311

to elicit a strong immune response. Durability of the response was reflected in elevated anti-Ab antibody titers measurable well beyond the 24-week duration of the trial.

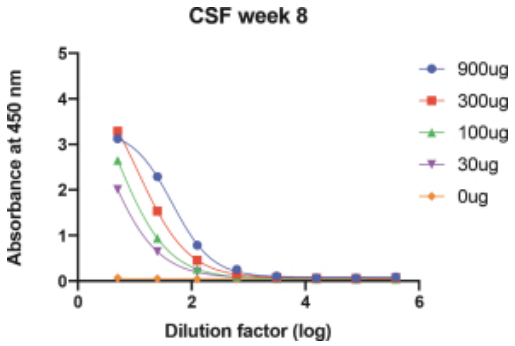
In a Western blot assay, we observed that UB-311 elicited antibody titers specific to toxic forms of Ab with minimal binding to normal, non-plaque-causing, forms of Ab.

Pre-Clinical Data

Pre-clinical trials of UB-311 included multiple antibody titer studies involving mice, guinea pigs, macaques and baboons. Application of specific transgenic animal models was intended to emulate both therapeutic and preventive treatment paradigms. These trials demonstrated that UB-311 generated high antibody titers across multiple species that selectively target aggregated Ab and both slow the accumulation of and reduce existing Ab pathology.

We also observed the ability of UB-311 induced antibodies to penetrate the BBB, as well as preferentially bind to toxic Ab aggregates. In our study of UB-311 in cynomolgus monkeys, we tested five escalating dose levels of UB-311: 0µg, 30µg, 100µg, 300µg and 900µg. Each dose level was administered on weeks zero, three and six by intramuscular injection and the cerebrospinal fluid ("CSF"): serum ratio of UB-311 calculated on week eight (two weeks after the last dose). This analysis concluded that UB-311 antibody titers were detectable in the CSF in a dose-dependent manner with CSF: serum antibody ratios of 0.1% to 0.2%, ratios similar to published data for mAbs in development for neurodegenerative diseases.

UB-311 Shows Dependent Response in CSF in Pre-Clinical Study



The above graphs demonstrates that UB-311 achieved CSF : serum ratios in the 0.1% to 0.2% range across five doses in a pre-clinical study involving cynomolgus monkeys.

Development Plans for UB-311

We have completed a pre-Phase 3 meeting with the FDA and obtained guidance on the further development of UB-311.

Subject to the FDA's approval, we expect to conduct a randomized, double-blinded, placebo-controlled Phase 2b efficacy trial of UB-311 in approximately 670 subjects with early AD. The Phase 2b trial will include subjects diagnosed with early AD with MMSE scores between 22 and 30. We will also screen to enrich for positive amyloid PET, positive tau PET and positive plasma p-tau181, in quantities consistent with an early AD population. Subjects in the active arm will receive UB-311 as three 300µg priming doses at weeks 0, 4 and 12, followed by four 300µg booster doses every three months thereafter. The primary objective of this trial will be to assess the effect of UB-311 on the decline of cognitive and functional performance as measured by the iADRS over the 78-week

treatment period. Secondary endpoints will include the changes from baseline measurements of other validated clinical outcomes scores. The effect of UB-311 on specific AD biomarkers will also be evaluated, including neurofilament light arm ("NfL"), p-tau, total-tau, brain amyloid as measured by PET, Ab-40 and Ab-42, hippocampal volume and whole brain volume as measured by MRI, and an assessment of certain CSF biomarkers. We expect to initiate this trial in .

Assuming positive results in the Phase 2b trial, we expect to initiate a Phase 3 program in subjects with early AD. The Phase 3 program may involve one, but more likely two, clinical trials, conducted at multiple international sites, with each trial consisting of at least two arms of approximately 800 subjects in each arm (at least one active arm and one placebo arm). Assuming positive results in the Phase 2b trial, we may also seek FDA approval under the accelerated approval pathway, which allows for earlier approval of drugs that treat serious conditions, and that fill an unmet medical need based on a surrogate endpoint. We expect that together, the Phase 2b trial and the Phase 3 program, if successful, will provide sufficient data to enable BLA filing with the FDA, but there can be no guarantee that we will not need to conduct additional trials or studies prior to a BLA filing with the FDA.

We believe UB-311 could also have a therapeutic benefit in a prophylactic setting for the prevention of AD in high-risk patients. We may seek to further develop UB-311 for the prevention of AD.

UB-312

An Overview of Parkinson's Disease

Parkinson's disease currently affects approximately one million people in the United States and more than 10 million people worldwide. The economic burden of PD is estimated at $52 billion in the United States alone. PD is a chronic and progressive neurodegenerative disorder that affects predominately dopamine-producing ("dopaminergic") neurons in the substantia nigra area of the brain. Although the mechanisms responsible for the dopaminergic cell loss in PD are not fully elucidated, several lines of evidence suggest that α-synuclein plays a central role in the neurodegenerative process.

Alpha-synuclein is a protein highly expressed in neurons, mostly at presynaptic terminals, suggesting a role in synaptic vesicle trafficking, synaptic functions and in regulation of neurotransmitter release at the synapse. Duplications, point mutations or single nucleotide polymorphisms in the gene encoding α-synuclein are known to cause or increase the risk of developing PD or DLB. Mutations have been shown to primarily alter the secondary structure of α-synuclein, resulting in misfolded and aggregated forms of α-synuclein (i.e., pathological forms). While mutations in the α-synuclein gene are rare, aggregates of α-synuclein in the form of Lewy bodies ("LB") and Lewy neurites are common neuropathological hallmarks of both familial and sporadic PD, suggesting a key role of α-synuclein in PD neuropathogenesis. Moreover, preformed fibrils of α-synuclein can induce the formation of LB-like inclusions and cellular dysfunction in cell-based assays as well as in pre-clinical animal models. Together, these data strongly suggest that targeting pathological forms of α-synuclein has therapeutic potential.

Limitations of Current Therapies

Most approved therapeutic products are aimed at compensating for the dopaminergic deficits and only provide symptomatic relief. While existing products can indeed provide meaningful symptomatic relief, they often produce significant side effects and lose their beneficial effects overtime. On the other hand, there are no currently approved disease-modifying therapeutics for PD.

Immunotherapy approaches targeting α-synuclein have been shown to ameliorate α-synuclein pathology as well as functional deficits in mouse models of PD and are now being investigated in the clinic. These include passive immunization therapy using humanized or human anti-α-synuclein mAbs or active immunization therapy

aimed at inducing a humoral response against pathological α-synuclein. These approaches have thus far demonstrated good tolerability profiles in Phase 1 clinical trials. Recently, a Phase 2 clinical trial in PD subjects with prasinezumab, a mAb that preferentially recognizes oligomeric and fibrillar forms of α-synuclein significantly reduced subjects' motor function decline and delayed clinically meaningful worsening or motor symptoms, compared with placebo. Despite encouraging preliminary data observed with this mAb, we expect that mAbs, even if approved as therapeutic for PD, would be burdened by the general challenges of cost and administration.

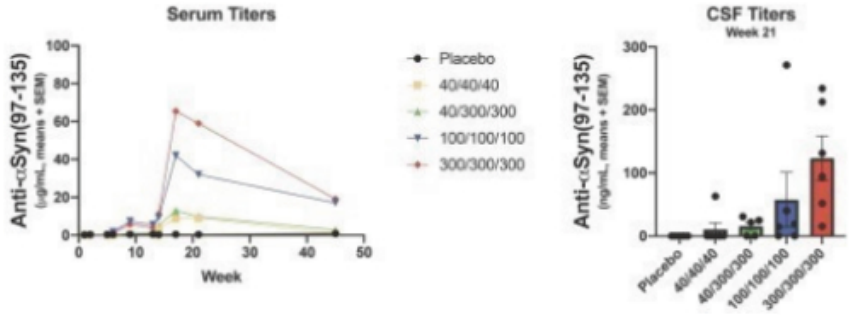
Our Product Candidate: UB-312

We are developing UB-312, an anti-α-synuclein product candidate, as a treatment for PD and other synucleinopathies. We believe that UB-312 has the potential to be established as a disease-modifying treatment modality for PD, and possibly for DLB and MSA. Pre-clinical data indicated that UB-312 elicits antibodies that preferentially recognize pathological forms of a-synuclein and improves motor performance in mouse models of α-synucleinopathies. Preliminary clinical data from our ongoing Phase 1 trial indicate that UB-312 elicits antibody levels sufficient to cross the BBB (*i.e.*, detectable in CSF). In 2018, the European Medical Agency ("EMA") granted UB-312 orphan designation for MSA.

Clinical Development

We have conducted Part A of a randomized, placebo-controlled, double-blind, dose-escalating, single-center Phase 1 clinical trial of UB-312 in which 50 healthy volunteers between the ages of 40 and 85 years received three intramuscular doses of either UB-312 or placebo. During this 44-week Part A trial, subjects received three doses (on weeks 1, 5 and 13) with escalating doses ranging from 40µg to 2,000µg. Immunogenicity was evaluated by measuring changes in serum anti-α-synuclein antibody concentrations during the course of the study. Data from Part A indicated that UB-312 is generally well tolerated, with no significant safety findings. Data from Part A also suggested that UB-312 is highly immunogenic, with all individuals in the 300µg/dose group showing detectable anti-α-synuclein antibodies in both serum and CSF samples. CSF : serum ratios appeared similar to those observed in UB-311 non-human primate studies (approximately 0.2%), and to those observed in clinical trials of mAbs. Based on these results, the 100µg and 300µg doses were selected for further evaluation in Part B of the Phase 1 trial. Part B will evaluate UB-312 and placebo in 20 PD subjects. In addition to the endpoints evaluated in Part A, an exploratory endpoint involving a clinical assessment using the Movement Disorder Society – Unified Parkinson's Disease Response Score will be utilized.

UB-312 Demonstrated Dose-Dependent Response in Phase 1 Part A Trial Including Penetration of Titers into CSF



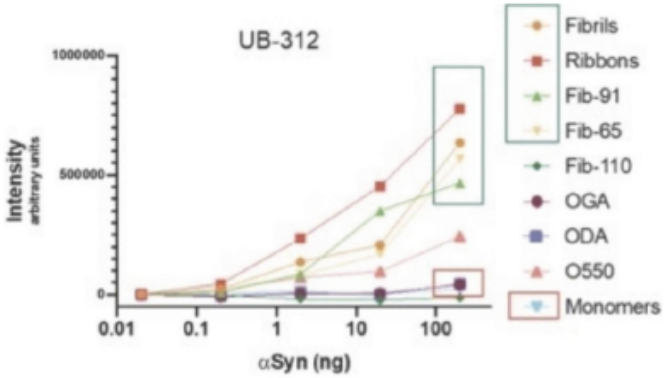
Across four cohorts, UB-312 demonstrated a dose-dependent immunogenic response. Antibodies generated by UB-312 were readily detectable in CSF, indicating BBB penetration with a CSF : serum ratio of approximately 0.2%.

We paused dosing in high dose cohorts in Part A of the trial after one subject developed an adverse effect ("AE") of special interest (i.e., Grade 3 flu-like symptoms) shortly after receiving the second 1000µg dose of UB-312. Although this AE was transient and not a serious adverse event ("SAE"), data collected until that point suggested that the 100µg and 300µg dose levels were well tolerated and yielded relatively high anti-α-synuclein titers. During the evaluation of the AE, the COVID-19 pandemic was becoming increasingly pervasive throughout Europe, increasing the risk to healthy volunteers participating in the trial. We therefore did not resume dose escalation and selected 100µg and 300µg doses for Part B in PD subjects.

Pre-Clinical Data

We have conducted pre-clinical studies of UB-312 across multiple animal species, including mice and guinea pigs. These trials demonstrated that our product candidates, including UB-312, generated high antibody titers to α-synuclein across animal species. In addition, *in vitro* studies provided evidence that anti-α-synuclein antibodies produced after UB-312 immunization are highly selective to pathological α-synuclein, and do not bind to normal α-synuclein.

UB-312 Demonstrates Selective Binding Towards α-Synuclein Fibrils and Ribbons

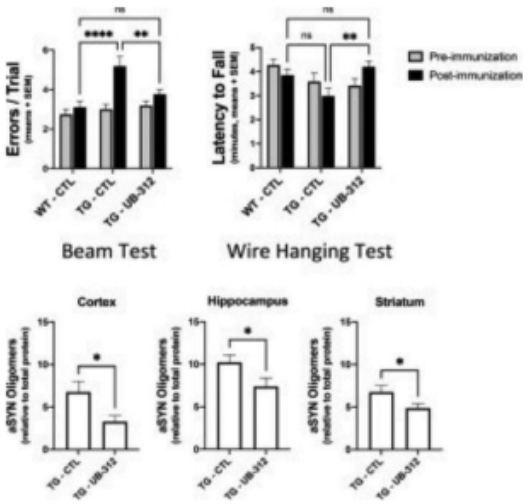


This in vitro slot blot analysis of sera from guinea pigs dosed with UB-312 demonstrates that antibodies generated by UB-312 bind to α-synuclein fibrils and ribbons, the toxic forms of α-synuclein believed to underlie PD, more strongly than they bind to monomers, the normal form of α-synuclein in the body. We believe this preference will allow UB-312 antibodies to avoid target-mediated clearance by monomers and bind selectively to the toxic species.

Anti-α-synuclein antibodies produced by UB-312 immunization specifically bind pathogenic species of α-synuclein, including aggregated fibrils, oligomers and ribbons, while demonstrating low affinity for the monomer. This species selectivity contrasted with Syn-1, a commercial research mAb used as a control, which failed to differentiate the toxic variants.

In an *in vivo* study of UB-312 using a transgenic mouse model of PD, we demonstrated prevention of motor deficits in treated animals, which was associated with significant reduction of brain oligomeric forms of α-synuclein. We believe this data supports the potential of UB-312 to prevent behavioral motor deficits and reduce toxic forms of α-synuclein.

UB-312 Demonstrates Improvement in Motor Symptoms in Pre-Clinical Study



An in vivo efficacy test in mouse α-synuclein inoculation model demonstrates improvement in beam test and wire hanging test, and reductions in α-synuclein oligomers in various brain regions.

We have also observed by immunohistochemistry that serum antibodies from guinea pigs dosed with UB-312 can bind to aberrant α-synuclein in PD, DLB and MSA brain sections.

Development Strategy

While certain portions of this Phase 1 trial were interrupted by the COVID-19 pandemic, Part A in 50 healthy volunteers was completed, and we expect to initiate Part B in PD subjects in . In Part B we expect to include exploratory endpoints potentially relevant to PD, such as total and free α-synuclein in serum and CSF, in addition to T-cell ELISpot analyses and antibody characterization. Upon the completion of the Phase 1 trial, we expect to advance UB-312 into further clinical development, which may comprise trials for various synucleinopathies.

Other Neurodegeneration Programs

We are actively engaged in additional initiatives related to neurodegenerative disorders. One of these programs focuses specifically on tau-protein pathology and its involvement in diseases such as AD and related tauopathies. We believe that targeting different pathological tau variants simultaneously may enhance treatment efficacy, which will most likely require targeting multiple epitopes concomitantly. Using our Vaxxine Platform, we have constructed combination product candidates that target these multiple epitopes and have successfully demonstrated their utility to raise therapeutic antibody titers in *in vitro* studies as well as early *in vivo* animal models.

We are also investigating the use of a combination of product candidates targeting Ab, α-synuclein, tau and C9orf dimethyl repeat proteins, as multiple proteins could be implicated in neurodegenerative diseases.

Next Wave Chronic Disease Treatments

Pathological endogenous proteins (“self-proteins”) drive a wide range of chronic diseases. While mAbs and small molecules have provided therapeutic benefits in the treatment of these diseases, inherent limitations of these drug classes have restricted access and adherence to these treatment modalities globally.

Our next wave chronic disease program is initially focused on migraine and hypercholesterolemia. Monoclonal antibodies have been approved in both therapeutic areas; however, their high costs have limited access and generally limited use to relatively severe disease. We aim to develop product candidates in these therapeutic areas that could offer similar efficacy as mAbs at a meaningfully lower cost and improved administrative convenience to patients, thereby potentially allowing for access to broader patient populations versus mAbs, and greater efficacy than small molecules.

UB-313

An Overview of Migraine

Migraine is a chronic and debilitating disorder characterized by recurrent attacks lasting four to 72 hours with multiple symptoms, including typically one-sided, pulsating headaches of moderate to severe pain intensity that are associated with nausea or vomiting, sensitivity to sound and sensitivity to light. Over 90% of the patients are unable to function normally during a migraine attack. Many experience comorbid conditions such as depression, anxiety and insomnia.

The Migraine Research Foundation ranks migraine as the world's third most prevalent illness. The disease affects 39 million individuals in the United States and approximately one billion individuals globally. Patients generally suffer from chronic or episodic migraines. Chronic migraine is defined as 15 headache days or more per month, while episodic migraine is defined as fewer than 15 headache days per month. Both acute and prophylactic treatments are used to address chronic and episodic migraines.

CGRP's Role in Migraine

CRGP is a neuropeptide found throughout the body, including in the spinal cord. CGRP activates CGRP receptor in the trigeminovascular system, which is located within pain-signaling pathways, intracranial arteries and mast cells. Activation of the CGRP receptor has been demonstrated to induce migraine in migraineurs. Multiple anti-CGRP therapies have been approved for the treatment of migraine.

Limitations of Current Therapies

Since the early 1990s, there has been minimal improvement in the standard treatment for migraine. Treatments are characterized as elite acute or prophylactic. Triptans are the current first-line prescription therapy for the acute treatment of migraine, with over 15 million annual prescriptions written in the United States.

Prophylactic medications approved for migraine include beta blockers, such as propranolol, topiramate, sodium valproate and botulinum toxin, branded as Botox. However, many of these medications provide limited clinical benefit. In addition, they are often not well tolerated, with AEs such as cognitive impairment, nausea, fatigue and sleep disturbance.

Therapeutics targeting the CGRP pathway represent an emerging treatment paradigm. Three anti-CGRP mAbs were approved by the FDA in 2018 for the prophylactic treatment of migraine in adults. These mAbs, erenumab-aooe (Aimovig), fremanezumab-vfrm (Ajovy) and galcanezumab-gnlm (Emgality), are all administered subcutaneously. Their side effects are generally mild, including pain and redness at the site of injection, nasal congestion and constipation. Studies show that these mAbs reduce the number of headache days by 50% or more in approximately 50% of patients. Sales for marketed and clinical-stage anti-CGRP therapeutics are projected to reach approximately $7.4 billion by 2026. Despite the commercial success that this class represents, many of these treatments require frequent administration, creating inconvenience for patients.

Our Product Candidate: UB-313

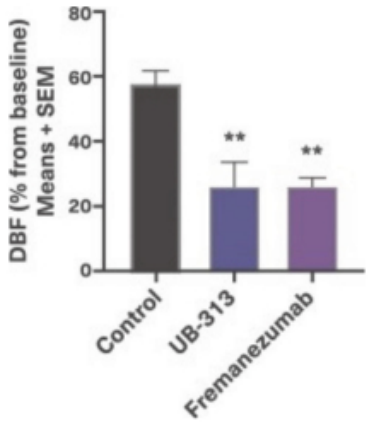
We are developing UB-313 as a prophylactic treatment initially for chronic migraine. We believe UB-313 has the potential to improve upon the current treatments for chronic migraine in multiple aspects: we

expect UB-313 will require administration quarterly to annually in contrast to monthly to quarterly for currently marketed mAbs and frequent administration for small molecules. Furthermore, a potential long durability of response may offer physicians and patients the option to administer UB-313 in an office setting, which can potentially improve adherence. We expect the cost of UB-313 treatment, if approved, to be lower than that of mAbs for migraine.

Pre-Clinical Studies

We have completed both *in vitro* and *in vivo* pre-clinical studies of UB-313. We used an *in vivo* proof-of-concept capsaicin-induced dermal blood flow model in mice to demonstrate target engagement of the marketed CGRP-targeting mAbs. In this model, we observed similar rates in reduction of dermal blood flow as fremanezumab in a head-to-head comparison against fremanezumab.

UB-313 Reduces Capsaicin-Induced Dermal Blood Flow in Mice



***Dunnett's: Ctl vs Vac 1p < 0.05; Ctl vs Vac 2 p < 0.05*

In this preliminary study, dermal blood flow measurements were taken 17 weeks following the first dose of UB-313. There were 3 to 11 animals per treatment group. Reduced dermal blood flow indicates target engagement with CGRP. UB-313 reduced dermal blood flow versus the control with an approximately similar magnitude to fremanezumab, which was administered 24 hours prior to the capsaicin test.

Our other *in vivo* studies of UB-313 have involved multiple animal species. High immunogenicity was observed in all pre-clinical species tested. Characterization of the antibodies produced after immunization with UB-313 indicated that they have limited, if any, off-target potential, are primarily IgG1 and IgG2, potently bind to CGRP and potently block CGRP activity *in vitro*. We refer to potency as the amount of drug required to produce a pharmacological effect of given intensity and is not a measure of therapeutic efficacy. In a comparison of binding affinities with fremanezumab and galcanezumab, UB-313-induced IgG antibodies demonstrated comparable binding affinities.

UB-313 Demonstrated Induced Antibodies Comparable to Approved CGRP mAbs

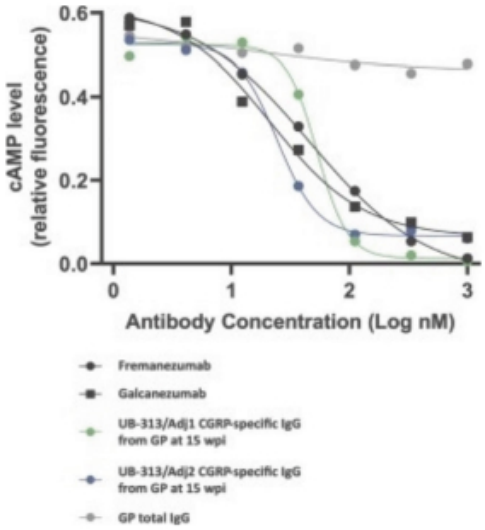
	Kon (10^6 $M^{-1}s^{-1}$)	Koff (10^{-6} s^{-1})	KD (pM)	Fold	Published KD (pM)
UB-313-Adj.2*	3.7	42	**11**	2.3	N/A
UB-313-Adj.1*	5.6	62	**11**	2.3	N/A
Fremanezumab^	0.36	1.7	**4.8**	1	2
Galcanezumab^	1.0	11	**11**	2.2	31

*CGRP-specific IgG purified from GP sera at 15 weeks after first dose
^old lot; reported values from 1-2 experiments

We evaluated UB-313 formulations with two different adjuvants in comparison to fremanezumab and galcanezumab; both formulations demonstrated comparable IgG to these two approved CGRP mAbs.

Additional *in vitro* studies using human SK-N-MC cells demonstrated that UB-313-induced IgG antibodies also had comparable *in vitro* activity to CGRP-targeted mAbs.

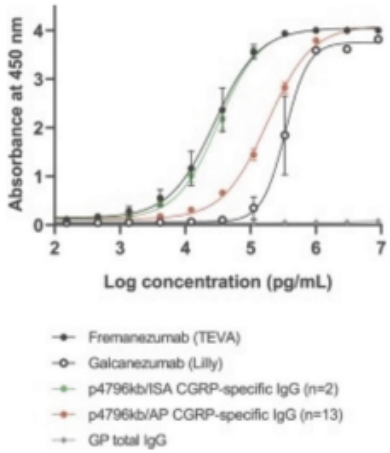
UB-313 Induced IgGs Have Comparable* In Vitro *Activities to Marketed CGRP mAbs



In a cyclic AMP ("cAMP") production assay conducted in human SK-N-MC cells, antibodies taken from the serum of guinea pigs 15 weeks following the first injection of UB-313 demonstrated similar properties to two approved CGRP mAbs.

Moreover, the binding potency of UB-313 was determined to be comparable to these mAbs.

UB-313 Induced IgGs Demonstrate Comparable Binding Potencies to Marketed CGRP mAbs



Antibodies taken from the serum of guinea pigs 15 weeks following the first injection of UB-313 demonstrated similar binding potencies to two approved CGRP mAbs as measured by ELISA.

Development Strategy

We have identified a lead candidate and anticipate submitting a clinical trial application ("CTA") or an IND in . While we are currently developing UB-313 as a potential treatment of chronic migraine, depending on successful clinical results, we may seek to address episodic migraine and cluster headaches as well.

PCSK9

An Overview of Hypercholesterolemia

Hypercholesterolemia is the presence of high levels of cholesterol in the blood and typically results from a combination of environmental and genetic factors. Cholesterol is transported in the blood plasma within particles called lipoproteins. Lipoproteins are classified by their density: very low-density lipoprotein, intermediate density lipoprotein, LDL and high density lipoprotein ("HDL"). All lipoproteins carry cholesterol, but elevated levels of lipoproteins other than HDL, particularly LDL, are associated with the development of cardiovascular disease. Approximately 2 billion people worldwide have elevated levels of LDL, potentially putting them at risk for cardiovascular disease.

Although hypercholesterolemia itself is asymptomatic, elevation of serum cholesterol can over time lead to atherosclerosis. Over many years, elevated serum cholesterol contributes to formation of atheromatous plaques in the arteries. These plaque deposits can in turn lead to progressive narrowing of the involved arteries. Smaller plaques may rupture and cause a clot to form and obstruct blood flow. A sudden blockage of a coronary artery may result in a heart attack. A blockage of an artery supplying the brain can cause a stroke. If the development of the stenosis or occlusion is gradual, blood supply to the tissues and organs slowly diminishes until organ function becomes impaired.

PCSK9 is mainly expressed in the liver and, to a lesser extent, in the small intestine, kidney, pancreas and the central nervous system. The LDL receptors ("LDLR") at the cell surface bind and initiate ingestion of LDL particles from extracellular fluid into cells, leading to a reduction in serum LDL levels. PCSK9 protein

plays a major regulatory role in cholesterol homeostasis, mainly by reducing LDLR levels on the plasma membrane, which leads to decreased metabolism of LDL by the cells. Inhibition of PCSK9 prevents this reduction in LDLR levels on the plasma membrane, and in consequence the cellular process of internalizing LDL particles, resulting in a reduction of LDL.

Limitations of Current Therapies

Statins are the most commonly used drugs to treat hypercholesterolemia and result in a pronounced reduction in LDL. The unambiguous benefits of statins, together with the prevalence of coronary heart disease, have made statins the most highly prescribed drug class in developed countries. However, many patients are unable to achieve targeted lipid levels despite intensive statins therapy. In addition, continued patient adherence to statin therapy, which is necessary to maintain a lower risk for cardiac events, is variable but considered to be low – as low as 30% to 40% after two years in persons following a myocardial infarction. Importantly, at the transcriptional level, statins up-regulate not only LDLR, but also PCSK9, causing the so-called paradox of statin treatment. Although statins induce a beneficial increase in LDLR, they also increase PCSK9, thus leading to LDLR degradation, which indirectly increases LDL, mitigating the overall LDL reduction that statins otherwise cause. Given the limitations in efficacy and adherence, targeting PCSK9 in combination with statins treatment is an emerging treatment paradigm for hypercholesterolemia.

Two mAbs that inhibit activity have received FDA approval, alirocumab (Praluent) and evolocumab (Repatha). These drugs were initially approved to treat the genetic condition heterozygous familial hypercholesterolemia, although the approved indications were expanded after the publication of studies demonstrating that the use of a PCSK9 inhibitor in conjunction with a statin significantly reduced the risk for major cardiovascular events, including heart attack, stroke, unstable angina requiring hospitalization or death from coronary heart disease. In addition, inclisiran (Leqvio), an siRNA inhibitor of PCSK9 synthesis, was approved by the EMA in late 2020 for the treatment of heterozygous familial hypercholesterolemia in addition to other dyslipidemia.

While alirocumab and evolucumab have demonstrated clinical benefit, their commercial potential has been limited by their pricing. Both launched with a wholesale acquisition price exceeding $14,000 annually, but prices for both were subsequently reduced in 2018. Nevertheless, this drug class generated sales of approximately $1.3 billion in 2020 and is expected to grow to approximately $5.2 billion by 2026, including the addition of inclisiran to the market. In addition, both must be administered bi-weekly, which represents what we believe to be a frequent and inconvenient administration schedule for patients. While inclisiran represents an improved administration schedule compared to alirocumab and evolucumab, as it must be administered only twice annually, we believe that it may encounter similar pricing challenges due to the published cost effectiveness price.

Our Hypercholesterolemia Program

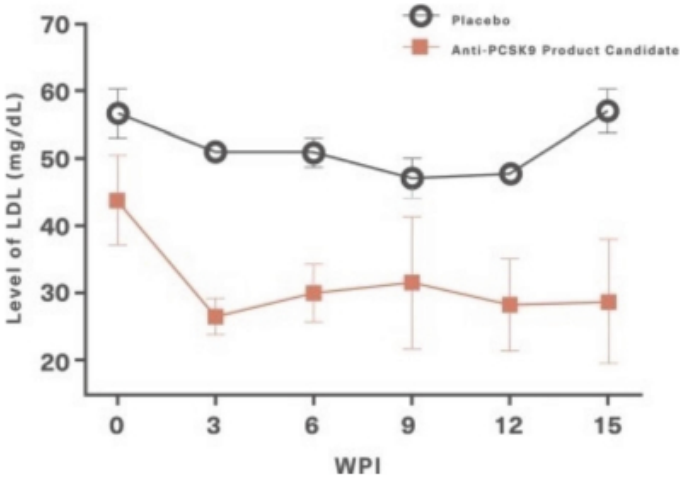
We are developing an anti-PCSK9 product candidate to treat hypercholesterolemia. Our program is dedicated to developing a product candidate that has long-acting treatment duration, which we believe will offer a more convenient treatment regimen of every six to 12 months compared to the up to bi-weekly dosing required by some mAbs. We believe that lower manufacturing costs commensurate with the requirement of meaningfully less drug substance relative to mAbs, coupled with our ability to achieve commercial scale production rapidly may promote expanded use of this drug class as a first-line therapy treating a greater number of hypercholesterolemia patients than currently treated with mAbs.

Pre-Clinical Studies

Pre-clinical studies of our anti-PCSK9 vaccine indicate that our product candidate generates therapeutic titer levels of anti-PCSK9 antibodies. These studies also indicate that it produces a high response rate among

dosed animals. We achieved proof-of-concept in a guinea pig model, reducing LDL cholesterol by more than 30% over the 15-week treatment duration, comparable to the reductions observed with the use of anti-PCSK9 mAbs.

Anti-PCSK9 Product Candidate Reduces LDL by 30 to 50% Over 15 Weeks in Guinea Pigs (n=6)



Development Strategy

We plan to select a lead candidate and initiate IND-enabling studies in .

Next Stage Development Candidates

In addition to our initial focus on migraines and hypercholesterolemia, we believe our Vaxxine Platform can generate product candidates for a range of chronic diseases. We are evaluating opportunities across multiple disease areas, including allergy (e.g., chronic rhinosinusitis, atopic dermatitis, food allergy), autoimmune (e.g., psoriasis, psoriatic arthritis), pain (e.g., peripheral neuropathy, diabetic neuropathy) and bone and muscle deterioration (e.g., osteopenia, sarcopenia of aging) indications.

COVID-19 Program

An Overview of COVID-19

COVID-19, caused by SARS-CoV-2, has rapidly swept throughout the world. The WHO declared COVID-19 a public health emergency of international concern. As of August 31, 2021, there have been more than 216 million laboratory-confirmed COVID-19 patients and more than 4.5 million deaths worldwide. Common symptoms of COVID-19 are fever, cough, lymphocytopenia and chest radiographic abnormality. A proportion of patients recovering from COVID-19 continue shedding virus for days, and asymptomatic carriers may also transmit SARS-CoV-2, indicating a risk of a continuous and long-term pandemic. Continuation of the pandemic is enabled by low vaccine coverage, with only approximately 27% of the world's population being fully vaccinated as of August 31, 2021.

SARS-CoV-2 is an enveloped, single-stranded, positive-sense RNA virus belonging to the family *Coronavidae* within the genus b-coronavirus. The genome of SARS-CoV-2 encodes one large Spike ("S")

protein that plays a pivotal role during viral attachment to the host receptor, angiotensin converting enzyme 2 (“ACE2”), and entry into host cells. The S protein is the major principal antigen target for vaccines against human coronavirus, including SARS-Co-V-2. Neutralizing antibodies targeting the receptor binding domain (“RBD”) subunit of the S protein block the virus from binding to host cells. Over 90% of all neutralizing antibodies produced in response to infection are directed to the RBD subunit, and mAbs that have shown therapeutic activity target epitopes on the RBD.

Twenty-two vaccines are authorized for use in one or more countries around the world, including three in the United States. These vaccines are based on the S protein of the SARS-CoV-2, but rely on different mechanisms for presentation or expression of the S antigen, including whole inactivated virus, defective adenovirus vectors (three different types) or mRNA. All have been shown to be safe and effective in placebo-controlled clinical trials. Antiviral drugs and mAbs have limited availability and effectiveness.

COVID-19: Primary Immunization Shortfall

Disparities in COVID-19 vaccine availability and distribution continue to grow despite the myriad of procurement efforts underway. There exists a shortfall in the supply of COVID-19 vaccines globally for primary immunization, driven by supply constraints along with substantial challenges around distribution, delivery and poor logistical capacity to administer doses. This primary immunization shortfall is disproportionately pronounced in low- and middle-income countries. We estimate that in order for these countries to approach herd immunity (modeled at 70% vaccinated), there remains a shortfall of 800 million to 1.6 billion doses (excluding India and China), calculated using the number of doses in contract and the expected manufacturing and distribution shortfall per manufacturer, according to publicly available sources, as well as the range of dose volume expected to become available through the “COVAX Facility” global initiative.

Although this shortfall may decrease over the next year, we estimate that even by mid-2022 there will remain a global need for 280-350 million people to receive primary immunizations. As Delta and other variants of SARS-CoV-2 emerge, the need for primary immunization that covers a broad array of variants is likely to increase.

COVID-19: Booster Market

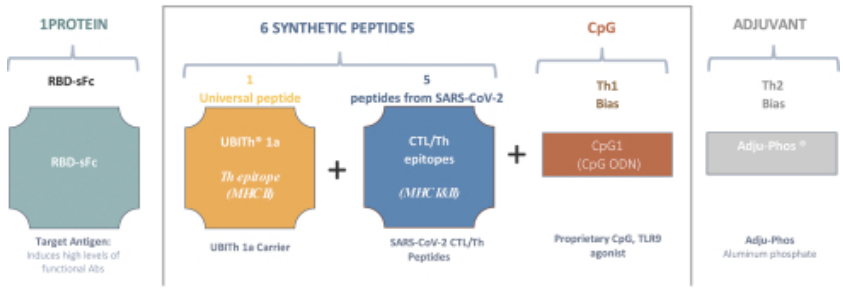
Furthermore, as knowledge of SARS-CoV-2, its circulating variants and vaccination efforts grow, the need for booster immunizations has become more apparent. We estimate that the size of the COVID-19 vaccine booster dose market globally in 2022 will exceed 1.5 billion doses. We expect the need for heterologous booster vaccines with low reactogenic profiles, broad variant coverage and durable immunity to grow through 2022.

UB-612 and UB-612A: Our COVID-19 Vaccine Initiative

We are developing UB-612 and UB-612A as product candidates for the prevention of COVID-19. UB-612 is designed to activate both antibody and cellular immunity against multiple viral targets. The vaccine is composed of a recombinant S1-RBD-sFc fusion protein combined with rationally designed synthetic Th and CTL epitope peptides selected from the S2 domain of the spike, membrane (“M”), and nucleocapsid (“N”) proteins. These peptides bind to MHC I and II without significant genetic restriction, so that they are recognized by the entire human population. Our mixture of peptides is designed to elicit T-cell activation, memory recall and effector functions similar to those of natural COVID-19. The S1-RBD-sFc fusion protein incorporates essential B-cell epitopes that promote the generation of neutralizing antibodies to the RBD of SARS-CoV-2. UB-612 is formulated with Adju-Phos, an adjuvant widely used in many approved vaccines globally. For added safety, synthetic peptides in UB-612 are adsorbed by our propriety CpG1 excipient, a Toll-like receptor 9 agonist molecule, known to help to stimulate balanced T-cell immunity in humans. UB-612 can be stored and shipped at 2° to 8°C (conventional cold chain refrigerated temperatures). An EUA application for UB-612 was denied by the TFDA in August 2021 because the neutralizing antibody response generated by UB-612, as compared to a

designated adenovirus vectored vaccine, did not meet the TFDA's specified evaluation criteria but, in collaboration with UBIA, we are appealing the decision and have asked the TFDA to update their criteria to include a comparison of geometric mean neutralizing titers against the Delta variant. The outcome of that appeal remains highly uncertain. At the same time, we are exploring paths to authorization for UB-612 as a heterologous boost and a three-dose regimen, and accelerating our development of our second COVID-19 product candidate, UB-612A. UB-612A includes the same mix of proteins and peptides as UB-612 with a new formulation to enhance immunogenicity.

Components of the UB-612 Multitope Vaccine Product Candidate



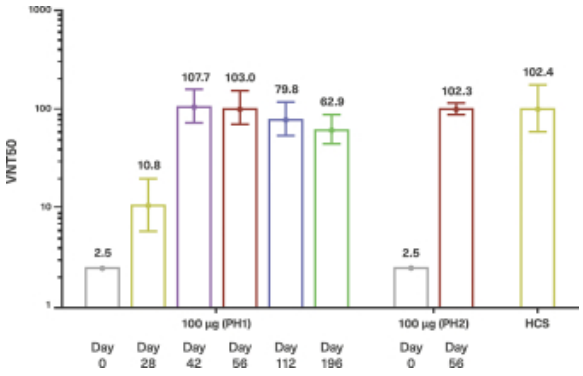
UB-612's construct contains an S1-RBD-sFc fusion protein for the B-cell epitopes, plus five synthetic Th/CTL peptides for class I and II MHC molecules derived from SARS-CoV-2 S2, M and N proteins, and the UBITh1a peptide. These components are formulated with CpG1, which binds the positively charged (by design) peptides by dipolar interactions and also serves as an adjuvant, which is then bound to Adju-Phos adjuvant to constitute the UB-612 product candidate.

Clinical Development

A randomized, placebo-controlled, multi-center Phase 2 trial of UB-612 in 3,850 healthy volunteers aged 12 to 85 is ongoing in Taiwan. Subjects in this trial receive two doses of 100μg UB-612, or placebo, 28 days apart. The objectives of this trial include the analysis of safety and immunogenicity of UB-612, in particular, antigen-specific antibodies to UB-612, the seroconversion rate and lot-to-lot consistency of antibody responses. An interim analysis of data from this Phase 2 trial in healthy volunteers 18 years and older based on the data cut-off date of June 27, 2021 was submitted to the TFDA as part of a filing for an EUA in Taiwan. The EUA was denied in August 2021 by the TFDA, but, in collaboration with UBIA, we are appealing that decision.

Phase 2 interim analysis suggests that Phase 1 observations on immunogenicity, neutralizing titers and tolerability are repeatable, with an overall seroconversion rate of 94.7% one month after the second dose. In a live virus (Wuhan) neutralization test, sera collected from UB-612 vaccinated younger adults (19-64 years, n=322), 28 days after the second dose (day 57), were estimated to reach geometric mean titers ("GMT") of 102 of 50% virus-neutralizing antibodies (VNT_{50}) . Published studies have shown a correlation between efficacy in randomized controlled trials and the ratio of neutralizing titers in sera from vaccinated subjects to titers in human convalescent sera.

