

GENPREX, INC.

FORM 424B5

(Prospectus filed pursuant to Rule 424(b)(5))

Filed 01/24/20

Address	1601 TRINITY STREET, BLDG. B SUITE 3.322 AUSTIN, TX, 78712
Telephone	512-537-7997
CIK	0001595248
Symbol	GNPX
SIC Code	2834 - Pharmaceutical Preparations
Industry	Biotechnology & Medical Research
Sector	Healthcare
Fiscal Year	12/31

PROSPECTUS SUPPLEMENT
(To Prospectus dated October 28, 2019)



7,620,000 Shares of Common Stock

We are offering 7,620,000 shares of our common stock, par value \$0.001 per share, pursuant to this prospectus supplement and the accompanying prospectus and a securities purchase agreement at a price of \$1.05 per share.

Our common stock is listed on The Nasdaq Capital Market under the symbol "GNPX". On January 22, 2020, the last reported sale price of our common stock on The Nasdaq Capital Market was \$1.89 per share.

We have retained A.G.P./Alliance Global Partners as lead placement agent and Joseph Gunnar & Company, LLC to act as co-placement agent (the "placement agents") in connection with this offering. The placement agents have agreed to use their reasonable best efforts to sell the securities offered by this prospectus supplement and the accompanying prospectus. The placement agents are not purchasing or selling any shares offered by this prospectus supplement and the accompanying base prospectus. See "Plan of Distribution" beginning on page S-15 of this prospectus supplement for more information regarding these arrangements.

As of January 22, 2020, the aggregate market value of our outstanding common stock held by non-affiliates was approximately \$34,029,692 based on 20,229,841 outstanding shares of common stock, of which approximately 18,005,128 shares are held by non-affiliates, and a per share price of \$1.89, based upon the closing sale price of our common stock on The Nasdaq Capital Market on January 22, 2020. During the 12 calendar month period that ends on, and includes, the date of this prospectus supplement, we have sold securities (including the securities covered by this prospectus supplement) with an aggregate market value of \$1,497,834.40 pursuant to General Instruction I.B.6 of Form S-3.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page S-9 of this prospectus for a discussion of information that should be considered in connection with an investment in our securities.

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

	Per Share	Total(1)
Public offering price	\$ 1.05	\$ 8,001,000
Placement agent's fees	\$ 0.084	\$ 640,080
Proceeds to us, before expenses	\$ 0.966	\$ 7,360,920

- (1) We have agreed to pay the placement agents an aggregate cash placement fee equal to 8% of the gross proceeds in this offering. We have also agreed to reimburse the placement agent for certain expenses incurred in connection with this offering. For additional information on the placement agent's fees and expense reimbursement, see "Plan of Distribution" beginning on page S-15 of this prospectus supplement.

Delivery of the shares of common stock to investors is expected on or about January 27, 2020.

Lead Placement Agent

A.G.P.

Co-Placement Agent

Joseph Gunnar & Co.

The date of this prospectus supplement is January 23, 2020.

TABLE OF CONTENTS

Prospectus Supplement

<u>About This Prospectus Supplement</u>	S-ii
<u>Cautionary Note Regarding Forward-Looking Statements and Industry Data</u>	S-iii
<u>Prospectus Supplement Summary</u>	S-1
<u>The Offering</u>	S-8
<u>Risk Factors</u>	S-9
<u>Use of Proceeds</u>	S-12
<u>Dividend Policy</u>	S-12
<u>Capitalization</u>	S-13
<u>Dilution</u>	S-14
<u>Description of Common Stock</u>	S-15
<u>Plan of Distribution</u>	S-15
<u>Legal Matters</u>	S-16
<u>Experts</u>	S-16
<u>Where You Can Find More Information</u>	S-17
<u>Incorporation by Reference</u>	S-17

