Filed Pursuant to Rule 424(b)(5)
Registration No. 333-239366

PROSPECTUS SUPPLEMENT
(To Prospectus dated July 2, 2020)

15,000,000 Shares

Common Stock

We are offering 15,000,000 shares of our common stock.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "PGEN." On January 21, 2021, the last reported sale price of our common stock on the Nasdaq Global Select Market was $9.14 per share.

See "Underwriting" for details and information regarding the compensation to be paid to the underwriters.

Investing in our securities involves significant risks. Please read the information contained in or incorporated by reference under the heading "Risk Factors" beginning on page S-12 of this prospectus supplement, and under similar headings in other documents filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.

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

	PER SHARE	TOTAL
Public offering price	$ 7.50	$112,500,000
Underwriting discounts and commissions(1)	$ 0.45	$ 6,750,000
Proceeds, before expenses, to us	$ 7.05	$105,750,000

(1) We have agreed to reimburse the underwriters for certain expenses. We refer you to "Underwriting" beginning on page S-26 of this prospectus supplement for additional information regarding total underwriting compensation.

Delivery of the shares of common stock is expected to be made on or about January 26, 2021.

We have granted the underwriters an option for a period of 30 days to purchase an additional 2,250,000 shares of our common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be $7,762,500, and the total proceeds to us, before expenses, will be $121,612,500.

Joint Book-Running Managers

Wells Fargo Securities **Stifel**

Lead Manager

JMP Securities

Co-Manager

H.C. Wainwright & Co.

The date of this prospectus supplement is January 21, 2021.

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PROSPECTUS SUPPLEMENT

PROSPECTUS

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a shelf registration statement on Form S-3 (File No. 333-239366) that we filed with the Securities and Exchange Commission, or SEC, on June 22, 2020 and was declared effective by the SEC on July 2, 2020, pursuant to which we may from time to time offer various securities in one or more offerings.

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein or therein. The second part, the accompanying prospectus, including the documents incorporated by reference into the accompanying prospectus, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement and the information contained in the accompanying prospectus or any document incorporated by reference herein or therein filed prior to the date of this prospectus supplement, you should refer to the information in this prospectus supplement; provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference in the accompanying prospectus — the statement in the document having the later date modifies or supersedes the earlier statement.

Neither we nor the underwriters have authorized anyone to provide information different from that contained in this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in this offering. Neither we nor the underwriters take any responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither the delivery of this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in this offering, nor the sale of our common stock means that information contained in this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in this offering, is correct after their respective dates. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference into this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this offering in making your investment decision.

This prospectus supplement does not contain all of the information that is important to you. You should also read and consider the information in the documents to which we have referred you in the sections entitled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" in this prospectus supplement. You should rely only on the information contained or incorporated by reference in this document. You should assume that the information in this prospectus supplement and the accompanying prospectus, as well as the information we have filed with the SEC and incorporated by reference in this document, is accurate only as of its date or the date which is specified in those documents.

We are offering to sell, and seeking offers to buy, and the underwriters are soliciting offers to buy, these securities only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of the securities in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

This prospectus supplement and the information incorporated herein by reference include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference herein are the property of their respective owners.

When we refer to “Precigen,” “we,” “our,” “us,” and the “Company” in this prospectus supplement, we mean Precigen, Inc., unless otherwise specified.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement and the accompanying prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of Precigen and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference in this prospectus supplement and the accompanying prospectus, and the information included in any free writing prospectus that we have authorized for use in connection with this offering, including the information referred to under the heading "Risk Factors" in this prospectus supplement beginning on page S-12.

Our Company

We are a dedicated discovery and clinical-stage biopharmaceutical company advancing the next generation of gene and cell therapies with the overall goal of improving outcomes for patients with significant unmet medical needs. We are leveraging our proprietary technology platforms to develop product candidates designed to target urgent and intractable diseases in our core therapeutic areas of immuno-oncology, autoimmune disorders, and infectious diseases. We have developed an extensive pipeline of therapies across multiple indications within these core focus areas.

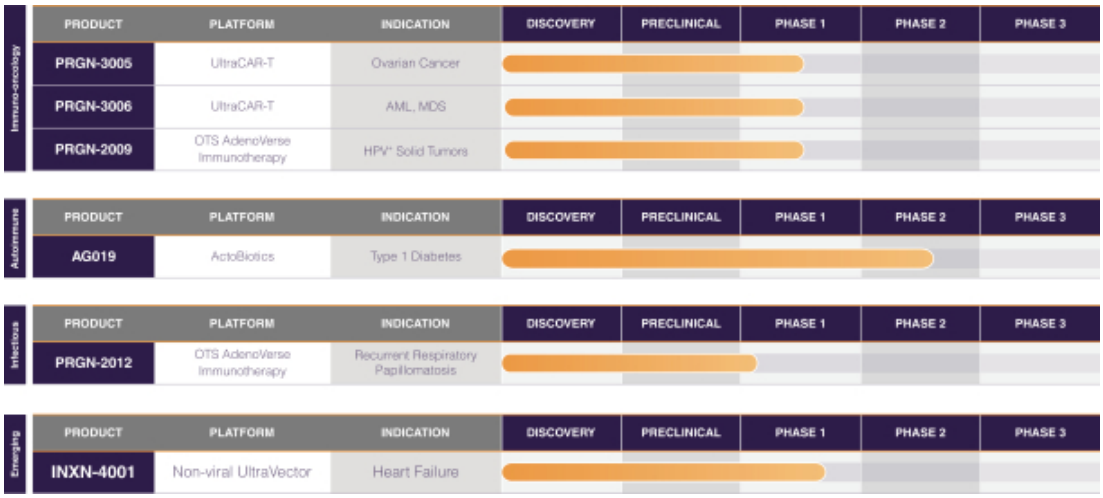
We believe that our array of technology platforms uniquely positions us among other biotechnology companies to advance precision medicine. Precision medicine is the practice of therapeutic product development that takes into account specific genetic variations within populations impacted by a disease to design targeted therapies to improve outcomes for a disease or patient population. Our proprietary and complementary technology platforms provide a strong foundation to realize the core promise of precision medicine by supporting our efforts to construct powerful gene programs to drive efficacy, deliver these programs through viral, non-viral, and microbe-based approaches to drive lower costs, and control gene expression to drive safety. Our therapeutic platforms, including UltraCAR-T®, ActoBiotics®, and AdenoVerse™ Immunotherapy, are designed to allow us to precisely control the level and physiological location of gene expression and modify biological molecules to control the function and output of living cells to treat underlying disease conditions.

We are actively advancing our lead clinical programs, including: PRGN-3005 and PRGN-3006, which are built on our UltraCAR-T platform; PRGN-2009, which is based on our AdenoVerse Immunotherapy platform; and AG019, which is built on our ActoBiotics platform. In addition, we recently announced that the U.S. Food and Drug Administration, or FDA, recently approved an investigational new drug application, or IND, to initiate a Phase 1 trial of PRGN-2012, an investigational AdenoVerse immunotherapy. We also recently completed a Phase 1 clinical trial of INXN-4001 in heart failure patients with outpatient left ventricular assist device, or LVAD.

In addition, our UltraPorator™ device, intended to be a viable scale-up and commercialization solution for rapid, decentralized UltraCAR-T manufacturing, received FDA clearance for manufacturing UltraCAR-T cells in clinical trials, and we have begun dosing patients with UltraCAR-T cells manufactured with UltraPorator in our PRGN-3005 and PRGN-3006 clinical trials. We also have a robust pipeline of preclinical programs that we are pursuing in order to drive long-term value creation. We exercise discipline in our portfolio management by systematically evaluating data from our preclinical programs in order to make rapid "go" and "no go" decisions. Through this process, we believe we can more effectively allocate resources to programs that we believe show the most promise and advance such programs to clinical trials.

Our Product Pipeline

We are leveraging our suite of technologies along with our internal research and development expertise to develop several preclinical and clinical stage programs.



Our Healthcare Subsidiaries

Our healthcare business is operated by our wholly owned subsidiaries PGEN Therapeutics, Inc., or PGEN Therapeutics, Precigen ActoBio, Inc., or ActoBio, and Exemplar Genetics LLC, doing business as Precigen Exemplar, or Exemplar, and also includes our majority ownership interest in Triple-Gene LLC, doing business as Precigen Triple-Gene, or Triple-Gene, as well as equity and royalty interests in therapeutics and therapeutic platforms from companies not controlled by us.

PGEN Therapeutics, Inc.

PGEN Therapeutics (formerly Precigen, Inc.) is a dedicated discovery and clinical stage biopharmaceutical company advancing the next generation of gene and cell therapies using precision technology to target urgent and intractable diseases in immuno-oncology, autoimmune disorders and infectious diseases. PGEN Therapeutics operates as an innovation engine, progressing a preclinical and clinical pipeline of well-differentiated therapies toward clinical proof-of-concept and commercialization.

PGEN Therapeutics is developing therapies primarily built on our UltraCAR-T therapeutics platform and our “off-the-shelf” AdenoVerse Immunotherapy platform. Through our UltraCAR-T therapeutics platform, we are able to precision-engineer UltraCAR-T cells to produce a homogeneous cell product that simultaneously co-expresses antigen-specific chimeric antigen receptor, or CAR, kill switch, and our proprietary membrane-bound interleukin-15, or mbIL15, genes in any genetically modified UltraCAR-T cell. Our rapid and decentralized proprietary manufacturing process allows us to manufacture these UltraCAR-T cells overnight at a medical center’s current good manufacturing practices facility and reinfuse the patient the following day after gene transfer. This process improves upon current approaches to CAR-T manufacturing, which require extensive *ex vivo* expansion following viral vector transduction to achieve clinically relevant cell numbers that we believe can result in the exhaustion of CAR-T cells prior to their administration, limiting their potential for persistence in patients. We have developed a proprietary electroporation device, UltraPorator, designed to further

streamline and ensure the rapid and cost-effective manufacturing of UltraCAR-T therapies. The UltraPorator system includes proprietary hardware and software solutions and potentially represents major advancements over current electroporation devices by significantly reducing the processing time and contamination risk. We recently introduced our vision for a new UltraCAR-T library approach, which is intended to transform the personalized cell therapy landscape for cancer patients. Our goal is to develop and validate a library of non-viral plasmids to target tumor-associated antigens. Enabled by what we believe to be design and manufacturing advantages of UltraCAR-T, coupled with the capabilities of the UltraPorator system, we are working to empower cancer centers to deliver personalized, autologous UltraCAR-T treatment with overnight manufacturing to any cancer patient. Based on the patient's cancer indication and biomarker profile, one or more non-viral plasmids would be selected from the library to build a personalized UltraCAR-T treatment. After initial treatment, this approach has the potential to allow for redosing of UltraCAR-T targeting the same or new tumor-associated antigens based on the treatment response and the changes in antigen expression of the patient's tumor. We believe that the combination of our advanced UltraVector® DNA construction platform and the ease of overnight manufacturing gives this library approach a proprietary advantage over traditional T-cell therapies. UltraPorator is intended to be a viable scale-up and commercialization solution for rapid, decentralized UltraCAR-T manufacturing. Our AdenoVerse Immunotherapy platform utilizes a library of proprietary adenovectors for the efficient gene delivery of therapeutic effectors, immunomodulators, and vaccine antigens. We believe that our proprietary gorilla adenovectors, part of the AdenoVerse technology, have superior performance characteristics as compared to current competition, including standard human adenovirus serotype 5, rare human adenovirus types and other non-human primate adenovirus types.

Our most advanced programs within PGEN Therapeutics include: (i) PRGN-3005, a first-in-class autologous CAR-T therapy that utilizes our UltraCAR-T platform to simultaneously express a CAR targeting the unshed portion of Mucin 16 antigen, mbIL15, and kill switch genes, which is in a Phase 1/1b clinical trial for the treatment of advanced ovarian, fallopian tube and primary peritoneal cancer; (ii) PRGN-3006, a first-in-class autologous CAR-T therapy that utilizes our UltraCAR-T platform to express a CAR to target CD33 (also known as Siglec-3), mbIL15 and a kill switch for better precision and control, which is in a Phase 1/1b clinical trial for the treatment of relapsed or refractory acute myeloid leukemia, or AML, higher-risk myelodysplastic syndromes, or MDS, and chronic myelomonocytic leukemia, or CMML; and (iii) PRGN-2009, a first-in-class, "off-the-shelf" investigational immunotherapy designed to activate the immune system to recognize and target human papillomavirus-positive, or HPV+, solid tumors. PRGN-2009 leverages our UltraVector and AdenoVerse platforms to optimize HPV type 16 and type 18 antigen design for delivery via a proprietary gorilla adenovector with a large genetic payload capacity and the ability for repeat administrations. PRGN-2009 is in a Phase 1/2 clinical trial for patients with HPV-associated cancers in collaboration with the National Cancer Institute, or NCI, pursuant to a cooperative research and development arrangement, or CRADA. In addition, we recently announced that the FDA recently approved an IND to initiate a Phase 1 trial of PRGN-2012, an investigational AdenoVerse immunotherapy. We continue to enroll patients in the Phase 1/1b trial of PRGN-3005 and Phase 1/1b trial of PRGN-3006 and announced preliminary data from these trials in December 2020. We also continue to enroll patients in Phase 1 portion of ongoing Phase 1/2 trial of PRGN-2009 and announced preliminary data from this trial in January 2021. See "Recent Developments" below.

In addition to our clinical programs, PGEN Therapeutics has a robust preclinical pipeline that includes UltraCAR-T therapeutics for various cancers, "off-the-shelf" AdenoVerse immunotherapeutics for infectious diseases, an AdenoVerse cytokine therapy for solid tumors, and a multifunctional therapeutic for solid tumors.

Precigen ActoBio, Inc.

ActoBio is pioneering a proprietary class of microbe-based biopharmaceuticals that enable expression and local delivery of disease-modifying therapeutics. We refer to these microbe-based biopharmaceuticals as ActoBiotics. Our ActoBiotics platform is a unique delivery platform precisely tailored for specific disease

modification via local delivery directly to the relevant tissue. ActoBiotics combine the advantages of highly selective protein-based therapeutic agents with local delivery by the well-characterized and food-grade bacterium *Lactococcus lactis*, or *L. lactis*. ActoBiotics can be delivered orally in a capsule, through an oral rinse, or in a topical solution. We believe ActoBiotics have the potential to provide superior safety and efficacy via the sustained release of appropriate quantities of select therapeutic agents as compared to injectable biologics, while reducing the side effects commonly attributed to systemic delivery and corresponding peaks in concentration.

ActoBio's most advanced pipeline candidate is AG019, a first-in-class disease modifying antigen-specific immunotherapy for the prevention, delay, or reversal of type 1 diabetes mellitus, or T1D. AG019 is currently in a Phase 1b/2a clinical trial for the treatment of early-onset T1D. The Phase 1b portion of the study evaluates the safety and tolerability of AG019 monotherapy administered as a single dose and repeated daily doses in adult and adolescent patients. The Phase 2a portion of the study investigates the safety and tolerability of AG019 in combination with teplizumab (PRV-031). In August 2020, we announced that the primary endpoint of assessing safety and tolerability in the Phase 1b monotherapy portion of the study was met, and that preliminary results at six months after AG019 monotherapy treatment initiation showed an encouraging trend in C-peptide levels, a biomarker for T1D disease progression. Recruitment in the Phase 2a portion of the trial is ongoing. Additional preliminary data from the ongoing Phase 1b/2a clinical trial were announced in December 2020. See "Recent Developments" below.