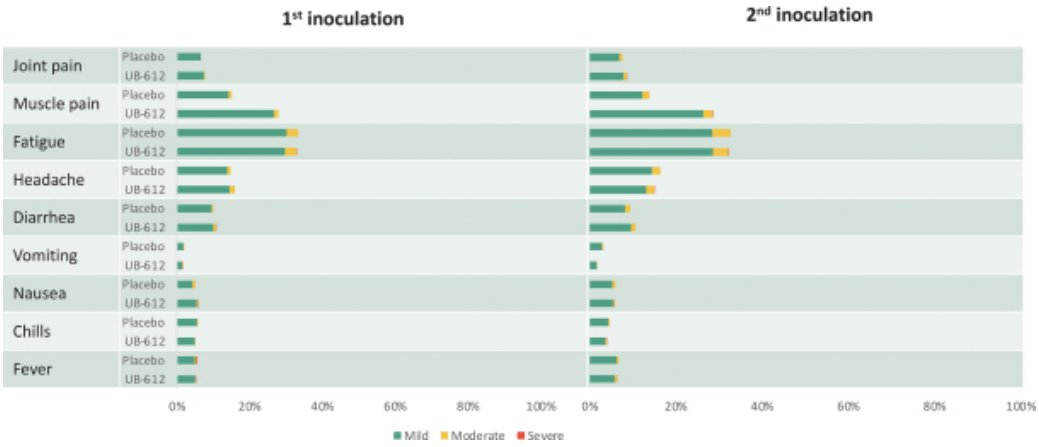
Immunogenicity Results from Phase 2 & Phase 1 were Consistent: Live Virus Neutralization Versus Convalescent Sera



Phase 1 (n=20 in 100µg dose group) and Phase 2 (n=322) sera (taken 28 days after the second dose) titer neutralizing activity, versus a panel of human convalescent serum titers taken from patients hospitalized with COVID-19, as measured by a live virus neutralization test, VNT_{50}, shows that two doses of UB-612 may yield neutralizing antibodies comparable to those found in convalescent patients.

In data from over 3,200 subjects, UB-612 appears well tolerated, with no significant safety findings to date. AEs were generally mild, and no related SAEs were observed. The figures below show the overall frequency of solicited AEs. Local injection site AEs occurred in half of the subjects, the most frequent being injection site pain. Systemic AEs occurred in less than half of the subjects, and the incidence was similar in the active and placebo groups, except for muscle pain which was more frequent in the active group. Aside from muscle pain, systemic reactions were comparable across the active and placebo groups, with less than 10% of subjects in either group experiencing fever or chills. Systemic AEs were similar after the first and second doses. The vast majority of AEs were mild (Grade 1), and all were self-limited. No subject had a severe (Grade 3) local reaction. The incidence of severe (Grade 3) systemic reactions was <0.1%.

Solicited Systemic Adverse Events 14 Days After Inoculation



In an interim analysis of safety data from Phase 2 we observed no systemic SAEs, and low rates of local mild and moderate events. Fatigue was the most common adverse event.

Phase 1 Data

In early 2021, we completed an open-label dose escalation Phase 1 clinical trial to evaluate the safety, tolerability and immunogenicity of UB-612 in healthy volunteers between the ages of 20 and 55 in Taiwan. This six-month trial consisted of three cohorts of 20 subjects each. The first cohort received two intramuscular injections of 10μg doses of UB-612, the second cohort received two 30μg doses and the third cohort received two 100μg doses. The first dose in each cohort was administered at the start of the trial, with the second dose administered on day 28. The mean titer of antigen-specific antibodies to UB-612 and the seroconversion rate was be evaluated throughout the six-month duration of the study to determine the humoral immune response and persistence of immunogenicity. In addition, T-cell responses were evaluated by interferon-g ELISpot assay and intracellular cytokine staining by flow cytometry.

The Phase 1 clinical trial was sponsored by UBIA. UBIA conducted the trial on our behalf in accordance with one of our related party master services agreements. See “Certain Relationships and Related Party Transactions—Our Relationship with UBI—Collaboration in Taiwan.”

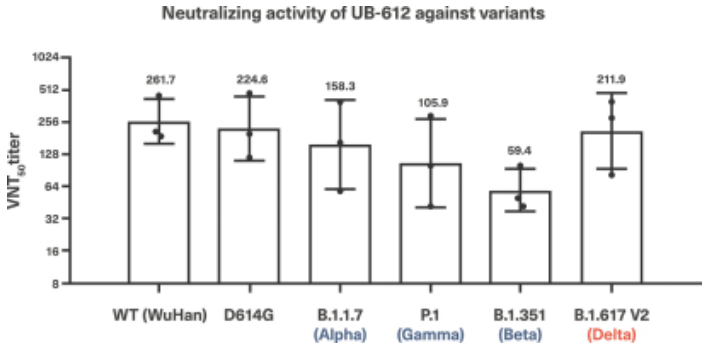
UB-612 was considered to be generally safe and well tolerated, with a low frequency of solicited and unsolicited AEs, which were all Grade 1 (mild) in severity. After each vaccination, the most common AE was injection site pain, with no clear difference in reactogenicity between dose levels. In all dose groups, there was a trend towards increased reactogenicity with increase in dose. Three cases of mild allergic reactions were reported (e.g., itching at vaccine site), which were all resolved within 1-3 days. Importantly, and in distinction to certain vaccines authorized for emergency use, no other increase in AEs was seen at second dose as compared to first injection. We selected the highest dose (100μg) to take into the Phase 2 trial.

In an anti-S1-RBD ELISA assay, we observed that all three dose levels of UB-612 induced titer levels comparable to or greater than those in sera from patients hospitalized with COVID-19. Furthermore, in a cytopathic effect viral neutralization assay (CPE VNT_{50}), we observed neutralizing titers comparable to those in sera from patients hospitalized with COVID-19.

Since September 2020, a number of genotypic variants of SARS-CoV-2 have emerged and contributed to epidemic spread in multiple countries. Notable among these are the Alpha or B.1.1.7 (United Kingdom), Beta or B.1.351 (South Africa), Gamma or P.1 (Brazil) and the Delta or B.1.617.2 variant (India). Some SARS-CoV-2 variants containing mutations in the S protein, especially the N-terminal domain and the RBD, show reduced neutralization by antibody against the Wuhan strain, evidenced both in persons naturally infected and in vaccinated individuals. The Beta (South Africa) variant shows the highest level of resistance, with up to 13-fold reduction in neutralization, and vaccines tested in placebo-controlled trials where this variant predominates have shown reduced efficacy. The Delta (B.1.617.2) variant, which is sweeping the globe due to its high transmissibility, has shown approximately three-fold reduced neutralization activity.

Neutralizing activities of sample sera from the Phase 1 trial were assessed against live virus variants at the Viral and Rickettsial Disease Laboratory of the California State Department of Public Health. The results indicate that UB-612 induces viral neutralizing antibody titers against the Alpha, Gamma and Delta variants of SARS-CoV-2, close to the neutralizing titer level against the original (wild-type, WT) Wuhan strain, while the titer level against the Beta variant is lower in comparison. The latter finding is anticipated by results published for other COVID-19 vaccines, as pointed out above. These data align with observations taken from a cynomolgus macaque study of UB-612 as well.

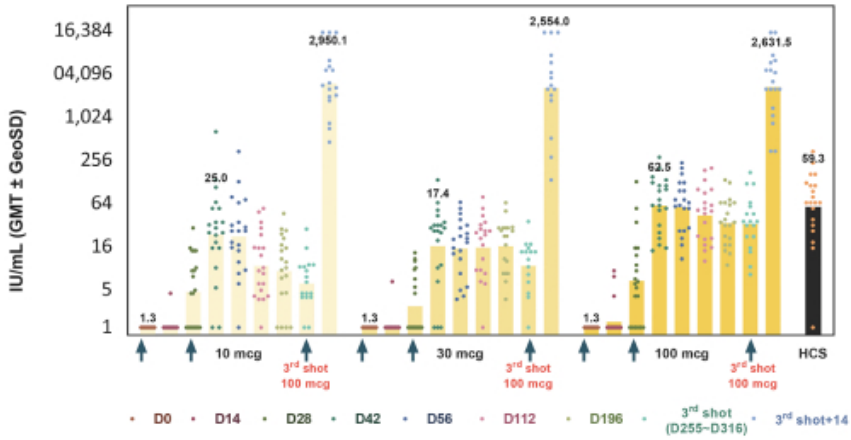
Neutralization of the Original and Variant Strains by Sera from Three Phase 1 Subjects(Live virus Neutralization Test)



Serum titers taken from three subjects dosed with 100µg of UB-612 in the Phase 1 trial, show neutralizing activity similar across original (wild-type, WT) Wuhan, Alpha (UK), Gamma (Brazil), Beta (South Africa), and Delta (India) variants as measured by VNT_{50} live virus neutralizing assay.

Participants from the Phase 1 trial have been enrolled in an extension trial in which they receive a 100µg booster dose of UB-612 at various time points following their second dose. Immunogenicity and safety data from this Phase 1 extension suggests that UB-612 elicits a multi-fold increase in neutralizing antibody titers upon third dose, significantly exceeding those observed in human convalescent sera, and that the third dose is well tolerated.

UB-612 GMT Neutralizing Titers (WHO International Standard)



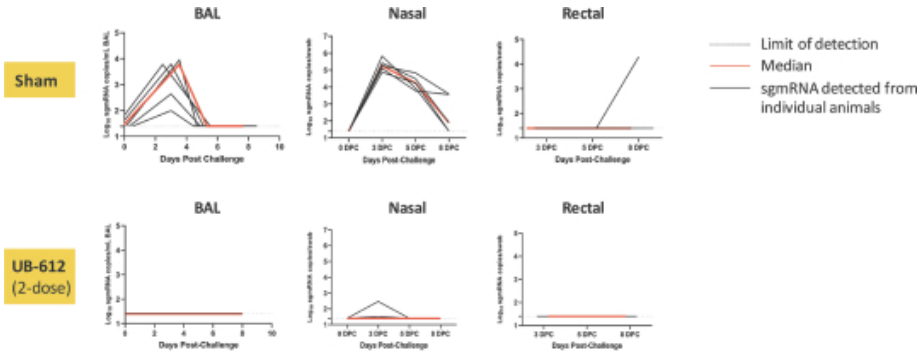
UB-612 Phase 1 extension (n=50) demonstrated that a dose of 100µg UB-612 followed by three doses of various sizes of UB-612 elicits a multi-fold increase in neutralizing antibody titers.

Pre-Clinical Study Results for UB-612 and UB-612A

Initial work to select the S1-RBD-sFc antigen was performed in guinea pig immunogenicity studies, which demonstrated the superiority of S1-RBD-sFc over other protein sequences tested. Product candidate dose

and formulation were explored in rat immunogenicity studies, which allowed the selection of the current formulation of UB-612. Efficacy studies were carried out in mouse and nonhuman primate models, in which UB-612 showed protective efficacy against live viral challenge. In a nonhuman primate model challenge study, we observed full protection against SARS-CoV-2.

Nonhuman Primate Challenge Model

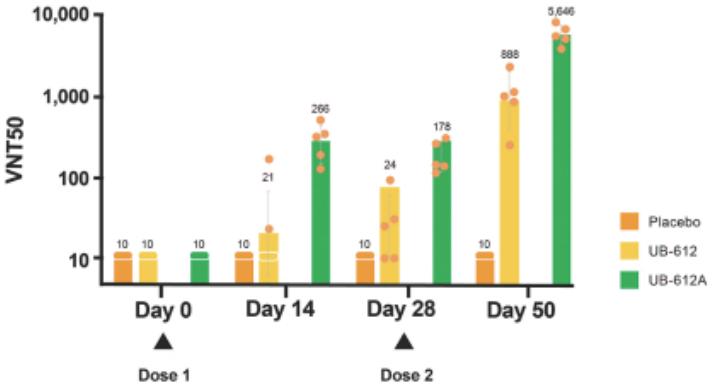


Five nonhuman primates per group were challenged with 10e TCID50 by IT/IN.

A GLP toxicology study in rats demonstrated an acceptable safety profile and enabled clinical testing of UB-612. In addition to these studies, a Developmental and Reproductive Toxicity study is in progress in rats to evaluate potential risks prior to including any pregnant women in clinical trials.

Our next generation COVID-19 product candidate is UB-612A, which employs the same mix of proteins and peptides as UB-612, formulated with a new formulation to enhance immunogenicity. This formulation has yielded higher immunogenicity than UB-612 in pre-clinical studies, as observed in neutralizing titers against multiple SARS-CoV-2 variants. We have also observed that UB-612A elicits full protection from COVID-19 disease in non-human primate challenge studies.

Neutralization of the Wuhan Variant of SARS-CoV-2 by Sera from Non-Human Primate Study
(Live Virus Neutralization Test)



Serum titers taken from five animals per group dosed with 100µg UB-612A four weeks apart.

Development Strategy

In addition to appealing the TFDA's decision regarding UB-612, we plan to pursue UB-612 approval from one or more regulators in other jurisdictions that may accept Phase 2 and immunobridging data as the basis for an EUA submission. We may also pursue approval of UB-612 as a three-dose regimen or as a heterologous boost (boosting the immunity of a subject who has already received a different vaccine). The likelihood of obtaining UB-612 regulatory approval in any jurisdiction is highly uncertain.

Nonetheless, our preliminary data gives us reason to believe that UB-612A could be meaningfully more effective than UB-612. Currently, we plan to file an IND for UB-612A in . We expect that by , safety, tolerability and immunogenicity data from a first-in-human study of UB-612A will inform whether to advance this product candidate. The development plan will incorporate safety, tolerability, immunogenicity and durability of response of UB-612A after a two-dose priming regimen, and after a booster dose administered several months following the priming regimen. We may also test the ability of both UB-612A and UB-612 to boost the COVID-19 immunity of subjects who have received vectored and inactivated virus COVID-19 vaccines, given the potential demand for COVID-19 booster vaccines with low reactogenic profiles, broad variant coverage and durable immunity.

COVID-19 Diagnostics Program

We have developed an ELISA test that can quickly detect antibodies in human sera or plasma to determine if a patient has had a SARS-CoV-2 infection post fourteen days of onset. It employs synthetic peptides derived from the M, S and N proteins of SARS-CoV2 for the detection of IgG antibodies to SARS-CoV2 in human sera or plasma. These synthetic peptides bind antibodies specific to highly antigenic segments of SARS-CoV2 structural M, N and S proteins and constitute the solid phase antigenic immunosorbant. The FDA issued an EUA for our ELISA test in January 2021.

Competition

The pharmaceutical industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our technology, the expertise of our executive and scientific teams, research, clinical capabilities, development experience and scientific knowledge provide us with competitive advantages, we face increasing competition from multiple sources, including pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions.

Vaccines

The global vaccine market is highly concentrated among a small number of multinational pharmaceutical companies: Pfizer, Merck, GlaxoSmithKline and Sanofi together control most of the global vaccine market. Other pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions are also working toward new solutions given the continuing global unmet need.

Twenty-two COVID-19 vaccines are currently authorized for use in one or more countries around the world, including three in the United States. All have been shown to be safe and effective in placebo-controlled clinical trials. All these vaccines are based on the S protein of the SARS-CoV-2 virus, but rely on different mechanisms for presentation or expression of the S antigen, including whole, inactivated virus, defective adenovirus vectors (three different types) or mRNA.

Neurodegenerative Disorders

We expect that, if approved, our product candidates will compete with the currently approved therapies for management of neurodegenerative diseases, such as AD and PD. In AD, four drugs are currently approved by the FDA for the treatment of symptoms of AD, based on acetylcholinesterase ("AChE") inhibition and NMDA receptor antagonism. In addition to the marketed therapies, we are aware of several companies currently developing therapies for AD, including Eisai, Eli Lilly, Hoffman-LaRoche, Otsuka Pharmaceuticals, Novartis and Biohaven Pharmaceuticals. Biogen's aducanumab was approved by the FDA in June 2021 under the accelerated approval pathway, which allows for earlier approval of drugs that treat serious conditions, and that fill an unmet medical need based on a surrogate endpoint. Regulatory approval of aducanumab is pending in Europe and Japan.

Pharmaceutical treatments for PD address its symptoms only and do not treat the underlying causes of PD. The majority of prescription drugs are dopaminergic medications and act by increasing dopamine, a neurotransmitter. We are aware of several companies with product candidates at various stages of clinical development, including Sanofi, Kyowa Kirin, Cerevel Therapeutics and Hoffman LaRoche. Hoffman LaRoche is developing prasinezumab, a mAb, as a potential treatment for PD.

CGRP-Directed Migraine Treatments

Six migraine treatments have been approved by the FDA that target CGRP. Four of these therapeutics are mAbs and were approved to prevent or reduce the number of migraine episodes. These medications are galcanezumab (Emgality), which was developed by Lilly; erenumabb (Aimovig), which was developed by Amgen in collaboration with Novartis; fremanezumab (Ajovy), which was developed by Teva; and eptinezumab (Vyepti), which was developed by Alder, acquired by Lundbeck. Ubrogepant (Ubvelvy), developed by Allergan, was approved for the treatment of acute migraine episodes; rimegepant (Nurtec), also approved for the treatment of acute migraine, is sold by Biohaven.

PCSK-9 Inhibitors

Two companies currently have PCSK-9 inhibitors approved by the FDA to treat hypercholesterolemia. Both are mAbs. Regeneron Pharmaceuticals developed alirocumab (Praluent), in collaboration with Sanofi, and Amgen developed evolocumab (Repatha). The Medicines Company, a subsidiary of Novartis, is developing inclisiran, an RNAi construct, to down-regulate synthesis of PCSK-9. Inclisiran was approved by the EMA in December 2020.

Collaborations

From time to time, we may enter into licensing and commercialization agreements when they align with our mission, including the Platform License Agreement described under "—Intellectual Property—Platform License Agreement" and the agreement with our partner Aurobindo.

Aurobindo License Agreement

In December 2020, we entered into an exclusive license agreement with Aurobindo (as amended, the "Aurobindo Agreement") to expand our development and commercialization of UB-612 to India and other territories through UNICEF. Pursuant to the Aurobindo Agreement, we granted Aurobindo an exclusive license (with certain rights reserved to us) to develop, manufacture and commercialize UB-612 in India and other countries through UNICEF and a non-exclusive license to develop, manufacture and commercialize UB-612 in other selected emerging and developing markets. Each license is a royalty-bearing, non-assignable (subject to certain exceptions) and sublicensable (subject to certain conditions) license under certain patents, trademarks and other intellectual property controlled by us related to UB-612 to make, have made, manufacture or have

manufactured, import, test, use, have used, register, sell, offer for sale, develop and commercialize UB-612 for the prevention and/or treatment of SARS-CoV-2. In addition, we agreed to transfer to Aurobindo certain technology required to manufacture finished and packaged UB-612. Pursuant to the Aurobindo Agreement, Aurobindo must use commercially reasonable efforts to develop, obtain regulatory approval for and commercialize UB-612 in the territory covered by the license, and we must provide reasonable scientific and technical support for regulatory and licensing efforts upon request. Aurobindo is responsible for bearing all costs and expenses of development and commercialization in the territory.

In partial consideration for entering into the Aurobindo Agreement, if Aurobindo receives a certain amount in grant funding from the international donor community, Aurobindo is required to pay us an upfront payment and an additional milestone payment upon the occurrence of a certain development-related milestone event that could equal up to $10 million in the aggregate. If Aurobindo does not receive that amount in grant funding, Aurobindo is required to pay us certain milestone payments upon the occurrence of certain development and commercialization-related milestone events that could equal up to $10 million in the aggregate. In addition, we are eligible to receive a tiered royalty percentage on net sales of licensed product, on a per dose basis, based on the gross price of UB-612, beginning upon the first commercial sale of UB-612 until the last commercial sale of UB-612, on a country-by-country basis. Aurobindo is also required to pay us a certain percentage of any sublicense income it receives.

The Aurobindo Agreement will continue in effect on a country-by-country basis until the last commercial sale of UB-612 pursuant to the Aurobindo Agreement, unless earlier terminated by either party. The Aurobindo Agreement may be terminated (i) by Aurobindo, without cause at any time after three years following the effective date or prior to such time if UB-612 fails to meet clinical end-points or fails in development, (ii) by us, (a) if Aurobindo disputes the patentability, enforceability or validity of our patent rights related to the UB-612 technology, (b) in case of a suit alleging Aurobindo's use of the licensed intellectual property infringes a third party's intellectual property rights if we reasonably believe the license is no longer commercially reasonable in light of such claim or (c) without cause at any time after four years following the effective date, (iii) by either party in the event of the other party's material breach of its obligations under the Aurobindo Agreement (subject to a cure period) or (iv) by either party in the event of the other party's insolvency.

Manufacturing

The manufacture of our product candidates encompasses both the manufacture of custom components and the formulation, fill and finish of the final product. We do not currently own or operate manufacturing facilities for these processes. We currently rely upon contract manufacturing organizations, including those mentioned below, to produce our product candidates for both pre-clinical and clinical use and will continue to rely upon these relationships for commercial manufacturing if any of our product candidates obtain regulatory approval. Although we rely upon contract manufacturers, we also have personnel with extensive manufacturing experience that can oversee the relationship with our manufacturing partners.

We depend heavily on UBI and its affiliates for our existing business operations, including the provision of research, development and manufacturing services. UBIA provides testing services and produces small-scale peptides for research and clinical use for us, UBIP provides formulation-fill-finish services and produces small-scale peptides for research and clinical use for us and UBP is currently our sole manufacturer of protein. Our commercial arrangements with UBI and its affiliates are described in more detail below.

Formulation-fill-finish services for UB-612 are also provided by Aurobindo and other contract manufacturers that have been engaged to scale-up our manufacturing capacity. For supply of our other custom components, in addition to manufacturing conducted by UBI and its affiliates, we have engaged third party CMOs. Under our agreement with CSBio, CSBio has agreed to be our primary supplier and service provider to supply not less than 80% of our worldwide commercial as well as clinical trial material requirements for the multi-peptide active pharmaceutical ingredient used in our COVID-19 vaccine until our own facility is

operational and validated to manufacture peptides to cGMPs. Until such time, we have agreed not to engage any third party contract manufacturer to produce any peptides that would exceed 20% of our worldwide requirements. While we currently rely on a single partner for the large-scale, commercial manufacture of each of our custom components, we believe that each of these components could be obtained from more than one source and we continue to seek additional manufacturing partnerships.

UBI Group Manufacturing Partnership

In support of our COVID-19 program, we have entered into a master services agreement with UBP and an additional master services agreement with UBI, UBIA and UBP. Pursuant to these agreements, UBIA provides research, development, testing and manufacturing services to us and UBP provides research, development, testing and manufacturing services to us. Payment terms are mutually agreed in connection with each work order relating to services rendered. Our agreement with UBP will expire on the later of March 2024 and the completion of all services under the last work order executed prior to such scheduled expiration and our agreement with UBI, UBIA and UBP will expire on the later of September 2023 and the completion of all services under the last work order executed prior to such scheduled expiration. We also have a management services agreement with UBI pursuant to which UBI provides research, development, manufacturing and back office administrative services to us and acts as our agent with respect to matters relating our COVID-19 program. UBI is compensated for its services on a cost-plus basis. The agreement terminates upon mutual agreement between the parties.

In support of our chronic disease pipeline, we have entered into master service agreements with each of UBI and UBIA. Pursuant to these agreements, UBI and UBIA provide research, development and clinical services to us on a cost-plus basis and UBIA provides manufacturing, quality control, testing, validation and supply to us on payment terms agreed in connection with work orders relating to the services rendered. These agreements may all be terminated for convenience upon 180 days' notice or less.

We have also entered into a research and development services agreement with UBI. Pursuant to this agreement, UBI and its affiliates provide research and development services to us in accordance with a research and development plan approved by a joint steering committee consisting of two committee members appointed by us and two committee members appointed by UBI. Service fees payable by us to UBI for research and development projects undertaken in accordance with the research and development plan will be determined by the joint steering committee and set forth in the research and development plan. The aggregate services fees payable by us under the research and development services agreement are subject to a quarterly cap throughout the term of the agreement. The research and development services agreement expires in August 2026.

Intellectual Property

Our ability to obtain and maintain intellectual property protection for our product candidates and core technologies is fundamental to the long-term success of our business. We rely on a combination of intellectual property protection strategies, including patents, trademarks, trade secrets, license agreements, confidentiality policies and procedures, nondisclosure agreements, invention assignment agreements and technical measures designed to protect the intellectual property and commercially valuable confidential information and data used in our business.

In summary, our patent estate includes issued patents and patent applications which claims cover our Vaxxine Platform and each of our product candidates. As of August 31, 2021, our patent estate includes ten U.S. issued patents, twelve U.S. patent applications, three U.S. provisional patent applications, four pending Patent Cooperation Treaty ("PCT") patent applications, 98 issued non-U.S. patents and 194 pending non-U.S. patent applications.

For our product candidates targeting the prevention and treatment of neurodegenerative disease, including claims covering UB-311, UB-312, patent rights are provided by patents and patent applications, the

majority of which are being prosecuted in the United States, Australia, Brazil, Canada, China, the EPO, Hong Kong, Indonesia, India, Israel, Japan, the Republic of Korea, Mexico, Russia, Singapore, South Africa, Taiwan and the United Arab Emirates directed to peptide vaccines for the prevention and treatment of neurodegenerative diseases. These issued patents and patent applications, if issued, are expected to expire between 2022 and 2039, excluding any patent term adjustments or patent term extensions.

For our product candidates directed to peptide immunogens targeting CGRP and formulations thereof for the prevention and treatment of migraine, including UB-313, patent rights may be provided by a patent family being prosecuted in the United States, Australia, Brazil, Canada, China, India, Indonesia, Japan, Mexico, Russia, the Republic of Korea, Singapore, Taiwan and the United Arab Emirates. These patent applications, if issued, are expected to expire in 2039, excluding any patent term adjustments or patent term extensions.

For our product candidates targeting cholesterol and cardiovascular disease, including our anti-PCSK9 product candidate targeting PCSK9 and formulations thereof for prevention and treatment of PCSK9-mediated disorders, we are in the process of acquiring a pending patent application in Taiwan and a pending PCT patent application. This Taiwanese patent application, if issued, and any U.S. or non-U.S. patent issuing from this PCT patent application, if such patent is issued, is expected to expire in 2041, excluding any patent term adjustment or patent term extension.

For our product candidates targeting SARS-CoV-2, including UB-612 and UB-612A for COVID-19, we have pending patent applications in Brazil, Pakistan and Taiwan, one pending PCT patent application and three provisional patent applications in the United States. These patent applications, if issued, and any U.S. or non-U.S. patent issuing from this PCT or provisional patent application, are expected to expire between 2041 and 2042, excluding any patent term adjustments or patent term extensions.

For each product candidate utilizing the Vaxxine platform, additional patent rights directed to artificial T helper cell epitopes and to a CpG delivery system are provided by patents and patent applications, the majority of which are being prosecuted in the United States, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Denmark, the EPO, France, Germany, Hong Kong, Indonesia, India, Ireland, Israel, Italy, Japan, Mexico, the Netherlands, New Zealand, Peru, Philippines, the Republic of Korea, Russia, Singapore, South Africa, Spain, Sweden, Switzerland/Liechtenstein, Taiwan, Thailand, the United Arab Emirates, the United Kingdom and Vietnam. These issued patents and patent applications, if issued, are expected to expire between 2023 and 2039, excluding any patent term adjustments or patent term extensions.

The term of individual patents depends on the countries in which they are obtained. The patent term is 20 years from the earliest effective filing date of a non-provisional patent application in most of the countries in which we file, including the United States. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed patent. The term of a patent that covers a drug or biological product may also be eligible for patent term extension when FDA approval is granted for a portion of the term effectively lost as a result of the FDA regulatory review period, subject to certain limitations and provided statutory and regulatory requirements are met.

In addition to our reliance on patent protection for our inventions, products and technologies, we also seek to protect our brand through the procurement of trademark rights. We own registered trademarks and pending trademark applications for our brands, including our "Vaxxinity", "United Neuroscience" and "COVAXX" brands and other related names and logos, in the United States and certain foreign jurisdictions.

Furthermore, we rely upon trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. However, trade secrets and know-how can be difficult to protect. We generally control access to and use of our trade secrets and know-how, through the use of internal and

external controls, including by entering into nondisclosure and confidentiality agreements with our employees and third parties. We cannot guarantee, however, that we have executed such agreements with all applicable counterparties, that such agreements will not be breached or that these agreements will afford us adequate protection of our intellectual property and proprietary rights. Furthermore, although we take steps to protect our proprietary information and trade secrets, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. As a result, we may not be able to meaningfully protect our trade secrets. For further discussion of the risks relating to intellectual property, see "Risk Factors—Risks Related to Our Intellectual Property Rights."

Platform License Agreement

In August 2021, Vaxxinity entered into a license agreement (the "Platform License Agreement") with UBI and certain of its affiliates (collectively, the "Licensors") that expanded intellectual property rights previously licensed under the Original UBI Licenses (as defined below). Pursuant to the Platform License Agreement, Vaxxinity obtained a worldwide, sublicensable (subject to certain conditions), perpetual, fully paid-up, royalty-free (i) exclusive license (even as to the Licensors) under all patents owned or otherwise controlled by the Licensors or their affiliates existing as of the effective date of the Platform License Agreement, (ii) exclusive license (except as to the Licensors) under all patents owned or otherwise controlled by the Licensors or their affiliates arising after the effective date during the term of the Platform License Agreement, and (iii) non-exclusive license under all know-how owned or otherwise controlled by the Licensors or their affiliates existing as of the effective date or arising during the term of the Platform License Agreement, in each of the foregoing cases, to research, develop, make, have made, utilize, import, export, market, distribute, offer for sale, sell, have sold, commercialize or otherwise exploit peptide-based vaccines in the field of all human prophylactic and therapeutic uses, except for such vaccines related to human immunodeficiency virus (HIV), herpes simplex virus (HSE) and Immunoglobulin E (IgE). The patents and patent applications licensed under the Platform License Agreement include claims directed to a CpG delivery system, artificial T helper cell epitopes and certain designer peptides and proteins utilized in UB-612 and UB-612A. As partial consideration for the rights and licenses we received pursuant to the Platform License Agreement, we granted UBI the UBI Warrant, as more fully described in the section titled "Description of Capital Stock—Authorized Capital Stock."

Vaxxinity has the first right to control the filing, prosecution, maintenance and enforcement of the licensed patents at Vaxxinity's own expense, subject to the Licensors' right to comment on and review any patent filings. The Platform License Agreement shall continue until the parties mutually consent in writing to terminate the agreement. Upon such termination, all licenses granted under the Platform License Agreement shall terminate and Vaxxinity will assign any regulatory documentation previously assigned to Vaxxinity back to the Licensors.

Coverage and Reimbursement

Sales of our product candidates in the United States will depend, in part, on the extent to which third-party payors, including government health programs such as Medicare and Medicaid, commercial insurance and managed health care organizations provide coverage and establish adequate reimbursement levels for such product candidates. The process for determining whether a third-party payor will provide coverage for a pharmaceutical or biological product is typically separate from the process for setting the price of such a product or for establishing the reimbursement rate that the payor will pay for the product once coverage is approved, and we may also need to provide discounts to purchasers, private health plans or government healthcare programs, as increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. As a result, a third-party payor's decision to provide coverage for a pharmaceutical or biological product does not imply that the reimbursement rate will be adequate for commercial viability, and inadequate reimbursement rates, including significant patient cost sharing obligations, may deter patients from selecting our product candidates. Obtaining coverage and reimbursement approval of a product from a third-party payor is a time-consuming and costly process that could require us to provide to each payor supporting scientific, clinical and cost-effectiveness data for the use of our

product on a payor-by-payor basis, with no assurance that coverage and adequate reimbursement will be obtained. Third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the approved products for a particular indication.

Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. In general, factors a payor considers in determining coverage and reimbursement are based on whether the product is a covered benefit under its health plan; safe, effective, and medically necessary, including its regulatory approval status; medically appropriate for the specific patient; cost-effective; and neither experimental nor investigational. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. As such, one third-party payor's decision to cover a particular medical product or service does not ensure that other payors will also provide coverage for the medical product or service, and the level of coverage and reimbursement can differ significantly from payor to payor. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Product Approval and Government Regulation

Government authorities in the United States, at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of products such as those we are developing. Any product candidate that we develop must be approved by the FDA before it may be legally marketed in the United States and by the appropriate foreign regulatory agency before it may be legally marketed in foreign countries.

U.S. Drug Development Process

In the United States, the development, manufacturing and marketing of human drugs and vaccines are subject to extensive regulation. The FDA regulates drugs under the Federal Food, Drug and Cosmetic Act ("FDCA") and implementing regulations, and biological products, including vaccines, under provisions of the FDCA and the Public Health Service Act. Drugs and vaccines are also subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial sanctions. FDA sanctions could include refusal to approve pending applications, withdrawal of an approval, clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, debarment, restitution, disgorgement or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us. The process required by the FDA before a drug or biological product may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests, animal studies and formulation and stability studies according to GLP or other applicable regulations;
- submission to the FDA of an application for an IND, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials according to the FDA's regulations commonly referred to as GCPs to establish the safety and efficacy of the proposed drug for its intended use;

- submission to the FDA of an NDA or BLA for a new drug;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the drug is produced to assess compliance with the FDA's cGMP, to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity;
- potential FDA audit of the nonclinical and clinical trial sites that generated the data in support of the NDA or BLA; and
- FDA review and approval of the NDA or BLA.

The lengthy process of seeking required approvals and the continuing need for compliance with applicable statutes and regulations require the expenditure of substantial resources and approvals are inherently uncertain.

Before testing any compounds with potential therapeutic value in humans, the product candidate enters the pre-clinical study stage. Pre-clinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the pre-clinical tests must comply with federal regulations and requirements including GLP. The sponsor must submit the results of the pre-clinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA imposes a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. The FDA may also impose clinical holds on a product candidate at any time before or during clinical trials due to safety concerns or non-compliance. Accordingly, we cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such trial.

Clinical trials involve the administration of the product candidate to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's direct control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety. Each protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted in accordance with the FDA's regulations comprising the good clinical practices requirements. Further, each clinical trial must be reviewed and approved by an independent IRB at or servicing each institution at which the clinical trial will be conducted. An IRB is charged with protecting the welfare and rights of trial participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each clinical trial subject or his or her legal representative and provide oversight for the clinical trial until completed.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1*. The drug is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing may be conducted in patients;
- *Phase 2*. The drug is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule; and

- *Phase 3*. Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling. Generally, a well-controlled Phase 3 clinical trial is required by the FDA for approval of an NDA or BLA.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data and clinical trial investigators. Annual progress reports detailing the results of the clinical trials must be submitted to the FDA and written IND safety reports must be promptly submitted to the FDA and the investigators for serious and unexpected adverse events or any finding from tests in laboratory animals that suggests a significant risk for human subjects. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor or its data safety monitoring board may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients.

Concurrently with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug as well as 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 drug. 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.

U.S. Review and Approval Processes

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA or BLA requesting approval to market the product. The submission of an NDA or BLA is subject to the payment of substantial fees; a waiver of such fees may be obtained under certain limited circumstances.

In addition, under the Pediatric Research Equity Act ("PREA"), an NDA or BLA or supplement to an NDA or BLA must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation has been granted.

The FDA reviews all NDAs or BLAs submitted to determine if they are substantially complete before it accepts them for filing. If the FDA determines that an NDA or BLA is incomplete or is found to be non-navigable, the filing may be refused and must be re-submitted for consideration. Once the submission is accepted for filing, the FDA begins an in-depth review of the NDA or BLA. Under the goals and policies agreed to by the FDA under the Prescription Drug User Fee Act ("PDUFA"), the FDA has 10 months from acceptance of filing in which to complete its initial review of a standard NDA or BLA and respond to the applicant, and six months from acceptance of filing for a priority NDA or BLA. The FDA does not always meet its PDUFA goal

dates. The review process and the PDUFA goal date may be extended by three months or longer if the FDA requests or the NDA or BLA sponsor otherwise provides additional information or clarification regarding information already provided in the submission before the PDUFA goal date.

After the NDA or BLA submission is accepted for filing, the FDA reviews the NDA or BLA to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, strength, quality and purity. The FDA may refer applications for novel drug or biological products or drug or biological products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. During the drug approval process, the FDA also will determine whether a REMS is necessary to assure the safe use of the drug. If the FDA concludes a REMS is needed, the sponsor of the NDA or BLA must submit a proposed REMS; the FDA will not approve the NDA or BLA without a REMS, if required.

Before approving an NDA or BLA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The FDA requires vaccine manufacturers to submit data supporting the demonstration of consistency between manufacturing batches, or lots. The FDA works together with vaccine manufacturers to develop a lot release protocol, the tests conducted on each lot of vaccine post-approval. Additionally, before approving an NDA or BLA, the FDA will typically inspect the sponsor and one or more clinical sites to assure that the clinical trials were conducted in compliance with IND study requirements. 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.

The NDA or BLA review and approval process is lengthy and difficult and the FDA may refuse to approve an NDA or BLA if the applicable regulatory criteria are not satisfied or may require additional clinical data or other data and information. Even if such data and information is submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. The FDA will issue a complete response letter if the agency decides not to approve the NDA or BLA. The complete response letter usually describes all of the specific deficiencies in the NDA or BLA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either submit new information, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. In addition, the FDA may require post-marketing clinical trials, sometimes referred to as Phase 4 clinical trials, which are designed to further assess a product's safety and effectiveness and may require testing and surveillance programs to monitor the safety of approved products that have been commercialized. In addition, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could impact the timeline for regulatory approval or otherwise impact ongoing development programs.

EUA Approval

The Commissioner of the FDA, under delegated authority from the Secretary of the U.S. Department of Health and Human Services ("DHHS") may, under certain circumstances, issue an EUA that would permit the

use of an unapproved drug product or unapproved use of an approved drug product. Before an EUA may be issued, the Secretary must declare an emergency based on one of the following grounds:

- a determination by the Secretary of the Department of Homeland Security that there is a domestic emergency, or a significant potential for a domestic emergency, involving a heightened risk of attack with a specified biological, chemical, radiological or nuclear agent or agents;

- a determination by the Secretary of the Department of Defense that there is a military emergency, or a significant potential for a military emergency, involving a heightened risk to U.S. military forces of attack with a specified biological, chemical, radiological or nuclear agent or agents; or

- a determination by the Secretary of the DHHS that a public health emergency that affects, or has the significant potential to affect, national security and that involves a specified biological, chemical, radiological or nuclear agent or agents, or a specified disease or condition that may be attributable to such agent or agent.

In order to be the subject of an EUA, the FDA Commissioner must conclude that, based on the totality of scientific evidence available, it is reasonable to believe that the product may be effective in diagnosing, treating or preventing a disease attributable to the agents described above, that the product's potential benefits outweigh its potential risks and that there is no adequate approved alternative to the product.

Although an EUA cannot be issued until after an emergency has been declared by the Secretary of DHHS, the FDA strongly encourages an entity with a possible candidate product, particularly one at an advanced stage of development, to contact the FDA center responsible for the candidate product before a determination of actual or potential emergency. Such an entity may submit a request for consideration that includes data to demonstrate that, based on the totality of scientific evidence available, it is reasonable to believe that the product may be effective in diagnosing, treating or preventing the serious or life-threatening disease or condition. This is called a pre-EUA submission and its purpose is to allow FDA review considering that during an emergency, the time available for the submission and review of an EUA request may be severely limited.

Post-Approval Requirements

Any drug or biological products for which we or our collaborators receive FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the product, providing the FDA with updated safety and efficacy information, product sampling and distribution requirements, complying with certain electronic records and signature requirements and complying with FDA promotion and advertising requirements, which include, among others, standards for direct-to-consumer advertising, promoting drugs for uses or in patient populations that are not described in the drug's approved labeling (known as "off-label use"), industry-sponsored scientific and educational activities, and promotional activities involving the internet.

Failure to comply with FDA requirements can have negative consequences, including adverse publicity, enforcement letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties. Although physicians may prescribe legally available drugs for off-label uses, manufacturers may not market or promote such off-label uses.

Manufacturers of our product candidates are required to comply with applicable FDA manufacturing requirements contained in the FDA's cGMP regulations. cGMP regulations require, among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation. Following approval, the FDA continues to monitor vaccine quality through real-time monitoring of lots by requiring manufacturers to submit certain information for each vaccine lot. Vaccine manufacturers may only distribute a lot following release by the FDA. Drug manufacturers and other entities involved in the manufacture and distribution

of approved drugs 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 and other laws. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer or holder of an approved NDA or BLA, including withdrawal of the product from the market. In addition, changes to the manufacturing process generally require prior FDA approval before being implemented, and other types of changes to the approved product, such as adding new indications and additional labeling claims, are also subject to further FDA review and approval.

Taiwan Drug Development Process

The regulatory processes in Taiwan are generally similar with those in the United States, and include:

- Extensive pre-clinical laboratory tests, pre-clinical animal studies and formulation studies in accordance with applicable regulations.
- Submission to the TFDA of an IND, which must be approved by the TFDA before human clinical trials may begin. Human clinical trials in Taiwan typically include:
    - *Phase I trials*. The new drug product is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism and side effects associated with increasing doses. If possible, early evidence of effectiveness of the new drug product is collected as well.
    - *Phase II trials*. The new drug product is evaluated for its efficacy and proposed indication in a limited patient population, as well as its adverse effects and safety risks.
    - *Phase III trials*. The new drug product is further evaluated for dosage tolerance, efficacy and safety in an expanded patient population.
- Submission to the TFDA of an NDA, which generally requires two Phase III trials, unless the NDA otherwise qualifies for exemptions as provided by the TFDA.