<u>About this Prospectus</u>	5
<u>Summary</u>	6
<u>Risk Factors</u>	14
<u>Special Note Regarding Forward-Looking Statements</u>	15
<u>Use of Proceeds</u>	16
<u>Description of Capital Stock</u>	17
<u>Description of Debt Securities</u>	20
<u>Description of Warrants</u>	24
<u>Description of Units</u>	26
<u>Legal Ownership of Securities</u>	27
<u>Plan of Distribution</u>	29
<u>Legal Matters</u>	31
<u>Experts</u>	31
<u>Where You Can Find More Information</u>	31
<u>Incorporation of Certain Information by Reference</u>	31

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein. The second part, 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 therein filed prior to the date of this prospectus supplement, you should rely on 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.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

You should rely only on the information contained in this prospectus supplement or the accompanying prospectus, or incorporated by reference herein. We have not authorized, and the placement agents have not authorized, anyone to provide you with information that is different. The information contained in this prospectus supplement or the accompanying prospectus, or incorporated by reference herein, is accurate only as of the respective dates thereof, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of our securities. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein, in making your investment decision. 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 by Reference” in this prospectus supplement and in the accompanying prospectus.

We are offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of our 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 our 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.

Unless otherwise mentioned or unless the context requires otherwise, all references in this prospectus supplement to the “Company,” “we,” “us,” “our” and “Genprex” refer to Genprex, Inc., a Delaware corporation, and its subsidiaries.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

This prospectus supplement, the accompanying prospectus and the documents we incorporate by reference herein and therein include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Any statement contained in this prospectus supplement, the accompanying prospectus or in the documents we incorporate by reference herein and therein other than a statement of historical fact, may be a forward-looking statement, including statements regarding our future discovery, development and commercialization efforts, strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management. In some cases, you can identify forward-looking statements by such terms as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “intend,” “might,” “may,” “plan,” “project,” “should,” “target,” “will,” “would” or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- our ability to obtain additional funding to develop our current and potential product candidates;
- the need to obtain regulatory approval of our current and potential product candidates;
- the success of our clinical trials through all phases of clinical development;
- compliance with obligations under intellectual property licenses with third parties;
- any delays in regulatory review and approval of product candidates in clinical development;
- our ability to commercialize our current and potential product candidates;
- market acceptance of our current and potential product candidates;
- competition from existing products or new products that may emerge;
- potential product liability claims;
- our dependence on third-party manufacturers to supply or manufacture our products;
- our ability to establish or maintain collaborations, licensing or other arrangements;
- our ability and third parties’ ability to protect intellectual property rights;
- our ability to adequately support future growth; and
- our ability to attract and retain key personnel to manage our business effectively.

If one or more of these factors materialize, or if any underlying assumptions prove incorrect, our actual results, performance or achievements may vary materially from any future results, performance or achievements expressed or implied by these forward-looking statements.

You should consider these factors and the other cautionary statements made in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference herein and therein as being applicable to all related forward-looking statements wherever they appear in this prospectus supplement, the accompanying prospectus, or the documents incorporated by reference. While we may elect to update forward-looking statements wherever they appear in this prospectus supplement, the accompanying prospectus, or the documents incorporated by reference herein and therein, we do not assume, and specifically disclaim, any obligation to do so, whether as a result of new information, future events or otherwise, unless required by law.

This prospectus summary also includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. All of the market data used in this report involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data. We believe that the information from these industry publications, surveys and studies is reliable. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of important factors, including those risks discussed (i) under the heading “Risk Factors” on page S-9 of this prospectus supplement, (ii) in the section titled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2018, as filed with the SEC on April 1, 2019, as amended on October 16, 2019 (the “Annual Report”), as updated in our quarterly reports on Form 10-Q and (iii) in other filings we make with the SEC from time to time. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

PROSPECTUS SUPPLEMENT SUMMARY

This summary does not contain all of the information that you should consider before investing in our securities. You should read this entire prospectus supplement and the accompanying prospectus carefully, including the financial statements and other information incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision. In addition, please read the "Risk Factors" section of this prospectus supplement beginning on page S-9 and the risk factors contained in our Annual Report.