Precigen Triple-Gene

Triple-Gene is a clinical stage gene therapy company focused on developing advanced treatments for complex cardiovascular diseases. Triple-Gene's approach is to develop a holistic treatment for heart failure through improvements in angiogenesis, calcium homeostasis-associated cellular energetics, reductions in inflammatory signals, and the activation/recruitment of stem cells to support heart remodeling. Triple-Gene's most advanced candidate, INXN-4001, is a non-viral triple-effector plasmid based on our UltraVector platform designed for constitutive expression of human S100A1, SDF-1a, and VEGF-165 genes to address multiple pathways of heart failure. A Phase 1 trial to evaluate safety and feasibility of INXN-4001 via retrograde coronary sinus infusion in heart failure patients with outpatient LVAD was recently completed. Six-month follow-up data from the Phase 1 trial of INXN-4001 announced in August 2020 demonstrated that the study met the primary endpoints to evaluate safety and feasibility for INXN-4001.

Precigen Exemplar

Exemplar is committed to enabling the study of life-threatening human diseases through the development of MiniSwine Yucatan miniature pig research models and services, as well as enabling the production of cells and organs in its genetically engineered swine for regenerative medicine applications. Historically, researchers have lacked animal models that faithfully represent human diseases. As a result, a sizeable barrier has blocked progress in the discovery of human disease mechanisms; novel diagnostics, procedures, devices, prevention strategies and therapeutics; and the ability to predict in humans the efficacy of those next-generation procedures, devices, and therapeutics. Exemplar's MiniSwine models are genetically engineered to exhibit a wide variety of human disease states, which provides a more accurate platform to test the efficacy of new medications and devices.

Partnered Programs

We also are engaged in a number of collaborations, pursuant to which our platforms are being used to advance additional product candidates. We have partnered with Castle Creek Biosciences, Inc. (formerly Fibrocell Science, Inc.), or Castle Creek, to advance product candidates D-Fi (debcoemagene autoficel), formerly designated FCX-007, for the treatment of recessive dystrophic epidermolysis bullosa, or RDEB, and FCX-013

for the treatment of localized scleroderma. In October 2020, Castle Creek announced the dosing of the first patient in the ongoing Phase 3 trial of D-Fi and the dosing of the first patient in the ongoing Phase 1/2 trial of FCX-013. The FDA has granted Orphan Drug designation to D-Fi for the treatment of Dystrophic Epidermolysis Bullosa, which includes RDEB. In addition, D-Fi has been granted Rare Pediatric Disease designation, Fast Track designation and Regenerative Medicine Advanced Therapy designation by the FDA for treatment of RDEB. The FDA has granted Orphan Drug designation to FCX-013 for the treatment of localized scleroderma. In addition, FCX-013 has been granted Rare Pediatric Disease designation and Fast Track designation for the treatment of moderate to severe localized scleroderma. Pursuant to the collaboration, we licensed our technology platforms to Castle Creek for use in certain specified fields and in exchange we received and were entitled to certain access fees, milestone payments, royalties, and sublicensing fees related to the development and commercialization of product candidates. In March 2020, we and Castle Creek terminated the original collaboration agreement by mutual agreement, with the parties agreeing that FCX-007 and FCX-013 would be treated as "Retained Products" under the terms of the original agreement. Castle Creek retains a license to continue to develop and commercialize the Retained Products within the field of use for so long as Castle Creek continues to pursue such development and commercialization, and we are also entitled to certain royalties with respect to the Retained Products. We are also required to perform certain drug product manufacturing activities related to the Retained Products.

Our Non-Healthcare Businesses

While our primary focus is in healthcare, we also own the following non-healthcare businesses:

Trans Ova Genetics, L.C.

Trans Ova Genetics, L.C., or Trans Ova, is internationally recognized as a provider of industry-leading bovine reproductive technologies. Trans Ova offers bovine embryo transfer technologies, in addition to other advanced reproductive technologies, including *in vitro* fertilization, or IVF, sexed-semen, genetic preservation, and cloning. Through extensive research programs and applied science, Trans Ova has developed and implemented new technologies that, we believe, have helped to move the science of bovine genetic improvement forward. We and Trans Ova continue to evaluate the optimal means to utilize these technology assets and Trans Ova's broad customer base and deep industry knowledge to maximize the value of the business.

MBP Titan LLC

Through the first quarter of 2020, we operated MBP Titan, LLC, or MBP Titan, as our standalone subsidiary comprising our Methane Bioconversion Platform, or MBP, and our associated technologies, personnel, and facilities. We previously announced that the market uncertainty driven by the COVID-19 pandemic and the state of the energy sector raised significant challenges for the strategic alternatives we have been pursuing for the MBP platform in the near term. As a result, we suspended MBP Titan's operations while preserving certain key MBP intellectual property and have terminated most of the personnel. We are in the process of disposing of certain of MBP Titan's remaining assets and obligations.

Recent Developments

UltraCAR-T Clinical Trials and UltraPorator System

On December 15, 2020, we announced preliminary data from our Phase 1/1b clinical trial of PRGN-3005 for the treatment of advanced ovarian, fallopian tube, and primary peritoneal cancer and our Phase 1/1b clinical trial of PRGN-3006 for the treatment of relapsed or refractory AML, higher-risk MDS and CMML. In both cases, the treatments were well-tolerated and the findings included the evidence of expansion and persistence of UltraCAR-T cells, which was encouraging to us.

Patients in the Phase 1 dose escalation trial of PRGN-3005 will receive either intraperitoneal, or IP, or intravenous administration of PRGN-3005 without prior lymphodepletion in order to assess the safety and maximum tolerated dose, or MTD. Enrollment is currently ongoing in the IP arm of Phase 1 trial. Preliminary data presented on December 15, 2020 from the first six patients treated with PRGN-3005, who were treated at the two lowest dose levels in the IP arm without prior lymphodepletion, showed that PRGN-3005 was well-tolerated, with no dose-limiting toxicities, neurotoxicities or cytokine release syndromes reported. We observed expansion and persistence of PRGN-3005 UltraCAR-T cells across both dose levels that was encouraging to us. In addition, three patients (50%) experienced regression in target tumor burden and two patients (33%) achieved stable disease according to RECIST v.1.1 criteria at their restaging evaluation. Dose escalation is ongoing in the IP arm at a third dose level, and a multicenter expansion phase of this trial is planned in 2021 at the MTD.

In the initial dose escalation phase of the Phase 1/1b clinical trial of PRGN-3006, patients are receiving a PRGN-3006 infusion either without prior lymphodepletion or following lymphodepleting chemotherapy. The primary objective of this trial is to assess the safety of PRGN-3006 and determine the MTD, and the purpose of the dual-arm treatment is to test whether expression of mbIL15 on PRGN-3006 can promote UltraCAR-T cell expansion and persistence without the need for lymphodepletion and to improve the overall safety profile of the treatment. As of November 10, 2020, the cutoff date for the results, six patients had been treated at one of two dose levels in the no lymphodepletion arm of the trial, and three patients had been treated at the lowest dose level in the lymphodepletion arm. We observed expansion and persistence of PRGN-3006 UltraCAR-T cells in both arms and across the dose levels tested that was encouraging to us. In addition, PRGN-3006 was well-tolerated, with no dose limiting toxicities and no neurotoxicity. Transient grade 1 to 3 cytokine release syndrome was reported in two patients, which was resolved without intervention. There was low incidence of treatment-related adverse events and serious adverse events and Grade 3 or greater treatment-emergent adverse events included hematologic events, decreased electrolytes, and infections. This trial continues to enroll patients, and an expansion phase is planned at the MTD for both the lymphodepletion and no lymphodepletion arms.

Earlier, in November 2020, we announced that we and our clinical partners had successfully dosed the first patients with UltraCAR-T cells manufactured using the UltraPorator system in the ongoing PRGN-3005 and PRGN-3006 trials. These trials have continued to proceed using cells manufactured with UltraPorator. We believe we have demonstrated the feasibility of rapid, decentralized UltraCAR-T manufacturing in these ongoing clinical trials as evidenced by 100% manufacturing success to date in both trials.

ActoBio AG019 Clinical Trial

On December 15, 2020, we announced additional data from our ongoing Phase 1b portion and initial preliminary data from the Phase 2a portion of our ongoing Phase 1b/2a clinical trial of AG019 for the treatment of early-onset T1D. The additional data from the Phase 1b monotherapy portion of the trial showed that AG019 continued to be well-tolerated, with no discontinuations due to treatment-emergent adverse events. From the perspective of clinical activity, this data showed that 58% of adult patients (7 of 12) showed stabilization of C-peptide levels during the first six months of treatment and slower decline in C-peptide levels after being treated for 12 months as compared to treatment with placebo. In addition, a mechanistic analysis performed by an independent research group found the induction of antigen-specific tolerance in conjunction with the reduction of disease-specific T cell responses for adult patients after three months of treatment with AG019. We believe these results indicate the potential of AG019 to preserve insulin production in early-onset T1D through AG019's capacity to induce antigen-specific immune modulation. Data from the Phase 2a combination portion with teplizumab showed that the combination was well-tolerated. This data showed that 70% of adult patients (7 of 10) experienced stabilization of C-peptide levels after six months of treatment with a trend toward higher C-peptide levels as compared to baseline levels. Mechanistic data were consistent with the data shown in the monotherapy trial, which we believe indicates the effect may be attributed to AG019. We believe preliminary results in the combination trial point to the potential to boost or prolong teplizumab-induced metabolic effects. No dose-related adverse events or serious adverse events were reported in either portion of this trial.

PRGN-2009 Clinical Trial

On January 13, 2021, we announced preliminary data from the ongoing Phase 1/2 clinical trial of PRGN-2009 in patients with HPV-associated cancers. The Phase 1 portion of this trial is evaluating the safety and response of PRGN-2009 alone and in combination with M7824 (bintrafusp alfa), a novel investigational fusion protein. Enrollment in the Phase 1 monotherapy dose escalation arm of this trial is complete, and enrollment in the Phase 1 combination arm has been initiated. All patients in the monotherapy arm have received multiple PRGN-2009 administrations to date, and PRGN-2009 has been well-tolerated by these patients with no dose-limiting toxicities. In addition, preliminary analysis of peripheral blood mononuclear cells from three patients treated at the initial dose level show an increase in HPV type 16- or HPV type 18-specific T-cell response, and an increase in the magnitude and breadth of immune response has been shown after repeat administration of PRGN-2009. PRGN-2009 is being developed in collaboration with the National Cancer Institute pursuant to a CRADA.

PRGN-2012 Clinical Trial

On January 5, 2021, we announced that the FDA has approved the IND to initiate a Phase 1 clinical trial of PRGN-2012, an investigational AdenoVerse immunotherapy, in adult patients with recurrent respiratory papillomatosis, or RRP, a rare, difficult-to-treat and sometimes fatal neoplastic disease of the respiratory tract caused by HPV type 6 or HPV type 11. PRGN-2012 uses our gorilla adenovector technology to elicit immune responses against cells infected with HPV type 6 or HPV type 11. In preclinical models, PRGN-2012 has shown robust HPV type 6- and HPV type 11-specific T-cell response in RRP patient samples *in vitro*. The initial Phase 1 dose escalation trial will study up to four injections of PRGN-2012 as an adjuvant immunotherapy following standard-of-care surgical removal of visible papillomatosis disease, with the primary objective of determining safety and tolerability and the recommended Phase 2 dose of PRGN-2012. PRGN-2012 is being developed in collaboration with the Center for Cancer Research at NCI through a CRADA.

PRGN-2013

In 2021, we plan to initiate IND-enabling studies for PRGN-2013, an investigational AdenoVerse immunotherapy, in chronic hepatitis B virus, or HBV, infection, which can cause serious health problems, including liver damage, cirrhosis, liver cancer, and death. Preclinical studies of PRGN-2013 showed that mice treated with PRGN-2013 saw (i) a more significant cytotoxic T-cell response against more HBV epitopes and (ii) decreased plasma levels of HBsAg, the key marker of chronic HBV infection, in mice, each as compared to treatment with a competitor vaccine candidate.

COVID-19 Impact

COVID-19 has had and continues to have an extensive impact on the global health and economic environments. At Precigen, the health and safety of our employees is of the utmost importance. Our essential employees are practicing appropriate safety measures, including social distancing and use of personal protective equipment. These efforts have permitted us to continue to advance our programs, with the ultimate goal of benefiting patients.

Commencing in the second half of March 2020, our healthcare business began to experience delays to certain of our clinical trials as a result of COVID-19. For example, starting in March 2020, ActoBio temporarily suspended the last cohort of the Phase 1b/2a clinical trial for AG019 as a proactive measure to protect the welfare and safety of patients, caregivers, clinical site staff, our employees, and contractors. The temporary suspension of the AG019 trial was voluntary and was not related to any patient safety issues in the study. The voluntary suspension of the AG019 trial was lifted in June 2020, and the study is recruiting patients again. Additionally,

from April to May 2020, enrollment of new patients in our PRGN-3005 Phase 1 trial was temporarily suspended due to a mandated hold on certain early and late-stage clinical trials at the Fred Hutchinson Cancer Research Center in Seattle that was instituted in light of the COVID-19 pandemic. Recruitment resumed in the PRGN-3005 trial in May 2020. At this time, we do not expect that these suspensions will result in a significant overall delay. Furthermore, uncertainty regarding the duration and severity of the ongoing pandemic may adversely impact our clinical as well as preclinical pipeline candidates in the future. Notwithstanding the foregoing, as the COVID-19 pandemic continues to evolve, we may experience additional delays to our clinical trials, including related to enrollment, site closures, reduced availability of key personnel, or our ability to receive the necessary approvals from the FDA or other regulatory agencies to advance our programs.

We are also closely monitoring the impact of COVID-19 on other aspects of our business. While Trans Ova and Exemplar have not experienced any significant impacts as a result of COVID-19 at this time, we are unable to reliably quantify or estimate what the future impacts may be. In addition, we have taken certain steps with respect to our operations of MBP Titan as a result of the impacts of the COVID-19 pandemic and other factors. See “Our Non-Healthcare Businesses – MBP Titan LLC” above.

Given the dynamic nature of these circumstances, the full impact of the COVID-19 pandemic on our ongoing business, results of operations, and overall financial performance cannot be reasonably estimated at this time. For more information regarding the risks associated with COVID-19 and its impact on our business, see “Risk Factors – Risks Related to Our Business.”

Selected Legal Proceedings Updates

In the course of our business, we are involved in litigation and legal matters, including governmental investigations.