In addition to information and data collected from the pre-clinical and clinical trials of the new drug product, chemistry data and information regarding manufacturing and controls serve as significant considerations during the course of the TFDA review and approval process. Where a new drug product will be manufactured in facilities located in Taiwan, the TFDA has the authority to inspect and assess compliance with the Pharmaceutical Inspection Co-operation Scheme GMP regulations to ensure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity. Further, the TFDA may audit the pre-clinical and/or clinical trial sites that generated the data in support of the NDA. Finally, the TFDA must review and approve the NDA prior to any commercial marketing or sale of the drug in Taiwan.

Regulation in Europe and Other Regions

In addition to regulations in the United States and Taiwan, we and our collaborators are subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products.

Whether or not we or our collaborators obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of

human clinical trials. In the European Union, for example, a CTA must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the CTA is approved in accordance with a country's requirements, clinical trial development may proceed.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials are conducted in accordance with GCPs and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

To obtain regulatory approval of an investigational drug or biological product under European Union regulatory systems, we or our strategic partners must submit a marketing authorization application. The application in the European Union is similar to that required in the United States, with the exception of, among other things, country-specific document requirements.

For other countries outside of the European Union, such as countries in Asia, Europe and Latin America, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCPs and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

Employees

As of September 1, 2021, we employed 75 full-time employees and no part-time employees. Of these 75 full-time employees, 65 are located in the United States, 5 are located in Taiwan and 5 are located in Ireland. None of our employees are represented by a labor union or are party to a collective bargaining agreement, and we have had no labor-related work stoppages. We consider our relationship with our employees to be good.

Scientific Advisory Board

We have assembled a highly qualified scientific advisory board composed of advisors who have deep expertise in the fields of biologics and vaccine development, as well as in the relevant therapeutic areas for our product candidates. Our scientific advisory board is composed of Chang Yi Wang, Ph.D.; George Siber, M.D.; Donna Ambrosino, M.D.; Brad Boeve; Nick Fox; Richard Mohs; Eric Reiman; Jeffrey Cummings; Barney Graham; Peter A. Patriarca, M.D.; Stanley A. Plotkin, M.D.; Sharon Lewin, A.O., FRACP., Ph.D., FAHMS and Wayne Koff, Ph.D.

Facilities

Our principal executive offices are located in Dallas, Texas, where we sublease approximately 3,631 square feet of office space from UBI. UBI's lease for the premises is currently scheduled to terminate in January 2022, subject to their option to renew the lease for an additional five years. In addition to our principal executive offices, we have additional offices in Florida and Taiwan. We do not currently own any real property. We believe that our current facilities are adequate to meet our immediate needs and believe that we should be able to renew each of our leases and subleases without an adverse impact on our operations. In addition, we believe that if we require additional office space or manufacturing facilities, we will be able to obtain additional facilities on commercially reasonable terms.

Legal Proceedings

From time to time we are a party to various litigation matters incidental to the conduct of our business. We are not presently party to any legal proceedings the resolution of which we believe would have a material adverse effect on our business, prospects, financial condition, liquidity, results of operation, cash flows or capital levels.

MANAGEMENT

Executive Officers and Non-Employee Directors

The following table presents information regarding our executive officers and directors as of the date of this prospectus.

Name	Age	Position(s)
Executive Officers and Directors:		
Mei Mei Hu	38	Co-Founder, President, Chief Executive Officer and Director
Farshad Guirakhoo	67	Chief Scientific Officer
Ulo Palm	65	Chief Medical Officer
Martin Doran	42	Treasurer and Principal Accounting Officer
René Paula Molina	43	General Counsel and Secretary
Louis Reese	39	Co-Founder and Executive Chairman of the Board
Non-Employee Directors:		
Peter Diamandis	60	Director
Gregory R. Blatt	53	Director

The following is biographical information and a brief summary of the business experience of our executive officers and directors.

Mei Mei Hu, one of our two co-founders, is our President and Chief Executive Officer and is one of our directors. Ms. Hu has served in these roles for the Company since 2014. Ms. Hu has also been a member of the executive committee of UBI since 2010 and a director of UBP since March 2020. Ms. Hu was formerly a consultant at McKinsey & Company where she advised pharmaceutical companies on strategic, operational and organizational issues. She was also a director of ShenLian Biotech from 2010 to 2014. Ms. Hu is also co-founder of an investment and advisory group with active investments in real estate, energy and life sciences. She has been named to Time 100 Next list, Fortune 40 under 40 and Young Global Leaders of World Economic Forum. She holds a B.A. from University of Pennsylvania and a J.D. from Harvard Law School. We believe Ms. Hu is qualified to serve on our board of directors based on the perspective she brings as our Chief Executive Officer, her experience in the biotechnology and life sciences industries and her success in leading the spin-outs of UNS and COVAXX from UBI.

Farshad Guirakhoo, Ph.D. is our Chief Scientific Officer. Dr. Guirakhoo has served in this role for the Company since June 2020. From October 2016 to August 2020, Dr. Guirakhoo served as Chief Scientific Officer of GeoVax, Inc., and he previously served as Senior Vice President for GeoVax, Inc. since 2015. From December 2017 to June 2020, Dr. Guirakhoo was also the co-founder and Chief Executive Officer of Responsive Bioservices, a CRO that provided laboratory testing in the fields of virology and immunology. In 2014, Dr. Guirakhoo was named as No. 22 in the list of The Most Influential People in Vaccines. Dr. Guirakhoo is the co-inventor of the ChimeriVaxTM-technology platform, the world's first recombinant viral vector platform that was approved for any human vaccine. Dr. Guirakhoo has broad experience in the application of genetics, gene expression technologies and molecular virology for the constructions and productions of recombinant proteins, human antibodies and attenuated viral vectored vaccines for prevention and treatment of infectious diseases and cancers. Dr. Guirakhoo is the author of over 100 peer-reviewed publications, including book chapters, and holds more than 40 issued patents. Dr. Guirakhoo received his Ph.D. in Virology from the University of Vienna, Austria, holds an M.Sc. in Genetics and a B.Sc. in Biology from the University of Tehran. He has been awarded the National Research Council Post-Doctorate Award and studied at the CDC, Division of Vector-Borne Infectious Diseases.

Ulo Palm is our Chief Medical Officer. Dr. Palm has served in this role for the Company since September 2021. Before joining the Company, Dr. Palm was the co-founder and Chief Medical Officer of Ordaōs

Bio, an AI drug design company with the mission of using digital sciences, machine learning and AI to increase the speed and efficacy of drug R&D from August 2020 until August 2021, and he now serves on their board of directors. Prior to Ordaōs, Dr. Palm was a Senior Vice President at Allergan from March 2015 to May 2020, where he led Digital Sciences and Global Drug Development Operations, and he also served in as a Vice President and Senior Vice President at Forest Labs, a predecessor company of Allergan, beginning in 2008. Prior to joining Forest Labs, Dr. Palm served as Global Head, Laboratory & Preclinical Quality Assurance and Global Head of Clinical Operations Oncology at Novartis and in various drug development roles at Schering-Plough and Bayer. He also served as the Chair of the oversight committee and as Corporate Secretary on the board of directors of TransCelerate BioPharma Inc. from December 2016 to May 2020. Dr. Palm earned his M.D. and Ph.D. from the Free University of Berlin and a M.B.A. from the AKAD University of Applied Sciences in Rendsburg, Germany.

Martin Doran is our Treasurer and Principal Accounting Officer. Mr. Doran has served in this role for the Company since the Reorganization. Before his appointment as Treasurer and Principal Accounting Officer, he held the position of Vice President of Finance at the Company since June 2016. He also held previous management roles at Mylan, Pfizer and Oracle. Mr. Doran holds a B.A. in Accounting and Human Resources Management and Masters in Management Information Systems from University College, Dublin and is a member of the Institute of Chartered Accountants of Ireland.

René Paula Molina is our General Counsel and Secretary. Mr. Paula has served in these roles for the Company since January 2021. Mr. Paula previously served as a consultant for the Company from November 2020 to January 2021. Prior to joining the Company, Mr. Paula was the Chief Operating Officer at Bionic Solution Inc. from June 2018 to January 2021, where he managed the finance and legal functions. Prior to joining Bionic, Mr. Paula served in roles of increasing responsibility for ABInBev and Zx Ventures (the captive private equity and venture capital arm of ABInBev) from July 2015 to April 2018. His career in corporate and legal affairs prior to joining ABInBev includes having worked at the law firm of Cravath, Swaine & Moore LLP, HSBC investment bank and Audible (Amazon's audiobook division). Earlier in his career, Mr. Paula worked with Deloitte & Touche and obtained his certified public accounting license. Mr. Paula is a graduate of New York University Stern School of Business, where he earned a B.S. degree in Finance and Accounting, and Columbia Law School, where he earned a J.D.

Louis Reese is one of our two co-founders and is the Executive Chairman of the Company. Mr. Reese has served in this role for the Company since September 2014. Mr. Reese has also been a member of the executive committee of UBI since 2014. He was also a director of ShenLian Biotech from 2010 to 2014. Mr. Reese is also the co-founder of an investment and advisory firm with active investments in real estate, energy, hospitality and life sciences. His investments focus on achieving global impact in critical important areas through innovative models and approaches. He received his B.A. from University of Pennsylvania. We believe Mr. Reese is qualified to serve on our board of directors based on the perspective and experience he brings as a member of the executive committee of UBI and as an investor in life sciences companies.

Peter Diamandis is a director of the Company. Dr. Diamandis has been a director of the Company since the Reorganization and was previously a director of COVAXX since March 2020. Dr. Diamandis has been the Chief Executive Officer of PHD Ventures, Inc., his personal holding company for his writing, speaking and consulting activities, since October 1993. Dr. Diamandis has started more than 24 companies in the areas of human longevity, space, venture capital and education, including as a co-founder of BOLD Capital Partners in 2015, a venture fund investing in exponential technologies, and as the founder and Executive Chairman of the XPRIZE Foundation, a non-profit foundation which, since 1996, has designed and operated large-scale incentive competitions for the development of new technologies that may help solve some of mankind's major challenges. In the area of human longevity, he has helped found Human Longevity, Inc., for which he served as a director from 2013 until December 2018, Celularity Inc., for which he served as Vice Chairman from July 2017 to July 2021 and as a director starting in July 2021, and Fountain Therapeutic Services, Inc., for which he has served as Chairman since January 2019. He is also the executive founder of Singularity University, a graduate-level Silicon

Valley institution founded in 2010 that counsels the world's leaders on exponentially growing technologies. He also serves as a director of two special purpose acquisition companies: DPCM Capital, Inc., which completed its initial public offering in October 2020, and Software Acquisition Group Inc. II, which completed its initial public offering in September 2020. Dr. Diamandis is also a New York Times bestselling author. He earned degrees in Molecular Engineering and Aerospace Engineering from Massachusetts Institute of Technology and holds an M.D. from Harvard Medical School. We believe Dr. Diamandis is qualified to serve on our board of directors based on his experience investing in, working with and co-founding companies in the life sciences and technology industries.

Gregory R. Blatt is a director of the Company. Mr. Blatt has been a director of the Company since July 2021. Mr. Blatt recently served as Executive Chairman, and then Chairman and Chief Executive Officer, of Match Group, from 2013 through 2017, and as Executive Chairman, and then Chief Executive Officer, of Tinder, from 2015 through 2017. Prior to concurrently serving in those roles, Mr. Blatt was Chief Executive Officer of IAC from 2010 through 2013, Chief Executive Officer of Match.com from 2009 through 2010, General Counsel of IAC from 2003 through 2009 and General Counsel and EVP of Business Affairs at Martha Stewart Living Omnimedia from 1999 through 2003. Earlier in his career, Mr. Blatt worked as an associate at law firms Wachtell Lipton Rosen & Katz and Grubman Indursky and Schindler. Additionally, Mr. Blatt has served as a director on the board of directors for Interval Leisure Group, HSN, IAC and Match Group. Mr. Blatt received a B.A. from Colgate University and a J.D. from Columbia Law School. We believe Mr. Blatt is qualified to serve on our board of directors based on his extensive managerial, financial, legal and transactional experience gained while serving as both the chief executive and chief legal officers of multiple public and private companies, as well as his experiences serving on multiple public company boards of directors.

Family Relationships

Ms. Hu, our Chief Executive Officer, is the daughter of Dr. Wang, who is a member of our scientific advisory board and is the founder of UBI. Ms. Hu and Mr. Reese, our Executive Chairman, are married to each other. Ms. Hu, Mr. Reese, UBI and certain of their respective affiliates are party to the Voting Agreement. See "Description of Capital Stock—Authorized Capital Stock—Voting Agreement."

Board Composition

Our business and affairs are managed under the direction of our board of directors. Upon the completion of this offering, our Charter will provide that our board of directors shall consist of at least but not more than directors and that the number may be fixed from time to time by resolution of our board of directors. Our board of directors will initially consist of members.

Controlled Company

Because our principal stockholders will continue to hold, in the aggregate, a majority of the total voting power of our outstanding capital stock following this offering, we expect to be a "controlled company" for purposes of the Nasdaq's listing rules. As a controlled company, exemptions under the Nasdaq's listing rules will exempt us from certain of the Nasdaq's corporate governance requirements, including the following requirements:

- that the board of directors be composed of a majority of "independent directors," as defined under the rules of the Nasdaq;
- that the Compensation Committee be composed entirely of independent directors; and
- that the Nominating and Governance Committee be composed entirely of independent directors.

Accordingly, for so long as we are a "controlled company," holders of Class A common stock will not have the same protections afforded to stockholders of companies that are subject to all of the Nasdaq's corporate governance requirements. In the event that we cease to be a controlled company, we will be required to comply with these provisions within the transition periods specified in the rules of the Nasdaq.

These exemptions do not modify the independence requirements for our Audit Committee, and we expect to satisfy the member independence requirement for the Audit Committee prior to the end of the transition period provided under the Nasdaq's listing requirements and SEC rules and regulations for companies completing their initial public offering.

Director Independence

Our board of directors has undertaken a review of the independence of each director. Based on information provided by each director concerning his or her background, employment and affiliations, our board of directors has determined that each of our directors other than does not have relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" under the Nasdaq's listing rules. In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with the Company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director and any transactions involving them described in the section titled "Certain Relationships and Related Party Transactions."

Lead Independent Director

Upon the completion of this offering, our corporate governance guidelines will provide that one of our independent directors will serve as the lead independent director at any time when the chair of our board of directors is a member of management or is otherwise not independent. Our board of directors has appointed to serve as our lead independent director. As lead independent director, will preside over all meetings of our board of directors at which the chair is not present, including any executive sessions of the independent directors, approve schedules and agendas for the meetings of our board of directors and act as liaison between the independent directors and our management and the chair of our board of directors.

Board Committees

Upon the completion of this offering, our board of directors will have three standing committees: the Audit Committee; the Compensation Committee; and the Nominating and Governance Committee. Each of the committees will operate under its own written charter adopted by our board of directors, each of which will be available on our website upon the completion of this offering. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit Committee

Following this offering, the Audit Committee will be composed of , and , with serving as chairperson of the Audit Committee. Within 90 days following the effective date of the registration statement of which this prospectus forms a part, we anticipate that the Audit Committee will consist of a majority of independent directors, and within one year following the effective date of the registration statement of which this prospectus forms a part, the Audit Committee will consist exclusively of independent directors. Our board of directors has also determined that is an "audit committee financial expert" within the meaning of the SEC's regulations and the applicable listing standards of the Nasdaq.

The purpose of the Audit Committee will be assisting our board of directors' oversight of (1) the integrity of our financial statements, (2) our compliance with legal and regulatory requirements, (3) the

independent auditors' qualifications and independence and (4) the performance of the independent auditors and our internal audit function. The responsibilities of the Audit Committee will include:

- appointment, compensation, retention and oversight of the work of our independent auditors and any other registered public accounting firm engaged for the purpose of preparing or issuing an audit report or to perform audit, review or attestation service;
- pre-approval, or the adoption of appropriate procedures to pre-approve, all audit and non-audit services to be provided by our independent auditors;
- consideration of reports or communications submitted to the Audit Committee by our independent auditors, including reports and communications related to the overall audit strategy;
- meeting with management and our independent auditors to discuss the scope of the annual audit, to review and discuss our financial statements and related disclosures, to discuss any significant matters arising from any audit and any major issues regarding accounting principles and financial statement presentations;
- discussing with members of the legal department any significant legal, compliance or regulatory matters that may have a material effect on our financial statements, business or compliance policies; and
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding accounting, internal accounting controls or auditing matters, and for the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters.

Compensation Committee

Following this offering, the Compensation Committee will be composed of , and , with serving as chairperson of the Compensation Committee. Our board of directors has determined that all members of the Compensation Committee other than are "independent" under the rules of the Nasdaq and under Rule 10A-3 under the Exchange Act. The responsibilities of the Compensation Committee will include:

- establishing and approving, and making recommendations to our board of directors regarding, performance goals and objectives relevant to the compensation of our Chief Executive Officer, evaluating the performance of our Chief Executive Officer in light of those goals and objectives and setting, or recommending to the full board of directors for approval, the Chief Executive Officer's compensation, including incentive-based and equity-based compensation, based on that evaluation;
- setting the compensation of our other executive officers, based in part on recommendations of the Chief Executive Officer;
- exercising administrative authority under our equity incentive plans and employee benefit plans;
- establishing policies and making recommendations to our board of directors regarding director compensation; and
- preparing a compensation committee report on executive compensation as may be required from time to time to be included in our annual proxy statements or annual reports on Form 10-K filed with the SEC.

Nominating and Governance Committee

Following this offering, the Nominating and Governance Committee will be composed of , and , with serving as chairperson of the Nominating and Governance Committee. Our board of directors has determined that all members of the Nominating and Governance Committee other than are "independent" under the rules of the Nasdaq and under Rule 10A-3 under the Exchange Act. The responsibilities of the Nominating and Governance Committee will include:

- identifying and recommending director nominees, consistent with criteria approved by our board of directors;
- developing and recommending to our board of directors standards to be applied in making determinations as to the absence of material relationships between us and a director; and
- developing and recommending corporate governance guidelines to our board of directors.

Code of Ethics and Conduct

In accordance with the Nasdaq's listing requirements and SEC rules, we will adopt a code of business conduct and ethics that applies to all of our employees, the members of our board of directors and our officers. The full text of the code will be posted on our website. We will make any legally required disclosures regarding amendments to, or waivers of, provisions of our code of ethics on our website. Information contained on our website is not incorporated by reference into this prospectus, and you should not consider information contained on our website to be part of this prospectus or in deciding to purchase shares of our Class A common stock.

Compensation Committee Interlocks and Insider Participation

None of the members of the Compensation Committee are current or former officers or employees of the Company. None of our executive officers serves as a director or member of a compensation committee of another entity. We are party to certain transactions with the principal stockholders described in "Certain Relationships and Related Party Transactions."

Director Compensation

None of our current directors received any cash fees or grants of any equity or equity-based awards or any other compensation for their services as directors of COVAXX or UNS in 2020.

Post-Offering Director Compensation

Following the completion of this offering, we intend to adopt a compensation policy for our independent directors (the "Director Compensation Policy"). The Director Compensation Policy will govern compensation paid to our independent directors following its adoption and is intended to reward our independent directors for their experience and performance, motivate them to achieve our long-term strategic goals and help align our director compensation program with those of leading peer U.S.-based publicly traded companies. As we transition to become a publicly traded company, we intend to periodically evaluate our Director Compensation Policy as part of our regular reviews of our overall compensation strategy.

EXECUTIVE COMPENSATION

As an emerging growth company under the JOBS Act, we have opted to comply with the executive compensation disclosure rules applicable to "smaller reporting companies" as such term is defined in the rules promulgated under the Securities Act, which permit us to limit reporting of executive compensation to our principal executive officer and our two other most highly compensated executive officers for the most recently ended fiscal year. We refer to such executive officers as our named executive officers ("NEOs").

Our executive compensation program is designed to attract, motivate and retain high quality leadership and incentivize our executive officers to achieve performance goals over the short- and long-term, which also aligns the interests of our executive officers with those of our stockholders.

Our NEOs for 2020 were:

- Mei Mei Hu, our Chief Executive Officer;
- Louis Reese, our Executive Chairman; and
- Dr. Farshad Guirakhoo, our Chief Scientific Officer.

Because Vaxxinity was not incorporated until February 2, 2021, the positions of our NEOs set forth above and throughout this section of the prospectus are the positions they held with our principal subsidiaries, COVAXX and UNS, during 2020. They are also the positions they currently hold with Vaxxinity as of the date of this prospectus.

Summary Compensation Table

The following table presents compensation awarded to, earned by and paid to our NEOs for the fiscal year ended December 31, 2020.

Name and Principal Position	Year	Salary ($)(1)	Bonus ($)(2)	Option Awards ($)(3)	All Other Compensation ($)(4)	Total ($)
Mei Mei Hu	2020	$ 334,507	—	—	$	$
Chief Executive Officer						
Louis Reese	2020	$ 334,500	—	—	$	$
Executive Chairman						
Dr. Farshad Guirakhoo	2020	$ 204,545	$ 112,148	$ 72,000	$ 4,700	$ 393,393
Chief Scientific Officer						

(1) For Ms. Hu and Mr. Reese, includes $82,424 and $82,417, respectively, of salary that was paid by UBI, but was determined to be compensation for services provided to UNS, and therefore has been allocated to UNS. Dr. Guirakhoo's salary reflects only a partial year of employment.

(2) For Dr. Guirakhoo, consists of a $40,000 sign on bonus paid upon commencement of his employment and a discretionary bonus of $72,148, each as described in more detail below.

(3) The amounts reported here represent the grant date fair value of shares underlying stock options, calculated in accordance with Accounting Standards Update 718, "Compensation—Stock Compensation (Topic 718)." For additional information, see Note 2 to our combined consolidated financial statements included elsewhere in this prospectus. The assumptions used in calculating the grant date fair value of the stock options reported in this table are set forth in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates—Stock-Based Compensation."

(4) For Dr. Guirakhoo, includes $4,700 of payments he received in lieu of electing medical, dental and vision coverage under our benefit plans.

Narrative Disclosure to Summary Compensation Table

The following describes the material elements of our compensation program for the fiscal year ended December 31, 2020 as applicable to our NEOs and reflected in the Summary Compensation Table above. As part of our transition to a publicly traded company in connection with this offering, we will evaluate our executive compensation program, which may differ in several respects from our historical program. For information on certain elements of our executive compensation program that we intend to adopt in connection with this offering, see "— Post-Offering Compensation" below.

Base Salary

We use base salaries to recognize the experience, skills, knowledge and responsibilities required for all our employees, including our NEOs. Base salaries are determined based on the individual's responsibilities, performance, experience and what we determine is appropriate and necessary to retain key talent, taking into consideration the other forms of compensation we provide.

During 2020, each of Ms. Hu and Mr. Reese received $18,750 and $233,333 in base salary payments from UNS and COVAXX, respectively. Each of Ms. Hu and Mr. Reese also received a base salary from UBI for 2020, for services provided to UBI and its various subsidiaries, including UNS. The amounts attributable to UNS for 2020 were, for Ms. Hu, $82,424, and, for Mr. Reese, $82,417, which amounts have been reflected in the Summary Compensation Table above. No amounts were attributable to COVAXX.

In the case of Dr. Guirakhoo, his base salary is set forth in his offer letter, described in more detail below, and is $360,000 on an annualized basis.

Bonuses

None of our NEOs is contractually entitled to an annual bonus or other annual incentive compensation, and neither Ms. Hu nor Mr. Reese received an annual bonus or any such compensation for 2020.

In order to secure the services of Dr. Guirakhoo, we agreed to pay him a $40,000 sign on bonus, subject to a condition that the bonus be repaid in full if he terminates employment with us for any reason prior to his one-year anniversary of employment, or June 5, 2021. In addition, in recognition of his accomplishments in 2020, Dr. Guirakhoo was awarded a performance bonus of $72,148, which was paid in March 2021.

Employee Benefits and Perquisites

Our NEOs are eligible to participate in our health and welfare plans on the same terms and conditions as provided to our full-time employees generally.

Retirement Benefits

We maintain a 401(k) plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. We may elect to make matching or other contributions into participants' individual accounts. We did not make any such contributions in 2020. We do not provide deferred compensation, defined benefit pension or nonqualified defined contribution benefits for our NEOs.

Employment Agreements

We currently do not have a formal employment agreement or offer letter with Ms. Hu or Mr. Reese.

UNS provided Dr. Guirakhoo with an offer letter in connection with the commencement of his employment, which provides for at-will employment and sets forth his annual base salary ($360,000), a sign-on bonus, as described above, eligibility for an annual cash bonus targeted at 35% of his base salary and eligibility for a grant of 900,000 stock options. The offer letter also provides that Dr. Guirakhoo will be eligible to participate in our medical, dental and vision plans, but if he declined coverage, we would pay him an additional $1,000 per month. The offer letter also provided that if Dr. Guirakhoo provided certain consulting services prior to his commencement of employment, that we would pay him $170 per hour for such services. Dr. Guirakhoo did not provide any such consulting services.

Long-Term Incentive Awards

From time to time, we have granted stock options to our NEOs to purchase shares of UNS common stock, each with an exercise price equal to the fair market value of a share of UNS common stock on the date of grant. For each grant of stock options to our NEOs, 25% of the stock options vest upon the first anniversary of the vesting commencement date, with the remainder vesting in 36 equal monthly installments thereafter. In 2020, we did not grant any stock options to either Ms. Hu or Mr. Reese, and, in accordance with his offer letter, granted 900,000 stock options to Dr. Guirakhoo, at an exercise price of $0.08. In connection with the Reorganization, all of the UNS stock options were converted into stock options to acquire Vaxxinity Class A common stock. For more information on the stock options granted to our NEOs, see the "Outstanding Equity Awards Table" and accompanying footnote disclosure below.

In the event a NEO terminates employment for any reason, all unvested stock options are forfeited. In the event the termination is for "cause", both vested and unvested stock options are forfeited.

Outstanding Equity Awards at Fiscal Year-End

The following table presents information regarding outstanding equity awards held by our NEOs as of December 31, 2020. All stock options shown in the table below were granted by UNS, but have since been converted into options to purchase shares of our Class A common stock in connection with the Reorganization. Although that conversion happened after December 31, 2020, the number of options and the exercise price shown below are on an as-converted basis.

	Option Awards					
Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#) (1)	Number of Securities Underlying Unexercised Options Unexercisable (#) (1)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($) (2)	Option Expiration Date
Mei Mei Hu	March 28, 2018	1,804,608	670,284	—	$ 0.18	March 28, 2028
Louis Reese	March 28, 2018	2,662,537	988,943	—	$ 0.18	March 28, 2028
Farshad Guirakhoo	September 2, 2020	—	197,193	—	$ 0.37	September 2, 2030

(1) The number of shares of our Class A common stock underlying each option was determined by multiplying the number of UNS shares underlying the option on December 31, 2020 by the exchange ratio used to convert UNS shares into shares of Vaxxinity Class A common stock, or 0.2191 (the "UNS Exchange Ratio"). The vesting schedule for these stock options is described above. The vesting commencement date is January 1, 2018 for the options granted to Ms. Hu and Mr. Reese and June 5, 2020 for the options granted to Dr. Guirakhoo.

(2) The exercise price was determined by dividing the exercise price of the UNS stock option on December 31, 2020 by the UNS Exchange Ratio.

Equity Plans

2017 Share Option and Grant Plan

In February 2017, UNS adopted the 2017 Share Option and Grant Plan (the "2017 Plan"), and was subsequently assumed by us in connection with the Reorganization and the assumption of stock options granted under the 2017 Plan. In connection with the Reorganization, all options to purchase shares of UNS common stock were converted into options to purchase shares of our Class A common stock, and, following the Reorganization, we terminated the 2017 Plan. Therefore, there are no equity awards outstanding with respect to UNS and no further equity awards with respect to UNS will be granted.

Prior to its termination, the 2017 Plan authorized the issuance of up to 92,664,512 shares of UNS common stock. As of December 31, 2020, 5,624,664 shares of UNS common stock were available for issuance under the 2017 Plan, or 1,232,387 shares of our Class A common stock based on the UNS Exchange Ratio. As of December 31, 2020, stock options to purchase 48,082,015 shares of UNS common stock (10,534,968 shares of our Class A common stock, based on the UNS Exchange Ratio) were outstanding with a weighted-average exercise price of $0.05 per share of UNS common stock ($0.23 per share of our Class A common stock, based on the UNS Exchange Ratio), of which, options to purchase 30,729,389 shares of UNS common stock (6,732,936 shares of our Class A common stock, based on the UNS Exchange Ratio) were vested and exercisable with a weighted-average exercise price of $0.04 per share of UNS common stock ($0.19 per share of our Class A common stock, based on the UNS Exchange Ratio). In addition, on December 31, 2020, there were 109,406 unvested shares of restricted UNS common stock outstanding (23,971 shares of our Class A common stock, based on the UNS Exchange Ratio).

In the event of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in UNS's capital stock, or, if, as a result of any merger or consolidation or sale of all or substantially all of UNS's assets the outstanding shares are converted into or exchanged for other securities of UNS or any successor entity, the administrator of the 2017 Plan shall make an appropriate and proportionate adjustment to (i) the number and kind of shares or other securities subject to any then outstanding awards under the 2017 Plan, (ii) the repurchase price, if any, per share subject to each outstanding award and (iii) the exercise price of any stock options. Such determination regarding adjustments will be final, binding and conclusive.

In the event of a "Sale Event" (as defined in the 2017 Plan), (i) outstanding stock options and unvested restricted stock awards may be assumed or continued (or substituted for) by the successor entity in connection with such Sale Event or (ii) with respect to vested stock options, may be cashed out (including the cancelation for no consideration of any underwater stock option).

Awards granted under the 2017 Plan generally may not be transferred or assigned in any manner other than by will, by the laws of descent and distribution, unless otherwise permitted by the administrator of the 2017 Plan.

The administrator of the 2017 Plan may amend, cancel or modify any outstanding award unless such action adversely affects rights under any outstanding award.

2020 Stock Option and Grant Plan

In August 2020, COVAXX adopted the 2020 Stock Option and Grant Plan (the "2020 Plan"), which was subsequently assumed by us in connection with the Reorganization and the assumption of stock options granted under the 2020 Plan. In connection with the Reorganization, all options to purchase shares of COVAXX common stock were converted into options to purchase shares of our Class A common stock, and, following the Reorganization, we terminated the 2020 Plan. Therefore, there are no equity awards outstanding with respect to COVAAX and no further equity awards with respect to COVAXX will be granted.

Prior to its termination, the 2020 Plan authorized the issuance of up to 1,641,326 shares of COVAXX common stock, subject to certain adjustments. As of December 31, 2020, 502,277 shares of COVAXX common stock were available for issuance under the 2020 Plan, or 1,719,433 shares of our Class A common stock based on the exchange ratio used to convert shares of COVAXX common stock into shares of our Class A common stock upon the Reorganization, or 3.4233 (the "COVAXX Exchange Ratio"). As of December 31, 2020, stock options to purchase 1,139,049 shares of COVAXX common stock (3,899,280 shares of our Class A common stock, based on the COVAXX Exchange Ratio) were outstanding with a weighted-average exercise price of $2.66 per share of COVAXX common stock ($0.78 per share of our Class A common stock, based on the COVAXX Exchange Ratio), of which, stock options to purchase 81,767 shares of COVAXX common stock (279,911 shares of our Class A common stock, based on the COVAXX Exchange Ratio) were vested and exercisable with a weighted-average exercise price of $2.66 per share of COVAXX common stock ($0.78 per share of our Class A common stock, based on the COVAXX Exchange Ratio).

In the event of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in COVAXX's capital stock, or, if, as a result of any merger or consolidation or sale of all or substantially all of COVAXX's assets the outstanding shares are converted into or exchanged for other securities of COVAXX or any successor entity, the administrator of the 2020 Plan shall make an appropriate and proportionate adjustment to (i) the number and kind of shares or other securities subject to any then outstanding awards under the 2020 Plan, (ii) the repurchase price, if any, per share subject to each outstanding award and (iii) the exercise price of any stock options. Such determination regarding adjustments will be final, binding and conclusive.

In the event of a "Sale Event" (as defined in the 2020 Plan), (i) outstanding stock options and unvested restricted stock and restricted stock unit awards may be assumed or continued (or substituted for) by the successor entity in connection with such Sale Event or (ii) with respect to vested stock options and restricted stock and restricted stock unit awards, may be cashed out (including the cancelation for no consideration of any underwater stock option).

Awards granted under the 2020 Plan generally may not be transferred or assigned in any manner other than by will, by the laws of descent and distribution, unless otherwise permitted by the administrator of the 2020 Plan.

The administrator of the 2020 Plan may amend, cancel or modify any outstanding award unless such action adversely affects rights under any outstanding award.

2021 Stock Option and Grant Plan

Our 2021 Stock Option and Grant Plan (the "Existing 2021 Plan") was adopted by our board of directors and our stockholders in February 2021. The Existing 2021 Plan authorizes the issuance of up to 32,600,000 shares of our Class A common stock pursuant to awards. Our Existing 2021 Plan provides for the grant of incentive stock options, non-qualified stock options, restricted stock, unrestricted stock and restricted stock units. Awards may be granted to our officers, employees, directors, consultants and other key persons or any of our subsidiaries.

Shares of our common stock granted under our Existing 2021 Plan that are reacquired by us or underlying forfeited or canceled awards will again be available for issuance under our Existing 2021 Plan.

Our Existing 2021 Plan is administered by our board of directors or a committee designated by our board of directors (as applicable, the "Existing 2021 Plan Administrator"). The Existing 2021 Plan Administrator has the authority to, among other things, grant awards; determine terms and provisions of awards and impose any limitations on awards; accelerate the exercisability or vesting of any portion of an award; and adopt, alter and repeal rules, guidelines and practices for administration of our Existing 2021 Plan as the Existing 2021 Plan

Administrator deems advisable for administration. The Existing 2021 Plan Administrator's decisions and interpretation of our Existing 2021 Plan will be binding on us and award recipients.

In the event of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in our capital stock, or, if, as a result of any merger or consolidation or sale of all or substantially all of our assets the outstanding shares are converted into or exchanged for other of our securities or any successor entity, the Existing 2021 Plan Administrator shall make an appropriate and proportionate adjustment in (i) the maximum number of shares reserved for issuance under our Existing 2021 Plan, (ii) the number and kind of shares or other securities subject to any then outstanding awards under our Existing 2021 Plan, (iii) the repurchase price, if any, per share subject to each outstanding award and (iv) the exercise price of any stock options. The Existing 2021 Plan Administrator's determination regarding adjustments will be final, binding and conclusive.

In the event of a "Sale Event" (as defined in our Existing 2021 Plan), (i) outstanding stock options and unvested restricted stock and restricted stock unit awards may be assumed or continued (or substituted for) by the successor entity in connection with such Sale Event or (ii) with respect to vested stock options and restricted stock and restricted stock unit awards, may be cashed out (including the cancelation for no consideration of any underwater stock option).

Awards granted under our Existing 2021 Plan generally may not be transferred or assigned in any manner other than by will, by the laws of descent and distribution, unless otherwise permitted by the Existing 2021 Plan Administrator.

The Existing 2021 Plan Administrator may amend, cancel or modify any outstanding award unless such action adversely affects rights under any outstanding award.

No grants of awards may be made after the tenth anniversary of the earlier of the adoption by our board of directors of our Existing 2021 Plan and the approval by our stockholders.

Post-Offering Compensation

Prior to the effectiveness of this registration statement we may enter into certain additional compensation arrangements with our NEOs the material terms of which would be disclosed in subsequent amendments in accordance with the rules and regulations of the SEC. In addition, we plan to adopt an equity incentive plan, the material terms of which will be disclosed in subsequent amendments in accordance with the rules and regulations of the SEC.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation arrangements for our executive officers and directors which are described elsewhere in this prospectus, below we describe transactions since January 1, 2018 to which we were or will be a participant and in which:

- the amounts involved exceeded or will exceed $120,000; and
- any of our directors, executive officers or holders of more than 5% of our outstanding voting securities, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

Our Relationship with UBI

Our Vaxxine Platform utilizes a peptide vaccine technology first developed by UBI for animal use and subsequently refined over the last two decades. UBI initiated the development of this technology for human use; the business focused on human use was then separated from UBI through two separate transactions: a spin-out from UBI in 2014 of operations focused on developing chronic disease product candidates that resulted in UNS, and a second spin-out from UBI in 2020 of operations focused on the development of a COVID-19 vaccine that resulted in COVAXX. The combination of UNS and COVAXX in March 2021 resulted in our current company, Vaxxinity. Dr. Wang, the founder of UBI, is a member of our scientific advisory board. Ms. Hu and Mr. Reese serve on the executive committee of UBI. Following the spin-out transactions, UBI continues to be a significant commercial partner for the Company and one of our principal stockholders.

As of , UBI and its affiliate UBIA collectively held shares of our Class A common stock and shares of our Series A preferred stock, representing approximately % of the total voting power of our capital stock, and Dr. Wang held shares of our Class B common stock, representing approximately % of the total voting power of our capital stock. After giving effect to this offering, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, UBI and UBIA will collectively hold shares of our Class A common stock, representing % of the total voting power of our capital stock (or % if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us), and Dr. Wang will hold shares of our Class B common stock, representing % of the total voting power of our capital stock (or % if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us). UBI also has a warrant to purchase 3,000,000 shares of our Class A common stock. As of , all 3,000,000 shares of Class A common stock underlying the UBI Warrant are exercisable, and are not subject to vesting. The UBI Warrant has a term of five years, and will not expire or be automatically exercised in connection with this offering. UBI, Ms. Hu, Mr. Reese and certain of their respective affiliates are party to the Voting Agreement providing Ms. Hu with the authority (and irrevocable proxies) to vote the shares of capital stock held by such persons at her discretion on all matters to be voted upon by stockholders. See “Description of Capital Stock—Authorized Capital Stock—Voting Agreement.”

Platform License Agreement

We are party to the Platform License Agreement with UBI and certain of its affiliates (collectively, the “Licensors”) pursuant to which Vaxxinity obtained a worldwide, sublicensable (subject to certain conditions), perpetual, fully paid-up, royalty-free license under certain patents and know-how owned or otherwise controlled by the Licensors or their affiliates existing as of the effective date or arising during the term of the Platform License Agreement to research, develop, make, have made, utilize, import, export, market, distribute, offer for sale, sell, have sold, commercialize or otherwise exploit peptide-based vaccines in the field of all human prophylactic and therapeutic uses, subject to certain exceptions. For a detailed description of the Platform License Agreement, see the section titled “Business—Intellectual Property—Platform License Agreement.” As

partial consideration for the rights and licenses we received pursuant to the Platform License Agreement, we granted UBI the UBI Warrant, as more fully described in the section titled "Description of Capital Stock—Authorized Capital Stock."

UBI Group Manufacturing Partnership

We are party to multiple services agreements with UBI and its affiliates which are more fully described in the section titled "Business—Manufacturing—UBI Manufacturing Relationship." We have entered into a master services agreement with UBP and an additional master services agreement with UBI, UBIA and UBP in support of our COVID-19 program. Pursuant to these respective agreements, each of UBIA and UBP provides research, development, testing and manufacturing services to us. Pursuant to a separate management services agreement with UBI, UBI provides research, development, manufacturing and back office administrative services to us and acts as our agent with respect to matters relating our COVID-19 program. In support of our chronic disease pipeline, we have also entered into master service agreements with UBI and UBIA pursuant to which UBI provides research, development and clinical services to us and UBIA provides manufacturing, quality control, testing, validation and supply to us. We have also entered into a research and development services agreement with UBI pursuant to which UBI and its affiliates provide research and development services to us. Total amounts due under these agreements as of December 31, 2020 and June 30, 2021 were approximately $7.5 million and $13.3 million, respectively, and total service fees incurred under these agreements for the year ended December 31, 2020 and for the six months ended June 30, 2021 were approximately $17.8 million and $21.6 million, respectively. In 2020, we also entered into a purchase arrangement with UBI for the production and shipment of our ELISA tests to customers and, as of December 31, 2020, we had prepaid UBI $2.9 million for materials required for the production and shipment of our ELISA tests.