Company Overview

Genprex™ is a clinical stage gene therapy company developing a new approach to treating cancer, based upon our novel proprietary technology platform, including our initial product candidate, Oncoprex™ immunogene therapy, or Oncoprex, for non-small cell lung cancer (NSCLC). Our platform technologies are designed to administer cancer fighting genes by encapsulating them into nanoscale hollow spheres called nanovesicles, which are then administered intravenously and taken up by tumor cells where they express proteins that are missing or found in low quantities. Oncoprex has a multimodal mechanism of action whereby it interrupts cell signaling pathways that cause replication and proliferation of cancer cells, re-establishes pathways for apoptosis, or programmed cell death, in cancer cells, and modulates the immune response against cancer cells. Oncoprex has also been shown to block mechanisms that create drug resistance.

In January, 2020, we received a United States FDA Fast Track Designation for use of Oncoprex™ in combination with EGFR inhibitor osimertinib (AstraZeneca's Tagrisso®) for the treatment of NSCLC patients with EGFR mutations that progressed after treatment with osimertinib alone. The FDA may award Fast Track Designation if it determines that a product either alone or in combination with one or more products demonstrates the potential to address unmet medical needs for a serious or life-threatening disease or condition. The Fast Track Designation is intended to facilitate the development of and to expedite the review of products that may treat serious and life-threatening conditions so that such product can reach the market expeditiously.

Fast Track drug candidates must show advantages over available therapies, such as superior effectiveness, avoiding serious side effects, improving diagnosis and outcome, decreasing significant toxicity, and the ability to address public health needs. Fast Track Designation recipients may also be eligible for accelerated approval or rolling review of the recipient's Biologics License Application (BLA). In addition, Fast Track product candidates could be eligible for priority review if supported by clinical data at the time of BLA submission.

We hold an exclusive worldwide license from The University of Texas MD Anderson Cancer Center, or MD Anderson, to patents covering the therapeutic use of a series of genes that have been shown in preclinical and clinical research to have cancer fighting properties.

With Oncoprex, we are initially targeting NSCLC. Researchers at MD Anderson have conducted two Phase I clinical trials and are currently conducting an ongoing Phase II clinical trial of Oncoprex plus erlotinib in NSCLC. According to the World Health Organization ("WHO"), lung cancer is the leading cause of cancer deaths worldwide in 2018, killing more people than colorectal, liver, stomach, and breast cancers, and is the second most common type of cancer. According to WHO, in 2018, there were over 2 million new lung cancer cases and over 1.7 million deaths from lung cancer worldwide, and the National Cancer Institute ("NCI") estimated that in 2019 there would be over 228,000 new cases and more than 142,000 deaths from lung cancer in the United States. According to the American Society of Clinical Oncology, NSCLC represents 84% of all lung cancers. According to NCI, the five-year survival rate for Stage IV (metastatic) NSCLC is approximately 5%, and overall survival for lung cancer has not improved appreciably in the last 25 years. We believe that there is a significant unmet medical need for new treatments for NSCLC in the United States and globally, and we believe that Oncoprex may be suitable for a majority of NSCLC patients.

We believe that our platform technologies could allow delivery of a number of cancer fighting genes, alone or in combination with other cancer therapies, to combat multiple types of cancer. Our research and development pipeline, discussed in "Our Pipeline" below, demonstrates our clinical and preclinical progress to date.

Cancer results from genetic mutations. Mutations that lead to cancer are usually present in two major classes of genes: oncogenes, which are involved in functions such as signal transduction and transcription; and tumor suppressor genes, which play a role in governing cell proliferation by regulating transcription. Transduction is the process by which chemical and physical signals are transmitted through cells. Transcription is the process by which a cell's DNA sequence is copied to make RNA molecules, which then play a role in protein expression. In normal cells, mutations in oncogenes are discovered and targeted for elimination by tumor suppressor genes. In cancer cells, the oncogene mutations may overwhelm the natural tumor suppression processes, or those tumor suppression processes may be impaired or absent. Functional alterations due to mutations in oncogenes or tumor suppressor genes may result in the abnormal and uncontrolled growth patterns characteristic of cancer. These genetic alterations facilitate such malignant growth by affecting signal transduction pathways and transcription, thus inhibiting normal growth signaling in the cell, circumventing the natural process of apoptosis, evading the immune system's response to cancer, and inducing angiogenesis, which is the formation of new blood vessels that supply cancer cells.