In October 2020, three purported shareholder class action lawsuits, captioned *Abadilla v. Precigen, Inc., F/K/A Intrexon Corp., et al*, *Chen v. Precigen, Inc. F/K/A Intrexon Corp., et al.*, and *Seppen v. Precigen, Inc. F/K/A Intrexon Corp., et al.*, were filed in the U.S. District Court for the Northern District of California on behalf of certain purchasers of the Company’s common stock. The complaints name as defendants the Company and certain of its current officers and, in one matter, a former officer. The plaintiffs’ claims track the allegations in the SEC’s previously disclosed administrative order. The plaintiffs seek compensatory damages, interest and an award of reasonable attorney’s fees and costs, and have filed motions to consolidate these claims. In December 2020, a derivative shareholder action, captioned *Edward D. Wright, derivatively on behalf of Precigen, Inc. F/K/A Intrexon Corp. v. Alvarez et al.*, was filed in the Circuit Court for Fairfax County in Virginia on behalf of Precigen, Inc. The complaint names as defendants current directors and certain officers. The plaintiff’s claims track the allegations in the SEC’s previously disclosed administrative order. The plaintiff seeks damages, forfeiture of benefits received by defendants, and an award of reasonable attorneys’ fees and costs. The Company intends to defend the lawsuits vigorously; however there can be no assurances regarding the ultimate outcome of these lawsuits.

As previously disclosed, in March 2012, Trans Ova was named as a defendant in a licensing and patent infringement suit brought by XY, LLC, or XY, alleging that Trans Ova’s sale of semen-sorting products and services breached a 2004 licensing agreement and infringed on XY’s patents related to semen sorting. Trans Ova counterclaimed for breach of contract, antitrust, and patent invalidity. After a jury trial, appeal, and various proceedings and developments that have been previously disclosed, Trans Ova and XY settled the dispute in December 2020. As part of that settlement, Trans Ova remitted to XY a settlement payment that constituted full payment and satisfaction of the judgment, including pre-judgment interest, post-judgment interest, costs, and all past, current, and future royalty obligations under the judgment. In exchange, XY released and forever discharged Trans Ova from all obligations arising out of the judgment. In addition, XY dismissed with prejudice

its pending appeal. On January 8, 2021, the parties filed a stipulation of case termination with the district court. A second dispute between Trans Ova and XY, which was initiated in December 2016 and relates to a second set of patents asserted by XY against Trans Ova's semen-sorting products and services, continues as previously disclosed. Descriptions of these two disputes and related proceedings are incorporated herein by reference from Note 16 to our Condensed Consolidated Financial Statements in Part I, Item 1 of our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2020.

Corporate Information

We are a Virginia corporation formed in 1998. Our principal executive offices are located at 20374 Seneca Meadows Parkway, Germantown, MD 20876, and our telephone number is (301) 556-9900. Our website address is *www.precigen.com*. The inclusion of our website address in this prospectus is, in each case, intended to be an inactive textual reference only and not an active hyperlink to our website. The information contained in, or that can be accessed through, our website is not incorporated by reference herein and is not part of this prospectus. We make available free of charge on our website Form 10-Ks, Form 10-Qs, Form 8-Ks and amendments to those reports as soon as reasonably practicable after filing with or furnishing to the SEC.

THE OFFERING	
Common stock offered by us	15,000,000 shares.
Option to purchase additional shares	We have granted the underwriters an option for a period of up to 30 days from the date of this prospectus supplement to purchase up to an additional 2,250,000 shares of our common stock.
Common stock to be outstanding after this offering	193,704,151 shares (195,954,151 shares assuming the underwriters exercise in full their option to purchase additional shares).
Use of proceeds	We intend to use the net proceeds from this offering to fund the development of clinical and preclinical product candidates and for working capital and other general corporate purposes. See “Use of Proceeds.”
Risk factors	An investment in our common stock involves a high degree of risk. See “Risk Factors” beginning on page S-12 of this prospectus supplement, and under similar headings in other documents filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.
Nasdaq Global Select Market symbol	PGEN

Outstanding Shares

The number of shares of our common stock to be outstanding after this offering is based on 178,704,151 shares of our common stock outstanding as of September 30, 2020, and excludes:

- 11,379,605 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2020 at a weighted-average exercise price of $15.77 per share and any exercise after that date;
- 1,813,043 shares of our common stock issuable upon the vesting of restricted stock units outstanding as of September 30, 2020 and any settlement after that date;
- 11,732,440 shares of our common stock issuable upon the conversion of our 3.50% convertible senior notes due 2023 outstanding as of September 30, 2020;
- shares of our common stock issuable upon the conversion of a convertible note with an outstanding principal balance of $25 million as of September 30, 2020, which was converted in full into 6,758,400 shares of our common stock on October 7, 2020;
- 133,264 shares of our common stock issuable upon the exercise of outstanding warrants as of September 30, 2020 at a weighted-average exercise price of $28.85 per share;
- 2,117,264 shares of our common stock issued to two entities affiliated with Harvest Capital Strategies, or the Harvest Funds, in connection with an agreement we entered into on December 2, 2020;
- 6,929,362 shares of our common stock available for future issuance under our 2013 Omnibus Incentive Plan, or the 2013 Plan, as of September 30, 2020; and
- 2,432,624 shares of our common stock available for future issuance under our 2019 Incentive Plan for Non-Employee Service Providers, or the 2019 Plan, as of September 30, 2020.

Except as otherwise indicated herein, all information in this prospectus supplement does not assume or give effect to the exercise of the underwriters' option to purchase additional shares in this offering.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider and evaluate all of the information contained in this prospectus and in the documents incorporated by reference in this prospectus before you decide to purchase our common stock. In particular, you should carefully consider and evaluate the risks and uncertainties described in "Part I – Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2019, or the 2019 Annual Report, as updated by "Part II – Item 1A. Risk Factors" of our most recent Quarterly Report on Form 10-Q and any additional risks and uncertainties included or incorporated by reference herein. Additional risks and uncertainties that we are unaware of or that we believe are not material at this time could also materially adversely affect our business, financial condition or results of operations. Any of these risks and uncertainties could materially and adversely affect our business, results of operations and financial condition, which in turn could materially and adversely affect the trading price or value of our common stock. As a result, you could lose all or part of your investment.

This prospectus also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks faced by us described below and elsewhere in this prospectus. See "Special Note Regarding Forward-Looking Statements" for information relating to these forward-looking statements.

Risks Related to our Business

The effects of the COVID-19 pandemic have disrupted, and will likely continue to disrupt, our business operations, which could have a material adverse effect on our results of operations, cash flows, and financial position.

We are closely monitoring the impacts of COVID-19 on all aspects of our business. The operations of our businesses may continue to be adversely impacted by COVID-19, including, for example, if we are unable to secure necessary supplies, including personal protection equipment for our employees. We also rely on third parties for various aspects of our business, including developing some of our product candidates. These third parties may experience similar disruptions or negative impacts to their businesses due to COVID-19, which may result in additional delays or otherwise adversely impact our operations.

Trans Ova, our established bovine genetics company, has not been significantly impacted by disruptions from COVID-19 to date. However, ongoing disruptions from COVID-19 and its cascading effects could mean that the business may be materially adversely affected in the future, including by a decrease in sales or overall demand for our products, the inability of our customers to pay for our services and products, similar negative effects on our suppliers, and disruptions to the global supply chain generally. There have already been a number of initial reports regarding such disruptions to the beef and dairy industry as a result of the COVID-19 pandemic, which impact both Trans Ova's potential customers and its sources of certain resources, such as embryos. While Exemplar, our subsidiary that develops MiniSwine models to enable the study of life-threatening diseases, has not been significantly impacted by disruptions from COVID-19 to date, it could face similar types of challenges, including its customers delaying or refusing shipments because of delays in their research and development operations similar to, or more severe than, the challenges and risks we face with our operations.

In addition to the potential impacts to our operations, we have initiated several precautions to mitigate the spread of the illness across our businesses, which may impact our ability to carry out our business as usual, including additional sanitation and cleaning procedures in our laboratories and other facilities, instituting remote working when possible, and implementing social distancing and staggered worktime requirements for our employees that must work on-site. The increase in remote working may also result in elevated susceptibility to cyber security risks. We have incurred additional costs as a result of these measures and will likely continue to do

so as a result of these and any future measures necessary to ensure the safety of our employees and the continuity of our operations. These measures could also lead to reduced efficiency in our operations.

Several of our subsidiaries are leanly staffed and rely on key personnel to manage operations. The loss of our key scientific staff, personnel, or other key employees, as a result of illness or otherwise, could negatively impact our business and operations, particularly if we are unable to adequately find or train replacements. Certain of our subsidiaries, such as Trans Ova and Exemplar, that operate in industries in which remote working is not possible may be particularly at risk.

Given the dynamic nature of these circumstances, the full impact of the COVID-19 pandemic on our ongoing business, results of operations, and financial performance cannot be reasonably estimated at this time, and it could have a material adverse effect on our results of operations, cash flows, and financial position, including resulting in impairments to goodwill and long-lived assets and additional credit losses.

The COVID-19 pandemic has created significant volatility, uncertainty, and economic disruption that could have an adverse effect on the Company's access to capital on favorable terms.

Our operations have consumed substantial amounts of cash since our inception. We expect to continue to spend substantial amounts to continue the preclinical and clinical development of our current and future programs. We are and will continue to be dependent on public or private financings, new collaborations or licensing arrangements with strategic partners, or additional debt financing sources to fund continuing operations. As the COVID-19 pandemic continues to negatively impact the economy, our future access to capital on favorable terms may be materially impacted. We may not be able to raise sufficient additional funds on terms that are favorable to us, if at all. Given the rapid evolution of the COVID-19 pandemic and the uncertainty surrounding it, its impact to our financial condition, including but not limited to, possible impairment, restructuring, and other changes, cannot be reliably quantified or estimated.

The ongoing COVID-19 pandemic has caused and could continue to cause disruption of the development of our product candidates, which could adversely impact our healthcare business.

In response to the COVID-19 pandemic, ActoBio took the initiative to temporarily suspend the last remaining cohort of the Phase1b/2a trial for AG019 as a proactive measure to protect the welfare and safety of patients, caregivers, clinical site staff, and our employees and contractors. This voluntary suspension was lifted in June 2020, and the study is recruiting patients again. Further, from April to May 2020, enrollment of new patients in our PRGN-3005 Phase 1 trial was temporarily suspended due to a mandated hold on certain early and late-stage clinical trials at the Fred Hutchinson Cancer Research Center in Seattle that was instituted in light of the COVID-19 pandemic. As the COVID-19 pandemic continues to evolve, we may experience delays in the development of our product candidates, including as a result of declines in new patient enrollment for new and existing trials, ability to recruit and retain principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19 if an outbreak occurs in their geography, site closures, reduced availability of other key personnel, availability of supplies, or for other reasons that may be difficult to anticipate. For example, we received IND clearance in 2020 to initiate, and initiated, a Phase 1/2 trial to study PRGN-2009 in participants with HPV+ cancers, but our ability to complete this trial may be delayed or impeded by any of the foregoing factors as a result of the COVID-19 pandemic. Similarly, we recently announced that the FDA has cleared approved our IND application to initiate a Phase 1 clinical trial of PRGN-2012, but our ability to initiate and complete this trial may be delayed or impeded by the COVID-19 pandemic. In addition, the FDA or other regulatory authorities may have their resources diverted to responding to, or otherwise may be disrupted by, the COVID-19 pandemic, which could result in delays of reviews, approvals, and communications with regulatory authorities related to our clinical trials and product candidates. As the focus of our business is on healthcare, disruptions to our clinical trials could result in increased costs, delays in advancing product candidates, or ultimately, termination of clinical trials altogether resulting in a material adverse impact to our overall business.

Furthermore, a failure to achieve meaningful clinical trial results, or even progress toward those results, could have a material adverse effect on the value of our securities and our ability to secure needed additional capital.

Failure to comply with current or future federal, state and foreign laws and regulations and industry standards relating to privacy and data protection laws could lead to government enforcement actions (which could include civil or criminal penalties), private litigation, and/or adverse publicity and could negatively affect our operating results and business.

We or our collaborators may be subject to federal, state and foreign data privacy and security laws and regulations. In the United States, numerous federal and state laws and regulations, including federal health information privacy laws, state data breach notification laws, state health information privacy laws and federal and state consumer protection laws, that govern the collection, use, disclosure and protection of health-related and other personal information could apply to our operations or the operations of our collaborators. Many state legislatures have adopted legislation that regulates how businesses operate online, including measures relating to privacy, data security and data breaches. Laws in all 50 states require businesses to provide notice to customers whose personally identifiable information has been disclosed as a result of a data breach. The laws are not consistent, and compliance in the event of a widespread data breach is costly. Furthermore, California recently enacted the California Consumer Privacy Act, or the CCPA, which became effective on January 1, 2020. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches. Additionally, a new privacy law, the California Privacy Rights Act, or the CPRA, was approved by California voters in the election of November 3, 2020. The CPRA, which will take effect in most material respects on January 1, 2023, modifies the CCPA significantly, potentially resulting in further uncertainty and requiring us to incur additional costs and expenses in an effort to comply.

Foreign data protection laws, including the EU General Data Protection Regulation, or the GDPR, may also apply to health-related and other personal information obtained outside of the United States. The GDPR introduced new data protection requirements in the EU, as well as potential fines for noncompliant companies of up to the greater of €20 million or 4% of annual global revenue. Among other requirements, the GDPR regulates transfers of personal data subject to the GDPR to third countries that have not been found to provide adequate protection to such personal data, including the United States, and the efficacy and longevity of current transfer mechanisms between the EU and the United States remains uncertain. For example, in 2016, the EU and United States agreed to a transfer framework for data transferred from the EU to the United States, called the Privacy Shield, but the Privacy Shield was invalidated in July 2020 by the Court of Justice of the European Union. Further, the vote in the United Kingdom in favor of exiting the EU, referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. The United Kingdom has transposed the GDPR into domestic law with a United Kingdom version of the GDPR that took effect in January 2021, which could expose us to two parallel regimes, each of which potentially authorizes similar fines and other potentially divergent enforcement actions for violations. In addition, it is still unclear whether transfer of data from the European Economic Area to the United Kingdom will remain lawful under GDPR. On December 24, 2020, the United Kingdom and EU entered into a Trade and Cooperation Agreement. The Trade and Cooperation Agreement provides for a transitional period during which the United Kingdom will be treated like an EU member state in relation to processing and transfers of personal data for four months from January 1, 2021. This may be extended by two further months. After such period, the United Kingdom will be a “third country” under the GDPR unless the European Commission adopts an adequacy decision in respect of transfers of personal data to the United Kingdom.

Compliance with U.S. and foreign data protection laws and regulations could require us to take on more onerous obligations in our contracts, restrict our ability to collect, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. Failure by us or our collaborators to comply with U.S. and foreign data protection laws and regulations could result in government enforcement actions (which could include civil or criminal penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects about whom we or our potential collaborators obtain information,

as well as the providers who share this information with us, may contractually limit our ability to use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend, could result in adverse publicity and could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to this Offering

You will experience immediate and substantial dilution in the net tangible book deficit per share of the common stock you purchase in this offering.

The public offering price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock based on the total value of our tangible assets less our total liabilities. Therefore, if you purchase shares of our common stock in this offering at the public offering price of $7.50 per share, you will experience immediate dilution of $7.27 per share, the difference between the price per share you pay for our common stock in this offering and our net tangible book value per share as of September 30, 2020, after giving effect to the issuance of 15,000,000 shares of our common stock in this offering. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. See "Dilution" on page S-20 of this prospectus supplement for a more detailed discussion of the dilution you will incur if you purchase shares of our common stock in this offering.