Collaboration in Taiwan

We collaborate with UBIA on the development of UB-612 in Taiwan. UBIA is responsible for applying for and managing grants on our behalf under existing agreements governing our manufacturing partnership with UBI and its affiliates, and UBIA was awarded a grant by the TCDC for the two-phase study of a COVID-19 vaccine trial in Taiwan. The grant provides that costs incurred to complete the two phases of the clinical trial will be reimbursed based on the achievement of certain milestones as defined in the agreement. During the year ended December 31, 2020, we received a reimbursement from UBIA under this grant of $2.9 million. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates—Taiwan Centers for Disease Control Grant." An EUA for UB-612 was denied by the TFDA in August 2021, but, in collaboration with UBIA, we are appealing that decision. The outcome of that appeal remains highly uncertain. If the appeal is successful and UB-612 receives an EUA, we anticipate that we would enter into a collaboration agreement with UBIA pursuant to which UBIA would be granted an exclusive license to commercialize UB-612 in Taiwan.

Other Arrangements

UNS also provided administrative services to an affiliate of UBI. Under the arrangement, UNS issued vendor payments and provided technical services mostly for legal services on behalf of the UBI affiliate with payment based on the cost incurred with no markup. Total amounts due to the Company from the UBI affiliate were $0.4 million for the year ended December 31, 2020.

Ms. Hu and Mr. Reese have been members of the executive committee of UBI since 2010 and 2014, respectively, and receive periodic compensation from UBI for their services to UBI. Each of Ms. Hu and Mr. Reese received compensation from UBI for their services in the amount of $222,444 for the year ended December 31, 2020, a portion of which was determined to be compensation for services provided to UNS. See "Executive Compensation."

The Reorganization

The combination of UNS and COVAXX in March of 2021 was effected in accordance with the Contribution and Exchange Agreement, pursuant to which the outstanding equity interests of UNS and COVAXX were contributed to Vaxxinity in return for equity interests of Vaxxinity resulting in UNS and COVAXX becoming wholly-owned subsidiaries of Vaxxinity. In connection with the Reorganization, (i) all outstanding shares of UNS and COVAXX preferred stock and common stock were contributed to Vaxxinity and exchanged for an aggregate of 89,785,026 shares of our Class A common stock, 17,114,677 shares of our Class B common stock and 58,175,751 shares of our Series A preferred stock, (ii) the outstanding options to purchase shares of UNS and COVAXX common stock were terminated and substituted with options to purchase an aggregate of 30,672,657 shares of our Class A common stock, (iii) the outstanding warrant to purchase shares of COVAXX common stock was cancelled and exchanged for the Reorg. Warrant, which is exercisable for 200,261 shares of our Class A common stock, and (iv) the outstanding Convertible Notes and the Related Note were contributed to Vaxxinity and the former holders of such notes received an aggregate of 4,047,344 shares of our Series A preferred stock. All shares of our Series A preferred stock will convert into shares of our Class A common stock concurrently with the closing of this offering.

Investors' Rights Agreement

We are party to an Amended and Restated Investors' Rights Agreement, dated as of March 17, 2021 (the "Investors' Rights Agreement"), with certain holders of our capital stock, including entities affiliated with UBI and Prime Movers Lab Fund I LLC ("Prime Movers"). This agreement grants, among other things, customary "demand" registration and "piggyback" registration rights, information rights and rights to future stock issuances of the Company to certain holders of our capital stock. In connection with this offering, the holders of our capital stock are expected to waive their "piggyback" registration rights, terminate the Investors' Rights Agreement and enter into a new registration rights agreement (the "Registration Rights Agreement") with us and certain other holders of our capital stock. See the section titled "Description of Capital Stock—Authorized Capital Stock—Registration Rights" for additional information regarding these registration rights.

Pre-IPO Voting Agreement

We are party to a voting agreement, pursuant to which certain holders of our capital stock, including Ms. Hu, Mr. Reese and entities affiliated with UBI and Prime Movers, have agreed to the manner in which they will vote their shares on certain matters, including the election of directors. This voting agreement will terminate in accordance with its terms in connection with the closing of this offering.

Right of First Refusal and Co-Sale Agreement

We are party to an Amended and Restated Right of First Refusal and Co-Sale Agreement, dated as of March 17, 2021 (the "Right of First Refusal and Co-Sale Agreement"), with certain of our stockholders, including Ms. Hu, Mr. Reese and entities affiliated with UBI and Prime Movers, under which we have a right of first refusal, and certain of our stockholders party thereto have a right of first refusal and co-sale, with respect to shares of capital stock that holders of our Class B common stock and UBI propose to sell to third parties. The Right of First Refusal Agreement will terminate in accordance with its terms in connection with the closing of this offering.

Financings and Historical Transactions

In the past, we and our predecessor entities have also entered into various other financing arrangements, service agreements and other related party transactions which are summarized below.

Financings

From 2018 through the Reorganization, we issued an aggregate of $24.5 million in Convertible Notes which accrued interest at annual rates ranging from 4.8% to 6%. In March 2021, in connection with the Reorganization, each Convertible Notes that was outstanding immediately prior to the Reorganization was contributed to the Company and the former holders of the Convertible Notes received shares of our Series A preferred stock. These issuances included:

- a Convertible Note in the amount of $0.5 million issued to an entity affiliated with a family member of Mr. Reese that was converted into 104,728 shares of Series A preferred stock in connection with the Reorganization;
- Convertible Notes in the aggregate amount of $10.0 million issued to entities affiliated with an individual who was a UNS board member at the time of issuance that were converted into 1,958,838 shares of Series A preferred stock in connection with the Reorganization; and
- a Convertible Note in the amount of $2.0 million issued to UBI that was converted into 384,410 shares of Series A preferred stock in connection with the Reorganization.

From December 2018 to September 2019, we borrowed an aggregate of $2.0 million from Ms. Hu, Mr. Reese and an entity affiliated with both of them. The initial $1.5 million tranche closed in December 2018 and the remaining two tranches closed in 2019. The Related Note accrued interest at an annual rate of 5%. In March 2021, in connection with the Reorganization, the Related Note was contributed to the Company and the entity affiliated with Ms. Hu and Mr. Reese received 422,696 shares of Series A preferred stock in the Company.

In November 2019, we borrowed $0.1 million from Ms. Hu. No formal loan agreement was executed for the Executive Note. However, the Company has elected to accrue interest at an annual rate of 5%, consistent with the terms and conditions of the Convertible Notes and the Related Note, which was the closest benchmark the Company could evaluate. We repaid the Executive Note in August 2021.

Subsequent to the Reorganization, we continued to finance our operations through the issuance of 15,365,574 shares of our Series B preferred stock at a purchase price of $8.00 per share, for aggregate consideration of $122.9 million. Prime Movers purchased 5,625,000 shares of our Series B preferred stock for an aggregate of $45 million.

Original UBI Licenses

In October 2014, we entered into a contribution agreement with UBI, pursuant to which UBI assigned to us certain patents and know-how directed to peptide vaccines for the prevention and treatment of AD, which we utilize in our UB-311 anti-Ab product candidate. In consideration for the rights assigned to UNS by UBI, UNS issued shares of its voting stock to UBI. In April 2020, we entered into a license agreement with UBI and certain of its affiliates pursuant to which we obtained an exclusive, worldwide, sublicensable (subject to certain restrictions), fully paid-up, royalty-free license under certain patent rights and know-how to research, develop, make, utilize, import, market, distribute, sell, commercialize and otherwise exploit products and services for all diagnostic, prophylactic and therapeutic uses and indications in humans in the field of all coronaviruses. The licenses granted under these two agreements (collectively, the “Original UBI Licenses”) were terminated in connection with our entry into the Platform License Agreement.

Airplane Lease

In June 2020, the Company entered into a dry lease agreement with a holding company owned by Ms. Hu and Mr. Reese pursuant to which the Company periodically leases the plane from the holding company at

an hourly rate of approximately $2,000 per flight hour, which rate was determined by an independent third-party management company to be the fully-loaded cost of operating the plane. During the year ended December 31, 2020, total costs incurred under this agreement were approximately $0.9 million.

Related Party Guaranty

In June 2020, COVAXX entered into the 2025 Note for the acquisition of an airplane. The 2025 Note is secured by the airplane and personally guaranteed by Ms. Hu and Mr. Reese.

Prime Movers Lab Fund I, LLC

Prime Movers is a holder of more than 5% of our capital stock. The founder of Prime Movers was also a director of the Company prior to the date of this prospectus. In 2020, we sold ELISA tests to Prime Movers and recognized revenue of approximately $162,000. In 2021, Prime Movers purchased 5,625,000 shares of our Series B preferred stock for an aggregate of $45 million. Concurrently with the closing of this offering, our Series B preferred stock will be automatically converted into shares of our Class A common stock.

Relationships Following this Offering

UBI

We will maintain an ongoing relationship with UBI following the closing of this offering. UBI will continue to be a significant commercial partner for the Company for the foreseeable future. See "—Our Relationship with UBI" above.

Voting Agreement

Our principal stockholders have entered into the Voting Agreement, which will be effective upon the completion of the offering. Upon the completion of this offering, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, the Voting Agreement will cover, in the aggregate, approximately % of the total voting power of our outstanding capital stock (or % if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us). See "Description of Capital Stock—Authorized Capital Stock—Voting Agreement."

Registration Rights

In connection with this offering, we intend to enter into a Registration Rights Agreement with certain holders of our capital stock pursuant to which such parties will have specified rights to require us to register all or a portion of their shares of Class A common stock (including shares received upon conversion of shares of Class B common stock) under the Securities Act. See "Description of Capital Stock—Authorized Capital Stock—Registration Rights" for additional information regarding these registration rights.

Indemnification Agreements

We are currently a party to and, in connection with this offering, we intend to enter into an indemnification agreement with each of our directors and officers. These agreements will require us to indemnify these individuals to the fullest extent permitted under the DGCL against liabilities that may arise by reason of their service to us and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. See "Description of Capital Stock—Certain Anti-Takeover Provisions of our Charter, our Bylaws and Delaware Law—Limitation of Liability and Indemnification of Directors and Officers."

Directed Share Program

At our request, the underwriters have reserved for sale, at the initial public offering price, up to shares of Class A common stock offered hereby for certain persons with relationships with us. Other than directors, executive officers, employees and other stockholders who are subject to a lock-up described elsewhere in this prospectus, individuals who purchase these shares will not be subject to a lock-up restriction. The number of shares of Class A common stock available for sale to the general public will be reduced to the extent these individuals purchase such reserved shares. Any reserved shares of Class A common stock that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus. See "Underwriting—Directed Share Program" for more information.

Policy on Related Person Transactions

In connection with this offering, we have adopted a policy with respect to the review, approval and ratification of related person transactions. Under the policy, our Audit Committee is responsible for reviewing and approving related person transactions. The policy will cover, with certain exceptions set forth in the policy consistent with Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, where the amount involved will or may be expected to exceed $100,000 and in which we were or are to be a participant and a related person had or will have a direct or indirect interest. In the course of its review and approval of related person transactions, our Audit Committee will consider all the facts and circumstances deemed relevant by and available to the Audit Committee to decide whether to approve such transactions, including, but not limited to, the business reasons for the Company to enter into the transaction and the risks, costs and the availability of other sources of comparable services or products. Related person transactions must be approved or ratified by the Audit Committee in accordance with the provisions of the policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to beneficial ownership of our Class A common stock and Class B common stock as of and as adjusted to reflect the issuance and sale of our Class A common stock in this offering, for:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of the outstanding shares of our capital stock;
- each of our directors;
- each of our named executive officers; and
- all of our executive officers and directors as a group.

The number of shares beneficially owned by each stockholder is determined under the rules of the SEC and includes voting or investment power with respect to securities. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of capital stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

We have based our calculation of the applicable percentage of beneficial ownership prior to this offering on shares of common stock outstanding as of , assuming (i) the Preferred Stock Conversion, (ii) the Warrant Exercise and (iii) the filing and effectiveness of our Charter. We have based our calculation of the applicable percentage of beneficial ownership after this offering on shares of common stock outstanding immediately after the completion of this offering, giving effect to the foregoing assumptions (i) through (iii) and assuming that the underwriters will not exercise their option to purchase additional shares of Class A common stock from us.

Except as otherwise indicated in the footnotes to the following table, to our knowledge, all persons listed below have sole voting and investment power with respect to the shares beneficially owned by them, subject to applicable community property laws. Except as otherwise indicated, the address for each stockholder listed below is c/o Vaxxinity, Inc. 1717 Main St., Ste. 3388, Dallas, TX 75201.

	Shares Beneficially Owned Prior to this Offering					Shares Beneficially Owned after this Offering				
	Class A		Class B		% of Total Voting Power**	Class A		Class B		% of Total Voting Power**
Name and address of beneficial owners	No.	%	No.	%		No.	%	No.	%	
5% stockholders:										
United Biomedical, Inc.(1)		%		%	%		%		%	%
Entities affiliated with Prime Movers Lab Fund I LP(2)										
Directors and named executive officers:										
Mei Mei Hu(3)										
Louis Reese(4)										
Farshad Guirakhoo										
Peter Diamandis										
Gregory R. Blatt										
All executive officers and directors as a group (persons)		%		%	%		%		%	%

* Represents beneficial ownership of less than one percent of our outstanding shares of common stock.

** Represents the voting power with respect to all shares of our Class A common stock and Class B common stock, voting as a single class. Each share of Class A common stock will be entitled to one vote per share and each share of Class B common stock will be entitled to ten votes per share. Holders of our Class A common stock and Class B common stock will vote together as a single class on all matters presented to our stockholders for their vote or approval, except as otherwise required by applicable law or our Charter.

(1) Consists of (i) shares of Class A common stock held by UBI, (ii) shares of Class A common stock issuable upon the exercise of the UBI Warrant and (iii) shares of Class A common stock held by UBIA. UBI is a majority shareholder in UBIA and may be deemed to share voting and investment power over the securities held by UBIA. Ms. Hu, Mr. Reese, Ms. Hu's father Nean Hu and Ms. Hu's mother Dr. Wang, together as a group, control more than 50% of the equity interests of UBI, and together hold voting and investment control of all shares held by UBI. Under the so-called "rule of three," if voting and dispositive decisions regarding an entity's securities are made by three or more individuals, and a voting or dispositive decision requires the approval of a majority of those individuals, then none of the individuals is deemed a beneficial owner of the entity's securities. Each of Ms. Hu, Mr. Reese, Dr. Wang and Mr. Hu expressly disclaim beneficial ownership of such shares, except to the extent of their respective pecuniary interest. All of the shares identified in this footnote will be subject to the Voting Agreement, which is further described under "Description of Capital Stock—Authorized Capital Stock—Voting Agreement." Except as set forth in this footnote, UBI has no voting or investment power over the securities beneficially owned by the other parties to the Voting Agreement and disclaims beneficial ownership of such securities. The mailing address of UBI is 25 Davids Drive, Hauppauge, NY 11788.

(2) Consists of (i) shares of Class A common stock held by Prime Movers Lab Fund I LP ("PML"), (ii) shares of Class A common stock held by Prime Movers Growth Fund I LP ("PMG"), (iii) shares of Class A common stock held by COVAXX PML SPV 1 LP ("PML SPV 1"), (iv) shares of Class A common stock held by COVAXX PML SPV 2 LP ("PMV SPV 2") and (v) shares of Class A common stock held by COVAXX PML SPV 3 LP ("PML SPV 3"). Prime Movers Lab GP I LLC ("PML GP I") is the general partner of PML and PML SPV 1. Prime Movers Lab GP II LLC ("PML GP II") is the general partner of PML SPV 2 and PML SPV 3. Prime Movers Growth GP I LLC ("PMG GP") is the general partner of PMG. Dakin Sloss is the manager of PML GP I, PML GP II and PMG GP, and may be deemed to beneficially own the securities held by PML, PMG, PML SPV 1, PML SPV 2 and PML SPV 3. The mailing address of PML, PMG, PML SPV 1, PML SPV 2 and PML SPV 3 is P.O. Box 12829, Jackson, WY 83002.

(3) Consists of (i) shares of Class B common stock held by Ms. Hu, (ii) shares of Class A common stock held by Blackfoot Healthcare Ventures, (iii) shares of Class B common stock subject to options exercisable within 60 days of and, without duplication, (iv) the shares of common stock subject to the Voting Agreement that are disclosed under footnotes (1), (2) and (4), pursuant to which Ms. Hu holds irrevocable proxies. Ms. Hu and Mr. Reese are the sole shareholders of Blackfoot Healthcare Ventures and may therefore be deemed to beneficially own the securities held by Blackfoot Healthcare Ventures. We do not believe that the parties to these voting agreements constitute a "group" under Section 13 of the Exchange Act, as Ms. Hu exercises voting control over these shares. All of the shares identified in this footnote will be subject to the Voting Agreement, which is further described under "Description of Capital Stock—Authorized Capital Stock—Voting Agreement." Except as set forth in this footnote, Ms. Hu has no voting or investment power over the securities beneficially owned by the other parties to the Voting Agreement and disclaims beneficial ownership of such securities.

(4) Consists of (i) shares of Class B common stock held by Mr. Reese, (ii) shares of Class A common stock held by Blackfoot Healthcare Ventures and (iii) shares of Class B common

stock subject to options exercisable within 60 days of . Ms. Hu and Mr. Reese are the sole shareholders of Blackfoot Healthcare Ventures and may therefore be deemed to beneficially own the securities held by Blackfoot Healthcare Ventures. All of the shares identified in this footnote will be subject to the Voting Agreement, which is further described under "Description of Capital Stock—Authorized Capital Stock—Voting Agreement." Except as set forth in this footnote, Mr. Reese has no voting or investment power over the securities beneficially owned by the other parties to the Voting Agreement and disclaims beneficial ownership of such securities.

DESCRIPTION OF CAPITAL STOCK

The provisions of our Charter and Bylaws and relevant sections of the DGCL are summarized below. The forms of our Charter and Bylaws have been filed as exhibits to the registration statement of which this prospectus is a part. The following descriptions of our capital stock and provisions of our Charter and our Bylaws are summaries and are qualified by reference to our Charter and our Bylaws.

Authorized Capital Stock

In connection with this offering, we expect to consummate the Stock Split of one-for- . Upon the completion of this offering and the filing of our Charter, our authorized capital stock will consist of shares of Class A common stock, par value $0.0001 per share; shares of Class B common stock, par value $0.0001 per share; and shares of preferred stock, par value $0.0001 per share. Assuming (i) the Preferred Stock Conversion, (ii) the Warrant Exercise and (iii) the filing and effectiveness of our Charter, as of , there would have been shares of Class A common stock and shares of Class B common stock outstanding held by stockholders of record and no shares of preferred stock outstanding. Upon the completion of this offering, assuming (i) the Preferred Stock Conversion, (ii) the Warrant Exercise, (iii) the filing and effectiveness of our Charter and (iv) no exercise of the underwriters' option to purchase additional shares of our Class A common stock from us, we will have shares of Class A common stock, shares of Class B common stock and no shares of preferred stock outstanding. In addition, as described below, we expect to have options to purchase shares of our Class A common stock, warrants to purchase shares of our Class A common stock and no restricted stock awards outstanding upon the completion of this offering.

Common Stock

We will have two classes of common stock: Class A common stock and Class B common stock. Holders of Class A common stock and Class B common stock will have identical rights, except with respect to voting and conversion. Except as otherwise expressly provided in our Charter or Bylaws or required by applicable law, holders of our Class A common stock will be entitled to one vote per share on all matters submitted to a vote of stockholders and holders of our Class B common stock will be entitled to ten votes per share on all matters submitted to a vote of stockholders. Following the offering, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, the holders of our Class B common stock will hold, in the aggregate, approximately % of the total voting power of our outstanding capital stock, and the majority of this voting power will be subject to the Voting Agreement described below. For so long as shares of Class B common stock remain outstanding and represent more than 9.1% of the aggregate number of outstanding shares of Class A common stock and Class B common stock, the aggregate voting power of the Class B common stock will exceed the aggregate voting power of the Class A common stock. Our common stockholders will not be entitled to cumulative voting in the election of directors. Unless a different vote is required by applicable law or specifically required by our Charter or Bylaws, if a quorum exists at any meeting of stockholders, stockholders shall have approved any matter (other than as described below) if such matter is approved by the affirmative vote of the majority of shares present in person or represented by proxy and entitled to vote on such matter. Subject to the rights of the holders of any series of preferred stock to elect directors under specified circumstances, if a quorum exists at any meeting of stockholders, stockholders shall have approved the election of a director if such director is elected by a plurality of the votes of the shares present in person or represented by proxy and entitled to vote on the election.

Holders of Class A common stock and Class B common stock will vote together as a single class on all matters submitted to a vote of stockholders, except (i) if we were to seek to amend our Charter to increase or decrease the par value of a class of our capital stock, then that class would be required to vote separately to approve the proposed amendment and (ii) if we were to seek to amend our Charter in a manner that alters or changes the powers, preferences or special rights of a class of our capital stock in a manner that affected its holders adversely, then that class would be required to vote separately to approve the proposed amendment.

Subject to preferences that may be applicable to any shares of preferred stock outstanding or that we may designate and issue in the future, holders of our common stock will be entitled to receive ratably such dividends as may be declared by our board of directors out of funds legally available therefor if our board of directors, in its discretion, determines to issue dividends and only then at the times and in the amounts that our board of directors may determine.

Upon liquidation, dissolution or winding-up of the Company, holders of our common stock will be entitled to receive their ratable share of the net assets of the Company available after payment of all debts and other liabilities, subject to the prior preferential rights and payment of liquidation preferences, if any, of any outstanding shares of preferred stock.

Holders of our common stock will have no preemptive, subscription or redemption rights. There will be no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of holders of our common stock will be 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 in the future.

Each share of Class B common stock will be convertible at any time at the option of the holder into one share of Class A common stock. In addition, each share of Class B common stock will automatically convert into one share of Class A common stock upon any transfer, whether or not for value and whether voluntary or involuntary or by operation of law, except for transfers to trusts solely for the benefit of the stockholder and certain related entities, transfers to partnerships, corporations and other entities exclusively owned by the stockholder or certain related entities, transfers to family members of the stockholder and transfers between certain stockholders. Holders of Class A common stock will have no conversion rights.

Preferred Stock

As of , we had shares of redeemable convertible preferred stock outstanding held by stockholders of record, all of which will, concurrently with the closing of this offering, automatically convert into shares of our Class A common stock on a one-to-one basis. After the completion of this offering, no shares of our redeemable convertible preferred stock or any other series of preferred stock will be outstanding.

Our board of directors will have the authority, subject to the limitations imposed by Delaware law or the Nasdaq's listing rules, without any further vote or action by our stockholders, to issue preferred stock in one or more series and to fix the designations, powers, preferences, limitations and rights of the shares of each series, including:

- dividend rates;
- conversion rights;
- voting rights;
- terms of redemption;
- liquidation preferences;
- sinking fund terms; and
- the number of shares constituting each series.

Satisfaction of any dividend preferences of outstanding shares of preferred stock would reduce the amount of funds available for the payment of dividends on shares of our Class A common stock. Holders of shares of preferred stock may be entitled to receive a preference payment in the event of our liquidation, dissolution or winding-up before any payment is made to the holders of shares of our Class A common stock.

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 our Class A 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 making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock, and may adversely affect the market price of our Class A common stock and the voting and other rights of the holders of our Class A common stock.

There are no current agreements or understandings with respect to the issuance of preferred stock and our board of directors has no present intentions to issue any shares of preferred stock.

Stock Options

As of , options to purchase shares of our Class A common stock were outstanding with a weighted-average exercise price of $ per share, of which options to purchase shares were vested and exercisable with a weighted-average exercise price of $ per share.

Restricted Stock Awards

As of , there were no outstanding restricted stock awards.

Warrants

In March 2021, in connection with the Reorganization, the outstanding warrant to purchase shares of COVAXX common stock was cancelled and exchanged for the Reorg. Warrant, which is exercisable for 200,261 shares of our Class A common stock. As of , shares of Class A common stock underlying the Reorg. Warrant were vested and exercisable. The Reorg. Warrant will expire and no longer be exercisable immediately prior to the closing of this offering. Immediately prior to such time, the Reorg. Warrant shall be automatically exercised on a cashless basis for all shares of Class A common stock underlying the Reorg. Warrant that have not previously been exercised.

In August 2021, as partial consideration for the rights and licenses we received pursuant to the Platform License Agreement, we granted UBI a warrant to purchase 3,000,000 shares of our Class A common stock. As of , all 3,000,000 shares of Class A common stock underlying the UBI Warrant are exercisable at an exercise price of $8.00 per share (subject to adjustment for the Stock Split and other adjustments pursuant thereto) (or $ per share as a result of the Stock Split), and are not subject to vesting. The UBI Warrant has a term of five years, and will not expire or be automatically exercised in connection with this offering.

Voting Agreement

Our principal stockholders have entered into the Voting Agreement, which will be effective upon the completion of the offering. Upon the completion of this offering, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, the Voting Agreement will cover, in the aggregate, approximately % of the total voting power of our outstanding capital stock (or % if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us). We are not a party to the Voting Agreement. The Voting Agreement provides the proxyholder, Ms. Hu, with the authority (and irrevocable proxies) to direct the vote and vote the shares of capital stock held by the principal stockholders at her discretion on all matters to be voted upon by stockholders. Shares subject to the Voting Agreement are freely transferable (subject to the lock-up described elsewhere in this prospectus) and, if any such shares of capital stock are transferred, there will be no obligation for the transferee to join the Voting Agreement unless the transferee is a controlled affiliate of one of the parties to the Voting Agreement.

Registration Rights

In connection with this offering, we and certain of our existing stockholders expect to enter into a Registration Rights Agreement pursuant to which such stockholders will have specified rights to require us to register all or a portion of their shares of Class A common stock (including shares received upon conversion of shares of Class B common stock) under the Securities Act.

The Registration Rights Agreement will provide that certain holders of our capital stock will be entitled to rights with respect to the registration of their shares under the Securities Act. The registration rights will terminate upon the earlier of (i) a deemed liquidation event (such as (a) a merger or consolidation in which we are a constituent party, (b) the sale, lease, transfer, exclusive license or other disposition by us or any of our subsidiaries of all or substantially all of our assets or (c) any transaction to which we are a party in which any entity or person, or a group of related persons or entities, acquires capital stock or other equity securities representing at least a majority of the voting power of the Company (other than in connection with certain financing transactions)), (ii) such time after the completion of this offering as Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such stockholders' shares without limitation during a three-month period without registration and (iii) three years following the completion of this offering. We will generally pay the registration expenses (other than underwriting discounts and selling commissions), including the reasonable fees and disbursements, not to exceed $50,000 of one counsel, of the holders of the securities registered pursuant to the registrations described below.

S-1 Demand Registration Rights

After completion of this offering, the holders of approximately shares of our Class A common stock (including shares received upon conversion of shares of Class B common stock) will be entitled to certain Form S-1 demand registration rights. Beginning 180 days after the registration statement of which this prospectus forms a part is declared effective, the holders of a majority of the registrable securities then outstanding may make a written request that we register the offer and sale of their shares on a registration statement on Form S-1. Such request for registration must cover at least 30% of the registrable securities then outstanding. We are obligated to effect only one such registration. If we determine that it would be materially detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than once in any 12-month period, for a period of up to 120 days. In addition, we will not be required to effect a demand registration during the period beginning 60 days prior to our good faith estimate of the date of the filing and ending on a date 180 days following the effectiveness of a registration statement initiated by us. In an underwritten public offering, the underwriters have the right, subject to specified conditions, to limit the number of shares that such holders may include for registration.

S-3 Registration Rights

After the completion of this offering, the holders of approximately shares of our Class A common stock (including shares received upon conversion of shares of Class B common stock) will be entitled to certain Form S-3 demand registration rights. The holders of at least 30% of the registrable securities then outstanding may make a written request that we register the offer and sale of their shares on a registration statement on Form S-3 if we are eligible to file a registration statement on Form S-3, so long as the request covers securities the anticipated aggregate offering price of which, net of underwriting discounts, selling commissions and other selling expenses, is at least $3.0 million. These stockholders may make an unlimited number of requests for registration on Form S-3. However, we will not be required to effect a registration on Form S-3 if we have effected two such registrations within the 12-month period preceding the date of the request. Additionally, if we determine that it would be materially detrimental to us and our stockholders to effect such a registration, we have the right to defer such registration, not more than once in any 12-month period, for a period of up to 120 days. Further, we will not be required to effect a demand registration during the period beginning 30 days prior to our good faith estimate of the filing of and ending on a date 90 days following the effectiveness of a

registration statement initiated by us. In an underwritten public offering, the underwriters have the right, subject to specified conditions, to limit the number of shares that such holders may include for registration.

Piggyback Registration Rights

After the completion of this offering, the Registration Rights Agreement will provide that if we propose to register the offer and sale of our common stock under the Securities Act, in connection with the public offering of such common stock, the holders of approximately shares of our Class A common stock (including shares received upon conversion of shares of Class B common stock) will be entitled to certain "piggyback" registration rights allowing the holders to include their shares in such registration, subject to certain marketing and other limitations. As a result, after the completion of this offering, whenever we propose to file a registration statement under the Securities Act, other than with respect to (i) a registration related to the sale or grant of securities to our employees or a subsidiary's employees pursuant to a stock option, stock purchase, equity incentive or similar plan, (ii) a registration relating to an SEC Rule 145 transaction, (iii) a registration on any registration form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of our registrable securities or (iv) a registration in which the only common stock being offered is common stock issuable upon conversion of debt securities that are also being registered, the holders of these registrable securities are entitled to notice of the registration and have the right, subject to certain limitations, to include their shares in the registration. We will have the right to terminate or withdraw any registration initiated pursuant to such "piggyback registration" rights described above before the effective date of such registration, whether or not any stockholder has elected to include shares of their common stock in such registration. In an underwritten public offering, the underwriters have the right, subject to specified conditions, to limit the number of shares that such holders may include for registration.

Certain Anti-Takeover Provisions of our Charter, our Bylaws and Delaware Law

Certain provisions of our Charter, our Bylaws and the DGCL may discourage or make more difficult a takeover attempt that a stockholder might consider to be in his, her or its best interest. These provisions may also adversely affect the prevailing market price for shares of our Class A common stock. We believe that the benefits of increased protection give us the potential ability to negotiate with the proponent of an unsolicited proposal to acquire or restructure us, which may result in an improvement of the terms of any such proposal in favor of our stockholders, and outweigh any potential disadvantage of discouraging those proposals.

Authorized but Unissued Shares of Capital Stock

Our authorized but unissued shares of common stock and preferred stock will be available for future issuance without stockholder approval, subject to the applicable provisions of the DGCL and rules of the Nasdaq. These additional shares may be used for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans.

One of the effects of the existence of authorized but unissued common stock or preferred stock may be to enable our board of directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our stockholders of opportunities to sell their shares of Class A common stock at a price higher than the prevailing market price.

Board Vacancies and Board Size

Our Charter and Bylaws will provide that any vacancies, including any newly created directorships, on our board of directors will be filled by the affirmative vote of a majority of the remaining directors then in office, even if such directors constitute less than a quorum, or by a sole remaining director. In addition, the number of

directors constituting our board of directors will be permitted to be set only by a resolution adopted by a majority vote of our entire board of directors. These provisions would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This will make it more difficult to change the composition of our board of directors and will promote continuity of management.

No Cumulative Voting

Under the DGCL, stockholders are not entitled to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. Our Charter will not provide for cumulative voting.

Stockholder Action by Written Consent and Special Meetings of Stockholders

Our Charter and Bylaws will provide that our stockholders may take action by written consent so long as the Voting Agreement is in effect and our principal stockholders hold a majority of the voting power of then-outstanding shares of our capital stock. Our Bylaws will further provide that special meetings of our stockholders may be called only by a majority of our board of directors, the chairperson of our board of directors or our Chief Executive Officer or, so long as the Voting Agreement is in effect and our principal stockholders hold a majority of the voting power of then-outstanding shares of our capital stock, our stockholders. These provisions may delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our Bylaws will establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors at our annual meeting of stockholders, and will also specify certain procedural requirements regarding the form, content and timing of such notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of the Company.

Amendments to our Charter and Bylaws

The DGCL provides generally that the affirmative vote of a majority of the outstanding shares entitled to vote thereon, voting together as a single class, is required to amend a corporation's certificate of incorporation or bylaws, unless the corporation's certificate of incorporation requires a greater percentage. Our Charter will provide that at any time the Voting Agreement is not in effect or our principal stockholders do not hold a majority of the voting power of then-outstanding shares of our capital stock, certain specified provisions in our Charter, including provisions relating to the size of the board, classification of the board, removal of directors, special meetings, actions by written consent and cumulative voting, may be amended, altered, rescinded or repealed only by the affirmative vote of the holders of at least 66 2/3% in voting power of all the then outstanding shares of our capital stock entitled to vote thereon, voting together as a single class.

Our Charter and Bylaws will provide that our board of directors is expressly authorized to make, alter, amend, change, add to, rescind or repeal, in whole or in part, our Bylaws without a stockholder vote in any manner not inconsistent with the laws of the State of Delaware or our Charter. Our Charter will provide that at any time the Voting Agreement is not in effect or our principal stockholders do not hold a majority of the voting power of then-outstanding shares of our capital stock, any amendment, alteration, rescission or repeal, in whole or in part, of our Bylaws by our stockholders will require the affirmative vote of the holders of at least 66 2/3% in voting power of all the then outstanding shares of our capital stock entitled to vote thereon, voting together as a single class.

Section 203 of the Delaware General Corporation Law

We will be subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for three years following the date that such stockholder became an interested stockholder, unless:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (1) persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a "business combination" to include, among other things, mergers, asset and stock sales and other transactions resulting in a financial benefit to an interested stockholder. An "interested stockholder" is a person who, together with its affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's outstanding voting stock.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our stockholders will have appraisal rights in connection with a merger or consolidation in which we are a constituent entity. Pursuant to the DGCL, stockholders who properly demand and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery, if any, on the amount determined to be the fair value, from the effective time of the merger or consolidation through the date of payment of the judgment.

Stockholders' Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of our shares at the time of the transaction to which the action relates or such stockholder's stock thereafter devolved by operation of law. To bring such an action, the stockholder must otherwise comply with Delaware law regarding derivative actions.

Exclusive Forum

Our Charter will require, to the fullest extent permitted by law, that (1) any derivative action or proceeding brought on behalf of the Company, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the DGCL, our Charter or our Bylaws, (4) any action to interpret, apply, enforce or determine the validity of our Charter or Bylaws and (5) any action asserting a claim against us that is governed by the internal affairs doctrine, in each case, may be brought only in specified courts in the State of Delaware. As described below, this provision will not apply to suits brought to enforce any duty or liability created by the Securities Act or Exchange Act, or rules and regulations thereunder.

Our Charter will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees or agents and arising under the Securities Act. However, Section 22 of the Securities Act provides that federal and state courts have concurrent jurisdiction over lawsuits brought pursuant to the Securities Act or the rules and regulations thereunder. To the extent the exclusive forum provision restricts the courts in which claims arising under the Securities Act may be brought, there is uncertainty as to whether a court would enforce such a provision. Our Charter will also provide 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 the foregoing provision; *provided*, *however*, that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. This provision does not apply to claims brought under the Exchange Act.

We recognize that the forum selection clause in our Charter may impose additional litigation costs on stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware. Additionally, the forum selection clause in our Charter may limit our stockholders' ability to bring a claim in a forum that they find favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents even though an action, if successful, might benefit our stockholders. The Court of Chancery of the State of Delaware may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders. See "Risk Factors—Risks Related to Our Class A Common Stock and This Offering—Our Charter will designate courts in the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, and also provide that the federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, each of which could limit our stockholders' ability to choose the judicial forum for disputes with us or our directors, officers, stockholders or employees."

Limitation of Liability and Indemnification of Directors and Officers

Our Charter will include provisions that limit the personal liability of our directors for monetary damages for breach of their fiduciary duties as directors, except to the extent that such limitation is not permitted under the DGCL. Such limitation shall not apply, except to the extent permitted by the DGCL, to (1) any breach of a director's duty of loyalty to us or our stockholders, (2) acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (3) any unlawful payment of a dividend or unlawful stock repurchase or redemption, as provided in Section 174 of the DGCL or (4) any transaction from which a director derived an improper personal benefit. These provisions will have no effect on the availability of equitable remedies such as an injunction or rescission based on a director's breach of his or her duty of care. Any amendment to, or repeal of, these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to that amendment or repeal.

Our Charter and our Bylaws will provide for indemnification, to the fullest extent permitted by the DGCL, of any person made or threatened to be made a party to any action, suit or proceeding by reason of the fact that such person is or was a director, officer, employee or agent of the Company, or, at the request of the Company, serves or served as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or any other enterprise, against all expenses, judgments, fines, amounts paid in settlement and other losses actually and reasonably incurred in connection with the defense or settlement of such action, suit or proceeding. In addition, we intend to enter into indemnification agreements with each of our directors pursuant to which we will agree to indemnify each such director to the fullest extent permitted by the DGCL.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, we have been informed that in the opinion of the SEC such indemnification is against public policy and is therefore unenforceable.

Listing

We intend to apply to list our Class A common stock on the Nasdaq under the symbol “VAXX.”

Transfer Agent and Registrar

Upon the completion of this offering, the transfer agent and registrar for our Class A common stock will be . The transfer agent’s address is .

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there was no market for shares of our Class A common stock. Future sales of substantial amounts of our Class A common stock in the public market could adversely affect market prices prevailing from time to time. Furthermore, because only a limited number of shares will be available for sale shortly after this offering due to existing contractual and legal restrictions on resale as described below, there may be sales of substantial amounts of our Class A common stock in the public market after the restrictions lapse. This may adversely affect the prevailing market price and our ability to raise equity capital in the future.

Upon the completion of this offering, based on the number of shares of our common stock outstanding as of , assuming no exercise of the underwriters' option to purchase additional shares of Class A common stock and after giving effect to (i) the Stock Split, (ii) the Preferred Stock Conversion, (iii) the Warrant Exercise and (iv) the filing and effectiveness of our Charter, we will have shares of common stock outstanding, including shares of Class A common stock and shares of Class B common stock. Of the shares of common stock outstanding following this offering, the shares of Class A common stock (shares if the underwriters exercise in full their option to purchase additional shares of Class A common stock from us) sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any such shares of common stock held by our "affiliates," as defined in Rule 144 under the Securities Act, which would be subject to the limitations and restrictions described below under "—Rule 144."

The remaining shares of common stock that will be outstanding are "restricted shares" as defined in Rule 144 under the Securities Act. Restricted shares may be sold in the public market only if registered or if they qualify for an exemption from registration under Rule 144 under the Securities Act.

Rule 144

In general, under Rule 144 under the Securities Act, as currently in effect, a person (or persons whose shares are aggregated) who is not deemed to be or have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than an affiliate, is entitled to sell such shares without registration, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of a prior owner other than an affiliate, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

In general, under Rule 144 under the Securities Act, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates, who have met the six-month holding period for beneficial ownership of "restricted shares" of our common stock, are entitled to sell within any three-month period, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our Class A common stock then outstanding, which will equal approximately shares immediately after this offering; and
- the average weekly trading volume of our Class A common stock on the Nasdaq during the four calendar weeks preceding the date of filing a Notice of Proposed Sale of Securities Pursuant to Rule 144 under the Securities Act with respect to the sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

In general, under Rule 701, any of our employees, directors, officers, consultants or advisors who purchased shares from us 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 are entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of ours can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of ours can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

The SEC has indicated that Rule 701 will apply to typical stock options granted before we become subject to the reporting requirements of the Exchange Act, along with the shares acquired upon exercise of such options, including exercises after we become subject to the reporting requirements of the Exchange Act.

Equity Incentive Plans

We intend to file with the SEC, as soon as practicable following the completion of the offering, a registration statement on Form S-8 registering an aggregate of all of the shares of Class A common stock issuable or reserved for issuance under our equity compensation plan. The Form S-8 will become effective upon filing and shares of Class A common stock so registered will become freely tradable upon such effectiveness, subject to any restrictions imposed on such resale pursuant to the lock-up agreements entered into with the underwriters for the offering.

Lock-Up Agreements

We, our directors, executive officers and certain other existing stockholders have agreed that, for a period of 180 days after the date of this prospectus without the prior written consent of BofA Securities, Inc., Jefferies LLC and Evercore Group L.L.C., we and they will not, subject to certain exceptions, (1) directly or indirectly, 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 any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock or (2) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of such securities, whether any such swap or transaction is to be settled by delivery of common stock or other securities, in cash or otherwise. For additional information, see “Underwriting—No Sales of Similar Securities.”

After this offering, certain of our employees and stockholders, including our directors and executive officers, may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements described above.