The most common genetic alterations present in NSCLC are in tumor suppressor genes, against which few targeted small molecule drugs have been developed. Each of the two sets of chromosomes in the cell nucleus includes two copies of each gene, called alleles, which may be identical or may show differences. In most situations, tumor suppressor genes require both alleles of a gene to be deleted or inactivated to impair tumor suppression activity and lead to tumor growth. The replacement of just one functional allele may therefore be enough to restore the normal cellular functions of growth regulation and apoptosis.

Among the genetic conditions associated with lung cancer are the overexpression of epidermal growth factor receptors, or EGFRs, and mutations of kinases. Kinases are enzymes that play an important role in signal transduction through the modification of proteins by adding or taking away phosphate groups, a process called (de-)phosphorylation, to change the proteins' function. When two EGFR transmembrane proteins are brought to proximity on the cell membrane surface, or dimerize, either through a ligand, or binding molecule, that binds to the extracellular receptor, or through some other process, the intracellular protein-kinase domains can autophosphorylate, and activate downstream processes, including cell signaling pathways that can lead to either cell cycle arrest or cell growth and proliferation. EGFRs and kinases can act similarly to a switch that turns "on" and "off" when phosphate groups are either added or taken away. Mutated kinases can have a malfunctioning on/off switch, causing the switch to be stuck in the "on" position or failing to turn the switch "off," leading to the loss of cell control.

A subset of NSCLC patients (approximately 7% of NSCLC patients of North American and European descent and approximately 30% to 50% of NSCLC patients of Asian descent) carry an EGFR mutation that makes their tumors sensitive to tyrosine kinase inhibitors, or TKIs, such as erlotinib or osimertinib. However, even for these patients, tumor resistance to TKIs frequently develops within two to three years, resulting in eventual disease progression. Erlotinib or osimertinib generally do not benefit NSCLC patients who do not have this activating EGFR mutation. However, our clinical and preclinical data have shown that the combination of Oncoprex and erlotinib can increase anti-tumor activity even in cancers without the EGFR mutations, as well as in cancers that have become resistant to erlotinib. For this reason, we believe Oncoprex may be suitable for the majority of NSCLC patients.

Cancer can spread when cells' natural cancer suppression functions are impaired. The tumor suppressor gene called Tumor Suppressor Candidate 2, or TUSC2 (which was formerly known as FUS1) has been shown to affect both cell proliferation and apoptosis. TUSC2 is a pan-kinase inhibitor, which means that it has the ability to inhibit multiple kinase receptors, such as EGFR and platelet-derived growth factor receptor, or PDGFR. TUSC2 is frequently inactivated early in the development of lung cancer, and loss of TUSC2 expression in NSCLC is associated with significantly worse overall survival compared to patients with normal TUSC2 expression. Many types of cancer cells, including approximately 80% of NSCLC cells, lack expression of TUSC2.

Cancer can also spread when the body's natural immune functions are impaired, including by the cancer cells themselves. PD-1, or Programmed Death-1, is a receptor expressed on the surface of activated T cells, which are part of the body's immune system. PD-L1, or Programmed Death Ligand-1, is a protein/receptor expressed on the surface of cancer and other cells. The binding of PD-1 to PD-L1 has been speculated to contribute to cancer cells' ability to evade the body's immune response. PD-1 and molecules like it are called immune checkpoints, because they can impede the normal immune response, for example by blocking the T cells from attacking the cancer cells. In many cancers, PD-L1 receptors are up-regulated, and substantial research is now being performed in the emerging field of immuno-oncology to discover drugs or antibodies that could block PD-L1 and similar receptors. It is believed that blocking the PD-1/PD-L1 interaction pathway and other similar checkpoints, such as cytotoxic T-lymphocyte-associated protein 4, or CTLA-4, with drugs called checkpoint inhibitors can prevent cancer cells from inactivating T cells.