In addition, as of September 30, 2020, we had outstanding options to acquire 11,379,605 shares of our common stock, outstanding restricted stock units representing 1,813,043 shares of our common stock, outstanding warrants to purchase 133,264 shares of our common stock, outstanding 3.50% convertible senior notes due 2023 convertible into 11,732,440 shares of our common stock, and a convertible note with an outstanding principal balance of $25 million as of September 30, 2020, which was converted in full into 6,758,400 shares of our common stock on October 7, 2020, and we subsequently issued 2,117,264 shares of our common stock to the Harvest Funds in connection with an agreement we entered into on December 2, 2020. The issuance of shares of our common stock upon exercise of the stock options or warrants, vesting of the restricted stock units, or conversion of additional convertible notes would result in dilution to the interests of other holders of our common stock and could adversely affect our stock price.

Substantial future sales or other issuances of our common stock could depress the market for our common stock.

Sales of a substantial number of shares of our common stock, or the perception by the market that those sales could occur, could cause the market price of our common stock to decline or could make it more difficult for us to raise funds through the sale of equity in the future.

In connection with this offering, we and our directors and executive officers have entered into lock-up agreements for a period of 90 days following this offering (which period may be extended under certain circumstances). We and our directors and executive officers may be released from such lock-up agreements prior to the expiration of the lock-up period at the sole discretion of Wells Fargo Securities, LLC and Stifel, Nicolaus & Company, Incorporated (See "Underwriting" beginning on page S-26 of this prospectus supplement). Upon expiration or earlier release of the lock-up, we and our directors, executive officers and certain of our significant stockholders may sell shares into the market, which could adversely affect the market price of shares of our common stock. Future issuances of our common stock or our other equity securities could further depress the market for our common stock. We expect to continue to incur preclinical and clinical development and selling, general and administrative costs, and may need to sell additional equity securities to satisfy our funding requirements. The sale or the proposed sale of substantial amounts of our common stock or our other equity securities may adversely affect the market price of our common stock and our stock price may decline

substantially. Our stockholders may experience substantial dilution and a reduction in the price that they are able to obtain upon sale of their shares. New equity securities issued may have greater rights, preferences or privileges than our existing common stock.

We have broad discretion in the use of the net proceeds of this offering and our cash reserves and, despite our efforts, we may use the net proceeds and our cash reserves in a manner that does not increase the value of your investment.

We currently intend to use the net proceeds from this offering to fund the development of clinical and preclinical product candidates and for working capital and other general corporate purposes. However, we have not determined the specific allocation of the net proceeds among these potential uses. Our management will have broad discretion over the use and investment of the net proceeds of this offering and our cash resources generally, and, accordingly, investors in this offering will need to rely upon the judgment of our management with respect to the use of proceeds and our cash reserves, with only limited information concerning our specific intentions. These proceeds and our cash resources generally could be applied in ways that do not improve our operating results or increase the value of your investment. Please see the section entitled “Use of Proceeds” on page S-19 of this prospectus supplement for further information.

We do not anticipate paying cash dividends, and accordingly, shareholders should rely on stock appreciation for return on their investment.

We have never declared or paid cash dividends on our capital stock. We do not anticipate paying cash dividends in the future and intend to retain all of our future earnings, if any, to finance the operations, development, and growth of our business. As a result, appreciation of the price of our common stock, which may never occur, will provide a return to shareholders. Investors seeking cash dividends should not invest in our common stock. We have twice distributed equity securities of affiliated entities to our shareholders as a special stock dividend, most recently in 2017, but it is possible that we may never declare a special dividend again, and shareholders should not rely upon potential future special dividends as a source of return on their investment.

As of September 30, 2020, Randal J. Kirk controlled approximately 47 percent of our common stock. If our executive officers and directors choose to act together, they may be able to significantly influence our management and operations, acting in their own best interests and not necessarily those of other shareholders.

We have historically been controlled, managed, and principally funded by Randal J. Kirk, our former Chief Executive Officer and current Executive Chairman, and affiliates of Mr. Kirk, including Third Security. As of September 30, 2020, Mr. Kirk and shareholders affiliated with him beneficially owned approximately 47 percent of our voting stock, and our executive officers and directors, as a group, beneficially owned approximately 49 percent of our voting common stock. Mr. Kirk may be able to control or significantly influence all matters requiring approval by our shareholders, including the election of directors and the approval of mergers or other business combination transactions, and he may be able to exert significant influence on other corporate actions as a result of his role as our Executive Chairman and status as a significant shareholder. Further, our executive officers and directors, acting together as shareholders, would be able to significantly influence all matters requiring approval by our shareholders, including the election of directors and the approval of mergers or other business combination transactions, as well as our management and affairs. The interests of this group of shareholders may not always coincide with the interests of other shareholders, and they may act in a manner that advances their best interests and not necessarily those of other shareholders. This concentration of ownership control may:

- delay, defer, or prevent a change in control;
- entrench our management and/or the board of directors; or
- impede a merger, consolidation, takeover, or other business combination involving us that other shareholders may desire.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and accompanying prospectus may contain forward-looking statements, including with respect to our plans, objectives, and expectations for our business, operations, and financial performance and condition. Any statements contained herein or therein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “continue,” “could,” “due,” “estimate,” “expect,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would,” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or similar language. Forward-looking statements include, but are not limited to, statements about:

- our ability to successfully enter new markets or develop product candidates, including the expected timing and results of investigational studies and preclinical and clinical trials, and our research and development programs;
- the timing or likelihood of regulatory filings for any product candidates we develop and our ability to obtain and maintain regulatory approvals for such product candidates for any indication;
- our intentions and ability to successfully commercialize our product candidates;
- the rate and degree of market acceptance of any products developed by us;
- our ability to successfully execute and achieve benefits from our recent leadership transition plan and organizational restructuring;
- our efforts to hold or generate significant operating capital, including through partnering, potential asset sales of our non-healthcare assets, and operating cost reductions;
- our cash position;
- any delays or potential delays to our clinical trials as a result of the COVID-19 pandemic;
- our estimates regarding expenses, future revenue, capital requirements, and our need for additional financing;
- our strategy and overall approach to our business model, including our efforts to focus our business in the healthcare industry;
- our ability to adapt to changes in laws, regulations, and policies;
- our reliance on and the performance of third parties, including exclusive channel collaborations and joint ventures, or JVs;
- competition from existing technologies and products or new technologies and products that may emerge;
- our expectations related to the use of proceeds from our public offerings and other financing efforts;
- actual or anticipated variations in our operating results;
- market conditions in our industry;
- our ability to retain, recruit, and train key personnel, or the loss of key personnel as a result of illness or otherwise;
- our ability to successfully enter into optimal strategic relationships with our subsidiaries and operating companies that we may form in the future;
- the result of litigation proceedings or investigations that we currently face or may face in the future;

- the effects, duration, and severity of the ongoing COVID-19 pandemic and the actions we and others have taken or may take in response; and
- our use of proceeds from this offering.

These statements are based on management's current expectations, estimates, forecasts and projections about our business and industry, are not guarantees of future performance and involve known and unknown risks, uncertainties, and other factors that are in some cases beyond our control and that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements. We discuss many of these risks in greater detail in the section of this prospectus supplement entitled "Risk Factors" and elsewhere in this prospectus supplement and in any other documents incorporated herein (including in the 2019 Annual Report, subsequent quarterly reports on Form 10-Q, and other filings we make with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act). You should read these factors and the other cautionary statements made in this prospectus supplement and accompanying prospectus as being applicable to all related forward-looking statements wherever they appear herein or therein. If one or more of these factors materialize, or if any underlying assumptions prove incorrect, our actual results, levels of activity, performance, or achievements may vary materially from any future results, activity, performance, or achievements expressed or implied by these forward-looking statements. We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they were made. We undertake no obligation to publicly update any forward-looking statements after the date of this prospectus, whether as a result of new information, future events or otherwise, except as required by law.

Before deciding to purchase our securities, you should carefully consider the risk factors discussed and incorporated by reference in this prospectus supplement and the accompanying prospectus and in the registration statement of which this prospectus supplement and the accompanying prospectus form a part.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of 15,000,000 shares of our common stock in this offering will be approximately $105.3 million, or approximately $121.2 million if the underwriters exercise their option to purchase additional shares in full based on the public offering price of $7.50 per share of common stock, after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

We currently intend to use the net proceeds from this offering to fund the development of clinical and preclinical product candidates and for working capital and other general corporate purposes.

The amounts and timing of our use of the net proceeds from this offering will depend on a number of factors, such as the timing and progress of our research and development efforts, the timing and progress of any partnering efforts, technological advances and the competitive environment for our products. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from the sale of the shares of our common stock offered by us hereunder. Accordingly, our management will have broad discretion in the timing and application of these proceeds. Pending application of the net proceeds as described above, we intend to temporarily invest the proceeds in short-term, interest-bearing instruments.

DILUTION

Purchasers of our common stock in this offering will experience immediate dilution to the extent of the difference between the public offering price per share of our common stock and the as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value (deficit) as of September 30, 2020 was approximately $(60.7) million, or $(0.34) per share of our common stock. Net tangible book value (deficit) per share of our common stock is determined by dividing total tangible assets less total liabilities, excluding items such as intangible assets and goodwill, by the aggregate number of shares of our common stock outstanding. Dilution per share to new investors represents the difference between the amount per share paid by purchasers for our common stock in this offering and the as adjusted net tangible book value per share of our common stock immediately following the completion of this offering.

After giving effect to the sale of 15,000,000 shares of our common stock in this offering at the public offering price of $7.50 per share, and after deducting the underwriting discounts and commissions and the estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2020 would have been approximately $44.6 million, or approximately $0.23 per share of our common stock. This represents an immediate increase in net tangible book value of $0.57 per share of our common stock to our existing stockholders and an immediate dilution in net tangible book value of $7.27 per share of our common stock to purchasers in this offering.

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

Public offering price per share		$7.50
Net tangible book value (deficit) per share as of September 30, 2020	$(0.34)	
Increase in net tangible book value per share attributable to purchasers in this offering	$ 0.57	
As adjusted net tangible book value per share immediately after this offering		$0.23
Dilution per share to purchasers in this offering		$7.27

If the underwriters exercise their option in full to purchase additional shares of our common stock in this offering at the public offering price of $7.50 per share, the as adjusted net tangible book value per share after the offering would be $0.31 per share, the increase in the net tangible book value per share to existing stockholders would be $0.65 per share and the dilution to purchasers in this offering would be $7.19 per share.

The above table is based on 178,704,151 shares of our common stock outstanding as of September 30, 2020. Unless specifically stated otherwise, the information in this prospectus supplement is as of September 30, 2020 and excludes:

- 11,379,605 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2020 at a weighted-average exercise price of $15.77 per share and exercise after that date;
- 1,813,043 shares of our common stock issuable upon the vesting of restricted stock units outstanding as of September 30, 2020 and any settlement after that date;
- 11,732,440 shares of our common stock issuable upon the conversion of our 3.50% convertible senior notes due 2023 outstanding as of September 30, 2020;
- shares of our common stock issuable upon the conversion of a convertible note with an outstanding principal balance of $25 million as of September 30, 2020, which was converted in full into 6,758,400 shares of our common stock on October 7, 2020;

- 133,264 shares of our common stock issuable upon the exercise of outstanding warrants as of September 30, 2020 at a weighted-average exercise price of $28.85 per share;
- 2,117,264 shares of our common stock issued to the Harvest Funds in connection with an agreement we entered into on December 2, 2020;
- 6,929,362 shares of our common stock available for future issuance under the 2013 Plan as of September 30, 2020; and
- 2,432,624 shares of our common stock available for future issuance under the 2019 Plan as of September 30, 2020.

Except as otherwise indicated herein, all information in this prospectus supplement does not assume or give effect to the exercise of the underwriters' option to purchase additional shares in this offering.

To the extent that options are exercised, other equity awards vest, new equity awards are issued under the 2013 Plan or the 2019 Plan or pursuant to inducement awards, convertible notes are converted into common stock, or we issue additional shares of common stock or other securities convertible into or exercisable for common stock in the future, there may be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to non-U.S. holders (as defined below) of the ownership and disposition of shares of our common stock issued pursuant to this offering. This discussion does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or foreign tax laws are not discussed. This discussion is based on the Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or IRS, in effect as of the date of this offering. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position regarding the tax consequences of the ownership and disposition of our common stock.

This discussion is limited to non-U.S. holders that acquire our common stock in this offering and hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a non-U.S. holder's particular circumstances. In addition, it does not address consequences relevant to holders subject to particular rules, including, without limitation:

- U.S. expatriates and certain former citizens or long-term residents of the United States;
- persons holding our common stock as part of a straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers or traders in securities;
- corporations that accumulate earnings to avoid U.S. federal income tax;
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code; and
- tax-qualified retirement plans.

If a partnership (including any entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS, UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION, AND UNDER ANY APPLICABLE INCOME TAX TREATY.

For purposes of this discussion, a "non-U.S. holder" is a beneficial owner of our common stock that is neither a U.S. holder nor an entity treated as a partnership for U.S. federal income tax purposes. A "U.S. holder" for this purpose is a person that, for U.S. federal income tax purposes, is:

- an individual who is a citizen or resident of the United States;

- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more U.S. persons (within the meaning of Section 7701(a)(30) of the Code), or (2) has made a valid election under applicable Treasury Regulations to continue to be treated as a U.S. person.

Distributions

We do not anticipate declaring or paying distributions to holders of our common stock in the foreseeable future. However, if we do make distributions on our common stock, such distributions of cash or property will constitute dividends for U.S. federal income tax purposes to the extent of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts distributed to a non-U.S. holder that are not treated as dividends for U.S. federal income tax purposes will constitute a return of capital to the extent of, and will reduce, the non-U.S. holder's adjusted tax basis in its common stock. Any excess amount will be treated as capital gain and will be treated as described below in the section relating to the sale or disposition of our common stock. Because we may not know the extent to which a distribution is a dividend for U.S. federal income tax purposes at the time it is made, for purposes of the withholding rules discussed below we or the applicable withholding agent may treat the entire distribution as a dividend.

Subject to the discussion below on backup withholding and the Foreign Account Tax Compliance Act, or FATCA, dividends paid to a non-U.S. holder of our common stock that are not effectively connected with the non-U.S. holder's conduct of a trade or business within the United States will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty).

Non-U.S. holders may be entitled to a reduction in or an exemption from withholding on dividends as a result of either (a) an applicable income tax treaty or (b) the non-U.S. holder holding our common stock in connection with the conduct of a trade or business within the U.S. and dividends being effectively connected with that trade or business. To claim such a reduction in or exemption from withholding, the non-U.S. holder must provide the applicable withholding agent with a properly executed (a) IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) claiming an exemption from or reduction of the withholding tax under the benefit of an income tax treaty between the United States and the country in which the non-U.S. holder resides or is established, or (b) IRS Form W-8ECI stating that the dividends are not subject to withholding tax because they are effectively connected with the conduct by the non-U.S. holder of a trade or business within the United States, as may be applicable. These certifications must be provided to the applicable withholding agent prior to the payment of dividends and must be updated periodically. Non-U.S. holders that do not timely provide the applicable withholding agent with the required certification, but that qualify for a reduced rate under an applicable income tax treaty, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

If dividends paid to a non-U.S. holder are effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such dividends are attributable), then, although exempt from U.S. federal withholding tax (provided the non-U.S. holder provides appropriate certification, as described above), the non-U.S. holder will be subject to U.S. federal income tax on such dividends on a net income basis at the regular graduated U.S. federal income tax rates. In addition, a non-U.S. holder that is a corporation may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits for the taxable year that are attributable to such dividends, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

Sale or Other Disposition of Common Stock

Subject to the discussions below on backup withholding and foreign accounts, a non-U.S. holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such gain is attributable);
- the non-U.S. holder is a nonresident alien individual present in the U.S. for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes U.S. real property interests, or USRPIs, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above will generally be subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates. A non-U.S. holder that is a foreign corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

A non-U.S. holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on any gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder (even though the individual is not considered a resident of the U.S.) provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we are not currently and do not anticipate becoming a USRPHC. Because the determination of whether we are a USRPHC depends on the fair market value of our USRPIs relative to the fair market value of our other business assets and our non-U.S. real property interests, however, there can be no assurance we are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a non-U.S. holder of our common stock will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market such as the Nasdaq Global Select Market, and such non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the non-U.S. Holder's holding period.