Registration Rights

Upon the completion of this offering, certain of our existing stockholders will have specified rights, subject to certain conditions, to require us to register all or a portion of their shares of Class A common stock (including shares received upon conversion of shares of Class B common stock) under the Securities Act. See “Description of Capital Stock—Authorized Capital Stock—Registration Rights” for additional information regarding these registration rights.

MATERIAL U.S. FEDERAL TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR CLASS A COMMON STOCK

The following is a general discussion of the material U.S. federal income and estate tax consequences of the ownership and disposition of our Class A common stock acquired in this offering by a "Non-U.S. Holder" that does not own, and has not owned, actually or constructively, more than 5% of our Class A common stock. A "Non-U.S. holder" means a beneficial owner of our Class A common stock (other than an entity treated as a partnership for U.S. federal income tax purposes) that is not, for U.S. federal income tax purposes, any of the following:

- an individual citizen or resident of the United States;
- a corporation (or any other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or 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 taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code) have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a United States person.

You are not a Non-U.S. Holder for these purposes if you are a nonresident alien individual present in the United States for 183 days or more in the taxable year of your disposition of our Class A common stock (or receipt of dividends or other distributions with respect thereto), or if you are a former citizen or former resident of the United States for U.S. federal income tax purposes. If you are such a person, you should consult your tax advisor regarding the U.S. federal income tax consequences of the ownership and disposition of our Class A common stock.

If an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes holds our Class A common stock, the U.S. federal income tax treatment of a partner will generally depend on the status and activities of the partner and the tax treatment and activities of the partnership. A partner in a partnership holding our Class A common stock should consult its tax advisor with regard to the U.S. federal income tax treatment of an investment in the Class A common stock.

This discussion is based on the U.S. Internal Revenue Code of 1986, as amended as of the date hereof (the "Code"), administrative pronouncements, judicial decisions and final, temporary and (to the extent they may be relied upon by taxpayers) proposed Treasury regulations, all of which are subject to differing interpretations or changes subsequent to the date thereof, in each case that may affect the tax consequences described herein, possibly with retroactive effect. This discussion is limited to Non-U.S. Holders that hold our Class A common stock as a "capital asset" within the meaning of Section 1221 of the Code. This discussion does not describe all of the tax consequences that may be relevant to you in light of your particular circumstances, including alternative minimum tax and Medicare contribution tax consequences and does not address any aspect of state, local or non-U.S. taxation, or any taxes other than income and estate taxes. In addition, it does not represent a detailed description of the U.S. federal income and estate tax consequences applicable to you if you are subject to special treatment under the U.S. federal income tax laws, including:

- certain financial institutions and insurance companies;
- certain former citizens or residents of the United States, "controlled foreign corporations, "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, or expatriated entities subject to Section 7874 of the Code;

- dealers or traders in securities who use a mark-to-market method of tax accounting;
- certain tax-exempt entities, including pension funds;
- any persons directly or indirectly acquiring ordinary shares in connection with the performance of services (including upon exercise of options); or
- persons who hold our ordinary shares on behalf of other persons as nominees.

You should consult a tax advisor regarding the U.S. federal tax consequences of acquiring, holding and disposing of Class A common stock in your particular circumstances, as well as any tax consequences that may arise under the laws of any state, local or foreign taxing jurisdiction.

Dividends

As described in the section titled "Dividend Policy" above, we do not anticipate declaring or paying dividends to holders of our Class A common stock in the near term. However, if we make a distribution of cash or other property (other than certain distributions of our stock) in respect of our Class A common stock, the distribution generally will be treated as a dividend to the extent of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Any portion of a distribution that exceeds our current and accumulated earnings and profits will generally be treated first as a tax-free return of capital, on a share-by-share basis, to the extent of your tax basis (generally your cost) in our Class A common stock (and will reduce your basis in such Class A common stock, but not below zero), and, to the extent such portion exceeds your tax basis in our Class A common stock, the excess will be treated as gain from the taxable disposition of the Class A common stock, the tax treatment of which is discussed below under "—Gain on Disposition of Class A Common Stock."

Except as described below, dividends paid to you are subject to U.S. withholding tax at a 30% rate or at a lower rate if you are eligible for the benefits of an income tax treaty that provides for a lower rate. Even if you are eligible for a lower treaty rate, the applicable withholding agent will generally be required to withhold at a 30% rate (rather than the lower treaty rate) on dividend payments to you, unless you have furnished to us (or the applicable paying agent) a valid applicable IRS Form W-8 (including all required attachments) or an acceptable substitute form upon which you certify, under penalties of perjury, your status as a non-United States person and your entitlement to the lower treaty rate with respect to such payments.

If you are eligible for a reduced rate of U.S. withholding tax under a tax treaty, you may obtain a refund of any amounts withheld in excess of that rate by timely filing a refund claim with the IRS.

If dividends paid to you are "effectively connected" with your conduct of a trade or business within the United States (and, if required by a tax treaty, the dividends are attributable to a permanent establishment that you maintain in the United States) the applicable withholding agent is not required to withhold tax from the dividends, provided that you have furnished a valid IRS Form W-8ECI or an acceptable substitute form upon which you represent, under penalties of perjury, that:

- you are a non-United States person; and
- the dividends are "effectively connected" with your conduct of a trade or business within the United States and are includible in your gross income.

"Effectively connected" dividends are taxed at rates applicable to U.S. citizens, resident aliens and U.S. corporations. If you are a corporate Non-U.S. Holder, "effectively connected" dividends that you receive may, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or at a lower rate if you are eligible for the benefits of an income tax treaty that provides for a lower rate.

GAIN ON DISPOSITION OF CLASS A COMMON STOCK

Subject to the discussions below under "—Backup Withholding and Information Reporting" and "—FATCA Withholding," you generally will not be subject to U.S. federal income tax or withholding tax on gain that you recognize on a disposition of Class A common stock unless:

- the gain is "effectively connected" with your conduct of a trade or business in the United States (and if required by an applicable income tax treaty, the gain is attributable to a permanent establishment that you maintain in the United States);

- we are or have been a "United States real property holding corporation" ("USRPHC") as described below, at any time within the five-year period preceding the disposition or your holding period, whichever period is shorter, you are not eligible for a treaty exemption, and either (1) our Class A common stock is not regularly traded on an established securities market prior to the beginning of the calendar year in which the sale or disposition occurs (as such terms are defined by applicable U.S. Treasury regulations) or (2) you owned or are deemed to have owned, at any time within the five-year period preceding the disposition or your holding period, whichever period is shorter, more than 5% of our Class A common stock.

If the gain from the taxable disposition of shares of our Class A common stock is effectively connected with your conduct of a trade or business in the United States (and, if required by a tax treaty, the gain is attributable to a permanent establishment that you maintain in the United States), you will generally be taxed on such gain in the same manner as a United States person. You should consult your tax advisor with respect to other U.S. tax consequences of the ownership and disposition of our Class A common stock, including the possible imposition of a branch profits tax at a rate of 30% (or a lower treaty rate) if you are a corporation.

We will be a USRPHC at any time that the fair market value of our "United States real property interests" ("USRPIs"), as defined in the Code and applicable U.S. Treasury regulations, equals or exceeds 50% of the aggregate fair market value of our worldwide real property interests and our other assets used or held for use in a trade or business (all as determined for the U.S. federal income tax purposes). We believe that we are not currently, and do not anticipate becoming in the foreseeable future, 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.

FATCA Withholding

Pursuant to sections 1471 through 1474 of the Code, commonly known as the Foreign Account Tax Compliance Act ("FATCA"), a 30% withholding tax ("FATCA withholding") may be imposed on certain payments to foreign financial institutions (which is broadly defined for this purpose and generally includes investment vehicles) and certain other non-U.S. entities receiving payments on your behalf, unless certain U.S. information reporting and due diligence requirements have been satisfied or an exemption applies. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Payments of dividends that you receive in respect of our Class A common stock could be affected by FATCA withholding if you hold our Class A common stock through a foreign financial institution or non-U.S. entity that is required to comply with these requirements (even if payments to you would not otherwise have been subject to FATCA withholding). In addition, although a 30% withholding tax would have applied under FATCA to payments of gross proceeds of dispositions of our Class A common stock, proposed U.S. Treasury regulations eliminate this 30% withholding tax on payments of gross proceeds. Taxpayers may rely on these proposed U.S. Treasury regulations until final U.S. Treasury regulations are issued. You should consult your own tax advisors regarding the relevant U.S. law and other official guidance on FATCA withholding.

Backup Withholding and Information Reporting

Information returns are required to be filed with the IRS in connection with any distributions on our Class A common stock. Unless you comply with certification procedures to establish that you are not a United States person, information returns may also be filed with the IRS with respect to the proceeds from a sale or other disposition of our Class A common stock. You may be subject to backup withholding (currently at a rate of 24%) on payments of dividends on our Class A common stock or on the proceeds from a sale or other disposition of our Class A common stock unless you comply with certification procedures to establish that you are not a United States person or otherwise establish an exemption. Your provision of a properly executed applicable IRS Form W-8 certifying your non-U.S. status will permit you to avoid backup withholding. Amounts withheld under the backup withholding rules are not additional taxes and may be refunded or credited against your U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Federal Estate Taxes

Individual Non-U.S. Holders and entities the property of which is potentially includible in such an individual's gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers) should note that, absent an applicable treaty exemption, our Class A common stock will be treated as U.S.-situs property subject to U.S. federal estate tax.

UNDERWRITING

BofA Securities, Inc., Jefferies LLC and Evercore Group L.L.C. are acting as representatives of each of the underwriters named below. Subject to the terms and conditions set forth in an underwriting agreement among us and the representatives of the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of Class A common stock set forth opposite its name below.

Underwriter	Number of Shares
BofA Securities, Inc.	
Jefferies LLC	
Evercore Group L.L.C.	
Total	

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares of Class A common stock sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares of Class A common stock, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares of Class A common stock, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representatives have advised us that the underwriters propose initially to offer the shares of Class A common stock to the public at the public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of $ per share. After the initial offering, the public offering price, concession or any other term of the offering may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares of Class A common stock from us.

	Per Share	Without Option	With Option
Public offering price	$	$	$
Underwriting discount	$	$	$
Proceeds, before expenses, to us	$	$	$

The expenses of the offering, not including the underwriting discount, are estimated at $ and are payable by us.

Option to Purchase Additional Shares of Class A Common Stock

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus, to purchase up to additional shares of Class A common stock from us at the public offering price, less the underwriting discount. If the underwriters exercise this option, each will be obligated, subject to conditions

contained in the underwriting agreement, to purchase a number of additional shares of Class A common stock proportionate to that underwriter's initial amount reflected in the above table.

Directed Share Program

At our request, the underwriters have reserved for sale, at the initial public offering price, up to shares of Class A common stock offered by this prospectus for sale to certain of our employees and existing business partners. If these persons purchase reserved shares of Class A common stock, this will reduce the number of shares of Class A common stock available for sale to the general public. Any reserved shares of Class A common stock that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares of Class A common stock offered by this prospectus.

No Sales of Similar Securities

We, our executive officers and directors and certain other existing security holders have agreed not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, for 180 days after the date of this prospectus without first obtaining the written consent of BofA Securities, Inc., Jefferies LLC and Evercore Group L.L.C. Specifically, we and these other persons have agreed, with certain limited exceptions, not to directly or indirectly:

- offer, pledge, sell or contract to sell any common stock,
- sell any option or contract to purchase any common stock,
- purchase any option or contract to sell any common stock,
- grant any option, right or warrant for the sale of any common stock,
- otherwise dispose of or transfer any common stock,
- exercise any right with relation to a confidential submission of a registration statement related to the common stock, or
- enter into any swap or other agreement that transfers, in whole or in part, the economic consequence of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares of Class A common stock or other securities, in cash or otherwise.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition.

Listing

We expect the shares of Class A common stock to be approved for listing on the Nasdaq, subject to notice of issuance, under the symbol "VAXX."

Before this offering, there has been no public market for our Class A common stock. The initial public offering price will be determined through negotiations between us and the representatives. In addition to prevailing market conditions, the factors to be considered in determining the initial public offering price are:

- the valuation multiples of publicly traded companies that the representatives believe to be comparable to us;
- our financial information;

- the history of, and the prospects for, our company and the industry in which we compete;
- an assessment of our management, its past and present operations, and the prospects for, and timing of, our future revenues;
- the present state of our development; and
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for the shares of Class A common stock may not develop. It is also possible that after the offering the shares of Class A common stock will not trade in the public market at or above the initial public offering price.

The underwriters do not expect to sell more than 5% of the shares of Class A common stock in the aggregate to accounts over which they exercise discretionary authority.

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares of Class A common stock is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our Class A common stock. However, the representatives may engage in transactions that stabilize the price of the Class A common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell our Class A common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares of Class A common stock than they are required to purchase in the offering. “Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares described above. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of Class A common stock or purchasing shares of Class A common stock in the open market. In determining the source of shares of Class A common stock to close out the covered short position, the underwriters will consider, among other things, the price of shares of Class A common stock available for purchase in the open market as compared to the price at which they may purchase shares of Class A common stock through the option granted to them. “Naked” short sales are sales in excess of such option. The underwriters must close out any naked short position by purchasing shares of Class A common stock in the open market. 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 our Class A common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of Class A common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares of Class A common stock sold by or for the account of such underwriter in stabilizing or short covering transactions.

Similar to other purchase transactions, the underwriters’ purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our Class A common stock or preventing or retarding a decline in the market price of our Class A common stock. As a result, the price of our Class A common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on the Nasdaq, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our Class A common stock. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

Other Relationships

Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

European Economic Area

In relation to each Member State of the European Economic Area (each a "Relevant State"), no Class A common stock have been offered or will be offered pursuant to the global offering to the public in that Relevant State prior to the publication of a prospectus in relation to the Class A common stock which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of Class A common stock may be made to the public in that Relevant 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 global coordinator for any such offer; or

c. in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares of Class A common stock shall require the Company 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.

Each person in a Relevant State who initially acquires any shares of Class A common stock or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the Company and the underwriters that it is a qualified investor within the meaning of the Prospectus Regulation.

In the case of any shares of Class A common stock being offered to a financial intermediary as that term is used in Article 5(1) of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares of Class A common stock 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 to the public other than their offer or resale in a Relevant State to qualified investors, in circumstances in which the prior consent of the underwriters has been obtained to each such proposed offer or resale.

The Company, the underwriters and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of Class A common stock in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of Class A common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of Class A common stock, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

The above selling restriction is in addition to any other selling restrictions set out below.

In connection with the offering, BofA Securities, Inc., Jefferies LLC and Evercore Group L.L.C. are not acting for anyone other than the Company and will not be responsible to anyone other than the Company for providing the protections afforded to their clients nor for providing advice in relation to the offering.

Notice to Prospective Investors in the United Kingdom

In relation to the United Kingdom ("UK"), no shares of Class A common stock have been offered or will be offered pursuant to the global offering to the public in the UK prior to the publication of a prospectus in relation to the shares of Class A common stock which has been approved by the Financial Conduct Authority in the UK in accordance with the UK Prospectus Regulation and the FSMA, except that offers of shares of Class A common stock may be made to the public in the UK at any time under the following exemptions under the UK Prospectus Regulation and the FSMA:

a. to any legal entity which is a qualified investor as defined under the UK Prospectus Regulation;

b. to fewer than 150 natural or legal persons (other than qualified investors as defined under the UK Prospectus Regulation), subject to obtaining the prior consent of the global coordinator for any such offer; or

c. at any time in other circumstances falling within section 86 of the FSMA,

provided that no such offer of shares of Class A common stock shall require the Company or any underwriter to publish a prospectus pursuant to Section 85 of the FSMA or Article 3 of the UK Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

Each person in the UK who initially acquires any shares of Class A common stock or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the Company and the underwriters that it is a qualified investor within the meaning of the UK Prospectus Regulation.

In the case of any shares of Class A common stock being offered to a financial intermediary as that term is used in Article 5(1) of the UK Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares of Class A common stock 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 to the public other than their offer or resale in the UK to qualified investors, in circumstances in which the prior consent of the underwriters has been obtained to each such proposed offer or resale.

The Company, the underwriters and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of Class A common stock in the UK means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of Class A common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of Class A common stock, the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, and the expression "FSMA" means the Financial Services and Markets Act 2000, as amended.

In connection with the offering, BofA Securities, Inc., Jefferies LLC and Evercore Group L.L.C. are not acting for anyone other than the Company and will not be responsible to anyone other than the Company for providing the protections afforded to their clients nor for providing advice in relation to the offering.

This document is for distribution only to persons who (i) have professional experience in matters relating to investments and who qualify as investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

Notice to Prospective Investors in Switzerland

The shares of Class A common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document 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 of Class A common stock 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, the Company, the shares of Class A common stock 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 of Class A common stock will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of shares of Class A common stock has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares of Class A common stock.

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus relates to an exempt offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules 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 nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares of Class A common stock to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares of Class A common stock offered should conduct their own due diligence on the shares of Class A common stock. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC") in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares of Class A common stock may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares of Class A common stock without disclosure to investors under Chapter 6D of the Corporations Act.

The shares of Class A common stock applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares of Class A common stock must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The shares of Class A common stock 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 Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares of Class A common stock 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 of Class A common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The shares of Class A common stock have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, the shares of Class A common stock were not offered or sold or caused to be made the subject of an invitation for subscription or purchase and will not be offered or sold or caused to be made the subject of an invitation for subscription or purchase, and this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of Class A common stock, has not been circulated or distributed, nor will it be circulated or distributed, whether directly or indirectly, to any person in Singapore other than (i) 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 (the "SFA")) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of Class A common stock 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 of Class A common stock pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;

(c) where the transfer is by operation of law; or

(d) as specified in Section 276(7) of the SFA.

Notice to Prospective Investors in Canada

The shares of Class A common stock 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 of Class A common stock 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 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) 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.

LEGAL MATTERS

The validity of the shares of our common stock offered hereby will be passed upon for us by Cravath, Swaine & Moore LLP, New York, New York. Certain legal matters in connection with this offering will be passed upon for the underwriters by Kirkland & Ellis LLP, New York, New York.

EXPERTS

The combined consolidated financial statements and schedules of Vaxxinity, Inc. at December 31, 2019 and December 31, 2020 and for each of the two years in the period ended December 31, 2020 appearing in this prospectus and in the registration statement have been audited by Armanino LLP, an independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm 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 for the shares of our Class A common stock being offered by this prospectus. This prospectus, which is part of the registration statement, does not contain all of the information included in the registration statement or the exhibits filed thereto. For further information about us and the Class A common stock offered hereby, you should refer to the registration statement and the exhibits filed thereto, which are available on the website of the SEC referred to below. References in this prospectus to any of our contracts or other documents are not necessarily complete, and each such reference 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 completion of this offering, we will be subject to the reporting and information requirements of the Exchange Act and, as a result, will file periodic and current reports, proxy statements and other information with the SEC. We expect to make our periodic reports and other information filed with or furnished to the SEC available, free of charge, through our website at www.vaxxinity.com as soon as reasonably practicable after those reports and other information are filed with or furnished to the SEC. Additionally, the SEC maintains an Internet site that contains such periodic and current reports, proxy statements and other information filed electronically with the SEC at www.sec.gov.

The information contained on, or that can be accessed through, our website, is not part of, and is not incorporated into, this prospectus. All website addresses in this prospectus are intended to be inactive textual references only.

VAXXINITY, INC.

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Audited Combined Consolidated Financial Statements as of and for the years ended December 31, 2020 and 2019

Unaudited Condensed Combined Consolidated Financial Statements as of December 31, 2020 and June 30, 2021 and for the three and six months ended June 30, 2021 and 2020

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Vaxxinity, Inc.
Dallas, Texas

Opinion on the Combined Consolidated Financial Statements

We have audited the accompanying combined consolidated balance sheets of Vaxxinity, Inc. and Subsidiaries (collectively the "Company") as of December 31, 2020 and 2019, and the related combined consolidated statements of operations, convertible preferred stock and stockholders' deficit, and cash flows for each of the years in the two-year period ended December 31, 2020, and the related notes (collectively referred to as the "combined consolidated financial statements").

In our opinion, the combined consolidated financial statements present fairly, in all material respects, the combined consolidated financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and cash flows for each of the two years in the period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

The Company's management is responsible for these combined consolidated financial statements. Our responsibility is to express an opinion on the Company's combined consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (the "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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combined consolidated 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 audits 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 combined consolidated 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 combined consolidated 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 combined consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

We have served as the Company's auditor since 2018.

/s/ Armanino LLP

San Jose, California

July 30, 2021

VAXXINITY, INC.
COMBINED CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	December 31, 2019	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 476	$ 31,143
Accounts receivable	—	26
Amounts due from related parties	303	361
Prepaid expenses and other current assets	656	4,144
Total current assets	1,435	35,674
Deferred offering costs	—	2,254
Property and equipment, net	160	12,158
Restricted cash	—	55
Total assets	$ 1,595	$ 50,141
Liabilities, convertible preferred stock, and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 1,284	$ 1,017
Amounts due to related parties	5,081	8,004
Accrued expenses and other current liabilities	325	610
Notes payable	—	619
Notes payable with related parties	2,188	2,294
Convertible notes payable	10,458	10,356
Convertible notes with related parties, net of discount	539	14,324
Total current liabilities	19,875	37,224
Other liabilities		
Convertible notes payable	1,124	—
Simple agreement for future equity	—	24,335
Notes payable	—	10,699
Warrant liability	—	400
Other long-term liabilities	2,289	2,383
Total liabilities	23,288	75,041
Commitments and contingencies (Note 17)		
Preferred stock: $0.001 par value, 15,994,300 and 57,298,376 shares authorized at December 31, 2019 and 2020, respectively	—	—
Convertible preferred stock:		
Series seed stock, 7,831,528 shares designated, issued and outstanding at December 31, 2019 and 2020; liquidation preference $10,452 at December 31, 2020	10,383	10,383
Series seed-1 stock, 8,162,772 and 23,021,458 shares designated, 8,017,771 and 22,876,457 shares issued and outstanding at December 31, 2019 and 2020, respectively; liquidation preference $20,964 at December 31, 2020	16,436	20,903
Series seed-2 stock, 14,615,399 shares designated, issued and outstanding at December 31, 2020; liquidation preference $11,360 at December 31, 2020	—	11,315
Series A-1 stock, 5,522,300 shares designated, 1,871,511 shares issued and outstanding at December 31, 2020; liquidation preference $5,210 at December 31, 2020	—	4,640
Series A-2 stock, 6,307,690 shares designated, issued and outstanding at December 31, 2020; liquidation preference $14,660 at December 31, 2020	—	15,234
Total convertible preferred stock	26,819	62,475
Stockholders' deficit:		
Class A common stock, $0.001 par value; 86,763,600 and 202,150,716 shares authorized, 59,055,945 and 93,920,974 shares issued and outstanding at December 31, 2019 and 2020, respectively	270	272
Class B common stock, $0.001 par value; 17,114,677 shares authorized, issued, and outstanding at December 31, 2020	—	—
Treasury stock, par value of $0.001; 4,931,109 shares	(23)	(23)
Additional paid-in capital	3,590	4,682
Accumulated deficit	(52,349)	(92,306)
Total stockholders' deficit	(48,512)	(87,375)
Total liabilities, convertible preferred stock, and stockholders' deficit	$ 1,595	$ 50,141

The accompanying notes are an integral part of the combined consolidated financial statements.

VAXXINITY, INC.
COMBINED CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)

	Years Ended December 31,	
	2019	2020
Revenue	$ —	$ 557
Cost of revenue	—	52
Gross profit	—	505
Operating expenses:		
Research and development	10,656	20,570
General and administrative	3,005	12,217
Total operating expenses	13,661	32,787
Loss from operations	(13,661)	(32,282)
Other expense:		
Interest expense, net	435	1,181
Change in fair value of convertible notes	27	5,761
Change in fair value of simple agreement for future equity	—	615
Change in fair value of warrant liability	—	41
Loss on foreign currency translation, net	40	77
Other expense, net	502	7,675
Loss before income taxes	(14,163)	(39,957)
Provision for income taxes	56	—
Net loss	$ (14,219)	$ (39,957)
Net loss per share, basic and diluted	$ (0.27)	$ (0.39)
Weighted average common shares outstanding, basic and diluted	53,232,097	102,134,201

The accompanying notes are an integral part of the combined consolidated financial statements.

VAXXINITY, INC.
COMBINED CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(in thousands, except share amounts)

	Convertible Preferred Stock										
	Series Seed		Series Seed-1		Series Seed-2		Series A-1		Series A-2		
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Total
Balance at December 31, 2019	**7,831,528**	**$ 10,383**	**8,017,771**	**$ 16,436**	**—**	**$ —**	**—**	**$ —**	**—**	**$ —**	**$ 26,819**
Issuance of Series Seed-1 preferred stock, net of issuance costs of $18	—	—	14,858,686	4,467	—	—	—	—	—	—	4,467
Issuance of Series Seed-2 preferred stock, net of issuance costs of $45	—	—	—	—	14,152,237	10,955	—	—	—	—	10,955
Conversion of Simple Agreement for Future Equity to Series Seed-2 preferred Stock	—	—	—	—	463,162	360	—	—	—	—	360
Issuance of Series A-1 preferred stock, net of issuance costs of $585	—	—	—	—	—	—	1,799,649	4,426	—	—	4,426
Exercise of warrants to Series A-1	—	—	—	—	—	—	71,862	214	—	—	214
Conversion of Simple Agreement for Future Equity to Series A-2 preferred stock, net of issuance costs of $41	—	—	—	—	—	—	—	—	6,307,690	15,234	15,234
Balance at December 31, 2020	**7,831,528**	**$ 10,383**	**22,876,457**	**$ 20,903**	**14,615,399**	**$ 11,315**	**1,871,511**	**$ 4,640**	**6,307,690**	**$ 15,234**	**$ 62,475**

	Stockholders' Deficit										
	Common Stock		Common Stock (Class A)		Common Stock (Class B)		Treasury Stock		Additional Paid-in Capital	Accumulated Deficit	Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2018	**57,066,304**	**$ 261**	**—**	**$ —**	**—**	**$ —**	**(4,931,109)**	**$ (23)**	**$ 2,345**	**$ (38,130)**	**$ (35,547)**
Issuance of common stock upon exercise of stock options	91,175	—	—	—	—	—	—	—	17	—	17
Vesting of restricted stock	1,898,466	9	—	—	—	—	—	—	—	—	9
Stock-based compensation expense	—	—	—	—	—	—	—	—	1,228	—	1,228
Net loss	—	—	—	—	—	—	—	—	—	(14,219)	(14,219)
Balance at December 31, 2019	**59,055,945**	**270**	**—**	**—**	**—**	**—**	**(4,931,109)**	**(23)**	**3,590**	**(52,349)**	**(48,512)**
Issuance of common stock upon exercise of stock options	440,800	1	—	—	—	—	—	—	78	—	79
Vesting of restricted stock	188,715	1	—	—	—	—	—	—	—	—	1
Issuance of common stock	51,350,191	—	—	—	—	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	—	—	1,014	—	1,014
Reclassification of common stock to Class A common stock	(93,920,974)	(272)	93,920,974	272		—	—	—	—	—	—
Reclassification of common stock to Class B common stock	(17,114,677)	—		—	17,114,677	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	—	—	(39,957)	(39,957)
Balance at December 31, 2020	**—**	**$ —**	**93,920,974**	**$ 272**	**17,114,677**	**$ —**	**(4,931,109)**	**$ (23)**	**$ 4,682**	**$ (92,306)**	**$ (87,375)**

The accompanying notes are an integral part of the combined consolidated financial statements.

VAXXINITY, INC.
COMBINED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,	
	2019	**2020**
Cash flows from operating activities:		
Net loss	$ (14,219)	$ (39,957)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	107	717
Amortization of debt issuance costs	—	108
Stock-based compensation expense	1,228	1,014
Non-cash interest expense	435	582
Change in fair value of convertible notes	27	5,761
Change in fair value of warrant liability	—	41
Change in fair value of simple agreement for future equity	—	615
Changes in operating assets and liabilities:		
Accounts receivable	—	(26)
Amounts due from related parties	(146)	(58)
Prepaid expenses and other current assets	2	(3,488)
Amounts due from related parties	—	(1,685)
Deferred offering costs	—	(2,254)
Accounts payable	(446)	(267)
Amounts due to related parties	1,012	4,608
Accrued expenses and other current liabilities	(354)	285
Other liabilities	89	94
Net cash used in operating activities	(12,265)	(33,910)
Cash flows from investing activities:		
Purchase of property and equipment	—	(1,477)
Net cash used in investing activities	—	(1,477)
Cash flows from financing activities:		
Proceeds from issuance of notes payable with related parties	600	—
Proceeds from issuance of convertible notes payable	10,520	12,040
Repayment of convertible notes	—	(5,500)
Repayment of note payable	—	(202)
Proceeds from issuance of simple agreement for future equity	—	39,355
Proceeds from issuance of Series Seed-1 convertible preferred stock, net of issuance costs	—	4,467
Proceeds from issuance of Series Seed-2 convertible preferred stock, net of issuance costs	—	10,955
Proceeds from issuance of Series A-1 convertible preferred stock, net of issuance costs	—	4,999
Payment for Series A-2 convertible preferred stock issuance costs	—	(41)
Debt issuance costs for related party convertible notes	—	(300)
Proceeds from Paycheck Protection Program	—	257
Proceeds from exercise of stock options	17	79
Net cash provided by financing activities	11,137	66,109
(Decrease) increase in cash, cash equivalents, and restricted cash	(1,128)	30,722
Cash, cash equivalents, and restricted cash at beginning of period	1,604	476
Cash, cash equivalents, and restricted cash at end of period	$ 476	$ 31,198
Supplemental Disclosure		
Cash paid for interest	$ —	$ 425
Noncash Financing Activities		
Fair value of restricted stock vesting during the period	$ 9	$ 1
Repurchase of unvested restricted stock awards	$ 1	$ —
Conversion of simple agreement for future equity into Series Seed-2 preferred stock	$ —	$ 360
Conversion of simple agreement for future equity into Series A-2 preferred stock	$ —	$ 15,275
Acquisition of airplane through issuance of note payable	$ —	$ 11,500
Fair value of warrants issued in connection with preferred stock issuance	$ —	$ 573
Noncash issuance of preferred stock related to warrants	$ —	$ 214

The accompanying notes are an integral part of the combined consolidated financial statements.

VAXXINITY, INC.
NOTES TO COMBINED CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands, except share and per share amounts)

1. Nature of the business

Vaxxinity, Inc., a Delaware corporation ("Vaxxinity", and together with its subsidiaries, the "Company"), was formed through the combination of two separate businesses that originated from United Biomedical, Inc. ("UBI") in two separate transactions: a spin-out from UBI in 2014 of operations focused on developing chronic disease product candidates that resulted in United Neuroscience ("UNS"), and a second spin-out from UBI in 2020 of operations focused on the development of a COVID-19 vaccine that resulted in C19 Corp. ("COVAXX"). On February 2, 2021, Vaxxinity was incorporated for the purpose of reorganizing and combining UNS and COVAXX and on March 2, 2021, did so by acquiring all of the outstanding equity interests of UNS and COVAXX pursuant to a contribution and exchange agreement (the "Contribution and Exchange Agreement") whereby the existing equity holders of UNS and COVAXX contributed their equity interests in each of UNS and COVAXX in exchange for equity in Vaxxinity (the "Reorganization").

The Company is a biotechnology company currently focused on developing product candidates for human use in the fields of neurology and coronaviruses utilizing its "Vaxxine Platform"—a peptide vaccine technology first developed by UBI and subsequently refined over the last two decades. The Company is engaged in the development and commercialization of rationally designed prophylactic and therapeutic vaccines to combat chronic disorders and infectious diseases with large patient populations and unmet medical need. UBI is a significant shareholder of the Company and, therefore, considered a related party.

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry including, but not limited to, uncertainty of product development and commercialization, lack of marketing and sales history, development by its competitors of new technological innovations, dependence on key personnel, market acceptance of products, product liability, protection of proprietary technology, ability to raise additional financing, and compliance with government regulations. If the Company does not successfully commercialize any of its product candidates, it will be unable to generate recurring product revenue or achieve profitability.

The Company's product candidates are in development and will require significant additional research and development efforts, including extensive pre-clinical and clinical testing and regulatory approval prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel and infrastructure and extensive compliance-reporting capabilities. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's intellectual property will be obtained, that any products developed will obtain necessary government regulatory approval or that any approved products will be commercially viable. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will generate significant revenue from product sales. The Company operates in an environment of rapid change in technology and is dependent upon the services of its employees and consultants.

Liquidity

As of December 31, 2020, the Company had $31.1 million of cash and cash equivalents. To date, the Company has primarily financed its operations through the sale of convertible preferred stock and common stock and borrowings under promissory notes (including convertible promissory notes ("Convertible Notes")), a portion of which has been raised from related party entities. The Company has experienced significant negative cash flows from operations since inception, including net losses of $14.2 million and $40.0 million for the years ended December 31, 2019 and 2020, respectively. In addition, as of December 31, 2020, the Company had an accumulated deficit of $92.3 million. The Company expects to incur substantial operating losses and negative

cash flows from operations for the foreseeable future. As of the date these financial statements were available to be issued, the Company expects its existing cash and cash equivalents, including the additional amounts raised during fiscal year 2021, to be sufficient to fund its operating expenses and capital expenditure requirements for at least the next 12 months.

The Company will need to obtain additional funding beyond the period that is 12 months from the date these financial statements were available to be issued whether through collaboration agreements, private or public equity or debt offerings or a combination thereof, and such additional funding may not be available on terms the Company finds acceptable or at all. If the Company is unable to obtain sufficient capital to continue to advance its programs, the Company would be forced to delay, limit, reduce or terminate its product development or future commercialization efforts or grant rights to third parties to develop and market product candidates that the Company would otherwise prefer to develop and market itself.

The accompanying combined consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The combined consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of the uncertainties described above.

Impact of COVID-19 Pandemic

In March 2020, the World Health Organization declared the outbreak of a COVID-19 pandemic. The COVID-19 pandemic is evolving, and to date, has led to the implementation of various responses, including government-imposed quarantines, travel restrictions and other public health safety measures.

The Company is closely monitoring the impact of the COVID-19 pandemic on all aspects of its business, including how it will impact its operations and the operations of its customers, suppliers, vendors and business partners. The Company does not yet know the full extent of potential delays or impacts on its business, its clinical trials, its research programs, healthcare systems or the global economy and it cannot presently predict the scope and severity of any potential business shutdowns or disruptions. The extent to which COVID-19 impacts its business, results of operation and financial condition will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the duration of the outbreak, new information that may emerge concerning the severity of COVID-19 or the effectiveness of actions to contain COVID-19 or treat its impact, among others. If the Company or any of the third parties with whom the Company engages, however, were to experience shutdowns or other business disruptions, its ability to conduct its business in the manner and on the timelines presently planned could be materially and negatively affected, which could have a material adverse impact on its business, results of operation and financial condition.

The Company has not incurred impairment losses in the carrying values of its assets as a result of the COVID-19 pandemic and it is not aware of any specific related event or circumstance that would require to revise its estimates reflected in these combined consolidated financial statements.

2. Summary of Significant Accounting Policies

Basis of presentation

The accompanying combined consolidated financial statements were prepared using generally accepted accounting principles in the United States of America (“GAAP”). The combined consolidated financial statements include the accounts of UNS and COVAXX that were part of the Contribution and Exchange

VAXXINITY, INC.
NOTES TO COMBINED CONSOLIDATED FINANCIAL STATEMENTS (continued)
(Amounts in thousands, except share and per share amounts)

Agreement, as described in Note 19. All share and per share amounts, as originally recorded by each entity, have been converted to a number of shares and per share amounts using the conversion ratios determined under the Contribution and Exchange Agreement. All intercompany balances and transactions have been eliminated in combination. Any reference in these notes to applicable guidance is meant to refer to the authoritative accounting principles found in the Accounting Standards Codification ("ASC") and Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB").

Foreign currency translation

The Company's combined consolidated financial statements are prepared in U.S. dollars. Its foreign subsidiaries use the U.S. dollar as their functional currency and maintain their records in the local currency. Nonmonetary assets and liabilities are re-measured at historical rates and monetary assets and liabilities are re-measured at exchange rates in effect at the end of the reporting period. Income statement accounts are re-measured at average exchange rates for the reporting period. The resulting gains or losses are included in foreign currency (losses) gains in the combined consolidated statements of operations.

Segment information

Operating segments are defined as components of an entity for which separate financial information is available and that is regularly reviewed by the Chief Operating Decision Maker ("CODM") in deciding how to allocate resources to an individual segment and in assessing performance. The Company's CODM is its Chief Executive Officer ("CEO"). The Company has determined that it operates as a single operating segment and has one reportable segment.

Use of estimates

The preparation of combined consolidated financial statements in accordance with GAAP requires the Company's management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the combined consolidated financial statements and the reported amounts of expenses during the reporting period. Significant estimates contained within these combined consolidated financial statements include, but are not limited to, the estimated fair value of the Company's common stock and convertible notes payable, simple agreements for future equity, warrant liabilities, stock-based compensation, income tax valuation allowance and the accruals of research and development expenses. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates, as there are changes in facts and circumstances. Actual results may differ materially from those estimates or assumptions.

Cash and cash equivalents

The Company considers all highly liquid investments with an original maturity of three months or less at the time of initial purchase to be cash equivalents. The Company maintains its cash and cash equivalents with financial institutions, in which balances from time to time may exceed the U.S. federally insured limits. The objectives of the Company's cash management policy are to safeguard and preserve funds to maintain liquidity sufficient to meet the Company's cash flow requirements, and to attain a market rate of return.

VAXXINITY, INC.
NOTES TO COMBINED CONSOLIDATED FINANCIAL STATEMENTS (continued)
(Amounts in thousands, except share and per share amounts)

Restricted cash

A deposit of less than $0.1 million was restricted from withdrawal as of December 31, 2020. The restriction relates to securing credit card obligations. This balance is included in restricted cash on the accompanying combined consolidated balance sheet.

The Company's combined consolidated statement of cash flows for the year ended December 31, 2020 included restricted cash with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on such statements. A reconciliation of cash, cash equivalents and restricted cash reported within the combined consolidated balance sheet that sum to the total of the same amounts shown in the combined consolidated statement of cash flows is as follows:

	December 31, 2020
Cash and cash equivalents	$ 31,143
Restricted cash	55
Total cash, cash equivalents and restricted cash	$ 31,198

Concentration of credit risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents. Cash equivalents are occasionally invested in certificates of deposit. The Company maintains each of its cash balances with high-quality and accredited financial institutions and accordingly, such funds are not exposed to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company is dependent on contract manufacturers, one of which is considered to be a related party, for manufacturing, quality control, testing, validation and supply services, including production, including production and shipment of its enzyme-linked immunosorbent assay ("ELISA") tests, and for research and development and clinical activities. The Company's future revenue as well as research and development programs could be adversely affected by a significant supply interruption by one or more of its contract manufacturers.

For the year ended December 31, 2020, three customers accounted for 27%, 23% and 15% of revenue. At December 31, 2020, one customer accounted for 90% of accounts receivable.

Accounts receivable

The Company's trade accounts receivable consist of amounts due from distributors. The Company reserves against trade accounts receivable for estimated losses that may arise from a customer's inability to pay, and any amounts determined to be uncollectible are written off against the reserve when it is probable that the receivable will not be collected. As of December 31, 2020, the Company has not recorded any allowance for bad debts against the trade accounts receivable.

Property and equipment

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is computed on the straight-line basis over the estimated useful life of the assets.

VAXXINITY, INC.
NOTES TO COMBINED CONSOLIDATED FINANCIAL STATEMENTS (continued)
(Amounts in thousands, except share and per share amounts)

The estimated useful life of property and equipment is as follows:

	Estimated Useful Life
Airplane	15 years
Laboratory and computer equipment	3 years
Furniture and fixtures	5 years

Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is included in loss from operations. Expenditures for repairs and maintenance are charged to expense as incurred.

Impairment of long-lived assets

Long-lived assets, comprised of property and equipment, are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Factors that the Company considers in deciding when to perform an impairment review include significant underperformance of the business in relation to expectations, significant negative industry or economic trends and significant changes or planned changes in the use of the assets. If an impairment review is performed to evaluate a long-lived asset for recoverability, the Company compares forecasts of undiscounted cash flows expected to result from the use and eventual disposition of the long-lived asset to its carrying value. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of an asset are less than its carrying amount. The impairment loss would be based on the excess of the carrying value of the impaired asset over its fair value, determined based on discounted cash flows. To date, the Company has not recorded any impairment losses or disposals on long-lived assets.