Our Oncoprex immunogene therapy is designed to interrupt cell signaling pathways that cause replication and proliferation of cancer cells, and to target and kill cancer cells via receptor pathways, and also to stimulate the natural immune responses against cancer. Oncoprex combines features of gene therapy and immunotherapy in that it up-regulates TUSC2 expression in the cell, and also increases the anti-tumor immune cell population and down-regulates PD-L1 receptors, thereby potentially boosting the immune response to cancer.

Oncoprex consists of a TUSC2 gene encapsulated in a nanovesicle made from lipid molecules with a positive electrical charge. Oncoprex is injected intravenously and can specifically target cancer cells, which generally have a negative electrical charge. Once Oncoprex is taken up into a cancer cell, the TUSC2 gene is expressed into a protein that is capable of restoring certain defective functions arising in the cancer cell. Oncoprex nanovesicles are designed to deliver the functioning TUSC2 gene to cancer cells while minimizing their uptake by normal tissue. Tumor biopsy studies conducted at MD Anderson show that, in three patients, the uptake of TUSC2 in tumor cells after Oncoprex treatment was 10 to 25 times the uptake in normal cells. We believe that Oncoprex, unlike other gene therapies, which either need to be delivered directly into tumors or require cells to be removed from the body, re-engineered and then reinserted into the body, is the first systemic gene therapy to be used for cancer in humans.

Clinical data from the evaluation of 25 patients in our Phase I/II clinical trial, as well as our preclinical data, indicate that Oncoprex can be combined with the widely used anti-cancer drug erlotinib (marketed as Tarceva® by Genentech, Inc.) in humans. Erlotinib is a tyrosine kinase inhibitor, or TKI, which uses a mechanism of action similar to that of pan-kinase inhibitors to block the action of tyrosine kinases, which are a type of kinase involved in many cell functions, including cell signaling, growth and division. In addition, MD Anderson researchers have conducted preclinical studies combining Oncoprex with:

- the TKI gefitinib (marketed as Iressa® by AstraZeneca Pharmaceuticals) in animals and in human NSCLC cells;
- third generation TKIs such as osimertinib (marketed as Tagrisso® by AstraZeneca Pharmaceuticals);
- MK2206 in animals (MK2206 is an inhibitor of AKT kinases, which affect cell signaling pathways downstream from tyrosine kinases);
- an anti-PD-1 antibody equivalent to the checkpoint inhibitor pembrolizumab (marketed as Keytruda® by Merck & Co.) in animals;
- an anti-PD-1 antibody equivalent to the checkpoint inhibitor nivolumab (marketed as Opdivo® by Bristol-Myers Squibb Company) in animals; and
- an anti-CTLA4 antibody equivalent to ipilimumab (marketed as Yervoy® by Bristol-Myers Squibb Company) in animals.

The manufacturers of the marketed drugs were not involved in any of our clinical or preclinical studies. In studies involving marketed drugs, the drugs were administered concurrently with Oncoprex without being modified in any way, and the antibodies used in our preclinical studies that did not use the marketed drugs were the non-humanized equivalent to marketed drugs.

Data from these clinical and preclinical studies indicate that combining Oncoprex with these other therapies yields results more favorable than either these therapies or Oncoprex alone, with minimal side effects relative to other lung cancer drugs, thereby potentially making Oncoprex a therapy complementary to these cancer treatments. In addition, based on our clinical and preclinical studies and on preclinical studies conducted by others, we believe that Oncoprex could be combined with other lung cancer drugs that have similar mechanisms of action to the drugs mentioned above, such as nivolumab (marketed as Opdivo® by Bristol-Myers Squibb Company) and atezolizumab (marketed as Tecentriq® by Genentech/Roche). We have not conducted any preclinical or clinical studies combining Oncoprex with atezolizumab.