Non-U.S. holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Subject to the discussion below on foreign accounts, a non-U.S. holder will not be subject to backup withholding with respect to distributions on our common stock we make to the non-U.S. holder, provided the applicable withholding agent does not have actual knowledge or reason to know such holder is a U.S. person and the holder certifies its non-U.S. status, such as by providing a valid applicable IRS Form W-8, or other applicable certification. However, information returns generally will be filed with the IRS in connection with any distributions (including deemed distributions) made on our common stock to the non-U.S. holder, regardless of whether any tax was actually withheld. Copies of these information returns may also be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which the non-U.S. holder resides or is established.

Information reporting and backup withholding may apply to the proceeds of a sale or other taxable disposition of our common stock within the U.S., and information reporting may (although backup withholding generally will not) apply to the proceeds of a sale or other taxable disposition of our common stock outside the U.S. conducted through certain U.S.-related financial intermediaries, in each case, unless the beneficial owner certifies under penalty of perjury that it is a non-U.S. holder on an applicable IRS Form W-8, or other applicable form (and the payor does not have actual knowledge or reason to know that the beneficial owner is a United States person) or such owner otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

FATCA

Withholding taxes may be imposed under FATCA on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends (including deemed dividends) paid on our common stock, to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial U.S. owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States owned foreign entities" (each as defined in the Code), and annually report certain information about such accounts. Because we may not know the extent to which a distribution is a dividend for U.S. federal income tax purposes at the time it is made, for purposes of these withholding rules we or the applicable withholding agent may treat the entire distribution as a dividend. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Withholding Agents generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued. Prospective investors should consult their tax advisors regarding the potential application of these withholding provisions. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States. governing FATCA may be subject to different rules.

UNDERWRITING

We are offering the shares of common stock described in this prospectus through a number of underwriters. Wells Fargo Securities, LLC and Stifel, Nicolaus & Company, Incorporated are acting as joint book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with Wells Fargo Securities, LLC and Stifel, Nicolaus & Company, Incorporated on behalf of the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Name	Number of Shares
Wells Fargo Securities, LLC	6,000,000
Stifel, Nicolaus & Company, Incorporated	6,000,000
JMP Securities LLC	1,800,000
H.C. Wainwright & Co., LLC	1,200,000
Total	15,000,000

The underwriters are committed to purchase all the shares of common stock offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of $0.27 per share. After the public offering of the shares, the offering price and other selling terms may be changed by the underwriters. Sales of shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to 2,250,000 additional shares of common stock from us. The underwriters have 30 days from the date of this prospectus to exercise this option. If any shares are purchased with this option, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is $0.45 per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Without exercise of Underwriters' options	With full exercise of Underwriters' option
Per Share	$ 0.45	$ 0.45
Total	$ 6,750,000.00	$ 7,762,500.00

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately $460,000. We have agreed to reimburse the underwriters for all expenses incurred in connection with the registration or qualification of the shares issued in this offering under state or foreign or blue sky laws (in an amount not to exceed $30,000).

A prospectus supplement in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to

allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act of 1933, as amended, or the Securities Act, relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing (other than filings on Form S-8 relating to outstanding company stock plans that are disclosed in the Prospectus), or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any such transaction described in (i) or (ii) is to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of Wells Fargo Securities, LLC and Stifel, Nicolaus & Company, Incorporated for a period of 90 days after the date of this prospectus, other than the shares of our common stock to be sold hereunder; any shares of our common stock issued upon the exercise of options granted under existing company stock plans; any shares of our common stock issued upon the exercise of warrants or conversion of convertible notes outstanding; sales of shares of our common stock pursuant to our existing employee stock purchase plan and grants of equity awards granted under existing company stock plans and the issuance of shares of up to 7% of our outstanding common stock in connection with mergers or acquisitions of businesses, entities, property or other assets, joint ventures or strategic alliances provided that we will have the recipient of any such shares execute lock-up agreements described below.

Our directors and certain of our executive officers, and certain of their affiliates, have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons or entities, with limited exceptions, for a period of 90 days after the date of this prospectus, may not, without the prior written consent of Wells Fargo Securities, LLC and Stifel, Nicolaus & Company, Incorporated, (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors, executive officers, shareholders, managers and members in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant), or publicly disclose the intention to make any offer, sale, pledge or disposition, (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, or (iii) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock.

The restrictions described in the immediately preceding paragraph do not apply to, among other items, transfers or dispositions of shares of common stock:

- in this offering;
- as a bona fide gift or gifts;
- to general or limited partners, members, shareholders, affiliates or wholly owned subsidiaries of the party subject to the lock-up restrictions or any investment fund or other entity controlled or managed by the party subject to the lock-up restrictions;
- to any trust for the direct or indirect benefit of the party subject to the lock-up restrictions or the immediate family of such person in a transaction not involving a disposition for value;

- to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held by the party subject to the lock-up restrictions or the immediate family of such person in a transaction not involving a disposition for value;
- by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the party subject to the lockup restrictions;

provided that in the case of any transfer or distribution pursuant to the second through sixth subclauses above, (i) each transferee, donee or distributee shall sign and deliver a lock-up letter in the form executed by the party subject to the lock up restrictions and (ii) no filing or other public announcement under Section 16(a) of the Exchange Act of 1934, as amended, or the Exchange Act, shall be required or shall be voluntarily made during the restricted period (other than a filing on Form 5 or a required filing on a Schedule 13F or 13G);

- exercise an option to purchase shares of our common stock granted under any stock-based compensation plan utilizing any “cashless” or “net-exercise” provision, provided, that the shares of our common stock issued upon such exercise remain subject to the 90-day restricted period or any extension thereof pursuant to the lock-up agreement; and
- the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of shares of our common stock during the restricted period and (ii) no filing under the Exchange Act or other public announcement shall be required or voluntarily made by or on behalf of the party subject to the lock-up restrictions regarding the establishment of such plan.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

Our common stock is listed on the Nasdaq Global Select Market under the symbol “PGEN.”

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be “covered” shorts, which are short positions in an amount not greater than the underwriters’ option to purchase additional shares referred to above, or may be “naked” shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the

common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on the Nasdaq Global Select Market, in the over-the-counter market or otherwise.

The underwriters and their respective affiliates are full-service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Selling Restrictions

General

Other than in the United States, no action has been taken by us or the underwriter that would permit a public offering of the securities offered by this prospectus supplement and the accompanying prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement and the accompanying prospectus may not be offered or sold, directly or indirectly, nor may this prospectus supplement and the accompanying prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement and the accompanying prospectus come are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement and the accompanying prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Notice to prospective investors in European Economic Area

In relation to each Member State of the European Economic Area (each a "Relevant State"), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares 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 shares 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 Article 2 of the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the Prospectus Regulation), subject to obtaining the prior consent of the Representatives 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 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 and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and the Company

that it is a "qualified investor" within the meaning of Article 2(e) of the Prospectus Regulation. In the case of any shares being offered to a financial intermediary as that term is used in the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant State to qualified investors as so defined or in circumstances in which the prior consent of the underwriters has been obtained to each such proposed offer or resale. For the purposes of this provision, the expression an "offer to the public" in relation to the shares 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 to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

Notice to prospective investors in United Kingdom

No shares have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the shares which has been approved by the Financial Conduct Authority, except that the shares may be offered to the public in the United Kingdom at any time:

(a) to any legal entity which is a qualified investor as defined under Article 2 of the U.K. Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the U.K. Prospectus Regulation), subject to obtaining the prior consent of the Representatives for any such offer; or

(c) in any other circumstances falling within Section 86 of the FSMA.

provided that no such offer of the shares shall require the Company or any underwriter to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the U.K. Prospectus Regulation. For the purposes of this provision, the expression an "offer to the public" in relation to the shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares and the expression "U.K. Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018. In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the U.K. Prospectus Regulation) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the "Order," and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (e) of the Order (all such persons together being referred to as "relevant persons") or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons. Any person in the UK who is not a relevant person must not act on or rely upon this document or any of its contents.

Notice to prospective investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in

accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws. Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to prospective investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (FINMA), and the offer of shares 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.

Notice to prospective investors in the United Arab Emirates

The shares have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the Dubai Financial Services Authority.

Notice to prospective investors in Australia

This prospectus:

- does not constitute a disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) (the "Corporations Act");
- has not been, and will not be, lodged with the Australian Securities and Investments Commission ("ASIC"), as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document for the purposes of the Corporations Act; and
- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, available under section 708 of the Corporations Act ("Exempt Investors").

The shares may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the shares may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any shares may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the shares, you represent and warrant to us that you are an Exempt Investor.

As any offer of shares under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the shares you undertake to us that you will not, for a period of 12 months from the date of issue of the shares, offer, transfer, assign or otherwise alienate those shares to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Notice to prospective investors in Japan

The shares have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares nor any interest therein may be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any "resident" of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

Notice to prospective investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (the "SFO") of Hong Kong and any rules made thereunder; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) (the "CO") or which do not constitute an offer to the public within the meaning of the CO. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made thereunder.

Notice to prospective investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons 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 are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- 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
- 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 contract (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:
    - to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
    - where no consideration is or will be given for the transfer;
    - where the transfer is by operation of law;
    - as specified in Section 276(7) of the SFA; or
    - as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Singapore SFA Product Classification—Solely for the purposes of its obligations pursuant to sections 309B(1)(a) and 309B(1)(c) of the SFA, the Company has determined, and hereby notifies all relevant persons (as defined in Section 309A of the SFA) that the shares are "prescribed capital markets products" (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Hogan Lovells US LLP, Baltimore, Maryland. The underwriters are being represented in connection with this offering by Davis Polk & Wardwell LLP, New York, New York.

EXPERTS

The financial statements incorporated in this prospectus supplement by reference from the 2019 Annual Report for the year ended December 31, 2019, and the effectiveness of the Company's internal control over financial reporting, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

The financial statements as of December 31, 2018 and for each of the two years in the period ended December 31, 2018 incorporated in this prospectus supplement by reference to the 2019 Annual Report have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements, and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements, and other information about issuers, such as us, who file electronically with the SEC. The address of that website is *www.sec.gov*. We make available, free of charge, on our website at *www.precigen.com*, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to such reports as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the SEC.

Information on or accessible through our website is not incorporated by reference herein and is not part of this prospectus.

This prospectus supplement and accompanying prospectus are part of a registration statement that we have filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained through the SEC's website, as provided above, or from us, as provided in the section of this prospectus entitled "Incorporation by Reference." Certain documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement or documents incorporated by reference in the registration statement. Statements in this prospectus supplement and accompanying prospectus about these documents are summaries and each statement is subject, and qualified in all respects by reference, to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for each of the documents incorporated by reference in this prospectus is 001-36042. The documents incorporated by reference into this prospectus contain important information that you should read.

This prospectus supplement and accompanying prospectus incorporate by reference the documents set forth below that have previously been filed with the SEC (other than those documents or the portions of those documents not deemed to be filed):

- the 2019 Annual Report, filed with the SEC on March 2, 2020, including the information incorporated therein by reference from our definitive proxy statement for our 2020 Annual Meeting of Shareholders filed on April 29, 2020;
- our quarterly reports on Form 10-Q for the quarters ended March 31, 2020, June 30, 2020 and September 30, 2020, filed with the SEC on May 11, 2020, August 10, 2020 and November 9, 2020, respectively;
- our current reports on Form 8-K filed with the SEC on January 2, 2020, January 7, 2020, February 4, 2020 (as amended on February 6, 2020), February 6, 2020, June 4, 2020, June 19, 2020, September 25, 2020, September 25, 2020, October 9, 2020 and December 2, 2020; and
- the description of our common stock contained in our registration statement on Form 8-A filed with the SEC on September 24, 2018, including any amendment or report filed for the purpose of updating such description, including Exhibit 4.5 to the 2019 Annual Report.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including those filed after the date of the initial registration statement of which this prospectus is part and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed above or filed in the future, that are not deemed “filed” with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

You may request, orally or in writing, a copy of any or all of the documents incorporated herein by reference. These documents will be provided to you at no cost, by contacting: Precigen, Inc., 20374 Seneca Meadows Parkway, Germantown, Maryland 20876. Our corporate phone number is (301) 556-9900. In addition, copies of any or all of the documents incorporated herein by reference may be accessed at our website at *www.precigen.com*. The information on or accessible through our website is not incorporated by reference herein and is not a part of this prospectus.

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PROSPECTUS

Precigen, Inc.

$500,000,000

Common Stock
Preferred Stock
Debt Securities
Warrants
Rights
Stock Purchase Contracts
Units

We may offer and sell up to $500,000,000 in the aggregate of the securities identified above from time to time in one or more offerings. This prospectus provides you with a general description of the securities we may offer and sell and the general manner in which they may be offered.

Each time we offer securities pursuant to this prospectus, we will provide one or more supplements to this prospectus or free writing prospectuses containing specific information about the offering and the terms of the securities being sold. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus, the applicable prospectus supplement, the information incorporated herein and therein by reference, and any free writing prospectus before you invest in any of our securities.

We may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, dealers, and agents, or directly to purchasers, or through a combination of these methods. The names of any underwriters, dealers or agents involved in the sale of any of the securities and the terms of the arrangements with them will be set forth in the applicable prospectus supplement or free writing prospectus. See the sections of this prospectus entitled “About this Prospectus” and “Plan of Distribution” for more information. No securities may be sold without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE THE SECTION OF THIS PROSPECTUS ENTITLED “Risk Factors” ON PAGE 5 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.

Our common stock is listed on the Nasdaq Global Select Market under the symbol “PGEN.” On June 19, 2020, the last reported sale price of our common stock on the Nasdaq Global Select Market was $4.99 per share.

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

The date of this prospectus is July 2, 2020.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the U.S. Securities and Exchange Commission, or the SEC, using a "shelf" registration process. By using a shelf registration statement, we may sell securities from time to time and in one or more offerings up to an aggregate dollar amount of $500,000,000 of securities as described in this prospectus. Each time that we offer and sell securities, we will provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable. Before purchasing any securities, you should carefully read this prospectus, the applicable prospectus supplement, and any applicable free writing prospectuses, together with the additional information described in the sections of this prospectus entitled "Where You Can Find More Information" and "Incorporation by Reference."

We have not authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus, any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We will not make an offer to sell or solicit an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus and the applicable prospectus supplement is accurate only as of the date on its respective cover, that the information appearing in any applicable free writing prospectus is accurate only as of the date of that free writing prospectus, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations, and prospects may have changed since those dates.