Deferred offering costs

The Company capitalized certain legal, audit, accounting and other third-party fees that are directly associated with an in-process capital financing effort as deferred offering costs until such financing is consummated. After consummation of the financing, these costs will be recorded as a reduction of additional paid-in capital generated as a result of the financing. Should the financing be abandoned, the deferred offering costs will be expensed immediately as a charge to operating expenses in the statement of operations. As of December 31, 2020, the Company recorded deferred offering costs of $2.3 million.

Fair value measurements

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

Level 1—Quoted prices in active markets that are identical assets or liabilities.

Level 2—Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.

VAXXINITY, INC.
NOTES TO COMBINED CONSOLIDATED FINANCIAL STATEMENTS (continued)
(Amounts in thousands, except share and per share amounts)

Level 3—Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The majority of the Company's convertible notes are carried at fair value and are classified as Level 3 liabilities.

Convertible notes payable

The Company issued convertible notes payable at various times from 2014 to 2020. The Company accounts for the convertible notes payable at fair value in accordance with ASC 480, *Distinguishing Liabilities from Equity* ("ASC 480"). The notes payable with related parties are accounted for as straight debt under ASC 470, *Debt* ("ASC 470"). The Company has elected to separate interest expense from the full change in fair value of the convertible notes. Debt issuance costs incurred by the Company are amortized to interest expense over the term of the convertible notes using the effective interest method in the accompanying combined consolidated statements of operations.

Debt issuance costs

The Company records debt issuance costs as a reduction to the carrying value of the debt. The debt discounts are amortized over the term of the debt using the effective interest method and recognized as interest expense in the accompanying combined consolidated statement of operations.

Simple Agreement for Future Equity—SAFE

The Company accounts for SAFEs at fair value in accordance with ASC 480. The SAFEs are subject to revaluation at the end of each reporting period, with changes in fair value recognized in the accompanying combined consolidated statements of operations (see Note 20).

Classification of convertible preferred stock

The Company records all convertible preferred stock at its original issuance price, less direct and incremental issuance costs, as stipulated by its terms. The Company's convertible preferred stock is classified outside of stockholders' deficit because the holders of such shares have liquidation rights in the event of a deemed liquidation that, in certain situations, are not solely within the control of the Company.

Revenue recognition

The Company accounts for revenue in accordance with ASC Topic 606, *Revenue from Contracts With Customers* ("ASC 606"). Under ASC 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration that the entity expects to be entitled to in exchange for those goods or services. The Company applies ASC 606 to contracts with customers only when it is probable that the entity will collect the consideration to which it is entitled in exchange for the goods or services it transfers to the customer.

The Company assesses the goods or services promised within each contract and determines those that are performance obligations by evaluating whether each promised good or service is distinct. This assessment involves subjective determinations and requires management to make judgments about the individual promised

goods or services, the intended benefit of the contract and whether each good or service is separately identifiable from the other aspects of the contractual relationship. If a promised good or service is not distinct, an entity is required to combine that good or service with other promised goods or services until it identifies a bundle of goods or services that is distinct.

If the consideration promised in a contract includes a variable amount, the Company estimates the amount of consideration to which it will be entitled in exchange for transferring the promised goods or services to a customer. The Company determines the amount of variable consideration by using the most likely amount method and applies the constraint on variable consideration, which requires the amount included in the transaction price to be constrained to the amount for which it is probable that a significant reversal of cumulative revenue recognized will not occur. At the end of each subsequent reporting period, the Company re-evaluates the estimated variable consideration included in the transaction price and any related constraint, and if necessary, adjusts its estimate of the overall transaction price.

The Company recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) each performance obligation is satisfied, either at a point in time or over time, and, if over time, recognition is based on the use of an output or input method. In the Company's sole revenue contract, the performance obligation was satisfied at the point in time the data and related samples were made available for the customer's review.

For its sales of ELISA tests, the Company recognizes revenue once control is transferred upon delivery to the customer.

Taiwan Centers for Disease Control Grant

United Biomedical, Inc., Asia ("UBI-Asia"), a related party through common ownership which is responsible for applying for and managing grants on the Company's behalf, was awarded a grant by the Taiwan Centers for Disease Control ("Taiwan CDC") for COVID-19 vaccine development. UBI-Asia contracted with the Company to conduct a two-phase study of a COVID-19 vaccine clinical trial in Taiwan. The grant provides that costs incurred to complete the two phases of the clinical trial will be reimbursed based on the achievement of certain milestones as defined in the agreement. At each reporting date, the Company assesses the status of all the activities involved in completing the clinical trials in relation to the milestones. The Company accounts for the amounts that have been received from the Taiwan CDC to reimburse costs incurred on the clinical trials and not expected to be refunded back to the Taiwan CDC as contra research and development expenses in the accompanying combined consolidated statement of operations.

Research and development

Research and development expenses include employee related costs, consulting, contract research, depreciation, rent, stock-based compensation and other corporate costs attributable to research and development activities and are expensed as incurred.

The Company has entered into various research, development and manufacturing contracts, some of which are with related parties (see Note 19). These agreements are generally cancelable by either party, and related payments are recorded as research and development expenses as incurred. The Company records accruals for estimated ongoing research costs. When evaluating the adequacy of the accrued liabilities, the Company analyzes progress of the studies or trials, including the phase or completion of events, invoices received and contracted costs. The Company's historical accrual estimates have not been materially different from the actual costs.

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Patent costs

Patent-related costs incurred in connection with filing and prosecuting patent applications to operations are expensed as incurred due to the uncertainty relating to the recovery of the expenditure. Amounts incurred are classified as general and administrative expenses.

Stock-based compensation

The Company measures all stock-based awards granted to employees, directors and non-employees based on the fair value on the date of grant and recognizes compensation expense of those awards over the requisite service period, which is generally the vesting period of the respective award. Forfeitures are accounted for as they occur.

The Company classifies stock-based compensation expense in its combined consolidated statements of operations in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified.

As there has been no public market for the Company's common stock, the estimated fair value of its common stock has been determined by its most recently available third-party valuations of common stock. These third-party valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. The Company's common stock valuations were prepared using an option pricing method ("OPM"). The OPM treats common stock and convertible preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceeded the value of the convertible preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock. There are significant judgments and estimates inherent in the determination of the fair value of the Company's common stock. These estimates and assumptions include a number of objective and subjective factors, including external market conditions, the prices at which the Company sold shares of preferred securities, the superior rights and preferences of securities senior to the common securities at the time of, and the likelihood of, achieving a liquidity event, such as an initial public offering ("IPO") or sale. Significant changes to the key assumptions used in the valuations could result in different fair values of common stock at each valuation date.

The fair value of each restricted stock award is estimated on the date of grant based on the fair value of the Company's common stock on that same date. The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model ("Black-Scholes"), which requires inputs based on certain subjective assumptions, including the expected stock price volatility, the expected term of the award, the risk-free interest rate and expected dividends. The Company is a private company and lacks company-specific historical and implied volatility information for its stock. Therefore, the Company estimates its expected stock price volatility based on the historical volatility of publicly traded peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. The expected term of the Company's options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The expected term of options granted to non-employees is equal to the contractual term of the option award. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends on common stock and does not expect to pay any cash dividends in the foreseeable future.

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Income taxes

The Company accounts for income taxes according to the ASC 740, *Income Taxes* ("ASC 740") using 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 recognized in the combined consolidated financial statements or in the Company's tax returns. Deferred taxes are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. In evaluating its ability to recover its deferred tax assets, the Company considers all available positive and negative evidence, including projected future taxable income, prudent and feasible tax planning strategies and recent financial operations.

The Company accounts for uncertainty in income taxes recognized in the combined consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the combined consolidated financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. To the extent the Company determines that such tax provisions will not be sustained, the provision for income taxes would include the effects of any resulting income tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

Net loss per share

The Company follows the two-class method when computing net loss per share as the Company has issued shares that meet the definition of participating securities. The two-class method determines net loss per share for each class of common and participating securities according to dividends declared or accumulated, and participation rights in undistributed earnings. The two-class method requires loss available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

Basic net loss per share is computed by dividing the net loss by the weighted average number of common shares outstanding for the period. Diluted net loss is computed by adjusting net loss to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted net loss per share is computed by dividing the diluted net loss by the weighted average number of common shares outstanding for the period, including potential dilutive common stock. For purpose of this calculation, outstanding options, unvested restricted stock and convertible preferred stock are considered potential dilutive common stock and are excluded from the computation of net loss per share as their effect is anti-dilutive.

The Company's convertible preferred stock contractually entitles the holders of such shares to participate in dividends but does not contractually require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss, such losses are not allocated to such participating securities. In periods in which the Company reports a net loss, diluted net loss per share is the same as basic net loss per share attributable to common stockholders, since dilutive common shares are not assumed to be outstanding if their effect is anti-dilutive.

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Emerging growth company status

The Company expects to qualify as an "emerging growth company" ("EGC"), as defined in the Jumpstart Our Business Startups Act ("JOBS Act"), and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not EGCs. The Company may take advantage of these exemptions until it is no longer an EGC under Section 107 of the JOBS Act, which provides that an EGC can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. The Company has elected to avail itself of the extended transition period and, therefore, while the Company is an EGC it will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not EGCs.

Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. Subsequently, the FASB issued ASU 2019-10 and then ASU 2020-05, both of which adjusted the effective date of ASU 2016-02 for non-public entities. The accounting standard is effective for non-public entities for fiscal years beginning after December 15, 2021 and interim periods within fiscal years beginning after December 15, 2022. The new standard establishes a right-of-use ("ROU") model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the statement of operations. A modified retrospective transition approach is required at the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company is evaluating the impact of the pending adoption of the new standard on the Company's combined consolidated financial statements. The Company expects to capitalize less than $1.0 million as an ROU and lease liability upon adoption.

In November 2018, the FASB issued ASU 2018-18, Collaborative Arrangements (Topic 808): *Clarifying the Interaction between Topic 808 and Topic 606*, ("ASU 2018-18"). The amendments in this update clarify that certain transactions between collaborative arrangement participants should be accounted for as revenue when the collaborative arrangement participant is a customer in the context of a unit of account and precludes recognizing as revenue consideration received from a collaborative arrangement participant if the participant is not a customer. ASU 2018-18 is effective for the Company's annual reporting periods beginning after December 15, 2020. The Company is evaluating the potential impact ASU 2018-18 will have on its combined consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12"), which is intended to simplify the accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. The new standard will be effective for the Company beginning January 1, 2021. The Company is evaluating the potential impact ASU 2019-12 may have on its combined consolidated financial statements.

On August 5, 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)*. The amendments remove certain separation models for convertible debt instruments and convertible preferred stock that require the separation of a convertible debt instrument into a debt component and an equity or derivative component. The ASU also amends the derivative scope exception guidance for contracts in an entity's own equity. The amendments remove three settlement conditions that are required for equity contracts to qualify

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for the derivative scope exception. In addition to the above, the ASU expands disclosure requirements for convertible instruments and simplifies areas of the guidance for diluted earnings-per-share calculations that are impacted by the amendments. The new standard is effective for the Company for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted. The Company is evaluating the potential impact this standard may have on its combined consolidated financial statements.

3. Fair value measurements

The following tables present information about the Company's financial instruments measured at fair value on a recurring basis and indicate the level of the fair value hierarchy used to determine such fair values:

December 31, 2019	Level 1	Level 2	Level 3	Total
Convertible notes payable	$ —	$ —	$11,740	$11,740
	$ —	$ —	$11,740	$11,740

December 31, 2020	Level 1	Level 2	Level 3	Total
Convertible notes payable	$ —	$ —	$24,040	$24,040
SAFEs	—	—	24,335	24,335
Warrant liability	—	—	400	400
	$ —	$ —	$48,775	$48,775

The value for the convertible notes payable, SAFE, and warrant liability balances are based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy.

During the years ended December 31, 2019 and 2020, there were no transfers between Level 1, Level 2 and Level 3.

Convertible Notes

During the years ended December 31, 2019 and 2020, the Company issued a series of Convertible Notes. In accordance with ASC 480, a portion of the Convertible Notes were required to be measured and accounted for at fair value at each reporting date. The Company determined the Convertible Notes requiring a measurement to fair value represent a recurring measurement that is classified within Level 3 of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs.

Convertible Notes requiring a measurement to fair value are as follows:

	December 31,	
	2019	2020
Level 3 fair value of the principal amount of convertible notes	$11,740	$24,040
Accrued interest on convertible notes	381	857
Convertible note issuance costs	—	(217)
Total	$12,121	$24,680

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The fair value of the Convertible Notes was estimated using a straight debt and conversion feature valuation model consisting of probability assumptions on multiple conversion scenarios, discount rates and interest rates.

Simple agreement for future equity—SAFE

During the year ended December 31, 2020, the Company executed SAFE arrangements. The fair value of the SAFEs on the date of issuance was determined to equal the proceeds received by the Company. The value of the SAFEs on the dates of conversion into preferred stock was determined to be equal to the fair value of the preferred stock issued, or $15.6 million.

The following table sets forth a summary of the activities of the SAFE arrangements which represents a recurring measurement that is classified within Level 3 of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs (in thousands):

	Amount
Balance at December 31, 2019	$ —
Issuance of SAFEs	39,355
Conversion to Series A-1 convertible preferred stock	(15,635)
Change in fair value	615
Balance at December 31, 2020	$ 24,335

Warrants to purchase Series A-1 convertible preferred stock

In connection with the 2020 Series A-1 convertible preferred stock (“Series A-1 preferred”) financing transactions, the Company issued fully vested warrants to purchase 205,970 shares of Series A-1 preferred. The warrants were issued to advisors as consideration for assistance with the sale and issuance of the Series A-1 preferred. The warrants were determined to represent issuance costs and were recorded as a reduction in the proceeds received from the sale. Consequently, the warrants are accounted for as liabilities and adjusted to fair value at each reporting period.

The warrants are exercisable on the date of issuance, have an exercise price of $0.003 per share and have a contractual term of ten years. In December 2020, 71,862 warrants were exercised at $0.003 per share, resulting in cash proceeds of less than $1,000. As of December 31, 2020, 134,106 warrants to purchase Series A-1 preferred were outstanding. The Company will continue to re-measure the fair value of the liability associated with the warrant to purchase shares of Series A-1 preferred at the end of each reporting period until the earlier of the exercise or expiration of the applicable warrant or until such time that the underlying convertible preferred stock is reclassified to permanent equity.

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The following table sets forth a summary of the activity of the Series A-1 preferred warrant liability, which represents a recurring measurement that is classified within Level 3 of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs (in thousands):

	Warrant Liability
Balance at December 31, 2019	$ —
Issuance of Series A-1 preferred warrants	573
Exercise of warrants	(214)
Change in fair value	41
Balance at December 31, 2020	$ 400

The fair value of the warrants to purchase shares of Series A-1 convertible preferred at an exercise price of $0.003 per share, including subsequent remeasurements, was estimated using Black-Scholes with the following assumptions:

	Year Ended December 31, 2020
Risk-free interest rate	0.23% - 0.36%
Expected term	9.61 - 10.0 years
Expected volatility	86.6% - 87.4%
Expected dividend yield	—
Fair value of underlying instrument	$9.53 - $10.21

The risk-free interest rate used is the rate for a U.S. Treasury zero coupon issue with a term consistent with the remaining contractual term of the warrant on the date of measurement. The Company has not paid, and does not expect to pay, any cash dividends in the foreseeable future. The Company based the expected term assumption on the actual remaining contractual term of the respective warrants as of the date of measurement. The expected volatility is based on historical volatilities from guideline companies since there is no active market for the Company's common stock. The fair value on the date of measurement of the Series A-1 convertible preferred stock, the underlying instrument, was estimated by management with the assistance of a third-party valuation specialist.

4. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following (in thousands):

	December 31,	
	2019	2020
Prepaid materials and supplies	$ —	$3,302
Deposits	—	10
Other	656	832
	$656	$4,144

The Company's prepaid material and supplies related to ELISA test production, of which $2.9 million was paid to a related party and $0.4 million related to materials to be utilized during its Phase 2 clinical trial for COVID-19 vaccine development.

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5. Property and equipment

Property and equipment, net consisted of the following (in thousands):

	December 31,	
	2019	2020
Airplane	$ —	$11,983
Laboratory and computer equipment	321	969
Furniture and fixtures	—	84
Total property and equipment	321	13,036
Less: accumulated depreciation	(161)	(878)
Property and equipment, net	$ 160	$12,158

Depreciation expense for the years ended December 31, 2019 and 2020 was $0.1 million and $0.7 million, respectively.

6. Accrued expenses and other current liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31,	
	2019	2020
Accrued payroll and benefits	$ 33	$ 53
Accrued external research and development	241	296
Accrued professional fees and other	51	228
Accrued interest	—	33
	$325	$610

7. Other liabilities

Other liabilities consisted of the following (in thousands):

	December 31,	
	2019	2020
Accrued payroll and related	$2,028	$2,134
Accrued tax provision	236	236
Lease liability	25	13
	$2,289	$2,383

Accrued payroll and related liabilities included approximately $1.5 million for accrued payroll and payroll taxes, and approximately $0.6 million for penalties and interest.

8. Convertible notes payable

Beginning in April 2018 and through September 2020, the Company issued several Convertible Notes. The Convertible Notes bear simple interest at annual rates ranging from 4.8% to 6%. All unpaid principal,

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together with the accrued interest thereon, for the Convertible Notes are payable upon the event of default or upon maturity, which ranges from one to three years. The Convertible Notes contain a number of provisions addressing automatic and optional conversion, events of default and prepayment provisions.

The Company accounts for the Convertible Notes at fair value, in accordance with ASC 480, with any changes in fair value being recognized through the combined consolidated statements of operations. The fair value of the Convertible Notes in the initial 2018 closing was determined to be $1.2 million on the date of issuance.

In 2019, the Company issued additional Convertible Notes for aggregate proceeds of $10.5 million, of which $0.5 million was received from a related party. The newly issued notes have similar terms and conditions as the Convertible Notes issued in 2018.

In 2020, the Company issued additional Convertible Notes for aggregate proceeds of $12.0 million, of which $10.0 million was received from a related party. Additionally, the Company settled $5.5 million of Convertible Notes, none attributed to a related party. The newly issued notes have similar terms and conditions as the Convertible Notes issued in 2018 and 2019.

As of December 31, 2020, several of the Convertible Notes have reached maturity and the Company and note holders have entered into discussions to extend the maturity date on the same terms and conditions. As of December 31, 2020, a total aggregate principal amount of $3.2 million of Convertible Notes were redeemable upon demand, and the Company was in default in respect of $2.0 million of Convertible Notes as of December 31, 2020. See Note 20 describing the contribution of outstanding Reorg. Convertible Notes (as defined below) to Vaxxinity for Vaxxinity's preferred stock on March 2, 2021 in connection with the Reorganization.

During the years ended December 31, 2019 and 2020, the Company recognized interest expense of $0.5 million and $0.7 million, respectively, related to the Convertible Notes. In addition, during the years ended December 31, 2019 and 2020, the Company recognized the change in fair value of $27 thousand and $5.8 million, respectively, in the accompanying combined consolidated statements of operations.

The following table shows the activity of the Convertible Notes:

	Convertible Notes							
	Principal Amount Payable		Change in Fair Value		Accrued Interest		Issuance	
	Standard	Related Party	Standard	Related Party	Standard	Related Party	Costs	Balance
December 31, 2019	**$11,170**	**$ 510**	**$ 33**	**$ 26**	**$ 378**	**$ 4**	**$ —**	**$12,121**
Additions	2,040	10,000	1,884	3,822	560	179	(300)	18,185
Settlements	(5,500)	—	55	—	(264)	—	—	(5,709)
Amortization	—	—	—	—	—	—	83	83
December 31, 2020	**$ 7,710**	**$10,510**	**$ 1,972**	**$ 3,848**	**$ 674**	**$ 183**	**$ (217)**	**$24,680**

9. Notes payable with related parties

In December 2018, the Company entered into a related party note payable (the "2018 Related Notes" and together with the Convertible Notes, the "Reorg. Convertible Notes") for $2.0 million in aggregate proceeds, received in three tranches. An initial $1.5 million tranche closed in December 2018 and the remaining two

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tranches closed in 2019. The 2018 Related Notes bear simple interest at an annual rate of 5% and contain a number of provisions addressing automatic and optional conversion, events of default and prepayment. Each tranche of the 2018 Related Notes had a maturity date one year from its loan date, the final tranche of the 2018 Related Notes reached maturity in September 2020 and the Company and note holders are in discussions to extend the maturity date of each tranche on the same terms and conditions. As of December 31, 2019 and 2020, a total of $1.6 million and $2.2 million, respectively, of 2018 Related Notes were in default. See Note 20 describing the contribution of Reorg. Convertible Notes to Vaxxinity for Vaxxinity's preferred stock on March 2, 2021 in connection with the Reorganization.

The Company accounts for the 2018 Related Notes as a straight debt instrument under the scope of ASC 470.

During the years ended December 31, 2019 and 2020, the Company recognized interest expense of $84 thousand and $0.1 million, respectively, on the 2018 Related Notes.

2019 Executive Note

In November 2019, the Company borrowed $0.1 million from its Chief Executive Officer (the "2019 Executive Note"). No formal loan agreement was executed. However, the Company has elected to accrue interest at an annual rate of 5%, consistent with the terms and conditions of the Convertible Notes and 2018 Related Notes, which was the closest benchmark the Company could evaluate.

The Company accounts for the 2019 Executive Note as a straight debt instrument under the scope of ASC 470 and accrued interest of less than $1 thousand and $6 thousand for the years ended December 31, 2019 and 2020, respectively.

The following table shows the activity of the notes payable with related parties:

	2018 Related Notes and 2019 Executive Note		
	Related Party Principal	Accrued Interest	Balance
December 31, 2019	**$ 2,100**	**$ 88**	**$ 2,188**
Additions	—	106	106
December 31, 2020	**$ 2,100**	**$ 194**	**$ 2,294**

10. Notes payable

Note Payable—Airplane

In connection with the acquisition of an airplane, the Company entered into a note payable agreement ("2025 Note") in June 2020 for $11.5 million, with an annual interest rate of 3.4% and a maturity date of June 9, 2025. Principal and interest payments are payable monthly in the amount of $66,000 with a final payment of $9.4 million at maturity. The 2025 Note is guaranteed by the co-founders of the Company. In addition, the Company incurred debt issuance costs of $0.3 million, which are being amortized over the term of the loan.

There are no financial covenants associated with the 2025 Note.

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The carrying value of the 2025 Note is as follows (in thousands):

	December 31, 2020
Principal	$ 11,298
Unamortized debt issuance cost	(237)
Carrying amount	11,061
Less: current portion	(362)
Note payable, net of current portion and debt issuance cost	$ 10,699

As of December 31, 2020, the annual principal payments for the note payable, are as follows (in thousands):

Year Ending December 31,	Amount
2021	$ 414
2022	429
2023	444
2024	458
2025 and thereafter	9,553
	$11,298

Interest expense associated with the 2025 Note for the year ended December 31, 2020 was $0.2 million. As of December 31, 2020, accrued interest of less than $0.1 million was included in accrued expenses and other liabilities in the accompanying combined consolidated balance sheets.

Note Payable—Paycheck Protection Program

The Company applied for and received a loan, which is in the form of a note dated May 5, 2020, from HSBC Bank USA, National Association (“HSBC”) in the aggregate amount of approximately $0.3 million (the “PPP Loan”), pursuant to the Paycheck Protection Program (“PPP”). The PPP, established as part of the Coronavirus Aid, Relief and Economic Security Act (“CARES Act”), provides for loans to qualifying businesses for amounts up to 2.5 times of the average monthly payroll expenses of the qualifying business. The loans and accrued interest may be forgiven if the borrower uses the loan proceeds for eligible purposes, including payroll, benefits, rent and utilities, and maintains its payroll levels. The amount of loan forgiveness will be reduced if the borrower terminates employees or reduces salaries during the covered period.

The PPP Loan is payable over five years at an interest rate of 1% per annum. The Paycheck Protection Flexibility Act of 2020 extended the deferral period for loan payments to either (1) the date that the Small Business Administration (“SBA”) remits the borrower’s loan forgiveness amount to the lender, or (2) if the borrower does not apply for loan forgiveness, 10 months after the end of the borrower’s loan forgiveness covered period. The Company is required to pay principal and interest on the PPP Loan in equal monthly installments beginning on March 1, 2021, and the outstanding interest balance accrued during the deferral period to be paid on the maturity date, which is May 5, 2025. The PPP Loan may be prepaid by the Company at any time prior to maturity with no prepayment penalties. The PPP Loan is subject to certain events of default (as set forth in the PPP Loan agreement), in which the occurrence could result in the acceleration of all amounts due under the PPP Loan. As of December 31, 2020, there were no events of default under the PPP Loan.

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The Company believes that it met the eligibility requirements for the PPP Loan and expects to meet the forgiveness criteria. Since the forgiveness of the PPP Loan is outside the Company's control, the Company has accounted for its PPP Loan as debt. If the PPP Loan is ultimately forgiven and the Company is legally released from being the PPP Loan's primary obligor, the extinguishment of the liability will be recognized in the Company's combined consolidated statement of operations as a gain. While the criteria for loan forgiveness is stated in the SBA loan forgiveness application, the SBA also indicated that it intends to issue more guidance which could affect the conditions for forgiveness. The Company will closely monitor the PPP Loan forgiveness criteria.

	December 31, 2020
Principal	$ 257
Less: current portion	(257)
Note payable, net of current portion	$ —

For the year ended December 31, 2020, the Company incurred $1.7 thousand in interest expense recorded in the accompanying combined consolidated statement of operations.

11. Simple Agreement for Future Equity—SAFE

During the year ended December 31, 2020, the Company executed SAFE arrangements. The SAFEs are not mandatorily redeemable, nor do they require the Company to repurchase a fixed number of shares. The Company determined that the SAFEs contain a liquidity event provision that embodies an obligation indexed to the fair value of the Company's equity shares and could require the Company to settle the SAFE obligation by transferring assets or cash. For this reason, the Company records the SAFEs as a liability under ASC 480 and re-measures the fair value at the end of each reporting period, with changes in fair value reported in earnings. Upon conversion into preferred shares, the preferred shares are classified as temporary equity.

In March 2020, the Company issued a SAFE ("SAFE 1") for $0.4 million, which converted into 463,162 shares of Series Seed-2 convertible preferred stock at $0.7773 per share in April 2020.

In June, July, and August 2020, the Company issued a series of SAFEs ("SAFE 2") for $14.7 million, which converted into 6,307,690 shares of Series A-2 convertible preferred stock ("Series A-2 preferred") at $2.3241 per share in August 2020.

The Company determined the fair value of SAFE 2 investment on the date of conversion and recognized the difference between the fair value on the date of conversion and the initial fair value of SAFE 2 investment in the combined consolidated statement of operations. A loss of $0.6 million was recorded in the combined consolidated statement of operations for the period ended December 31, 2020. This amount reflects the difference of the per share fair value of the initial SAFE 2 investment of $2.3241 and the per share fair value of SAFE 2 investment at conversion of $2.42.

In December 2020, the Company issued a series of SAFEs (collectively, "SAFE 3"), resulting in gross proceeds of $24.3 million.

Key provisions of SAFE 3 are as follows:

Equity Financing—Upon initial closing of a qualified financing of at least $50.0 million, SAFE 3 will automatically convert into the greater of (1) the number of shares of SAFE 3 preferred stock equal to the

purchase amount divided by the SAFE 3 price, defined as the price per share equal to the post-money valuation divided by all shares outstanding, all convertible securities, all issued, outstanding and promised options, and the unissued option pool, or (2) the number of shares of SAFE 3 preferred stock equal to the purchase amount divided by the discount price, defined as the price per share of the standard preferred stock sold in a qualified financing multiplied by eighty percent (80%).

Liquidity Event—If there is a liquidity event, as defined, before the termination of SAFE 3, SAFE 3 will automatically be entitled to receive a portion of proceeds, subject to the liquidation priority set forth in the agreement, due and payable immediately prior to, or concurrent with, the consummation of such liquidity event, equal to the greater of (i) the purchase amount or (ii) the amount payable on the number of shares of common stock equal to the purchase amount divided by the liquidity price, as outlined in the agreements.

Dissolution Event—If there is a dissolution event, as described in the agreements, before the termination of SAFE 3, the investor will automatically be entitled, subject to the liquidation priority set forth in the agreement, to receive a portion of proceeds equal to the purchase amount, due and payable to the investor immediately prior to the consummation of the dissolution event.

Termination—SAFE 3 will automatically terminate immediately following the earliest to occur of: (i) the issuance of capital stock to the investor pursuant to the automatic conversion provisions of SAFE 3 or (ii) the payment, or setting aside for payment, of amounts due the investor. In connection with the Contribution and Exchange Agreement, the holders of SAFEs agreed to convert such SAFEs into shares of Series A-3 preferred stock of COVAXX, which shares were then exchanged for shares of Vaxxinity's preferred stock.

12. Convertible preferred stock

As of December 31, 2020, the Company had issued Series Seed convertible preferred stock ("Series Seed preferred"), Series Seed-1 convertible preferred stock ("Series Seed-1 preferred"), Series Seed-2 convertible preferred stock ("Series Seed-2 preferred"), Series A-1 preferred and Series A-2 preferred.

In March 2020, the Company issued 14,858,686 shares of Series Seed-1 preferred, including 8,945,038 shares to a related party at $0.3018 per share resulting in gross proceeds of $4.5 million. In April 2020, the Company issued 14,615,399 shares of Series Seed-2 preferred, resulting in gross proceeds of $11.3 million, $0.4 million of which was from the proceeds of SAFE 1.

In August 2020, the Company issued 1,566,163 shares of Series A-1 preferred at $2.7839 per share, resulting in gross proceeds of $4.4 million. In November 2020, the Company issued 233,486 shares of Series A-1 preferred at $2.7839 per share, resulting in gross proceeds of $0.7 million. Additionally, in December 2020, one of the warrant holders exercised their warrant for 71,862 shares of Series A-1 preferred, resulting in proceeds of less than $1 thousand.

In August 2020, the Company issued 6,307,690 shares of Series A-2 preferred at $2.3241 per share from the conversion of SAFE 2. See Note 11 for a discussion of the treatment of the difference in the initial fair value of SAFE 2 and the fair value of SAFE 2 at conversion.

The holders of Series Seed preferred, Series Seed-1 preferred, Series Seed-2 preferred, Series A-1 preferred, and Series A-2 preferred (collectively, the "Preferred Stock") have liquidation rights in the event of a deemed liquidation that, in certain situations, are not solely within the control of the Company. Therefore, Preferred Stock is classified outside of stockholders' deficit.

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13. Common stock

As of December 31, 2020, the Company had issued common stock and reserved common stock for issuance upon conversion of the preferred stock, options, warrants and Convertible Notes. The voting, dividend and liquidation rights of the holders of common stock are subject to and qualified by the rights, powers, and preferences of the holders of the convertible preferred stock as described above.

In connection with the incorporation of the Company's subsidiary COVAXX in March 2020, the Company issued 34,235,514 shares of common stock to C19 LLC and 17,114,677 shares of common stock to UBI at par value. Both C19 LLC and UBI are related parties of the Company.

The Company has reserved shares of common stock for issuance for the following purposes at December 31, 2020:

Series Seed preferred to related party	7,831,528
Series Seed-1 preferred	22,876,457
Series Seed-2 preferred	14,615,399
Series A-1 preferred	1,871,511
Series A-2 preferred	6,307,690
Options issued and outstanding	14,434,077
Options available for future grants	2,951,809
Warrants issued and outstanding	134,106
	71,022,577

In addition to the above, the Company had Convertible Notes outstanding at December 31, 2019 and 2020. The Convertible Notes are convertible into common shares or payable in the future and at amounts based on certain events as described in the Convertible Note agreements.

14. Equity incentive plan

In February 2017 and August 2020, the Company adopted its 2017 and 2020 Stock Option and Grant Plans (the "Option Plans"), which provides for the Company to grant qualified incentive options, nonqualified options and restricted stock awards to employees and non-employees to purchase the Company's common stock. The Option Plans are administered by the board of directors, or at the discretion of the board of directors, by a committee of the board of directors.

The maximum number of shares of common stock that can be issued is 25,921,546 shares as of December 31, 2020. As of December 31, 2020, 2,951,809 shares were available for future grant. Shares that are expired, terminated, surrendered, or canceled under the Option Plans without having been fully exercised will be available for future awards.

The exercise price for incentive options is determined at the discretion of the board of directors. All incentive options granted to any person possessing less than 10% of the total combined consolidated voting power of all classes of stock may not have an exercise price of less than 100% of the fair market value of the common stock on the grant date. All incentive options granted to any person possessing more than 10% of the total combined consolidated voting power of all classes of stock may not have an exercise price of less than 110% of the fair market value of the common stock on the grant date. The option term for incentive awards may

not be greater than ten years from the date of the grant. Incentive options granted to persons possessing more than 10% of the total combined consolidated voting power of all classes of stock may not have an option term of greater than five years from the date of the grant. The vesting period for equity-based awards is determined at the discretion of the board of directors, which is generally four years. For awards granted to employees and non-employees with four-year vesting terms, 25% of the option vests on the first anniversary of the grant date and the remaining stock vest equally each month for three years thereafter.

Option valuation

The weighted average assumptions used to determine the fair value of stock options granted were as follows:

	Years Ended December 31,	
	2019	2020
Risk-free interest rate	1.74%	0.34% - 0.38%
Expected term (in years)	6.04	5.6 - 6.08
Expected volatility	83.31%	70.9% - 86.84%
Expected dividend yield	0%	0%

Stock Options

The following table summarizes stock option activity for the years ended December 31, 2019 and 2020 (in thousands, except share and per share amounts):

	Number of stock options outstanding	Weighted price per share	Weighted contractual term (in years)	Aggregate intrinsic value
Balance at December 31, 2018	$10,331,750	$ 0.18	9.4	$ 1,415
Granted	1,890,974	0.37		
Exercised	(91,175)	0.18		
Forfeited	(289,939)	0.18		
Balance at December 31, 2019	11,841,610	$ 0.21	8.6	$ 2,357
Granted	4,157,870	0.75		
Exercised	(440,800)	0.18		
Forfeited	(1,124,603)	0.18		
Balance at December 31, 2020	$14,434,077	$ 0.38	7.6	$ 8,415
Options exercisable at December 31, 2020	$ 7,012,722	$ 0.21	7.6	$ 4,898

The aggregate intrinsic value of options is calculated as the difference between the exercise price of the options and the fair value of the common stock for those options that had exercise prices lower than the fair value of the common stock.

The intrinsic value of options exercised during each of the years ended December 31, 2019 and 2020 were less than $0.1 million.

The weighted-average grant-date fair value per share of options granted during the years ended December 31, 2019 and 2020 was $0.30 and $0.50, respectively.

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The total fair value of options vested during the years ended December 31, 2019 and 2020 was $1.1 million and $0.8 million, respectively.

Restricted stock

Under terms of restricted stock agreements, shares of restricted stock are subject to vesting schedules as determined by the Company's board of directors. The shares of restricted stock vest over a period of one to four years during which time all unvested stock will immediately be forfeited to the Company if the relationship between the recipient and the Company ceases. Subject to the continued employment (or other engagement of the recipient by the Company as described in the restricted stock agreements), all shares of restricted stock become fully vested within each award's vesting period.

The following table summarizes the Company's restricted stock activity for the years ended December 31, 2019 and 2020:

	Number of Shares	Weighted average grant date fair value per share
Unvested restricted shares at December 31, 2018	2,439,893	$ 0.32
Forfeited	(328,741)	0.32
Vested	(1,898,466)	0.32
Unvested restricted shares at December 31, 2019	212,686	$ 0.32
Vested	(188,715)	0.32
Unvested restricted shares at December 31, 2020	23,971	$ 0.32

The aggregate fair value of restricted stock that vested during the years ended December 31, 2019 and 2020 was $0.6 million and less than $0.1 million, respectively.

The Company recorded stock-based compensation expense in the accompanying combined consolidated statements of operations for restricted stock of $0.6 million and less than $0.1 million during the years ended December 31, 2019 and 2020, respectively.

Stock-based compensation expense

The Company recorded stock-based compensation expense in the following expense categories in the accompanying combined consolidated statements of operations (in thousands):

	Years Ended December 31,	
	2019	2020
Research and development	$ 483	$ 243
General and administrative	745	771
Total stock-based compensation expense	$ 1,228	$ 1,014

As of December 31, 2020, total unrecognized compensation cost related to the unvested stock-based awards was $2.8 million, which is expected to be recognized over a weighted average period of 2.8 years.

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15. Income taxes

The Company is subject to U.S. federal income tax as well as income tax of various foreign jurisdictions. For financial reporting purposes, loss before income taxes includes the following components (in thousands):

	Years Ended December 31,	
	2019	2020
United States	$ (8,508)	$ (31,053)
Foreign	(5,655)	(8,904)
Total	$ (14,163)	$ (39,957)

The income tax expense from continuing operations for the years ended December 31, 2019 and 2020 are as follows (in thousands):

	Years Ended December 31,	
	2019	2020
Current tax expense		
United States	$ 50	$ —
Foreign	6	—
Total income tax expense	$ 56	$ —

A reconciliation of income taxes computed using the statutory federal tax rate to that reflected in the combined consolidated statements of operations is as follows:

	Years Ended December 31,	
	2019	2020
U.S. federal statutory income tax rate	21.0%	21.0%
State and local taxes, net of federal benefit	0.0%	0.3%
Foreign rate differential	(3.9%)	(4.1%)
Uncertain tax positions	(0.4%)	0.0%
Other	(1.1%)	(0.3%)
Change in valuation allowance	(16.0%)	(16.9%)
Effective income tax rate	(0.4%)	0.0%

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NOTES TO COMBINED CONSOLIDATED FINANCIAL STATEMENTS (continued)
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The tax effects of temporary differences that gave rise to significant portions of the deferred tax assets were as follows (in thousands):

	December 31,	
	2019	2020
Deferred tax assets:		
Net operating loss carryforwards	$ 5,918	$ 12,373
Compensation accruals	377	377
Other temporary differences	245	497
Gross deferred tax assets	6,540	13,247
Valuation allowance	(6,540)	(13,247)
Net deferred tax assets	$ —	$ —

The Company has federal net operating loss carryforwards of $15.5 million and $44.5 million as of December 31, 2019 and 2020, respectively, which were generated from tax years beginning after January 1, 2018, and thus have no expiration date and can be carried forward indefinitely. The Company had foreign net operating loss carryforwards of $18.3 million and $20.2 million as of December 31, 2019 and 2020, respectively, which may be available to offset similar future trade income and have no expiration date.

In assessing the realizability of the net deferred tax assets, the Company considers all relevant positive and negative evidence in determining whether it is more likely than not that some portion or all of the deferred income tax assets will not be realized. The realization of the gross deferred tax assets is dependent on several factors, including the generation of sufficient taxable income prior to the expiration of the net operating loss carryforwards. Management believes that it is more likely than not that the Company's deferred income tax assets will not be realized. As such, there is a full valuation allowance against the net deferred tax assets as of December 31, 2019 and 2020. The valuation allowance increased by $2.3 million during the year ended December 31, 2019 and $6.7 million during the year ended December 31, 2020, primarily as a result of net operating losses generated during the periods. The Company reevaluates the positive and negative evidence at each reporting period.

Utilization of the NOL carryforwards and credits may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code Sections 382 and 383 (the "Code"), as amended, and similar state provisions. The Company has not completed a study to assess whether an ownership change has occurred or whether there have been multiple ownership changes since the Company's formation due to the complexity and cost associated with such a study, and the fact that there may be additional ownership changes in the future. If the Company experienced an ownership change at any time since its formation, utilization of the NOL or tax credit carryforwards to offset future taxable income and taxes, respectively, would be subject to annual limitation under the Code. The annual limitation may result in the expiration of the NOL and credits before utilization. If impaired, the NOL and credit carryforwards would be removed from the deferred tax asset schedule with a corresponding reduction in the valuation allowance.

On March 27, 2020, the President of the United States signed into law the CARES Act, which, along with earlier issued IRS guidance, contains numerous provisions that may benefit the Company, including the deferral of certain taxes. There is no material impact to the Company. The Company will continue to assess the effect of the CARES Act and ongoing government guidance related to COVID-19 as it is issued.