Researchers at MD Anderson have collaborated with other researchers to identify other genes, such as those in the 3p21.3 chromosomal region, that may act as tumor suppressors or have other cancer fighting functions. We hold rights to certain of these genes under license agreements with MD Anderson. Data from preclinical studies performed by others suggest that product candidates that could be derived from our technology platform could be effective against other types of cancer, including glioblastoma, head and neck, breast, renal cell (kidney), and soft tissue sarcoma, as well as NSCLC. Therefore, our platform technologies may allow delivery of a number of cancer fighting genes, alone or in combination with other cancer therapies, to combat multiple types of cancer.

In 2012, MD Anderson researchers completed a Phase I clinical trial of Oncoprex as a monotherapy. The primary objective of this Phase I trial was to assess the toxicity of Oncoprex administered intravenously and to determine the maximum tolerated dose, or MTD, and recommended Phase II dose of Oncoprex alone. Secondary objectives were to assess the expression of TUSC2 following intravenous delivery of Oncoprex in tumor biopsies and also to assess the anticancer activity of Oncoprex. This trial demonstrated that Oncoprex was well tolerated and established the MTD and the therapeutic dosage for Oncoprex at 0.06 mg/kg administered every 21 days. Although this trial was not designed to show changes in outcomes, a halt in cancer growth was observed in a number of patients, and tumor regressions occurred in primary lung tumors and metastatic cancers in the liver, pancreas, and lymph nodes. In addition, pre- and post-treatment patient biopsies demonstrated that intravenous Oncoprex selectively and preferentially targeted patients' cancer cells, and suggested that clinical anti-cancer activity was mediated by TUSC2.

We believe that Oncoprex' combination of pan-kinase inhibition, direct induction of apoptosis, anti-cancer immune modulation and complementary action with targeted drugs and immunotherapies is unique, and positions Oncoprex to provide treatment for patients with NSCLC and possibly other cancers, who are not benefitting from currently offered therapies.

MD Anderson researchers have completed the first phase of a Phase I/II clinical trial of Oncoprex in combination with erlotinib in patients with Stage IV (metastatic) or recurrent NSCLC that is not potentially curable by radiotherapy or surgery, whether or not they have received prior chemotherapy, and whether or not they have an activating EGFR mutation. The Phase I portion of the trial was a dose-escalating study with primary endpoints of establishing the safety and tolerability of the combination of Oncoprex and erlotinib, and establishing the MTD. The secondary endpoint of the Phase I portion of the trial was to assess the toxicity of the combination of Oncoprex with erlotinib. In the Phase I portion of the trial, which began in 2014, 18 subjects were treated, and the MTD was determined to be the highest tested dose: 0.06 mg/kg of Oncoprex administered every 21 days and 150 mg of erlotinib per day. Toxicities were found to compare favorably with those of other lung cancer drugs.

The Phase II portion of the trial was designed to include subjects treated with the combination of Oncoprex and erlotinib at the MTD with the primary goal of measuring the response rate, and secondary endpoints of stable disease, time to progression and overall survival. The response rate for cancer therapies is defined under the Response Evaluation Criteria in Solid Tumors, or RECIST, as Complete Response (CR) + Partial Response (PR); disease control rate is defined under the RECIST criteria as Complete Response (CR) + Partial Response (PR) + Stable Disease (SD) > 8 weeks.

Enrollment criteria for the second phase of the Phase I/II clinical trial are identical to those in the first phase. The Phase II portion of the trial began in June 2015 and is ongoing at MD Anderson. Of the 39 patients allowed in the protocol for the Phase II portion of the trial, ten have been enrolled and nine are evaluable for response under the trial protocol, because they have received two or more cycles of treatment. Interim results show that four of the patients had tumor regression and one patient had a Complete Response, or CR under the RECIST criteria. The patient with the CR had disappearance of the lung primary tumor, as well as lung, liver, and lymph node metastases. The median response duration for all patients, which is defined as the median time between when response is first noted to the time when cancer progression is observed, was three months. The response rate for the nine patients evaluated to date was 11% and the disease control rate for the nine patients was 78%.