This prospectus, the information incorporated herein by reference, and any prospectus supplement or free writing prospectus contain or may contain references to trademarks, service marks, and trade names owned by us or other companies. Solely for convenience, trademarks, service marks, and trade names, including logos, artwork, and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks, service marks, and trade names. We do not intend our use or display of other companies' trade names, service marks, or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies. Other trademarks, trade names, and service marks appearing in this prospectus are the property of their respective owners.

When we refer to "we," "our," "us," and the "Company" in this prospectus, we mean Precigen, Inc., unless otherwise specified. When we refer to "you," we mean the potential holders of the applicable series of securities.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements, and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements, and other information about issuers, such as us, who file electronically with the SEC. The address of that website is www.sec.gov. We make available, free of charge, on our website at www.precigen.com, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to such reports as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the SEC.

Information on or accessible through our website is not incorporated by reference herein and does not form a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we have filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained through the SEC's website, as provided above, or from us, as provided in the section of this prospectus entitled "Incorporation by Reference." Certain documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement or documents incorporated by reference in the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is subject, and qualified in all respects by reference, to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters.

INCORPORATION BY REFERENCE

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC (other than those documents or the portions of those documents not deemed to be filed):

- our annual report on Form 10-K for the year ended December 31, 2019, filed with the SEC on March 2, 2020, or the 2019 Annual Report, including the information incorporated therein by reference from our definitive proxy statement for our 2020 Annual Meeting of Shareholders filed on April 29, 2020;
- our quarterly report on Form 10-Q for the quarter ended March 31, 2020, filed with the SEC on May 11, 2020;
- our current reports on Form 8-K filed with the SEC on January 2, 2020, January 7, 2020, February 4, 2020 (as amended on February 6, 2020), February 6, 2020, June 4, 2020, and June 19, 2020; and
- the description of our Common Stock contained in our Registration Statement on Form 8-A filed with the SEC on September 24, 2018, including any amendment or report filed for the purpose of updating such description, including Exhibit 4.5 to the 2019 Annual Report.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, prior to the termination of this offering, including those filed after the date of the initial registration statement of which this prospectus is part and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed above or filed in the future, that are not deemed "filed" with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

We will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request of such person, a copy of any or all of the documents incorporated by reference in this prospectus, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into such documents. Requests may be made in writing or by telephone at:

Precigen, Inc.
20374 Seneca Meadows Parkway
Germantown, Maryland 20876
(301) 556-9900

THE COMPANY

We are a dedicated discovery and clinical-stage biopharmaceutical company advancing the next generation of gene and cell therapies with the overall goal of improving outcomes for patients with significant unmet medical needs. We are leveraging our proprietary technology platforms to develop product candidates designed to target urgent and intractable diseases in our core therapeutic areas of immuno-oncology, autoimmune disorders, and infectious diseases. We have developed an extensive pipeline of therapies across multiple indications within these core focus areas.

We believe that our array of technology platforms uniquely position us among other biotechnology companies to advance precision medicine. Precision medicine is the practice of therapeutic product development that takes into account specific genetic variations within populations impacted by a disease to design targeted therapies to improve outcomes for a disease or patient population. Our proprietary and complementary technology platforms provide a strong foundation to realize the core promise of precision medicine by supporting our efforts to construct powerful gene programs to drive efficacy, deliver these programs through viral, non-viral, and microbe-based approaches to drive lower costs, and control gene expression to drive safety. Our therapeutic platforms, including UltraCAR-T, ActoBiotics, and AdenoVerse Immunotherapy, allow us to precisely control the level and physiological location of gene expression and modify biological molecules to control the function and output of living cells to treat underlying disease conditions.

We are actively advancing our lead programs, including: PRGN-3005 and PRGN-3006, which are built on our UltraCAR-T platform; AG019, which is built on our ActoBiotics platform; and INXN-4001, a non-viral triple-effector plasmid DNA, which is built on our UltraVector platform. In addition, the FDA recently cleared the Investigational New Drug application to initiate a Phase 1/2 trial to study PRGN-2009 in participants with human papillomavirus-positive cancers. We also have a robust pipeline of preclinical programs that we are pursuing in order to drive long-term value creation.

Our healthcare business is operated by our wholly-owned subsidiaries PGEN Therapeutics, Inc., Precigen ActoBio, Inc., and Exemplar Genetics LLC, doing business as Precigen Exemplar, and also includes our majority ownership interest in Triple-Gene LLC, doing business as Precigen Triple-Gene, as well as equity and royalty interests in therapeutics and therapeutic platforms from companies not controlled by us. While our primary focus is in healthcare, we continue to have non-healthcare businesses, including our established bovine genetics company, Trans Ova Genetics, L.C.

We are a Virginia corporation formed in 1998 and our principal executive offices are located at 20374 Seneca Meadows Parkway, Germantown, MD 20876, and our telephone number is (301) 556-9900. Our website address is www.precigen.com. Information on or accessible through our website is not incorporated by reference herein and does not form a part of this prospectus.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus and the applicable prospectus supplement involves significant risks. You should carefully consider the risk factors incorporated by reference to the 2019 Annual Report, our quarterly report on Form 10-Q filed with the SEC on May 11, 2020, and any subsequent reports we file with the SEC after the date of this prospectus, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in the applicable prospectus supplement and any applicable free writing prospectus before making a decision about investing in our securities. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business, financial condition, and results of operations. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, the applicable prospectus supplement and any free writing prospectus may contain forward-looking statements, including with respect to our plans, objectives, and expectations for our business, operations, and financial performance and condition. Any statements contained herein or therein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “continue,” “could,” “due,” “estimate,” “expect,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would,” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or similar language. Forward-looking statements include, but are not limited to, statements about:

- our ability to successfully enter new markets or develop product candidates, including the expected timing and results of investigational studies and preclinical and clinical trials, and our research and development programs;
- the timing or likelihood of regulatory filings for any product candidates we develop and our ability to obtain and maintain regulatory approvals for such product candidates for any indication;
- our intentions and ability to successfully commercialize our product candidates;
- the rate and degree of market acceptance of any products developed by us;
- our ability to successfully execute and achieve benefits from our recent leadership transition plan and organizational restructuring;
- our efforts to hold or generate significant operating capital, including through partnering, potential asset sales of our non-healthcare assets, and operating cost reductions;
- our cash position;
- any delays or potential delays to our clinical trials as a result of the COVID-19 pandemic;
- our estimates regarding expenses, future revenue, capital requirements, and our need for additional financing;
- our strategy and overall approach to our business model, including our efforts to focus our business in the healthcare industry;
- our ability to adapt to changes in laws, regulations, and policies;
- our reliance on and the performance of third parties, including exclusive channel collaborations and joint ventures;
- competition from existing technologies and products or new technologies and products that may emerge;
- our expectations related to the use of proceeds from our public offerings and other financing efforts;
- actual or anticipated variations in our operating results;
- market conditions in our industry;
- our ability to retain, recruit, and train key personnel, or the loss of key personnel as a result of illness or otherwise;
- our ability to successfully enter into optimal strategic relationships with our subsidiaries and operating companies that we may form in the future;
- the result of litigation proceedings or investigations that we currently face or may face in the future;

- the effects, duration, and severity of the ongoing COVID-19 pandemic and the actions we and others have taken or may take in response; and
- our intended use of the proceeds from sales of securities by us.

These statements are based on management's current expectations, estimates, forecasts and projections about our business and industry, are not guarantees of future performance and involve known and unknown risks, uncertainties, and other factors that are in some cases beyond our control and that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements. We discuss many of these risks in greater detail in the section of this prospectus entitled "Risk Factors" and elsewhere in this prospectus and any related free writing prospectus, and in any other documents incorporated herein or therein (including in our most recent annual report on Form 10-K, subsequent quarterly reports on Form 10-Q, and other filings we make with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act). You should read these factors and the other cautionary statements made in this prospectus, the applicable prospectus supplement, and any free writing prospectus as being applicable to all related forward-looking statements wherever they appear herein or therein. If one or more of these factors materialize, or if any underlying assumptions prove incorrect, our actual results, levels of activity, performance, or achievements may vary materially from any future results, activity, performance, or achievements expressed or implied by these forward-looking statements. We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they were made. We undertake no obligation to publicly update any forward-looking statements after the date of this prospectus, whether as a result of new information, future events or otherwise, except as required by law.

You should read this prospectus, the applicable prospectus supplement 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 our forward-looking statements by the foregoing cautionary statements.

USE OF PROCEEDS

Unless we specify otherwise in a prospectus supplement, we intend to use the net proceeds from sales of securities by us for general corporate purposes. These purposes may include clinical trials, research and development expenditures, expenditures to build our development and commercialization capabilities, capital expenditures, working capital, repayment or redemption of existing indebtedness, and any other corporate purpose. As of the date of this prospectus, we cannot specify with certainty all of the particular uses of the net proceeds from the sale of securities under this prospectus or the amounts to be used for such purposes. Accordingly, we will retain broad discretion over the use of such proceeds. Pending the use of the net proceeds described above, we plan to invest any net proceeds from sales of securities by us in a variety of capital preservation investments, including money market funds and U.S. government debt securities. We will not receive proceeds from sales of securities by persons other than us except as may otherwise be stated in an applicable prospectus supplement.

DESCRIPTION OF CAPITAL STOCK

The following description summarizes certain information about our capital stock. The summary does not purport to be complete and is subject, and qualified in its entirety by reference, to our amended and restated articles of incorporation, or articles of incorporation, and our amended and restated bylaws, or bylaws, each of which is incorporated by reference as an exhibit to the registration statement of which this prospectus is a part, and the applicable provisions of Virginia law.

General

Our authorized capital stock consists of 400,000,000 shares of common stock, no par value per share, and 25,000,000 shares of preferred stock, no par value per share, all of which shares of preferred stock are undesignated. As of May 31, 2020, we had 172,190,152 shares of common stock outstanding and held of record by approximately 288 shareholders. The actual number of shareholders is greater than this number of record holders and includes shareholders who are beneficial owners but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include shareholders whose shares may be held in trust by other entities. All outstanding shares of common stock are fully paid and nonassessable. There are no shares of preferred stock outstanding.

Common Stock

Voting rights; Dividends; Liquidation

Holders of our common stock are entitled to:

- cast one vote for each share on all matters submitted to a vote of our shareholders, including the election of directors. Holders of our common stock do not have cumulative voting rights in the election of directors;
- receive dividends if and when dividends are declared by our board of directors out of assets legally available for the payment of dividends, subject to preferential rights of outstanding shares of preferred stock, if any; and
- in the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, after payment of our debts and other liabilities and making provision for the holders of outstanding shares of preferred stock, if any, to share equally and ratably in the remainder of our assets.

Registration Rights

In September 2018, our wholly owned subsidiary Precigen ActoBio, Inc., or ActoBio, issued convertible promissory notes that provide the holders with certain registration rights for shares of our common stock issuable upon conversion thereof. If ActoBio pays any of its obligations under the notes in shares of our common stock, ActoBio is required to cause us to use commercially reasonable efforts to register the resale of such shares by the holders and to maintain the effectiveness of such registration until one year after the noteholder’s demand or ActoBio’s election to pay.

Other Rights and Preferences

Holders of our common stock have no preemptive, redemption, conversion, or subscription rights and there are no sinking fund provisions applicable to our common stock. The rights, powers, preferences, and privileges of holders of common stock are subject to, and may be impaired by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Our board has the authority to designate and issue from time to time one or more series of preferred stock without shareholder approval. Our board may fix and determine the preferences, limitations, and relative rights of each series of preferred stock issued. Because our board has the power to establish the preferences and rights of each series of preferred stock, it may afford the holders of any series of preferred stock preferences and rights, voting or otherwise, senior to the rights of holders of our common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of holders of common stock until our board determines the specific rights of the holders of preferred stock. However, the effects might include:

- restricting dividends on our common stock;
- diluting the voting power of our common stock;
- impairing liquidation rights of our common stock; or
- delaying or preventing a change in control of us without further action by our shareholders.

Anti-Takeover Effects of Provisions of our Articles of Incorporation and Bylaws and of Virginia Law

Our articles of incorporation, bylaws, and Virginia law contain provisions that may have the effect of impeding the acquisition of control of us by means of a tender offer, a proxy contest, open market purchases, or otherwise in a transaction not approved by our board of directors. These provisions are designed to reduce, or have the effect of reducing, our vulnerability to coercive takeover practices and inadequate takeover bids. The existence of these provisions could limit the price that investors might otherwise pay in the future for shares of common stock. In addition, these provisions make it more difficult for our shareholders to remove our board of directors or management, should they choose to do so.

Articles of Incorporation and Bylaws

Undesignated preferred stock. Our articles of incorporation authorize our board to establish one or more series of preferred stock and to determine, with respect to any series of preferred stock, the preferences, rights, and other terms of such series. See “Preferred Stock” above for additional information. Under this authority, our board could create and issue a series of preferred stock with rights, preferences or restrictions that have the effect of discriminating against an existing or prospective holder of our capital stock as a result of such holder beneficially owning or commencing a tender offer for a substantial amount of our common stock. One of the effects of authorized but unissued and unreserved shares of preferred stock may be to render it more difficult for, or to discourage an attempt by, a potential acquirer to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management. The issuance of shares of preferred stock may have the effect of delaying, deferring or preventing a change in control of our Company without any action by our shareholders.

Qualification and election of directors. Our bylaws provide that to be eligible to be a nominee for election to our board of directors, a person must submit a written questionnaire regarding his or her background and qualifications and must agree to other representations as set forth in our bylaws. In addition, we have adopted a director resignation policy. Our bylaws provide that, in uncontested director elections (i.e., an election where the number of nominees is not greater than the number of directors to be elected), a nominee for director will be elected to the board of directors if the votes cast for such nominee’s election exceed the votes cast against such nominee’s election. However, directors will be elected by a plurality of the votes cast at any meeting of the shareholders for which (i) the Secretary receives a notice that a shareholder has nominated a person for election to the board of directors in compliance with the advance notice requirements for shareholder nominees for director set forth in the bylaws, and (ii) such nomination has not been withdrawn by such shareholder on or prior to the 10th day preceding the date we first mail the notice of meeting for such meeting to the shareholders (i.e., if there is a contested director election). If directors are to be elected by a plurality of the votes cast, the

shareholders may withhold votes, but will not be permitted to vote against a nominee. Our Corporate Governance Guidelines provide that any nominee for director in an uncontested election who receives a greater number of shareholder votes cast against his or her election than votes for his or her election must promptly tender his or her resignation to the board of directors for consideration. The Nominating and Governance Committee will then evaluate the best interests of the Company and will recommend to the board of directors whether to accept or reject the tendered resignation. Following the board of directors' receipt of this recommendation and determination as to whether to accept the resignation, we will disclose the board of directors' decision and an explanation of how the decision was reached.

Board vacancies; removal. Our articles of incorporation provide that any vacancy occurring on our board of directors may be filled by a majority of directors then in office, even if less than a quorum.

Special meetings of shareholders. Our bylaws provide that a special meeting may be called by a vote of shareholders representing in the aggregate not less than 25 percent of the total number of shares of stock entitled to vote on the matter to be brought before the proposed special meeting, and that shareholders may only conduct business at special meetings of shareholders that was specified in the notice of the meeting.