The Consolidated Appropriations Act, 2021, which was enacted on December 27, 2020, has expanded, extended, and clarified selected CARES Act provisions, specifically on Paycheck Protection Program loan and

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Employee Retention Tax Credit, 100% deductibility of business meals as well as other tax extenders. The Consolidated Appropriations Act did not have a material impact on the Company's tax provision for the year ended December 31, 2020.

A summary of the Company's unrecognized tax benefits activity and related information is presented as follows (in thousands):

	Years Ended December 31,	
	2019	2020
Beginning balance, January 1	$ 646	$ 652
Gross increases, tax positions in current period	6	—
Ending balance, December 31	$ 652	$ 652

The unrecognized tax benefits for U.S. jurisdiction, if recognized, would not have an impact on the Company's effective tax rate assuming the Company continues to maintain a full valuation allowance position against its U.S. deferred tax assets. The remaining unrecognized tax benefits of $41,000, if recognized, will have an impact on the effective tax rate. The Company recognizes accrued interest and penalties related to unrecognized tax benefits in income tax expense. We accrued $0.2 million in interest and penalties related to prior year's tax filings, as of December 31, 2020. The Company does not expect a significant change to its unrecognized tax benefits over the next twelve months. The Company is subject to U.S. federal income tax as well as income tax of various foreign jurisdictions. Generally, the statute of limitations for examination of the Company's U.S. federal and foreign income tax filings are open for the years ended December 31, 2016 and future periods.

16. Net loss per share

The Company's unvested restricted common shares have been excluded from the computation of basic net loss per share.

The Company's potentially dilutive securities, which include options, unvested restricted stock, convertible notes payable and convertible preferred stock, have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share is the same. The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share for the periods indicated because including them would have had an anti-dilutive effect:

	Years Ended December 31,	
	2019	2020
Series Seed preferred	7,831,528	7,831,528
Series Seed-1 preferred	8,017,771	22,876,457
Series Seed-2 preferred	—	14,615,399
Series A-1 preferred	—	1,871,511
Series A-2 preferred	—	6,307,690
Unvested restricted stock	212,686	23,971
Options issued and outstanding	11,841,610	14,434,077
Warrants issued and outstanding	—	134,106
	27,903,595	68,094,739

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In addition to the above, the Company has excluded common shares from the assumed conversion of the Convertible Notes and SAFEs outstanding at December 31, 2019 and 2020 from the computation of diluted net loss per share for the periods indicated because including them would have had an anti-dilutive effect. The Convertible Notes and SAFEs are convertible into preferred shares of the Company which would then be convertible into common shares or payable in the future and at amounts based on certain events as described in the Convertible Note and SAFE agreements.

17. Commitments and contingencies

Contractual Obligations

The Company enters into agreements with contract research organizations ("CROs") to conduct clinical trials and pre-clinical studies. Contracts with CROs are generally cancellable, with notice, at the Company's option.

Lease agreements

The Company has multiple operating lease agreements for office and laboratory space that extend through March 2022. The Company records total expense on a straight-line basis over the term of the lease agreement. One of the Company's leases requires the Company to provide a security deposit in the amount of $9 thousand. The Company is also required to pay certain operating costs under its leases.

Rent expense for the years ended December 31, 2019 and 2020 was $0.2 million and less than $0.1 million, respectively.

Minimum annual rent payments under this lease for the remaining term, excluding operating expenses and taxes which are not fixed for future periods as of December 31, 2020, are as follows (in thousands):

Year Ended December 31,	Amount
2021	$ 12
2022	3
	$ 15

License agreements

In October 2014, the Company entered into a contribution agreement with UBI, whereby UBI contributed and assigned to the Company assets and granted a non-exclusive license to certain technologies deemed necessary or reasonably useful in the utilization of the contributed assets. In consideration, the Company issued 50,578,257 shares of common stock to UBI. The agreement allowed for exploitation of all diagnostic, prophylactic and therapeutic uses and indications in humans in the field of neurology. The agreement was amended in August 2019 to provide the Company with exclusivity (except as to UBI) in the field of neurology and the flexibility to pursue indications outside the initial field limitations.

In connection with the amendment, the Company agreed to execute an exclusive, worldwide license agreement for any product that is developed by the Company outside the original field. The terms and conditions are to be negotiated in good faith and mutually agreed upon. The Company anticipates that if it is required to enter into an exclusive license agreement, it will be able to negotiate financial terms for the license at prevailing market rates within the pharmaceutical industry. Accordingly, the Company may be required to pay UBI upfront fees, revenue royalties, development milestones, commercial milestones, sublicense fees, and other related fees.

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Vaxxinity's COVAXX subsidiary was formed in March 2020 through a transfer of technology from UBI, UBI IP Holdings ("UBI-IP"), and UBI US Holdings, LLC, all related parties of the Company, whereby the Company, pursuant to an April 2020 license agreement, obtained exclusive rights to intellectual property and technology related to the discovery of vaccines, diagnostic assays and antigens for use against all coronaviruses including, without limitation, SARS, MERS and COVID-19 in all strains in humans. The license is worldwide, perpetual, exclusive and fully paid-up. There are no future royalty or milestone payment obligations associated with the agreement. The Company has the right to grant sublicenses.

The Company considered ASC 805, "Business Combinations" ("ASC 805") and ASC 730, "Research and Development" ("ASC 730") in determining how to account for the issuance of common stock. The license agreement is considered to be a common control transfer; however, the related party did not have any basis in the assets licensed, so there was no accounting impact for the Company.

Indemnification agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to employees, consultants, vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its board of directors and executive officers that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any indemnification arrangements that could have a material effect on its financial position, results of operations or cash flows, and it has not accrued any liabilities related to such obligations in its combined consolidated financial statements as of December 31, 2019 or 2020.

Legal proceedings

From time to time, the Company may become involved in legal proceedings arising in the ordinary course of business. As of December 31, 2019 and 2020, the Company was not a party to any material legal matters or claims.

18. Benefit plans

In March 2018, the Company established a defined contribution savings plan under Section 401(k) of the Code. This plan covers substantially all U.S. employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. The Company does not make matching contributions to the Plan.

The Company offers its Ireland-based employees a Personal Retirement Savings Account ("PRSA") that allows participants to defer a portion of their annual compensation. The Company provides contributions equal to 5% of each participant's annual salary. During the years ended December 31, 2019 and 2020, the Company contributed $11 thousand and $13 thousand, respectively, to PRSA accounts.

19. Related party transactions

In March 2015, the Company entered into a Master Services Agreement with UBI ("MSA") for UBI to provide research, development and clinical functions. As of December 31, 2019 and 2020, UBI owned

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79,881,860 common shares, representing greater than 50%, respectively, of the Company's total shares outstanding on an as-converted basis. The Company pays for services provided by UBI based on the UBI costs incurred, plus a markup of 7.5%, and reimburses for certain pass-through costs. Total amounts due to UBI were $4.1 million and $3.6 million as of December 31, 2019 and 2020, respectively. Total service fees incurred were $2.3 million and $0.9 million for the years ended December 31, 2019 and 2020, respectively.

In August 2017, as part of the Series Seed-1 preferred financing, the Company issued 712,425 shares of preferred stock to UBI in exchange for the extinguishment of $1.5 million in UBI-related accounts payable.

In June 2018, the Company entered into an MSA with UBI-Asia ("MSA Asia") for manufacturing, quality control, testing, validation and supply services. As of December 31, 2019 and 2020, UBI-Asia owned 6,554,520 common shares and common stock equivalents, representing 4.1% of the Company's total shares outstanding on an as-converted basis. Payment terms are mutually agreed in connection with each work order relating to services rendered. Total amounts due to UBI-Asia were $1.0 million and $0.9 million, as of December 31, 2019 and 2020, respectively. Total service fees incurred were $1.4 million and $0.1 million for the years ended December 31, 2019 and 2020, respectively.

In November 2018, the Company entered into an MSA with UBI Pharma, Inc. ("UBI-P") ("MSA Taiwan"). Under the MSA Taiwan, UBI-P will provide the Company with manufacturing, quality control, testing, validation and supply services. Payment terms are mutually agreed in connection with each work order relating to services rendered. No amounts were due to UBI-P as of December 31, 2019 and 2020. Total service fees incurred were $0.2 million for the year ended December 31, 2019. No services were performed during the year ended December 31, 2020.

In April 2020, the Company entered into an MSA with UBI ("COVID MSA") relating to the Company's COVID-19 program. The COVID MSA provides that UBI acts as COVAXX's agent with respect to matters relating the Company's COVID-19 program and provides research, development, manufacturing and back office administrative services to the Company. The Company pays for services based on the UBI costs incurred plus a markup of 10.0% and reimburses for certain pass-through costs.

In September 2020, the Company entered into a four-company MSA with UBI, UBI-Asia and United BioPharma, Inc ("UBP"). The Company is an exclusive licensee of technologies related to diagnostics, vaccines and therapies for COVID-19 ("COVID-19 Relief MSA"). The MSA established the terms under which UBI-Asia provides research, development, testing and manufacturing services to the Company and UBP provides contract development and manufacturing services to the Company. The four companies party to the COVID-19 Relief MSA share common ownership through UBI.

In aggregate, total amounts due to related parties under the COVID MSA and the COVID-19 Relief MSA were $2.9 million as of December 31, 2020. Total service fees incurred under the COVID MSA and the COVID-19 Relief MSA were $16.8 million during the year ended December 31, 2020.

In addition, the Company entered into a purchase arrangement with UBI for the production and shipment of the Company's ELISA tests to its customers. The Company has prepaid for materials required in this arrangement and recognizes prepayments as cost of goods sold when UBI ships product containing the materials to the Company's customer. As of December 31, 2020, $2.9 million of ELISA test materials prepaid to UBI were included in the combined consolidated balance sheet.

During the year ended December 31, 2020, the Company sold ELISA tests to Prime Movers Lab Fund I LLC ("Prime Movers") and recognized revenue of $0.2 million. As of December 31, 2020, Prime Movers'

founder is a director of the Company. As of December 31, 2020, Prime Movers owned 8,945,038 and 6,207,689 shares of Series Seed-1 preferred and Series Seed-2 preferred, respectively, representing 9.5% of the Company's total shares on an as-converted basis.

Taiwan Centers for Disease Control Grant ("Taiwan CDC")

UBI-Asia, which is responsible for applying for and managing grants on our behalf under the COVID-19 Relief MSA, was awarded a grant by the Taiwan CDC for COVID-19 vaccine development. The Company contracted with UBI-Asia to conduct a two-phase study of a COVID-19 vaccine clinical trial in Taiwan. The grant provides that costs incurred to complete the two phases of the clinical trial will be reimbursed based on the achievement of certain milestones as defined in the agreement. During the period ended December 31, 2020, the Company received reimbursement from UBI-Asia under this grant of $2.9 million, which was recorded as contra research and development expenses in the combined consolidated statements of operations.

UBI IP Holdings

The Company provides administrative services to UBI-IP. Under the arrangement, the Company issues vendor payments and provides technical services mostly for legal services on behalf UBI-IP. The Company bills UBI-P for services based on the costs incurred with no markup. Total amounts due to the Company from UBI-IP were $0.3 million and $0.4 million as of December 31, 2019 and 2020, respectively.

Total related party operating activity, including the activity described above, for the years ended December 31, 2019 and 2020 are as follows (in thousands):

	Years Ended December 31,	
	2019	2020
Combined Consolidated Balance Sheet		
Prepaid expenses and other current assets	$ —	$ 2,867
Property and equipment, net	—	725
Accrued expenses	—	285
Combined Consolidated Statement of Operations		
Revenue	$ —	$ 162
Cost of revenue	—	52
Operating expenses		
Research and development	—	
Services provided by related parties	3,549	17,987
Taiwan CDC grant reimbursement from related party	—	(2,948)
General and administrative		
Services provided by related parties	371	3,147

In November 2019, the Company entered into a $0.5 million Convertible Note as part of the Convertible Notes issuances. The Convertible Note was with a related party entity controlled by a family member of a member of the Company's management team. Since this Convertible Note is on the same terms and conditions as the other Convertible Notes, the Company determined this was an arm's length transaction at fair market value. The Company accrued interest of $0.1 million and less than $0.1 million for the years ended December 31, 2019 and 2020, respectively.

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(Amounts in thousands, except share and per share amounts)

In November 2019, the Company borrowed $0.1 million from its CEO. No formal loan agreement was executed between the Company and its CEO. However, the Company has elected to accrue interest at an annual rate of 5%, consistent with the terms and conditions of the Convertible Notes, which was the closest benchmark the Company could evaluate. The Company accrued interest of less than $0.1 million for each of the years ended December 31, 2019 and 2020.

In September 2020, the Company entered into Convertible Notes in an aggregate amount of $10.0 million as part of the Convertible Notes issuances. The Convertible Notes were with entities affiliated with a board member of the Company. Since the applicable Convertible Note is on the same terms and conditions as the other Convertible Notes, the Company determined this was an arm's length transaction at fair market value. The Company accrued interest of $0.2 million for the year ended December 31, 2020.

20. Subsequent events

The Company has evaluated subsequent events through July 30, 2021 and has concluded that no events or transactions have occurred that require disclosure in the accompanying combined consolidated financial statements, except as follows:

Issuance of SAFE

In January 2021, the Company issued additional SAFE for $2.9 million that had the same terms as SAFE 3 discussed in Note 11. The SAFE was converted into shares of the Company's Series A preferred stock pursuant to the Contribution and Exchange Agreement (as discussed below).

Escrow Deposit

In February 2021, the Company paid a $1.0 million refundable deposit into escrow for a potential capital purchase. This amount was refunded to the Company in May 2021.

Convertible Promissory Note with Related Party

On February 9, 2021, the Company entered into a Convertible Note (the "UBI Note") with UBI for aggregate proceeds of $2.0 million. The UBI Note is due on demand on or after February 9, 2022. The UBI Note accrues simple interest at 5% per year and contains a number of provisions addressing automatic and optional conversion, events of default and prepayment. The proceeds from the UBI Note were used to repay $2.0 million of principal on existing Convertible Notes. The UBI Note was converted into shares of the Company's Series A preferred stock pursuant to the Contribution and Exchange Agreement (as discussed below).

Contribution and Exchange Agreement

On March 2, 2021, in accordance with the Contribution and Exchange Agreement, (i) all outstanding shares of UNS and COVAXX preferred stock and common stock were contributed to Vaxxinity and exchanged for like shares of stock in Vaxxinity, (ii) the outstanding options to purchase shares of UNS and COVAXX common stock were terminated and substituted with options to purchase shares of common stock in Vaxxinity, (iii) the outstanding warrant to purchase shares of COVAXX common stock was cancelled and exchanged for a warrant to acquire common stock in Vaxxinity and (iv) each outstanding Reorg. Convertible Note was contributed to Vaxxinity and the holders of such notes received Series A preferred stock in Vaxxinity. In particular:

- Each UNS common share and convertible preferred share was exchanged for 0.2191 shares of Vaxxinity common stock or Series A preferred stock, as applicable;

VAXXINITY, INC.
NOTES TO COMBINED CONSOLIDATED FINANCIAL STATEMENTS (continued)
(Amounts in thousands, except share and per share amounts)

- Each share of COVAXX common and convertible preferred stock was exchanged for 3.4233 shares of Vaxxinity common stock or Series A preferred stock, as applicable (and prior to the Reorganization, all the holders of outstanding COVAXX SAFEs agreed to convert such SAFEs into shares of Series A-3 preferred stock of COVAXX, which shares were then exchanged for shares of Vaxxinity's Series A preferred stock);

- The Reorg. Convertible Notes were exchanged for an aggregate of 4,047,344 shares of Vaxxinity's Series A preferred stock; and

- Each outstanding option of both UNS and COVAXX to purchase common shares of UNS or COVAXX was terminated and substituted with an option to purchase shares of Class A common stock of Vaxxinity. Each outstanding UNS option was exchanged based on a conversion ratio of 0.2191. Each outstanding COVAXX option was exchanged based on a conversion ratio of 3.4233.

All parties to the Contribution and Exchange Agreement intend that the contribution of outstanding equity interests to the Company in exchange for the Company's common stock and preferred stock will be treated as an integrated transaction for U.S. federal income tax purposes that is governed by Section 351(a) of the Code.

Series B preferred stock financing

Since the Reorganization, the Company has raised gross proceeds of $122.9 million through the sale and issuance of 15,365,574 shares of the Company's Series B preferred stock at a price of $8.00 per share. All shares of the Company's Series B preferred stock will convert into shares of the Company's Class A common stock concurrently with the closing of an initial public offering.

Conversion of Class A common stock to Class B common stock

In June 2021, the Company converted 4,473,476 shares of Class A common stock held by the Company's Chief Executive Officer and Executive Chairman on a one-to-one basis for shares of Class B common stock.

Issuance of options

In June 2021, the Company issued stock options to its employees under the 2021 Stock Option and Grant Plan entitling the holders thereof to purchase, in aggregate, 1,074,055 shares of the Company's Class A common stock in accordance with the terms of such stock options. In addition, in July 2021, the Company issued stock options under the 2021 Stock Option and Grant Plan entitling the holders thereof to purchase, in aggregate, 1,315,414 shares of the Company's Class A common stock in accordance with the terms of such stock options. In July 2021, the Company also increased the maximum number of shares of common stock that can be issued under the Plan to 33,600,000 shares. As of July 30, 2021, 630,302 shares were available for future grant.

Authorized share capital

In connection with the above-mentioned events, the Company amended the Amended and Restated Certificate of Incorporation to increase its authorized shares of common stock and preferred stock. As of July 30, 2021, the Amended and Restated Certificate of Incorporation authorized (a) 249,506,992 shares of common stock with a par value of $0.0001 per share, of which 227,918,839 shares have been designated as Class A common stock and 21,588,153 shares have been designated as Class B common stock and (b) 87,223,095 shares of convertible preferred stock with a par value of $0.0001 per share, of which 62,223,095 shares have been designated as Series A preferred stock and 25,000,000 shares have been designated as Series B preferred stock.

VAXXINITY, INC.
CONDENSED COMBINED CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)
(unaudited)

	December 31, 2020	June 30, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 31,143	$ 110,845
Accounts receivable	26	—
Amounts due from related parties	361	372
Prepaid expenses and other current assets	4,144	16,235
Total current assets	35,674	127,452
Deferred offering costs	2,254	2,786
Property and equipment, net	12,158	11,593
Restricted cash	55	58
Total assets	$ 50,141	$ 141,889
Liabilities, convertible preferred stock, and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 1,017	$ 5,882
Amounts due to related parties	8,004	13,261
Accrued expenses and other current liabilities	610	2,028
Notes payable	619	679
Notes payable with related parties	2,294	108
Convertible notes payable	10,356	—
Convertible notes with related parties, net of discount	14,324	—
Total current liabilities	37,224	21,958
Other liabilities		
Simple agreement for future equity	24,335	—
Notes payable	10,699	10,460
Warrant liability	400	—
Other long-term liabilities	2,383	240
Total liabilities	75,041	32,658
Commitments and contingencies (Note 14)		
Preferred stock: $0.0001 par value, 57,298,376 and 87,223,095 shares authorized at December 31, 2020 and June 30, 2021, respectively		
Convertible preferred stock:		
Series seed stock, 7,831,528 shares designated, issued and outstanding at December 31, 2020; liquidation preference $10,452	10,383	—
Series seed-1 stock, 23,021,458 shares designated, 22,876,457 shares issued and outstanding at December 31, 2020; liquidation preference $20,964	20,903	—
Series seed-2 stock, 14,615,399 shares designated, issued and outstanding at December 31, 2020; liquidation preference $11,360	11,315	—
Series A-1 stock, 5,522,300 shares designated, 1,871,511 shares issued and outstanding at December 31, 2020; liquidation preference $5,210	4,640	—
Series A-2 stock, 6,307,690 shares designated, issued and outstanding at December 31, 2020; liquidation preference $14,660	15,234	—
Series A stock, 62,223,095 shares designated, issued and outstanding at June 30, 2021; liquidation preference $110,944	—	128,206
Series B stock, 25,000,000 shares designated, 15,365,574 issued and outstanding at June 30, 2021; liquidation preference $122,925	—	122,843
Total convertible preferred stock	62,475	251,049
Stockholders' deficit:		
Common stock: $0.0001 par value, 219,265,393 and 248,506,992 shares authorized at December 31, 2020 and June 30, 2021, respectively	—	—
Class A common stock; 202,150,716 and 226,918,839 shares designated, 93,920,974 and 85,339,665 shares issued and outstanding at December 31, 2020 and June 30, 2021, respectively	272	255
Class B common stock; 17,114,677 and 21,588,153 designated, issued, and outstanding at December 31, 2020 and June 30, 2021, respectively	—	—
Treasury stock, par value of $0.0001, 4,931,109 shares and 0 shares at December 31, 2020 and June 30, 2021, respectively	(23)	—
Additional paid-in capital	4,682	8,825
Accumulated deficit	(92,306)	(150,898)
Total stockholders' deficit	(87,375)	(141,818)
Total liabilities, convertible preferred stock, and stockholders' deficit	$ 50,141	$ 141,889

The accompanying notes are an integral part of the condensed combined consolidated financial statements.

VAXXINITY, INC.
CONDENSED COMBINED CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2021	2020	2021
Revenue	$ 440	$ —	$ 440	$ 17
Cost of revenue	229	1,927	229	1,928
Gross profit (loss)	211	(1,927)	211	(1,911)
Operating expenses:				
Research and development	4,243	18,944	6,071	30,605
General and administrative	4,331	5,924	5,048	14,430
Total operating expenses	8,574	24,868	11,119	45,035
Loss from operations	(8,363)	(26,795)	(10,908)	(46,946)
Other expense:				
Interest expense, net	406	107	595	384
Change in fair value of convertible notes	1,995	—	2,965	2,667
Change in fair value of warrant liability	—	—	—	214
Change in fair value of simple agreements for future equity	—	—	—	8,365
Foreign currency loss, net	9	8	14	16
Other expense, net	2,410	115	3,574	11,646
Net loss	$ (10,773)	$ (26,910)	$ (14,482)	$ (58,592)
Net loss per share, basic and diluted	$ (0.13)	$ (0.25)	$ (0.19)	$ (0.55)
Weighted average common shares outstanding, basic and diluted	84,466,208	106,901,609	76,753,433	106,785,080

The accompanying notes are an integral part of the condensed combined consolidated financial statements.

VAXXINITY, INC.
CONDENSED COMBINED CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
FOR THE SIX MONTHS ENDED JUNE 30, 2020
(in thousands, except share amounts)
(unaudited)

	Convertible Preferred Stock						
	Series Seed		Series Seed-1		Series Seed-2		
	Shares	Amount	Shares	Amount	Shares	Amount	Total
Balance at December 31, 2019	**7,831,528**	**$ 10,383**	**8,017,771**	**$ 16,436**	**—**	**—**	**$ 26,819**
Issuance of Series Seed-1 preferred stock, net of issuance costs of $18	—	—	14,858,686	4,467	—	—	4,467
Issuance of Series Seed-2 preferred stock, net of issuance costs of $45	—	—	—	—	14,152,237	10,955	10,955
Conversion of Simple Agreement for Future Equity to Series Seed-2 preferred Stock	—	—	—	—	463,162	360	360
Balance at June 30, 2020	**7,831,528**	**$ 10,383**	**22,876,457**	**$ 20,903**	**14,615,399**	**$ 11,315**	**$ 42,601**

	Stockholders' Deficit						
	Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Deficit	Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance at December 31, 2019	**59,055,945**	**$ 270**	**(4,931,109)**	**$ (23)**	**3,590**	**$ (52,349)**	**$ (48,512)**
Issuance of common stock upon exercise of stock options	331,957	—	—	—	57	—	57
Vesting of restricted stock	188,715	1	—	—	—	—	1
Issuance of common stock	51,350,191	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	405	—	405
Net loss	—	—	—	—	—	(14,482)	(14,482)
Balance at June 30, 2020	**110,926,808**	**$ 271**	**(4,931,109)**	**$ (23)**	**$ 4,052**	**$ (66,831)**	**$ (62,531)**

The accompanying notes are an integral part of the condensed combined consolidated financial statements.

VAXXINITY, INC.
CONDENSED COMBINED CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
FOR THE SIX MONTHS ENDED JUNE 30, 2021
(in thousands, except share amounts)
(unaudited)

	Convertible Preferred Stock														
	Series Seed		Series Seed-1		Series Seed-2		Series A-1		Series A-2		Series A		Series B		
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	To
Balance at December 31, 2020	**7,831,528**	**$ 10,383**	**22,876,457**	**$ 20,903**	**14,615,399**	**$ 11,315**	**1,871,511**	**$ 4,640**	**6,307,690**	**$ 15,234**	**—**	**$ —**	**—**	**$ —**	**$ 62**
Exchange of Series Seed, Series seed-1, Series seed-2, Series A-1 and Series A-2 for Series A	(7,831,528)	(10,383)	(22,876,457)	(20,903)	(14,615,399)	(11,315)	(1,871,511)	(4,640)	(6,307,690)	(15,234)	53,502,585	62,475	—	—	
Conversion of convertible notes to Series A preferred	—	—	—	—	—	—	—	—	—	—	3,624,114	27,379	—	—	27
Conversion of notes payable with related party to Series A preferred	—	—	—	—	—	—	—	—	—	—	423,230	2,138	—	—	2
Conversion of SAFEs to Series A preferred	—	—	—	—	—	—	—	—	—	—	4,539,060	35,600	—	—	35
Conversion of Warrants to Series A preferred	—	—	—	—	—	—	—	—	—	—	134,106	614	—	—	
Issuance of Series B preferred stock, net of issuance costs of $81	—	—	—	—	—	—	—	—	—	—	—	—	15,365,574	122,843	122
Balance at June 30, 2021	**—**	**$ —**	**—**	**$ —**	**—**	**$ —**	**—**	**$ —**	**—**	**$ —**	**62,223,095**	**$128,206**	**15,365,574**	**$122,843**	**$251**

	Stockholders' Deficit								
	Common Stock (Class A)		Common Stock (Class B)		Treasury Stock		Additional Paid-in Capital	Accumulated Deficit	Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2020	**93,920,974**	**$ 272**	**17,114,677**	**$ —**	**(4,931,109)**	**$ (23)**	**$ 4,682**	**$ (92,306)**	**$ (87,375)**
Issuance of common stock upon exercise of stock options	43,342	6	—	—	—	—	—	—	6
Vesting of restricted stock	23,971	—	—	—	—	—	—	—	—
Issuance of common stock upon stock grant	755,963	—	—	—	—	—	4	—	4
Reclassification of Class A common stock to Class B common stock	(4,473,476)	—	4,473,476	—	—	—	—	—	—
Retirement of treasury stock in merger	(4,931,109)	(23)	—	—	4,931,109	23	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	4,139	—	4,139
Net loss	—	—	—	—	—	—	—	(58,592)	(58,592)
Balance at June 30, 2021	**85,339,665**	**$ 255**	**21,588,153**	**$ —**	**—**	**$ —**	**$ 8,825**	**$ (150,898)**	**$ (141,818)**

The accompanying notes are an integral part of the condensed combined consolidated financial statements.

VAXXINITY, INC.
CONDENSED COMBINED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Six Months Ended June 30,	
	2020	2021
Cash flows from operating activities:		
Net loss	$ (14,482)	$ (58,592)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	150	565
Stock-based compensation expense	405	4,139
Non-cash interest expense	595	258
Change in fair value of convertible notes	2,965	2,667
Change in fair value of warrant liability	—	214
Change in fair value of simple agreement for future equity	—	8,365
Changes in operating assets and liabilities:		
Accounts receivable	(44)	26
Prepaid expenses and other current assets	(5,967)	(12,089)
Amounts due from related parties	(23)	(11)
Deferred offering costs	—	(532)
Accounts payable	1,769	4,865
Amounts due to related parties	2,551	5,257
Accrued expenses and other current liabilities	327	1,418
Other liabilities	501	(2,502)
Net cash used in operating activities	(11,253)	(45,952)
Cash flows from financing activities:		
Proceeds from capital purchase rebate	1,045	—
Proceeds from issuance of convertible notes payable with related parties	—	2,000
Proceeds from issuance of convertible notes payable	2,040	—
Repayment of convertible notes	—	(2,096)
Proceeds from issuance of simple agreement for future equity	5,410	2,900
Proceeds from issuance of Series Seed-1 convertible preferred stock, net of issuance costs	4,467	—
Proceeds from issuance of Series B convertible preferred stock, net of issuance costs	—	122,843
Proceeds from issuance of Series Seed-2 convertible preferred stock, net of issuance costs	10,955	—
Proceeds from Paycheck Protection Program	227	—
Proceeds from exercise of stock options	61	10
Net cash provided by financing activities	24,205	125,657
Increase in cash, cash equivalents, and restricted cash	12,952	79,705
Cash, cash equivalents, and restricted cash at beginning of period	476	31,198
Cash, cash equivalents, and restricted cash at end of period	$ 13,428	$ 110,903

The accompanying notes are an integral part of the condensed combined consolidated financial statements.

VAXXINITY, INC.
NOTES TO CONDENSED COMBINED CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands, except share and per share amounts)
(unaudited)

1. Nature of the Business

Vaxxinity, Inc., a Delaware corporation ("Vaxxinity", and together with its subsidiaries, the "Company"), was formed through the combination of two separate businesses that originated from United Biomedical, Inc. ("UBI") in two separate transactions: a spin-out from UBI in 2014 of operations focused on developing chronic disease product candidates that resulted in United Neuroscience ("UNS"), and a second spin-out from UBI in 2020 of operations focused on the development of a COVID-19 vaccine that resulted in C19 Corp. ("COVAXX"). On February 2, 2021, Vaxxinity was incorporated for the purpose of reorganizing and combining UNS and COVAXX and on March 2, 2021, did so by acquiring all the outstanding equity interests of UNS and COVAXX pursuant to a contribution and exchange agreement (the "Contribution and Exchange Agreement") whereby the existing equity holders of UNS and COVAXX contributed their equity interests in each of UNS and COVAXX in exchange for equity in Vaxxinity (the "Reorganization").

The Company is a biotechnology company currently focused on developing product candidates for human use in the fields of neurology and coronaviruses utilizing its "Vaxxine Platform" — a peptide vaccine technology first developed by UBI and subsequently refined over the last two decades. The Company is engaged in the development and commercialization of rationally designed prophylactic and therapeutic vaccines to combat chronic disorders and infectious diseases with large patient populations and unmet medical need. UBI is a significant shareholder of the Company and, therefore, considered a related party.

Issuance of SAFE

In January 2021, the Company issued a Simple Agreement for Future Equity ("SAFE") for $2.9 million that had the same terms as SAFE 3 discussed in Note 9. The SAFE was converted into shares of the Company's Series A preferred stock pursuant to the Contribution and Exchange Agreement.

Escrow Deposit

In February 2021, the Company paid a $1.0 million refundable deposit into escrow for a potential capital purchase. This amount was refunded to the Company in May 2021.

Convertible Promissory Note with Related Party

On February 9, 2021, the Company entered into a convertible promissory note ("Convertible Note") with UBI (the "UBI Note") for aggregate proceeds of $2.0 million. The UBI Note is due on demand on or after February 9, 2022. The UBI Note accrues simple interest at 5% per year and contains a number of provisions addressing automatic and optional conversion, events of default and prepayment. The proceeds from the UBI Note were used to repay $2.0 million of principal on existing Convertible Notes. The UBI Note was converted into shares of the Company's Series A preferred stock pursuant to the Contribution and Exchange Agreement.

Contribution and Exchange Agreement

On March 2, 2021, in accordance with the Contribution and Exchange Agreement, (i) all outstanding shares of UNS and COVAXX preferred stock and common stock were contributed to Vaxxinity and exchanged for like shares of stock in Vaxxinity, (ii) the outstanding options to purchase shares of UNS and COVAXX common stock were terminated and substituted with options to purchase shares of common stock in Vaxxinity, (iii) the outstanding warrant to purchase shares of COVAXX common stock was cancelled and exchanged for a warrant to acquire common stock in Vaxxinity and (iv) each outstanding Reorg. Convertible Note (as defined below) was contributed to Vaxxinity and the holders of such notes received Series A preferred stock in Vaxxinity. In particular:

VAXXINITY, INC.
NOTES TO CONDENSED COMBINED CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands, except share and per share amounts)
(unaudited)

- Each UNS common share and convertible preferred share was exchanged for 0.2191 shares of Vaxxinity common stock or Series A preferred stock, as applicable;
- Each share of COVAXX common and convertible preferred stock was exchanged for 3.4233 shares of Vaxxinity common stock or Series A preferred stock, as applicable (and prior to the closing of the Reorganization, all the holders of outstanding COVAXX SAFEs agreed to convert such SAFEs into shares of Series A-3 preferred stock of COVAXX, which shares were then exchanged for shares of Vaxxinity's Series A preferred stock);
- The Reorg. Convertible Notes were exchanged for an aggregate of 4,047,344 shares of Vaxxinity's Series A preferred stock; and
- Each outstanding option of both UNS and COVAXX to purchase common shares of UNS or COVAXX was terminated and substituted with an option to purchase shares of Class A common stock of Vaxxinity. Each outstanding UNS option was exchanged based on a conversion ratio of 0.2191. Each outstanding COVAXX option was exchanged based on a conversion ratio of 3.4233.

All parties to the Contribution and Exchange Agreement intend that the contribution of outstanding equity interests to Vaxxinity in exchange for Vaxxinity's common stock and preferred stock will be treated as an integrated transaction for U.S. federal income tax purposes that is governed by Section 351(a) of the Internal Revenue Code of 1986, as amended.

Prior to the execution of the Contribution and Exchange Agreement, the Company raised gross proceeds of $2.0 million and $2.9 million through the issuance of the UBI Note and SAFEs in the first quarter of 2021, respectively (as discussed above).

The Reorganization was determined to be a common control transaction, so the carrying values of all contributed assets and assumed liabilities remained unchanged and the financial information for all periods in the prospectus presented prior to the Reorganization are presented on a combined consolidated basis.

Series B Preferred Stock Financing

During the six months ended June 30, 2021, the Company raised gross proceeds of $122.9 million in connection with its Series B preferred stock financing. The Company issued a total of 15,365,574 shares at a price of $8.00 per share. All shares of the Company's Series B preferred stock will convert into shares of the Company's Class A common stock concurrently with the closing of an initial public offering.

Liquidity

As of June 30, 2021, the Company had $110.9 million of cash and cash equivalents. To date, the Company has primarily financed its operations through the sale of convertible preferred stock and common stock and borrowings under promissory notes (including Convertible Notes), a portion of which has been raised from related party entities. The Company has experienced significant negative cash flows from operations since inception, including net losses of $58.6 million on a combined basis for the six months ended June 30, 2021, $34.3 million of which was from the date of the Contribution and Exchange Agreement, March 2, 2021 to June 30, 2021. In addition, as of June 30, 2021, the Company has an accumulated deficit of $150.9 million. The Company expects to incur substantial operating losses and negative cash flows from operations for the foreseeable future. As of the date these financial statements were available to be issued, the Company expects its existing cash and cash equivalents to be sufficient to fund its operating expenses and capital expenditure requirements for at least the next 12 months.

VAXXINITY, INC.
NOTES TO CONDENSED COMBINED CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands, except share and per share amounts)
(unaudited)

The Company will need to obtain additional funding beyond the period that is 12 months from the date these financial statements were available to be issued whether through collaboration agreements, private or public equity or debt offerings or a combination thereof, and such additional funding may not be available on terms the Company finds acceptable or at all. If the Company is unable to obtain sufficient capital to continue to advance its programs, the Company would be forced to delay, limit, reduce or terminate its product development or future commercialization efforts or grant rights to third parties to develop and market product candidates that the Company would otherwise prefer to develop and market itself.

Impact of COVID-19 Pandemic

In March 2020, the World Health Organization declared the outbreak of a COVID-19 pandemic. The COVID-19 pandemic is evolving, and to date, has led to the implementation of various responses, including government-imposed quarantines, travel restrictions and other public health safety measures.

The Company is closely monitoring the impact of the COVID-19 pandemic on all aspects of its business, including how it will impact its operations and the operations of its customers, suppliers, vendors and business partners. The Company does not yet know the full extent of potential delays or impacts on its business, its clinical trials, its research programs, healthcare systems or the global economy and it cannot presently predict the scope and severity of any potential business shutdowns or disruptions. The extent to which COVID-19 impacts its business, results of operation and financial condition will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the duration of the outbreak, new information that may emerge concerning the severity of COVID-19 or the effectiveness of actions to contain COVID-19 or treat its impact, among others. If the Company or any of the third parties with whom the Company engages, however, were to experience shutdowns or other business disruptions, its ability to conduct its business in the manner and on the timelines presently planned could be materially and negatively affected, which could have a material adverse impact on its business, results of operation and financial condition.

The Company has not incurred impairment losses in the carrying values of its assets as a result of the COVID-19 pandemic and it is not aware of any specific related event or circumstance that would require to revise its estimates reflected in these condensed combined consolidated financial statements.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited interim condensed combined consolidated financial statements have been prepared pursuant to the rules and regulations of the United States Securities and Exchange Commission (“SEC”) for interim financial reporting. The condensed combined consolidated financial statements for the periods presented include the accounts of UNS and COVAXX that were parties to the Contribution and Exchange Agreement as described in Note 1. All share and per share amounts, as originally recorded by each entity, have been converted to a number of shares and per share amounts using the conversion ratios determined under the Contribution and Exchange Agreement.

These condensed statements are unaudited and, in the opinion of management, include all adjustments (consisting of normal recurring adjustments and accruals) necessary to fairly present the results of the interim periods. The condensed balance sheet at December 31, 2020, has been derived from the audited financial statements at that date. Operating results for the three and six months ended June 30, 2021 and cash flows for the

VAXXINITY, INC.
NOTES TO CONDENSED COMBINED CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands, except share and per share amounts)
(unaudited)

six months ended June 30, 2021 are not necessarily indicative of the results that may be expected for the fiscal year ended December 31, 2021 or any other future period. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP") have been omitted in accordance with the rules and regulations for interim reporting of the SEC. These interim condensed financial statements should be read in conjunction with the financial statements and notes thereto included in our report for the year ended December 31, 2020.

Significant Accounting Policies

The significant accounting policies used in preparation of these condensed financial statements are disclosed in our annual financial statements for the year ended December 31, 2020. There have been no changes to the Company's significant accounting policies during the three and six months ended June 30, 2021.

Emerging Growth Company Status

The Company expects to qualify as an "emerging growth company" ("EGC"), as defined in the Jumpstart Our Business Startups Act ("JOBS Act") and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not EGCs. The Company may take advantage of these exemptions until it is no longer an EGC under Section 107 of the JOBS Act, which provides that an EGC can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. The Company has elected to avail itself of the extended transition period and, therefore, while the Company is an EGC it will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not EGCs.

Recently Adopted Accounting Pronouncements

In November 2018, the Financial Accounting Standards Board ("FASB") issued ASU 2018-18, Collaborative Arrangements (Topic 808): *Clarifying the Interaction between Topic 808 and Topic 606*, ("ASU 2018-18"). The amendments in this update clarify that certain transactions between collaborative arrangement participants should be accounted for as revenue when the collaborative arrangement participant is a customer in the context of a unit of account and precludes recognizing as revenue consideration received from a collaborative arrangement participant if the participant is not a customer. ASU 2018-18 is effective for the Company's annual reporting periods after December 15, 2020. The Company adopted ASU 2018-18 at January 1, 2021. The adoption of this pronouncement did not have a material impact on the Company's combined consolidated financial statements or its results of operations.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12"), which is intended to simplify the accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. The new standard will be effective for the Company beginning January 1, 2021. The Company adopted ASU 2019-12 at January 1, 2021. The adoption of this pronouncement did not have a material impact on the Company's combined consolidated financial statements or its results of operations.

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Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-12, "Leases (Topic 842), and associated ASUs related to Topic 842, which requires organizations that lease assets to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. The new guidance requires that a lessee recognize assets and liabilities for leases, and recognition, presentation and measure in the financial statements will depend on its classification as a finance or operating lease. In addition, the new guidance requires disclosures to help investors and other financial statement users better understand the amount, timing and uncertainty of cash flows arising from leases. The estimated impact on our existing lease agreements is being evaluated.

The Company has elected to apply the transition requirements as of January 1, 2022. This approach allows for a cumulative effect adjustment in the period of adoption, and prior periods continue to be reported in accordance with historic accounting under ASC 840 "Leases." Additionally, as an accounting policy election, the Company has chosen to not apply the standard to any existing short-term leases (term of 12 months or less) as this is optional under U.S. GAAP.

3. Fair Value Measurements

The following tables present information about the Company's financial instruments measured at fair value on a recurring basis and indicate the level of the fair value hierarchy used to determine such fair values:

The value for the Convertible Notes, SAFE and warrant liability balances as of December 31, 2020 are based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. In accordance with the Contribution and Exchange Agreement, on March 2, 2021 the Convertible Notes, SAFEs and warrants were all converted into Series A preferred stock.

December 31, 2020	Level 1	Level 2	Level 3	Total
Liabilities				
Convertible notes payable	$ —	$ —	$24,040	$ 24,040
SAFEs	—	—	24,335	24,335
Warrant liability	—	—	400	400
	$ —	$ —	$48,775	$ 48,775

June 30, 2021	Level 1	Level 2	Level 3	Total
Assets				
Money market funds	$105,579	$ —	$ —	$105,579
	$105,579	$ —	$ —	$105,579

During the six months ended June 30, 2020 and 2021, there were no transfers between Level 1, Level 2 and Level 3.

Convertible Notes

During the years ended December 31, 2019 and 2020, and the six months ended June 30, 2021, the Company issued Convertible Notes. In accordance with ASC 480, a portion of the Convertible Notes were

required to be measured and accounted for at fair value at each reporting date. The Company determined the Convertible Notes requiring a measurement to fair value represent a recurring measurement that is classified within Level 3 of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs.

Convertible Notes requiring a measurement to fair value are as follows (in thousands):

	June 30, 2021
Beginning balance, December 31, 2020	$ 24,680
Level 3 fair value of the principal amount of convertible notes	$ 24,040
Change in fair value	2,667
Conversion to Series A preferred stock	(26,707)
Ending balance, June 30, 2021	$ —

The fair value of the Convertible Notes was estimated using a straight debt and conversion feature valuation model consisting of probability assumptions on multiple conversion scenarios, discount rates and interest rates.

In accordance with the Contribution and Exchange Agreement, on March 2, 2021, the Convertible Notes were converted into Series A preferred stock.

Simple Agreement for Future Equity

During the year ended December 31, 2020, the Company executed SAFE arrangements. The fair value of the SAFEs on the date of issuance was determined to equal the proceeds received by the Company. The value of the SAFEs on the dates of conversion into preferred stock was determined to be equal to the fair value of the preferred stock issued, or $15.6 million.

The following table sets forth a summary of the activities of the SAFE arrangements, which represents a recurring measurement that is classified within Level 3 of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs (in thousands):

	SAFE Liability
Balance at December 31, 2020	$ 24,335
Change in fair value	8,365
Issuance of SAFEs	2,900
Conversion to Series A preferred stock	(35,600)
Balance at June 30, 2021	$ —

In accordance with the Contribution and Exchange Agreement, on March 2, 2021, the SAFEs were converted into Series A preferred stock.

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Warrants to Purchase Series A-1 Convertible Preferred Stock

In connection with the 2020 Series A-1 convertible preferred stock ("Series A-1 preferred") financing transactions, the Company issued fully vested warrants to purchase 205,970 shares of Series A-1 preferred. The warrants were issued to advisors as consideration for assistance with the sale and issuance of the Series A-1 preferred. The warrants were determined to represent issuance costs and were recorded as a reduction in the proceeds received from the sale. Consequently, the warrants are accounted for as liabilities and adjusted to fair value at each reporting period.

The warrants are exercisable on the date of issuance and have an exercise price of $0.003 per share and a contractual term of ten years. In December 2020, 71,862 warrants were exercised at $0.003 per share, resulting in cash proceeds of less than $1 thousand. As of December 31, 2020, 134,106 warrants to purchase Series A-1 preferred were outstanding. The Company continued to re-measure the fair value of the liability associated with the warrant to purchase shares of Series A-1 preferred at the end of each reporting period until the Reorganization, when the underlying convertible preferred stock was reclassified to permanent equity.

The following table sets forth a summary of the activity of the Series A-1 preferred warrant liability which represents a recurring measurement that is classified within Level 3 of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs (in thousands):

	Warrant Liability
Balance at December 31, 2020	$ 400
Change in fair value	214
Exchange of warrants for shares of Series A preferred stock	(614)
Balance at June 30, 2021	$ —

4. Property and Equipment

Property and equipment, net consisted of the following (in thousands):

	December 31, 2020	June 30, 2021
Airplane	$ 11,983	$ 11,983
Laboratory and computer equipment	969	969
Furniture and fixtures	84	84
Total property and equipment	$ 13,036	$ 13,036
Less accumulated depreciation	(878)	(1,443)
Property and equipment, net	$ 12,158	$ 11,593

Depreciation expense for the three and six months ended June 30, 2020 was less than $0.1 million and $0.1 million, respectively. Depreciation expense for the three and six months ended June 30, 2021 was $0.3 million and $0.6 million, respectively.

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5. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31, 2020	June 30, 2021
Accrued payroll and benefits	$ 53	$ 1,322
Accrued external research and development	296	594
Accrued professional fees and other	228	81
Accrued interest	33	31
	$ 610	$ 2,028

6. Convertible Notes Payable

Beginning in April 2018, the Company issued several Convertible Notes, some of which were with related parties. The Convertible Notes bear simple interest at annual rates ranging from 4.8% to 6%. All unpaid principal, together with the accrued interest thereon, for the Convertible Notes are payable upon the event of default or upon maturity, which ranges from one to three years. The Convertible Notes contain a number of provisions addressing automatic and optional conversion, events of default, and prepayment provisions.

The Company accounts for the Convertible Notes at fair value, in accordance with ASC 480, with any changes in fair value being recognized through the condensed combined consolidated statements of operations.

As explained in Note 1, in accordance with the Contribution and Exchange Agreement, on March 2, 2021 each Reorg. Convertible Note that was outstanding was contributed to Vaxxinity in return for the number of shares of preferred stock set forth in the applicable note contribution agreement and the Contribution and Exchange Agreement.

During each of the three and six months ended June 30, 2020, the Company recognized interest expense of $0.2 million related to the Convertible Notes. During the three and six months ended June 30, 2020, the Company recognized interest expense of $0.1 and $0.2 million, respectively, related to the Convertible Notes. In addition, during the six months ended June 30, 2021, the Company recognized a change in fair value of $2.7 million in the accompanying condensed combined consolidated statements of operations.

The following table shows the activity of the Convertible Notes (in thousands):

	Convertible Notes								
	Principal Amount Payable		Change in Fair Value		Accrued Interest				
	Standard	Related Party	Standard	Related Party	Standard	Related Party	Issuance Costs	Conversion to Series A Preferred	Balance
December 31, 2020	**$ 7,710**	**$10,510**	**$ 1,972**	**$3,848**	**$ 674**	**$ 183**	**$ (217)**	**$ —**	**$ 24,680**
Additions	—	2,000	812	1,855	48	121	—	—	4,836
Settlements	(2,000)	—	—	—	(187)	—	—	—	(2,187)
Amortization	—	—	—	—	—	—	50	—	50
Conversion of Convertible Notes to Series A preferred stock	—	—	—	—	—	—	167	(27,546)	(27,379)
June 30, 2021	**$ 5,710**	**$12,510**	**$ 2,784**	**$5,703**	**$ 535**	**$ 304**	**$ —**	**$ (27,546)**	**$ —**

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7. Notes Payable

Notes Payable with Related Parties

In December 2018, the Company entered into a related party note payable (the "2018 Related Notes" and together with the Convertible Notes, the "Reorg. Convertible Notes") for $2.0 million in aggregate proceeds, received in three tranches. The 2018 Related Notes bear simple interest at an annual rate of 5% and contain a number of provisions addressing automatic and optional conversion, events of default and prepayment. In accordance with the Contribution and Exchange Agreement, on March 2, 2021, a majority of the 2018 Related Notes were converted into Series A preferred stock.

In November 2019, the Company borrowed $0.1 million from its Chief Executive Officer (the "2019 Executive Note"). No formal loan agreement was executed. However, the Company has elected to accrue interest at an annual rate of 5%, consistent with the terms and conditions of the Convertible Notes and 2018 Related Notes, which was the closest benchmark the Company could evaluate. The 2019 Executive Note has no maturity date, is payable on demand and remained outstanding as of June 30, 2021. The 2019 Executive Note was repaid in August 2021.

Note Payable—Airplane

In connection with the acquisition of an airplane, the Company entered into a note payable agreement (the "2025 Note") in June 2020 for $11.5 million, with an annual interest rate of 3.4% and a maturity date of June 9, 2025. Principal and interest payments are payable monthly in the amount of $66,000 with a final payment of $9.4 million at maturity. The 2025 Note is guaranteed by the co-founders of the Company. In addition, the Company incurred debt issuance costs of $0.3 million, which are being amortized over the term of the loan. There are no financial covenants associated with the 2025 Note.

The carrying value of the 2025 Note is as follows (in thousands):

	June 30, 2021
Principal	$ 11,092
Unamortized debt issuance cost	(211)
Carrying amount	10,881
Less: current portion	(421)
Note payable, net of current portion and debt issuance cost	$ 10,460

As of June 30, 2021, the annual principal payments for the 2025 Note, are as follows (in thousands):

	Amount
2021	$ 208
2022	429
2023	444
2024	458
2025 and thereafter	9,553
	$11,092

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Interest expense associated with the 2025 Note was less than $0.1 million for each of the three and six months ended June 30, 2020. Interest expense associated with the 2025 Note was $0.1 million and $0.2 million for the three and six months ended June 30, 2021.

Note Payable—Paycheck Protection Program

The Company applied for and received a loan, which is in the form of a note dated May 5, 2020, from HSBC Bank USA, National Association ("HSBC") in the aggregate amount of approximately $0.3 million (the "PPP Loan"), pursuant to the Paycheck Protection Program ("PPP"). The PPP, established as part of the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"), provides for loans to qualifying businesses for amounts up to 2.5 times of the average monthly payroll expenses of the qualifying business. As of December 31, 2020, there were no events of default under the PPP Loan. The Company paid off the PPP Loan in full, including all accrued but unpaid interest to the repayment date, in August 2021.

The carrying value of the note relating to the PPP Loan is included as a component of the current portion of notes payable at December 31, 2020 and June 30, 2021, respectively.

8. Convertible Preferred Stock

As explained in Note 1, in accordance with the Contribution and Exchange Agreement, on March 2, 2021 each share of preferred stock of UNS and COVAXX, as well as each Reorg. Convertible Note, that was outstanding was exchanged for Vaxxinity's preferred stock as set forth in the Contribution and Exchange Agreement. Each UNS convertible preferred share was exchanged for 0.2191 shares of Vaxxinity preferred stock and each share of COVAXX convertible preferred stock was exchanged for 3.4233 shares of Vaxxinity preferred stock.

As of June 30, 2021, Vaxxinity's Amended and Restated Certificate of Incorporation authorized 87,223,095 shares of convertible preferred stock with a par value of $0.0001 per share, of which 62,223,095 shares have been designated as Series A preferred stock and 25,000,000 shares have been designated as Series B preferred stock.

The holders of Vaxxinity's preferred stock have liquidation rights in the event of a deemed liquidation that, in certain situations, are not solely within the control of Vaxxinity. Therefore, the preferred stock is classified outside of stockholders' deficit.

Preferred stock consisted of the following as of June 30, 2021:

As of June 30, 2021	Issuance Dates	Shares issued and outstanding	Common Stock Issuable Upon Conversion
Series A preferred stock	March 2021	62,223,095	62,223,095
Series B preferred stock	March 2021	5,441,863	5,441,863
Series B preferred stock	June 2021	9,923,711	9,923,711
		77,588,669	77,588,669

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The holders of the preferred stock have the following rights and preferences:

Voting

The holders of preferred stock are entitled to vote, together with the holders of common stock, on all matters submitted to stockholders for a vote. Each holder of outstanding shares of preferred stock shall be entitled to cast the number of votes equal to the number of shares of Class A common stock into which the shares of preferred stock held by such holder are convertible at the time of such vote. Except as provided by law or by the other provisions of Vaxxinity's Amended and Restated Certificate of Incorporation, holders of preferred stock vote together with the holders of common stock as a single class.

Conversion

Each share of preferred stock shall be convertible, at the option of the holder, into shares of Class A common stock at a ratio equal to the original issue price divided by the applicable conversion price in effect at the time of conversion. The conversion price shall initially be equal to the applicable original issue price, subject to adjustment for stock dividends, stock splits, combinations or other similar recapitalizations.

The original issue price and conversion price of the Series A preferred stock is equal to $1.783 per share. The original issue price and conversion price of the Series B preferred stock is equal to $8.00 per share. As of June 30, 2021, each share of preferred stock was convertible into one share of Class A common stock.

Upon either (a) the closing of the sale of shares of common stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in gross proceeds of a minimum of $75.0 million and a per share price of $8.00 per share or (b) the vote or written consent of the holders of a majority in voting power of the then outstanding shares of preferred stock, voting as a single class, then all outstanding shares of preferred stock shall automatically be converted into shares of Class A common stock, at the then effective conversion rate.

Dividends

Vaxxinity may not declare, pay, or set aside any dividends on shares of any other class or series of stock of Vaxxinity, other than dividends on shares of common stock payable in shares of common stock, unless the holders of the preferred stock first receive, or simultaneously receive, a dividend on each outstanding share of preferred stock in an amount at least equal to (i) in the case of a dividend on common stock or any class or series that is convertible into common stock, that dividend per share of preferred stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Class A common stock, and (B) the number of shares of Class A common stock issuable upon conversion of a share of preferred stock, or (ii) in the case of a dividend on any class or series that is not convertible into common stock, at a rate per share of preferred stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination, or other similar recapitalization with respect to such class or series, and (B) multiplying such fraction by an amount equal to the applicable original issue price; provided that, if Vaxxinity declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of Vaxxinity, the dividend payable to the holders of preferred stock shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest preferred stock dividend. To date, no cash dividends have been declared or paid.

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Anti-Dilution Protection

The holders of preferred stock have proportional anti-dilution protection for unit splits, unit dividends, and similar recapitalizations. Subject to certain exclusions, anti-dilution price protection for additional sales of securities by Vaxxinity for consideration per share less than the applicable conversion price per share of any series of convertible preferred stock, shall be on a broad-based weighted average basis.

Liquidation Preference

In the event of any liquidation, dissolution or winding up of Vaxxinity, or deemed liquidation event, each holder of a share of preferred stock shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of Vaxxinity to the holders of common stock, the greater of (i) an amount equal to an issuance price as defined for each series of preferred stock, plus any declared but unpaid dividends, or (ii) an amount per share as would have been payable had all preferred stock been converted into common stock prior to such liquidation, dissolution, winding up, or deemed liquidation event.

If upon any liquidation, dissolution or winding up of Vaxxinity, or deemed liquidation event, the assets of Vaxxinity available for distribution to its shareholders are insufficient to pay the holders of preferred stock the full amount to which they are entitled, the holders of preferred stock shall ratably receive in any distribution of the assets available for distribution, in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution, if all amounts payable on or with respect to such shares were paid in full.

Unless a majority of the holders of the then outstanding preferred stock elect otherwise, a deemed liquidation event shall mean a merger or consolidation (other than one in which stockholders of Vaxxinity own a majority by voting power of the outstanding shares of the surviving or acquiring company or corporation) or a sale, lease, transfer, exclusive license or other disposition of all or substantially all of the assets of Vaxxinity.

Redemption and Liquidation Rights

Vaxxinity's Amended and Restated Certificate of Incorporation does not provide redemption rights to the holders of preferred stock.

The holders of preferred stock have liquidation rights in the event of a deemed liquidation that, in certain situations, are not solely within the control of Vaxxinity. Therefore, the preferred stock is classified outside of stockholders' deficit.

9. Simple Agreement for Future Equity

During the year ended December 31, 2020, the Company executed SAFE arrangements. The SAFEs were not mandatorily redeemable, nor did they require the Company to repurchase a fixed number of shares. The Company determined that the SAFEs contained a liquidity event provision that embodied an obligation indexed to the fair value of the Company's equity shares and could require the Company to settle the SAFE obligation by transferring assets or cash. For this reason, the Company recorded the SAFEs as a liability under ASC 480 and re-measured the fair value at the end of each reporting period, with changes in fair value reported in earnings.

In March 2020, the Company issued a SAFE ("SAFE 1") for $0.4 million, which converted into 463,162 shares of Series Seed-2 convertible preferred stock at $0.7773 per share in April 2020. In June, July, and

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August 2020, the Company issued a series of SAFEs ("SAFE 2") for $14.7 million, which converted into 6,307,690 shares of Series A-2 convertible preferred stock ("Series A-2 preferred") at $2.3241 per share in August 2020.

The Company determined the fair value of SAFE 2 investment on the date of conversion and recognized the difference between the fair value on the date of conversion and the initial fair value of SAFE 2 investment in the consolidated statement of operations. A loss of $0.6 million was recorded in the consolidated statement of operations for the period ended December 31, 2020. This amount reflects the difference of the per share fair value of the initial SAFE 2 investment of $2.3241 and the per share fair value of SAFE 2 investment at conversion of $2.42.

In December 2020, the Company issued a series of SAFEs (collectively, "SAFE 3") for $24.3 million. In January 2021, the Company issued additional SAFEs for $2.9 million.

As explained in Note 1, in accordance with the Contribution and Exchange Agreement, on March 2, 2021, the shareholders of both UNS and COVAXX contributed their capital stock in exchange for Vaxxinity's capital stock. Prior to the Reorganization, all the holders of outstanding COVAXX SAFEs agreed to convert such SAFEs into shares of Series A-3 preferred stock of COVAXX, which shares were then exchanged for shares of the Company's Series A preferred stock.

10. Common Stock

As explained in Note 1, in accordance with the Contribution and Exchange Agreement, on March 2, 2021, all outstanding shares of common stock of UNS and COVAXX were contributed to Vaxxinity and exchanged for an aggregate of 89,785,026 shares of Vaxxinity's Class A common stock, 17,114,677 shares of Vaxxinity's Class B common stock and 58,175,751 shares of our Series A preferred was exchanged for Vaxxinity's common stock. Each UNS share of common stock was exchanged for 0.2191 shares of Vaxxinity common stock and each share of COVAXX common stock was exchanged for 3.4233 like shares of Vaxxinity common stock.

In June 2021, the Company converted 4,473,476 shares of Class A common stock held by the Company's Chief Executive Officer and Executive Chairman on a one-to-one basis for shares of Class B common stock.

As of June 30, 2021, Vaxxinity's Amended and Restated Certificate of Incorporation authorized 248,506,992 shares of common stock with a par value of $0.0001 per share, of which 226,918,839 shares have been designated as Class A common stock and 21,588,153 shares have been designated as Class B common stock.

Holders of Class A common stock and Class B common stock have identical rights, except with respect to voting and conversion. Except as otherwise expressly provided in Vaxxinity's Amended and Restated Certificate of Incorporation or Bylaws, or required by applicable law, holders of Class A common stock will be entitled to one vote per share on all matters submitted to a vote of stockholders and holders of our Class B common stock will be entitled to ten votes per share on all matters submitted to a vote of stockholders.

Holders of Class A common stock and Class B common stock vote together as a single class on all matters submitted to a vote of stockholders, except (i) amendments to Vaxxinity's Amended and Restated Certificate of Incorporation to increase or decrease the par value of a class of capital stock, in which case the

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applicable class would be required to vote separately to approve the proposed amendment and (ii) amendments to Vaxxinity's Amended and Restated Certificate of Incorporation that alter or change the powers, preferences or special rights of a class of capital stock in a manner that affects its holders adversely, in which case the applicable class would be required to vote separately to approve the proposed amendment.

Holders of common stock are entitled to receive, ratably, dividends as may be declared by Vaxxinity's board of directors out of funds legally available therefor if the board of directors, in its discretion, determines to issue dividends.

The voting, dividend, and liquidation rights of the holders of common stock are subject to and qualified by the rights, powers, and preferences of the holders of Vaxxinity's preferred stock.

The Company has reserved shares of common stock for issuance for the following purposes at June 30, 2021:

Series A preferred stock	62,223,095
Series B preferred stock	15,365,574
Options issued and outstanding	31,626,055
Options available for future grants	945,830
Warrants issued and outstanding to purchase shares of common stock	200,261
	110,360,815

11. Equity Incentive Plan

Stock Options

In February 2021, the Company replaced the 2017 and 2020 Stock Option and Grant Plans with the newly-adopted 2021 Stock Option and Grant Plan (the "Plan"), which provides for the Company to grant qualified incentive options, nonqualified options, restricted stock awards, unrestricted stock awards, and restricted stock units to employees and non-employees to purchase the Company's common stock.

The maximum number of shares of common stock that can be issued under the plans is 32,600,000 shares as of June 30, 2021. As of June 30, 2021, 945,830 shares were available for future grant. Shares that are forfeited, canceled, reacquired by the Company prior to vesting, satisfied without the issuance of stock, withheld to cover the exercise price or tax withholdings, or otherwise terminated, other than by exercise, shall be added back to the Shares available for issuance under the Plan.

The exercise price for grants made pursuant to the terms of the Plan is determined in the applicable grant by the board of directors. Any incentive options granted to persons possessing less than 10% of the total combined voting power of all classes of stock may not have an exercise price of less than 100% of the fair market value of the common stock on the grant date. Any incentive options granted to persons possessing more than 10% of the total combined voting power of all classes of stock may not have an exercise price of less than 110% of the fair market value of the common stock on the grant date.

The option term for incentive awards may not be greater than ten years from the date of the grant. Incentive options granted to persons possessing more than 10% of the total combined voting power of all classes

of stock may not have an option term of greater than five years from the date of the grant. The vesting period for equity-based awards is determined at the discretion of the board of directors.

At June 30, 2021 there were 31,626,055 options outstanding under the Plan of which 10,081,596 were exercisable.

Total stock-based compensation expense for stock options is as follows (in thousands):

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2021	2020	2021
Research and development	$ 62	$205	$123	$ 375
General and administrative	141	597	282	3,764
Total stock-based compensation expense	$203	$802	$405	$4,139

Restricted Stock

The following table summarizes the Company's restricted stock activity for the six months ended June 30, 2021:

	Number of Shares	Weighted average grant date fair value per share
Unvested at December 31, 2020	23,971	$ 0.32
Vested	(23,971)	$ 0.32
Unvested at June 30, 2021	—	$ —

Stock-based compensation expense recognized on restricted stock was immaterial for the three and six months ended June 30, 2020 and 2021, respectively.

12. Income Taxes

During the three and six months ended June 30, 2020 and 2021, respectively, the Company recorded no income tax benefit for the net operating losses incurred in each year, due its uncertainty of realizing a benefit from those items. The Company's tax provision and the resulting effective tax rate for interim periods is determined based upon its estimated annual effective tax rate, adjusted for the effect of discrete items arising during the interim quarterly period. The impact of such inclusions could result in a higher or lower effective tax rate during a particular quarterly period, based upon the mix and timing of actual earnings or losses versus annual projections. In each quarterly period, the Company updates its estimate of the annual effective tax rate, and if the estimated annual tax rate changes, a cumulative adjustment is made in that quarter.

The Company has evaluated the positive and negative evidence bearing upon its ability to realize its deferred tax assets, which primarily consist of net operating loss carryforwards. The Company has considered its history of cumulative net losses, estimated future taxable income and prudent and feasible tax planning strategies and has concluded that it is more likely than not that the company will not realize the benefits of its deferred tax

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assets. As a result, as of December 31, 2020 and June 30, 2021, the Company has recorded a full valuation allowance against its net deferred tax assets.

13. Net Loss Per Share

The Company's unvested restricted common shares have been excluded from the computation of basic net loss per share.

The Company's potentially dilutive securities, which include options, unvested restricted stock, convertible notes payable and convertible preferred stock, have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share is the same. The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share as of June 30, 2021 because including them would have had an anti-dilutive effect:

Series A preferred stock	62,223,095
Series B preferred stock	15,365,574
Options to purchase common stock	31,626,055
Warrants issued and outstanding to purchase shares of common stock	200,261
	109,414,985

14. Commitments and Contingencies

Contractual Obligations

The Company enters into agreements with contract research organizations ("CROs") to conduct clinical trials and preclinical studies and contract manufacturing organizations ("CMOs") to produce vaccines and other potential product candidates. Contracts with CROs and CMOs are generally cancellable, with notice, at the Company's option.

As of June 30, 2021, the Company had remaining prepayments to CROs of $2.2 million and remaining prepayments to CMOs of $11.7 million for activities associated with the conduct of its clinical trials and for the production of the Company's anticipated vaccine product candidate.

Lease Agreements

The Company has multiple operating lease agreements for office and laboratory space that extend through March 2022. The Company records total expense on a straight-line basis over the term of the lease agreement. One of the Company's leases requires the Company to provide a security deposit in the amount of $9 thousand. The Company is also required to pay certain operating costs under its leases.

Rent expense for each of the three and six months ended June 30, 2020 was less than $0.1 million. Rent expense for each of the three and six months ended June 30, 2021 was less than $0.1 million.

Vaxxinity, Inc.
Notes to Condensed Combined Consolidated Financial Statements
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License Agreements

In October 2014, the Company entered into a contribution agreement with UBI, whereby UBI contributed and assigned to the Company assets and granted a non-exclusive license to certain technologies deemed necessary or reasonably useful in the utilization of the contributed assets. In consideration, the Company issued 50,578,257 shares of common stock to UBI. The agreement allowed for exploitation of all diagnostic, prophylactic, and therapeutic uses and indications in humans in the field of neurology. The agreement was amended in August 2019 to provide the Company with exclusivity (except as to UBI) in the field of neurology and the flexibility to pursue indications outside the initial field limitations.

In connection with the amendment, the Company agreed to execute an exclusive, worldwide license agreement for any product that is developed by the Company outside the original field. The terms and conditions are to be negotiated in good faith and mutually agreed upon. The Company anticipates that if it is required to enter into an exclusive license agreement, it will be able to negotiate financial terms for the license at prevailing market rates within the pharmaceutical industry. Accordingly, the Company may be required to pay UBI upfront fees, revenue royalties, development milestones, commercial milestones, sublicense fees, and other related fees.

Vaxxinity's COVAXX subsidiary was formed in March 2020 through a transfer of technology from UBI, UBI IP Holdings, and UBI US Holdings, LLC, all related parties of the Company, whereby the Company, pursuant to an April 2020 license agreement, obtained exclusive rights to intellectual property and technology related to the discovery of vaccines, diagnostic assays, and antigens for use against all coronaviruses including, without limitation, SARS, MERS, and COVID-19 in all strains in humans. The license is worldwide, perpetual, exclusive and fully paid-up. There are no future royalty or milestone payment obligations associated with the agreement. The Company has the right to grant sublicenses.

The Company considered ASC 805, "Business Combinations" and ASC 730, "Research and Development" in determining how to account for the issuance of common stock. The license agreement is considered to be a common control transfer; however, the related party did not have any basis in the assets licensed, so there was no accounting impact for the Company.

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to employees, consultants, vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its board of directors and executive officers that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any indemnification arrangements that could have a material effect on its financial position, results of operations, or cash flows, and it has not accrued any liabilities related to such obligations as of June 30, 2021.

Legal Proceedings

From time to time, the Company may become involved in legal proceedings arising in the ordinary course of business. As of December 31, 2020 and June 30, 2021, the Company was not a party to any material legal matters or claims.

Vaxxinity, Inc.
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15. Related Party Transactions

Pursuant to a Master Services Agreement with UBI ("MSA"), UBI provides research, development and clinical functions to the Company. The Company pays for services provided by UBI based on the UBI costs incurred plus a markup of 7.5% and reimburses for certain pass-through costs. Total amounts due to UBI were $3.6 million and $4.0 million, as of December 31, 2020 and June 30, 2021, respectively. Total service fees incurred were $0.5 million and less than $0.1 million for the six months ended June 30, 2020 and 2021, respectively.

The Company also maintains a purchase arrangement with UBI for the production and shipment of the Company's diagnostic test kits to its customers. The Company has prepaid for materials required in this arrangement and recognizes prepayments as cost of goods sold when UBI ships product containing the materials to the Company's customers. As of December 31, 2020 and June 30, 2021, $2.9 million and $1.1 million of diagnostic test kit materials prepaid to UBI are included in the condensed combined consolidated balance sheets, respectively.

The Company is party to an MSA ("MSA Asia") with United Biomedical, Inc., Asia ("UBI-Asia") for manufacturing, quality control, testing, validation, and supply services. Payment terms are mutually agreed in connection with each work order relating to services rendered. Total amounts due to UBI-Asia were each $0.9 million as of December 31, 2020 and June 30, 2021, respectively. Total service fees incurred were each $0.1 million for the six months ended June 30, 2020 and 2021, respectively.

The Company is party to an MSA ("MSA Taiwan") with UBI Pharma, Inc. ("UBI-P"). Under the MSA Taiwan, UBI-P will provide the Company with manufacturing, quality control, testing, validation, and supply services. Payment terms are mutually agreed in connection with each work order relating to services rendered. No amounts were due to UBI-P as of December 31, 2020 or June 30, 2021, respectively.

The Company is party to an MSA ("COVID MSA") with UBI relating to the Company's COVID-19 program. The COVID MSA provides that UBI acts as COVAXX's agent with respect to matters relating the Company's COVID-19 program and provides research, development, manufacturing and back office administrative services to the Company. The Company pays for services based on the UBI costs incurred plus a markup of 10.0% and reimburses for certain pass-through costs.

The Company is party to a four-company MSA with UBI, UBI-Asia and United BioPharma, Inc ("UBP"). The Company is an exclusive licensee of technologies related to diagnostics, vaccines, and therapies for COVID-19 ("COVID-19 Relief MSA"). The MSA established the terms under which UBI-Asia provides research, development, testing and manufacturing services to the Company and UBP provides contract development and manufacturing services to the Company. The four companies party to the COVID-19 Relief MSA share common ownership through UBI.

In aggregate, total amounts due to related parties under the COVID MSA and the COVID-19 Relief MSA were $2.9 million and $8.4 million as of December 31, 2020 and June 30, 2021, respectively. Total service fees incurred under the COVID MSA and the COVID-19 Relief MSA were $1.6 million and $21.4 million during the six months ended June 30, 2020 and 2021, respectively, with $2.2 million representing a prepaid production deposit at June 30, 2021.

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Taiwan Centers for Disease Control Grant ("Taiwan CDC")

UBI-Asia, which is responsible for applying for and managing grants on our behalf under the COVID-19 program, was awarded a grant by the Taiwan CDC for COVID-19 vaccine development. The Company contracted with UBI-Asia to conduct a two-phase study of a COVID-19 vaccine clinical trial in Taiwan. The grant provides that costs incurred to complete the two phases of the clinical trial will be reimbursed based on the achievement of certain milestones as provided in the agreement. During the six months ended June 30, 2021, the Company has provided for an estimate of $9.0 million against Phase II study costs incurred during this time; this was recorded as contra research and development expenses in its condensed consolidated statement of operations.

UBI IP Holdings

The Company provides administrative services to UBI IP Holding ("UBI-IP"). Under the arrangement, the Company issues vendor payments and provides technical services mostly for legal services on behalf UBI-IP. The Company bills UBI-IP for services based on the costs incurred with no markup. Total amounts due to the Company from UBI-IP were each $0.4 million as of December 31, 2020 and June 30, 2021, respectively.

Total related party operating activity, including the activity described above, for the three and six months ended June 30, 2020 and 2021 is as follows (in thousands):

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2021	2020	2021
Operating expenses				
Research and development				
Services provided by related parties	$ 1,473	$ 20,090	$1,666	$30,723
Taiwan CDC grant reimbursement from related party	—	(6,575)	—	(8,992)
General and administrative				
Services provided by related parties	$ 485	$ 355	$ 485	$ 862

16. Subsequent Events

The Company has evaluated subsequent events through September 14, 2021 and has concluded that no events or transactions have occurred that require disclosure in the accompanying consolidated financial statements, except as follows:

Issuance of Options

In July 2021, the Company issued stock options under the Plan entitling the holders thereof to purchase, in aggregate, 1,315,414 shares of the Company's Class A common stock in accordance with the terms of such stock options. In July 2021, the Company also increased the maximum number of shares of common stock that can be issued under the Plan to 33,600,000 shares. In August 2021, the Company canceled existing options to purchase, in aggregate, 9,899,982 shares of our Class A common stock held by Ms. Hu and Mr. Reese in exchange for an equal number of options to purchase shares of our Class B common stock. As of September 14, 2021, 630,302 shares were available for future grant.

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Authorized Share Capital

In connection with the above-mentioned events, the Company amended the Amended and Restated Certificate of Incorporation to increase its authorized shares of common stock and preferred stock. As of September 14, 2021, the Amended and Restated Certificate of Incorporation authorizes (a) 265,533,346 shares of common stock with a par value of $0.0001 per share, of which 227,918,839 shares have been designated as Class A common stock and 37,614,507 shares have been designated as Class B common stock and (b) 87,223,095 shares of convertible preferred stock with a par value of $0.0001 per share, of which 62,223,095 shares have been designated as Series A preferred stock and 25,000,000 shares have been designated as Series B preferred stock.

Facility Lease

In August 2021, the Company entered into a lease for 5,248 square feet of lab space with Space Florida in Exploration Park, Florida commencing August 12, 2021. The lease has an initial one-year term with an annual lease obligation of $0.2 million, after Lessee credits.

Related Party Transactions

In August 2021, the Company entered into a platform license agreement with UBI and certain of its affiliates that expanded intellectual property rights previously licensed under the license agreements described in Note 14. The licenses granted under the license agreements described in Note 14 were terminated in connection with the Company’s entry into the platform license agreement. As partial consideration for the rights and licenses the Company received pursuant to the platform license agreement, the Company granted UBI a warrant to purchase 3,000,000 shares of its Class A common stock, at an exercise price of $8.00 per share (subject to adjustments pursuant thereto).

Shares

Vaxxinity, Inc.

Class A Common Stock

Preliminary Prospectus

, 2021

Through and including , 2021 (25 days 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.

PART II

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance.

The following table sets forth the various expenses, other than the underwriting discount, payable in connection with the offering contemplated by this registration statement. All of the fees set forth below are estimates except for the SEC registration fee, the FINRA fee and the stock exchange listing fee.

	Payable by the registrant
SEC registration fee	$ *
FINRA filing fee	$ *
Nasdaq listing fee	$ *
Printing and engraving expenses	$ *
Legal fees and expenses	$ *
Accounting fees and expenses	$ *
Transfer agent and registrar fees and expenses	$ *
Miscellaneous fees and expenses	$ *
Total	$ *

* To be furnished by amendment.

Item 14. Indemnification of Directors and Officers.

Limitation of personal liability of directors and indemnification

We have entered into indemnification agreements with each of our current directors and executive officers. These agreements require us to indemnify these individuals to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. We also intend to enter into indemnification agreements with our future directors and executive officers.

Section 145 of the Delaware General Corporation Law (the "DGCL") provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any threatened, pending or completed actions, suits or proceedings in which such person is made a party by reason of such person being or having been a director, officer, employee or agent to the registrant. The DGCL provides that Section 145 is not exclusive of other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise. Our Bylaws provide for indemnification by the registrant of its directors, officers and employees to the fullest extent permitted by the DGCL.

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for unlawful payments of dividends or unlawful stock repurchases, redemptions or other distributions or (4) for any transaction from which the director derived an improper personal benefit. Our Charter provides for such limitation of liability.

We maintain standard policies of insurance under which coverage is provided (a) to our directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act and (b) to us with respect to payments we may make to our officers and directors pursuant to the above indemnification provision or otherwise as a matter of law.

Item 15. Recent Sales of Unregistered Securities.

Since January 1, 2018, we have engaged in the following transactions that were not registered under the Securities Act:

- In March 2021, in connection with the Reorganization, (i) all outstanding shares of UNS and COVAXX preferred stock and common stock were contributed to Vaxxinity and exchanged for an aggregate of 89,785,026 shares of our Class A common stock, 17,114,677 shares of our Class B common stock and 58,175,751 shares of our Series A preferred stock, (ii) the outstanding options to purchase shares of UNS and COVAXX common stock were terminated and substituted with options to purchase an aggregate of 30,672,657 shares of our Class A common stock, (iii) the outstanding warrant to purchase shares of COVAXX common stock was cancelled and exchanged for the Reorg. Warrant, which is exercisable for 200,261 shares of our Class A common stock, and (iv) the outstanding Convertible Notes and the Related Note were contributed to Vaxxinity and the former holders of such notes received an aggregate of 4,047,344 shares of our Series A preferred stock.

- From March 2021 through June 2021, we sold an aggregate of 15,365,574 shares of our Series B preferred stock at a purchase price of $8.00 per share, for an aggregate purchase price of $122,924,592, pursuant to a financing with 14 investors.

- In June 2021, pursuant to a share exchange agreement entered into by and among us, Ms. Hu and Mr. Reese, we exchanged an aggregate of 4,473,476 shares of our Class A common stock held by Ms. Hu and Mr. Reese on a one-to-one basis for shares of our Class B common stock.

- From April 2021 through July 2021, we granted 2,389,469 stock options to purchase shares of our Class A common stock to our officers, employees, directors, consultants and other key persons at a weighted average price of $4.33 per share under our Existing 2021 Plan.

- In August 2021, as partial consideration for the rights and licenses we received pursuant to the Platform License Agreement, we granted UBI the UBI Warrant, which entitles UBI to purchase 3,000,000 shares of our Class A common stock at an exercise price of $8.00 per share (subject to adjustment for the Stock Split and other adjustments pursuant thereto).

- In August 2021, we canceled existing options to purchase, in aggregate, 9,899,982 shares of our Class A common stock held by Ms. Hu and Mr. Reese in exchange for an equal number of options to purchase shares of our Class B common stock.

None of the foregoing transactions involved any underwriters, underwriters' discounts or commissions or any public offering. Unless otherwise stated, the sales of the above securities were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act (or Regulation D or Regulation S promulgated thereunder) or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to, or for sale in connection with, any distribution thereof and appropriate legends were placed upon the stock certificates issued in these transactions.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits: The list of exhibits set forth under *"Exhibit Index"* at the end of this registration statement is incorporated herein by reference.

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 registrant 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	Exhibit Description
1.1	Form of Underwriting Agreement*
3.1	Form of Amended and Restated Certificate of Incorporation of Vaxxinity, Inc. to be in effect upon the completion of this offering*
3.2	Form of Amended and Restated Bylaws of Vaxxinity, Inc. to be in effect upon the completion of this offering*
4.1	Form of Class A Common Stock Certificate of Vaxxinity, Inc.*
4.2	Warrant to Purchase Shares of Class A Common Stock of Vaxxinity, Inc.*
5.1	Opinion of Cravath, Swaine & Moore LLP*
10.1	Form of Indemnification Agreement between Vaxxinity, Inc. and each of its directors and executive officers*
10.2	Form of Registration Rights Agreement*
10.3	Form of Voting Agreement*
10.4	Platform License Agreement, dated as of August 5, 2021, among Vaxxinity, Inc., United Biomedical, Inc., UBI IP Holdings and UBI US Holdings, LLC*
10.5	United Neuroscience 2017 Share Option and Grant Plan+*
10.6	C19 Corp. 2020 Stock Option and Grant Plan+*
10.7	Vaxxinity, Inc. 2021 Stock Option and Grant Plan+*
10.8	Letter agreement by and between United Neuroscience, LLC and Dr. Farshad Guirakhoo, dated May 4, 2020+*
21.1	Subsidiaries of Vaxxinity, Inc.*
23.1	Consent of Armanino LLP*
23.2	Consent of Cravath, Swaine & Moore LLP (contained in its opinion filed as Exhibit 5.1 hereto)*
24.1	Power of attorney (included on the signature page to this registration statement)*

* To be filed by amendment.
\+ Indicates a management contract or compensatory plan, contract or arrangement.

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 , on , 2021.

Vaxxinity, Inc.

By: _____
Name: Mei Mei Hu
Title: Chief Executive Officer and President

Signatures and Powers of Attorney

Each of the undersigned officers and directors of Vaxxinity, Inc. hereby severally constitutes and appoints , and each of them acting alone, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement and any subsequent registration statement filed pursuant to Rule 462 under the Securities Act, and to file the same, with all exhibits thereto and other documents in connection therewith, with the SEC and any applicable securities exchange or securities self-regulatory body, 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 and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or either of them individually, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
By: _____ Mei Mei Hu	President and Chief Executive Officer *(Principal Executive Officer)*	, 2021
By: _____ Martin Doran	Treasurer and Principal Accounting Officer *(Principal Financial Officer and Principal Accounting Officer)*	, 2021
By: _____ Louis Reese	Executive Chairman	, 2021
By: _____ Peter Diamandis	Director	, 2021
By: _____ Gregory R. Blatt	Director	, 2021