Advance notification of shareholder nominations and proposals. Our bylaws establish advance notice procedures with respect to shareholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board.

Exclusive forum provision. Our bylaws provide that unless we consent in writing to the selection of an alternative forum, the United States District Court for the Eastern District of Virginia, Alexandria Division, or in the event that court lacks subject matter jurisdiction to hear such action, the Circuit Court of the County of Fairfax, Virginia, will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action for breach of duty to the Company or our shareholders by any current or former officer or other employee or agent or director of the Company, (iii) any action against the Company or any current or former officer or other employee or agent or director of the Company arising pursuant to any provision of the Virginia Stock Corporation Act (as it may be amended from time to time) or our articles of incorporation or our bylaws (as either may be amended from time to time), or (iv) any action against the Company or any current or former officer or other employee or agent or director of the Company governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring or holding any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our bylaws. It is possible that a court of law could rule that the choice of forum provision contained in our bylaws is inapplicable or unenforceable if it is challenged in a proceeding or otherwise.

Virginia Anti-takeover Statutes

Affiliated transactions statute. Virginia law contains provisions governing affiliated transactions. In general, these provisions prohibit a Virginia corporation from engaging in affiliated transactions with any holder of more than 10 percent of any class of its outstanding voting shares, or an interested shareholder, for a period of three years following the date that such person became an interested shareholder unless:

- a majority of (but not fewer than two) disinterested directors of the corporation and the holders of two-thirds of the voting shares, other than the shares beneficially owned by the interested shareholder, approve the affiliated transaction; or
- before or on the date the person became an interested shareholder, a majority of disinterested directors approved the transaction that resulted in the shareholder becoming an interested shareholder.

Affiliated transactions subject to this approval requirement include mergers, share exchanges, material dispositions of corporate assets not in the ordinary course of business, any dissolution of the corporation proposed by or on behalf of an interested shareholder or any reclassification, including reverse stock splits,

recapitalizations or mergers of the corporation with its subsidiaries, which increases the percentage of voting shares owned beneficially by an interested shareholder by more than five percent.

Virginia law permits a corporation to exempt itself from this statutory provision by placing a statement to that effect in its articles of incorporation. Our articles of incorporation do not specifically address the Virginia statute regarding affiliated transactions; therefore, we are subject to this provision.

Control share acquisitions statute. Virginia law also contains provisions relating to control share acquisitions, which are transactions causing the voting strength of any person acquiring beneficial ownership of shares of a Virginia public corporation to meet or exceed certain threshold percentages (20 percent, 33 $^{1}/_{3}$ percent or 50 percent) of the total votes entitled to be cast for the election of directors. Shares acquired in a control share acquisition have no voting rights unless:

- the voting rights are granted by a majority vote of all outstanding shares entitled to vote in the election of directors, other than those held by the acquiring person or any officer or employee director of the corporation; or
- the articles of incorporation or bylaws of the corporation provide that these Virginia law provisions do not apply to acquisitions of its shares.

The acquiring person may require that a special meeting of the shareholders be held within 50 days of the corporation's receipt of the acquiring person's request to consider the grant of voting rights to the shares acquired in the control share acquisition. If voting rights are not granted and the corporation's articles of incorporation or bylaws permit, the acquiring person's shares may be repurchased by the corporation, at its option, at a price per share equal to the acquiring person's cost. Virginia law grants dissenters' rights to any shareholder who objects to a control share acquisition that is approved by a vote of disinterested shareholders and that gives the acquiring person control of a majority of the corporation's voting shares.

Our articles of incorporation provide that the statutory provisions governing control share acquisitions do not apply to our Company; therefore, we are not subject to this provision.

Authorized but Unissued Shares

The authorized but unissued shares of common stock and preferred stock are available for future issuance without shareholder approval, subject to any limitations imposed by the Nasdaq Stock Market LLC listing rules. These additional shares may be used for a variety of corporate finance transactions, acquisitions, and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could make it more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger, or otherwise.

Listing on the Nasdaq Global Select Market

Our common stock is listed on the Nasdaq Global Select Market under the symbol "PGEN".

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

DESCRIPTION OF DEBT SECURITIES

The following description summarizes certain terms and conditions of the debt securities that we will offer and sell pursuant to this prospectus. When we offer to sell a particular series of debt securities, we will describe the specific terms and conditions of the series in a prospectus supplement to this prospectus. We will also indicate in the applicable prospectus supplement whether the general terms and conditions described in this prospectus apply to the series of debt securities. The terms and conditions of the debt securities of a series may be different in one or more respects from the terms and conditions described below. If so, those differences will be described in the applicable prospectus supplement. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the indenture, which may be amended or supplemented from time to time, that contains the terms of the debt securities.

The following summary of provisions of the indenture does not purport to be complete and is subject, and qualified in its entirety by reference, to the complete text of the indenture, including, but not limited to, definitions therein of certain terms. This summary may not contain all of the information that you may find useful. The terms and conditions of the debt securities of each series will be set forth in those debt securities and in the indenture and in the applicable prospectus supplement.

The form of indenture has been filed as an exhibit to the registration statement of which this prospectus forms a part. A form of each debt security, reflecting the specific terms and provisions of that series of debt securities, will be filed with the SEC in connection with each offering and will be incorporated by reference in the registration statement of which this prospectus forms a part.

General

We may offer the debt securities from time to time in as many distinct series as we may determine. The indenture does not limit the amount of debt securities that we may issue thereunder. We may, without the consent of the holders of the debt securities of any series, issue additional debt securities ranking equally with, and otherwise similar in all respects to, the debt securities of the series (except for the public offering price and the issue date) so that those additional debt securities will be consolidated and form a single series with the debt securities of the series previously offered and sold.

The debt securities of each series will be issued in fully registered form without interest coupons. We currently anticipate that the debt securities of each series offered and sold pursuant to this prospectus will be issued as global debt securities as described under “Global Debt Securities” and will trade in book-entry form only.

Debt securities denominated in U.S. dollars will be issued in denominations of $2,000 and any integral multiple of $1,000 in excess thereof, unless otherwise specified in the applicable prospectus supplement. If the debt securities of a series are denominated in a foreign or composite currency, the applicable prospectus supplement will specify the denomination or denominations in which those debt securities will be issued.

Unless otherwise specified in the applicable prospectus supplement, we will repay the debt securities of each series at 100% of their principal amount, together with any premium and accrued and unpaid interest thereon at maturity, except if those debt securities have been previously redeemed or purchased and cancelled.

Unless otherwise specified in the applicable prospectus supplement, the debt securities of each series will not be listed on any securities exchange.

Provisions of Indenture

A prospectus supplement, the indenture and a supplemental indenture or authorizing resolution of our board of directors (including any related officer’s certificate or Company order), if any, relating to any series of debt

securities being offered will include specific terms relating to the offering. These terms will include some or all of the following:

- the form and title of the debt securities;
- the aggregate principal amount of the debt securities and any limit on the aggregate principal amount, provided, however, that such amount may from time to time be increased by a resolution of our board of directors;
- the price or prices at which the debt securities will be sold;
- the person to whom any interest on a debt security of the series will be payable, if other than the person in whose name that debt security is registered;
- the date or dates on which the principal of the debt securities will be payable;
- the rate or rates (fixed or variable, or combination thereof) at which the debt securities will bear interest, if any, or the method of determining such rate or rates;
- the date or dates on which any such interest shall be payable, the date or dates on which payment of any such interest will commence and the record dates, if any, for such payment date or dates, or the method of determining such date or dates, and the basis upon which interest shall be calculated if other than that of a 360-day year of twelve 30-day months, the right, if any, to extend or defer interest payments and the duration of such extension or deferral;
- any optional or mandatory redemption or repayment option, including any sinking fund, amortization or analogous provisions;
- if other than a minimum denomination equal to $2,000 or an integral multiple of $1,000 in excess thereof, the denominations in which any debt securities of the series will be issuable;
- any special tax implications of the debt securities, including provisions for original issue discount securities, if offered;
- any provisions granting special rights to holders when a specified event occurs;
- the percentage of the principal amount at which the debt securities will be issued and any payments due if the maturity of the debt securities is accelerated;
- any Events of Default or covenants with respect to the debt securities that differ from, or are in addition to, those set forth in the indenture;
- if other than U.S. dollars, the currency or currencies for which the debt securities will be issued or in which the principal thereof, any premium thereon and any interest thereon will be payable;
- provisions regarding the convertibility or exchangeability of the debt securities;
- provisions pertaining to the issuance of debt securities in the form of global debt securities, as described below;
- provisions relating to the satisfaction and discharge of the indenture;
- the form of and conditions to issuance of debt securities issuable in definitive form, other than as described below;
- if other than the trustee, the identity of any other trustee, the registrar for the debt securities and any paying agent;
- whether the debt securities of the series will be guaranteed by any persons and, if so, the identity of such persons, the terms and conditions upon which such debt securities will be guaranteed and, if applicable, the terms and conditions upon which such guarantees may be subordinated to other indebtedness of the respective guarantors;

- whether the debt securities of the series will be secured by any collateral and, if so, the terms and conditions upon which such debt securities will be secured and, if applicable, upon which such liens may be subordinated to other liens securing other indebtedness of us or of any guarantor;
- whether the debt securities will be issued in a transaction exempt from registration under the Securities Act and any restriction or condition on the transferability of the debt securities of such series;
- the exchanges, if any, on which the debt securities may be listed;
- the terms of any right to convert or exchange debt securities of such series into any other securities or property of ours or of any other corporation or person, and the additions or changes, if any, to the indenture with respect to the debt securities of such series to permit or facilitate such conversion or exchange; and
- any other terms not prohibited by the provisions of the indenture.

Global Debt Securities

Certain series of the debt securities may be issued as permanent global debt securities to be deposited with a depositary with respect to that series. Unless otherwise indicated in the applicable prospectus supplement, the following is a summary of the depository arrangements applicable to debt securities issued in permanent global form and for which The Depository Trust Company, or DTC, acts as depositary.

Each global debt security will be deposited with, or on behalf of, DTC, as depositary, or its nominee and registered in the name of a nominee of DTC. Except under the limited circumstances described below, global debt securities are not exchangeable for definitive certificated debt securities.

Ownership of beneficial interests in a global debt security is limited to institutions that have accounts with DTC or its nominee, or participants, or persons that may hold interests through participants. In addition, ownership of beneficial interests by participants in a global debt security will be evidenced only by, and the transfer of that ownership interest will be effected only through, records maintained by DTC or its nominee for a global debt security. Ownership of beneficial interests in a global debt security by persons that hold through participants will be evidenced only by, and the transfer of that ownership interest within that participant will be effected only through, records maintained by that participant. DTC has no knowledge of the actual beneficial owners of the debt securities. Beneficial owners will not receive written confirmation from DTC of their purchase, but beneficial owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the participants through which the beneficial owners entered the transaction. The laws of some jurisdictions require that certain purchasers of securities take physical delivery of such securities in definitive form. Such laws may impair the ability to transfer beneficial interests in a global debt security.

Payments on debt securities represented by a global debt security registered in the name of or held by DTC or its nominee will be made to DTC or its nominee, as the case may be, as the registered owner and holder of the global debt security representing the debt securities. We expect that upon receipt of any payments with respect to a global debt security, DTC will immediately credit accounts of participants on its book-entry registration and transfer system with payments in amounts proportionate to their respective beneficial interests in the principal amount of that global debt security as shown in the records of DTC. Payments by participants to owners of beneficial interests in a global debt security held through those participants will be governed by standing instructions and customary practices, as is now the case with securities held for the accounts of customers in bearer form or registered in “street name,” and will be the sole responsibility of those participants, subject to any statutory or regulatory requirements that may be in effect from time to time.

Neither we, any trustee nor any of our respective agents will be responsible for any aspect of the records of DTC, any nominee or any participant relating to, or payments made on account of, beneficial interests in a

permanent global debt security or for maintaining, supervising or reviewing any of the records of DTC, any nominee or any participant relating to such beneficial interests.

A global debt security is exchangeable for definitive debt securities registered in the name of, and a transfer of a global debt security may be registered to, any person other than DTC or its nominee, only if:

- DTC notifies us that it is unwilling or unable to continue as depositary for that global debt security or at any time DTC ceases to be registered under the Exchange Act, and a successor depositary is not appointed by us within 90 days after our receipt of such notice;
- there shall have occurred and be continuing an event of default under the debt securities and the registrar shall have received a request from the depositary to issue certificated securities;
- we determine in our sole discretion that the global debt security will be exchangeable for definitive debt securities in registered form; or
- as may be provided in any applicable prospectus supplement.

Any global debt security that is exchangeable pursuant to the preceding sentence will be exchangeable in whole for definitive debt securities in registered form, of like tenor and of an equal aggregate principal amount as the global debt security. The definitive debt securities will be registered by the registrar in the name or names instructed by DTC. We expect that these instructions may be based on directions received by DTC from its participants with respect to ownership of beneficial interests in the global debt security.

Except as provided above, owners of the beneficial interests in a global debt security will not be entitled to receive physical delivery of debt securities in definitive form and will not be considered the holders of debt securities for any purpose under the indenture. No global debt security will be exchangeable except for another global debt security of like denomination and tenor to be registered in the name of DTC or its nominee. Accordingly, each person owning a beneficial interest in a global debt security must rely on the procedures of DTC and, if that person is not a participant, on the procedures of the participant through which that person owns its interest, to exercise any rights of a holder under the global debt security or the indenture.

We understand that, under existing industry practices, in the event that we request any action of holders, or an owner of a beneficial interest in a global debt security desires to give or take any action that a holder is entitled to give or take under the debt securities or the indenture, DTC would authorize the participants holding the relevant beneficial interest to give or take that action, and those participants would authorize beneficial owners owning through those participants to give or take that action or would otherwise act upon the instructions of beneficial owners owning through them.

DTC is a limited purpose trust company organized under the laws of the State of New York, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code and a “clearing agency” pursuant to the provisions of Section 17A of the Exchange Act. DTC was created to hold securities of its participants and to facilitate the clearance and settlement of securities transactions among its participants in those securities through electronic book-entry changes in accounts of the participants, thereby eliminating the need for physical movement of securities certificates. DTC’s participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation, or DTCC. DTCC is the holding company for DTC, National Securities Clearance Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, such as banks, brokers, dealers, trust companies and clearing corporations that clear through or maintain a custodial relationship with a participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the SEC. More information about DTC can be found at www.dtcc.com; the information contained on that website is not incorporated in this prospectus or in any prospectus supplement.

Certain Covenants

The indenture sets forth limited covenants that will apply to each series of debt securities issued under the indenture, unless otherwise specified in the applicable prospectus supplement. Under the indenture, we will agree to:

- pay the principal of, and interest and any premium on, the debt securities when due;
- maintain a place of payment;
- deliver an officer's certificate to the trustee within 120 days after the end of each fiscal year regarding our review of compliance with our obligations under the indenture;
- maintain our corporate existence; and
- deposit sufficient funds with any paying agent on or before the due date for any payment of principal, interest or premium.

Consolidation, Merger or Asset Sale

The indenture generally will allow us to consolidate with or merge into any other person, association or entity. The indenture will also allow us to convey, transfer or lease our property and assets as, or substantially as, an entirety to a person, association or entity.

However, we will only consolidate with or merge into any other person, association or entity or convey, transfer or lease our properties and assets as, or substantially as, an entirety according to the terms and conditions of the indenture, including the following requirements:

- (i) we are the surviving person or (ii) the remaining or acquiring person, association or entity is a corporation or partnership organized under the laws of the United States, any state or the District of Columbia and expressly assumes all of our responsibilities and liabilities under the indenture, including the punctual payment of all amounts due on the debt securities and performance of the covenants in the indenture;
- immediately after giving effect to the transaction, no Event of Default, and no event which, after notice or lapse of time or both, would become an Event of Default, as defined below, exists; and
- delivery to the trustee of an officer's certificate and an opinion of counsel, each stating that all related conditions have been satisfied.

The remaining or acquiring person, association or entity will be substituted for us in the indenture with the same effect as if it had been an original party to the indenture. Thereafter, the successor may exercise our rights and powers under the indenture, in our name or in its own name. If we sell or transfer our assets substantially as an entirety, we will be released from all our liabilities and obligations under the indenture and the debt securities. If we lease our assets substantially as an entirety, we will not be released from our obligations under the indenture and the debt securities.

Events of Default

Unless otherwise specified in the applicable prospectus supplement, each of the following events will be an Event of Default under the indenture with respect to any series of debt securities issued under the indenture:

- failure to pay any interest on any debt security of the series when due, continued for 30 days;
- failure to pay principal of (or premium, if any, on) any debt security of the series when due;
- failure to deposit a sinking fund payment when and as due by the terms of a debt security of the series;

- failure to perform or comply with any covenant in the indenture or related supplemental indenture, continued for 90 days after written notice as provided in the indenture;
- certain events in bankruptcy, insolvency or reorganization affecting us; and
- any other Event of Default set forth in the indenture or supplemental indenture relating to the debt securities of that series.

An Event of Default for a particular series of debt securities does not necessarily constitute an Event of Default for any other series of debt securities issued under the indenture. The trustee may withhold notice to the holders of a series of debt securities of any default, except payment defaults of principal or interest or any premium on those debt securities, if it considers such withholding to be in the interest of the holders.

If an Event of Default occurs and is continuing, then the trustee or the holders of 25% in aggregate principal amount of the outstanding debt securities of that series may declare the entire principal amount of the debt securities of that series to be due and payable immediately; provided, however, that the holders of a majority of the aggregate principal amount of the debt securities of that series may, under certain circumstances, rescind and annul the declaration.

Subject to provisions in the indenture relating to its duties in case an Event of Default shall have occurred and be continuing, the trustee will not be under an obligation to exercise any of its rights or powers under the indenture at the request, order or direction of any holders of debt securities then outstanding under the indenture, unless the holders shall have offered to the trustee reasonable indemnity. If such reasonable indemnity is provided, the holders of a majority in aggregate principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any power conferred on the trustee, for any series of debt securities.

Defeasance

Debt securities of a series may be defeased at any time in accordance with their terms and as set forth in the indenture and described briefly below, unless the securities resolutions or supplemental indenture establishing the terms of the series provides otherwise. Any defeasance may terminate all of our obligations (with limited exceptions) with respect to a series of debt securities and the indenture, or legal defeasance, or it may terminate only our obligations under any restrictive covenants which may be applicable to a particular series, or covenant defeasance.

We may exercise our legal defeasance option even though we have also exercised our covenant defeasance option. If we exercise the legal defeasance option with respect to a series of debt securities, that series may not be accelerated because of an Event of Default. If we exercise the covenant defeasance option, that series of debt securities may not be accelerated by reference to any restrictive covenants which may be applicable to that particular series.

To exercise either defeasance option as to a series of debt securities, we must:

- irrevocably deposit in trust with the trustee or another trustee money or U.S. government obligations in an amount to pay and discharge the principal of and any premium and interest on the debt securities on the stated maturities or redemption dates therefor and any mandatory sinking fund payments;
- deliver a certificate from an independent public accountant or financial advisor expressing its opinion that the payments of principal and interest when due on the deposited U.S. government obligations, without reinvestment, plus any deposited money without investment, will provide cash at the times and in the amounts necessary to pay the principal of and premium and interest when due on all debt securities of the series to maturity or redemption, as the case may be, and any mandatory sinking fund payments; and

- comply with certain other conditions, including that there be no Event of Default at the time of deposit or Event of Default due to bankruptcy on or prior to the 90th day after the deposit date. In particular, we must obtain an opinion of tax counsel that the defeasance will not result in recognition of any gain or loss to holders for federal income tax purposes as a result of the deposit.

Discharge

We may discharge all our obligations under the indenture with respect to the notes of any series, other than our obligation to register the transfer of and to exchange notes of that series, when either:

- all outstanding notes of that series (except (i) mutilated, destroyed, lost or stolen notes that have been replaced or paid and notes for whose payment money has been deposited in trust and thereafter repaid to us and (ii) notes for whose payment money has theretofore been deposited in trust or segregated and held in trust by us and thereafter repaid to us or discharged from such trust) have been delivered to the trustee cancelled or for cancellation; or
- all such notes not so delivered for cancellation have either become due and payable or will become due and payable at their stated maturity within one year or are to be called for redemption within one year, and we have deposited with the trustee in trust an amount of cash sufficient to pay the entire indebtedness of such notes, including interest to the stated maturity or applicable redemption date; and
- we have paid all other sums due under the indenture and delivered an officer's certificate and opinion of counsel to the trustee stating that all related conditions have been satisfied.

Modification of the Indenture

Under the indenture, generally we and the trustee may modify our rights and obligations and the rights of the holders with the consent of the holders of not less than a majority in aggregate principal amount of the outstanding debt securities of each series affected by the modification.

No modification of the principal or interest payment terms, no modification reducing the percentage required for any waiver or modifications and no modification impairing the right to institute suit for the enforcement of any payment on debt securities of any series when due, is effective against any holder without its consent.

In addition, we and the trustee may amend the indenture without the consent of any holder of the debt securities to make certain changes, such as:

- curing ambiguities or correcting defects or inconsistencies;
- otherwise adding or changing provisions with respect to matters or questions arising under the indenture relating to a particular series of debt securities that does not adversely affect the rights of any holder in any material respect;
- evidencing the succession of another person to us, and the assumption by that successor of our obligations under the indenture and the debt securities of any series;
- providing for the acceptance of appointment by a successor trustee;
- qualifying the indenture under the Trust Indenture Act, or TIA;
- complying with the rules and regulations of any securities exchange or automated quotation system on which debt securities of any series may be listed or traded or any applicable depositary;
- adding, changing or eliminating provisions relating to a particular series of debt securities to be issued, provided that any such addition, change or elimination (1) shall neither (i) apply to any debt security of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor (ii) modify the rights of the holders of any such debt security with respect to such provision or (2) shall become effective only when there is not such debt security outstanding;

- to establish the form or terms of any debt securities of any series under the indenture; or
- to provide for the issuance of additional debt securities of any series.

No Individual Liability of Officers, Directors, Employees or Stockholders

No director, officer, employee or stockholder, as such, of ours or any of our affiliates will have any personal liability in respect of our obligations under the indenture or the debt securities by reason of his, her or its status as such.

Governing Law

The indenture and all the debt securities will be governed by, and construed in accordance with, the laws of the State of New York.

Regarding the Trustee

The indenture provides that there may be more than one trustee thereunder, each with respect to one or more series of debt securities. If there are different trustees for different series of debt securities, each trustee will be a trustee of a trust or trusts separate and apart from the trust or trusts administered by any other trustee under the indenture. Unless otherwise indicated in any applicable prospectus supplement, any action permitted to be taken by a trustee may be taken by such trustee only with respect to the one or more series of debt securities for which it is the trustee under the indenture. Any trustee under the indenture may resign or be removed with respect to one or more series of debt securities. All payments of principal of, and premium, if any, and interest on, and all registration, transfer, exchange, authentication and delivery (including authentication and delivery on original issuance of the debt securities) of, the debt securities of a series will be effected by the trustee with respect to that series at an office designated by the trustee.

We may maintain corporate trust relationships in the ordinary course of business with the trustee. The trustee shall have and be subject to all the duties and responsibilities specified with respect to the indenture trustee under the TIA. Subject to the provisions of the TIA, the trustee is under no obligation to exercise any of the powers vested in it by the indenture at the request of any holder of debt securities, unless offered satisfactory indemnity by the holder against the costs, expense and liabilities which might be incurred thereby.

Under the TIA, the indenture is deemed to contain limitations on the right of the trustee, should it become a creditor of our company, to obtain payment of claims in some cases or to realize on certain property received in respect of any such claim as security or otherwise. The trustee may engage in other transactions with us. If it acquires any conflicting interest under the TIA relating to any of its duties with respect to the debt securities, however, it must eliminate the conflict or resign as trustee.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of shares of our common stock or preferred stock or of debt securities. We may issue warrants independently or together with other securities, and the warrants may be attached to or separate from any offered securities. Each series of warrants may be issued under a separate warrant agreement to be entered into between us and the investors or a warrant agent. The following description summarizes certain provisions of the warrants and warrant agreements and is subject, and qualified in its entirety by reference, to the complete text of the warrant agreement and warrant certificate applicable to a particular series of warrants. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants.

The particular terms of any issue of warrants will be described in the prospectus supplement relating to the issue. Those terms may include:

- the number of shares of common stock or preferred stock purchasable upon the exercise of warrants to purchase such shares and the price at which such number of shares may be purchased upon such exercise;
- the designation, stated value and terms (including, without limitation, liquidation, dividend, conversion, and voting rights) of the series of preferred stock purchasable upon exercise of warrants to purchase preferred stock;
- the principal amount of debt securities that may be purchased upon exercise of a debt warrant and the exercise price for the warrants, which may be payable in cash, securities or other property;
- the date, if any, on and after which the warrants and the related debt securities, preferred stock or common stock will be separately transferable;
- the terms of any rights to redeem or call the warrants;
- the date on which the right to exercise the warrants will commence and the date on which the right will expire;
- certain United States federal income tax consequences applicable to the warrants; and
- any additional terms of the warrants, including terms, procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of equity warrants will not be entitled:

- to vote, consent or receive dividends;
- to receive notice as shareholders with respect to any meeting of shareholders for the election of our directors or any other matter; or
- to exercise any rights as shareholders of the Company.

Each warrant will entitle its holder to purchase the principal amount of debt securities or the number of shares of preferred stock or common stock at the exercise price set forth in, or calculable as set forth in, the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

A holder of warrant certificates may exchange them for new warrant certificates of different denominations, present them for registration of transfer and exercise them at the corporate trust office of the warrant agent or any

other office indicated in the applicable prospectus supplement. Until any warrants to purchase debt securities are exercised, the holder of the warrants will not have any rights of holders of the debt securities that can be purchased upon exercise, including any rights to receive payments of principal, premium or interest on the underlying debt securities or to enforce covenants in the applicable indenture. Until any warrants to purchase common stock or preferred stock are exercised, the holders of the warrants will not have any rights of holders of the underlying common stock or preferred stock, including any rights to receive dividends or payments upon any liquidation, dissolution or winding up on the common stock or preferred stock, if any.

The description in the applicable prospectus supplement of any warrants that we may offer will not necessarily be complete and will be subject, and qualified in its entirety by reference, to the complete text any applicable warrant agreement and certificate, which will be filed with the SEC.

DESCRIPTION OF RIGHTS

We may issue rights to purchase debt securities, preferred stock, common stock or other securities. These rights may be issued independently or together with any other security offered hereby and may or may not be transferable by the shareholder receiving the rights in such offering. The applicable prospectus supplement may add, update or change the terms and conditions of the rights as described in this prospectus. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete rights agreements and rights certificates that contain the terms of the rights.

The applicable prospectus supplement will describe the specific terms of any offering of rights for which this prospectus is being delivered, including the following:

- the price, if any, per right;
- the exercise price payable for debt securities, preferred stock, common stock, or other securities upon the exercise of the rights;
- the number of rights issued or to be issued to each shareholder;
- the number and terms of debt securities, preferred stock, common stock, or other securities which may be purchased per right;
- the extent to which the rights are transferable;
- any other terms of the rights, including the terms, procedures and limitations relating to the exchange and exercise of the rights;
- the date on which the holder’s ability to exercise the rights shall commence, and the date on which the rights shall expire;
- the extent to which the rights may include an over-subscription privilege with respect to unsubscribed securities; and
- if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of such rights.

Holders may exercise rights as described in the applicable prospectus supplement. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the applicable securities purchased upon exercise of the rights. If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than shareholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby arrangements with one or more underwriters or other purchasers, pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering, as described in the applicable prospectus supplement.

The description in the applicable prospectus supplement of any rights that we may offer will not necessarily be complete and will be subject, and qualified in its entirety by reference, to the applicable rights agreement and rights certificate, which will be filed with the SEC.

DESCRIPTION OF STOCK PURCHASE CONTRACTS

We may issue stock purchase contracts, including contracts obligating holders to purchase from or sell to us, and obligating us to sell to or purchase from the holders, a specified number of shares of common stock, preferred stock or other securities at a future date or dates, which we refer to in this prospectus as stock purchase contracts. The price per share of the securities and the number of shares of the securities may be fixed at the time the stock purchase contracts are issued or may be determined by reference to a specific formula set forth in the stock purchase contracts, and may be subject to adjustment under anti-dilution formulas.

The applicable prospectus supplement will describe the material terms of the stock purchase contracts. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete stock purchase contract agreements and stock purchase contracts that contain the terms of the stock purchase contracts. Certain United States federal income tax considerations applicable to the stock purchase contracts will also be discussed in the applicable prospectus supplement.

The description in the applicable prospectus supplement of any stock purchase contracts that we may offer will not necessarily be complete and will be subject, and qualified in its entirety by reference, to the applicable stock purchase contract, and, if applicable, collateral or depositary arrangements relating to the stock purchase contract, which will be filed with the SEC.

DESCRIPTION OF UNITS

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of any unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes certain features of the units that we may offer under this prospectus. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete unit agreements that contain the terms of the units. If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain United States federal income tax considerations applicable to the units; and
- any other terms of the units and their constituent securities.

The description in the applicable prospectus supplement of any units that we may offer will not necessarily be complete and will be subject, and qualified in its entirety by reference, to the applicable unit agreement, which will be filed with the SEC.

PLAN OF DISTRIBUTION

We may sell the offered securities from time to time:

- through underwriters or dealers;
- through agents;
- directly to one or more purchasers; or
- through a combination of any of these methods of sale.

We will identify the specific plan of distribution, including any underwriters, dealers, agents or direct purchasers and their compensation in the applicable prospectus supplement.

LEGAL MATTERS

Certain legal matters relating to the issuance and sale of the securities offered hereby will be passed upon for us by our counsel, Hogan Lovells US LLP, Baltimore, Maryland. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The financial statements incorporated in this prospectus by reference from the 2019 Annual Report for the year ended December 31, 2019, and the effectiveness of the Company's internal control over financial reporting, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

The financial statements as of December 31, 2018 and for each of the two years in the period ended December 31, 2018 incorporated in this prospectus by reference to the 2019 Annual Report have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

15,000,000 Shares

Precigen, Inc.

Common Stock

PROSPECTUS SUPPLEMENT

Joint Book-Running Managers

Wells Fargo Securities **Stifel**

Lead Manager

JMP Securities

Co-Manager

H.C. Wainwright & Co.