The response rate and disease control rate to date in the Phase II portion of our Phase I/II clinical trial substantially exceeds the response rate of 7% (with no CRs) and disease control rate of 58% reported for a clinical trial of the TKI afatinib (marketed as Gilotrif® by Boehringer Ingelheim Pharmaceuticals, Inc.) in a study referred to as the LUX-Lung 1 clinical trial. A total of 585 patients were enrolled in that Phase IIB/III clinical trial, whose primary endpoint was overall survival and whose secondary endpoints were progression-free survival, RECIST response, quality of life and safety. The LUX-Lung 1 clinical trial was a randomized, double blinded Phase IIB/III clinical trial treating subjects with Stage IIIB or IV adenocarcinoma, a type of NSCLC. The Phase II portion of our Phase I/II trial is not blinded, and is designed to treat NSCLC subjects regardless of EGFR status.

Preliminary analysis of the early data from the Phase II portion of our Phase I/II trial supports our belief that Oncoprex may provide medical benefit in several subpopulations of NSCLC patients for which there is an unmet medical need, and may provide pathways for accelerated approval by the US Food and Drug Administration, or FDA. As a result of these initial findings, in April 2016, we suspended enrollment of new patients in the Phase II portion of the trial to collect additional trial data and have it analyzed in order to seek FDA guidance as to whether the protocol for this clinical trial could be modified to expand enrollment and also to divide the patients into cohorts with a view toward seeking accelerated approval in one or more of these cohort populations. We subsequently decided not to modify the trial, but to continue it as originally designed. Although this clinical trial is currently closed to new patient enrollment, it is not terminated, and is considered “ongoing” because activities such as patient follow-up and further data collection and analysis continue.

We now plan to reopen enrollment in the current version of the Phase II portion of the trial. We have encountered delays in reopening this trial at MD Anderson and will likely reopen the trial at one or more other clinical trial sites. We intend to use a portion of our available funds to add additional clinical trial sites.

Our Oncoprex immunogene therapy technology was discovered through a lung cancer research consortium from MD Anderson and The University of Texas Southwestern Medical Center, or UTSWMC, along with the National Cancer Institute, or NCI. The TUSC2 discovery teams included Jack A. Roth, MD, FACS, chairman of our Scientific and Medical Advisory Board. We have assembled a team of experts in clinical and translational research, including laboratory scientists, medical oncologists and biostatisticians, to pursue the development and commercialization of Oncoprex and other potential product candidates.

Our technology discoveries and research and development programs have been the subjects of numerous peer-reviewed publications and have been supported by Small Business Innovation Research, or SBIR, grants and grants from the National Institutes of Health, the United States Department of Treasury, and the State of Texas. We hold a worldwide, exclusive license from MD Anderson to patents covering the therapeutic use of TUSC2 and other genes that have been shown to have cancer fighting properties, as well as a number of related technologies, including 33 issued patents, and two pending patent applications. The rights we have obtained pursuant to our license agreement with MD Anderson are made subject to the rights of the U.S. government to the extent that the technology covered by the licensed intellectual property was developed under a funding agreement between MD Anderson and the U.S. government.

Our Pipeline

We are developing Oncoprex, our lead product candidate, to be administered with EGFR inhibitors such as erlotinib and osimertinib for NSCLC. We are also conducting preclinical research with the goal of developing Oncoprex to be administered with immunotherapies in NSCLC. In addition, we have conducted research into other tumor suppressor genes associated with chromosome 3p21.3. Our research and development pipeline is shown below:



Our Strategy

We intend to develop and commercialize treatments for cancer based on our proprietary gene therapy platform, alone or in combination with other cancer therapies. Key elements of our strategy include:

- **Conduct Ongoing and New Clinical Trials.** We plan to continue clinical trials of Oncoprex immunogene therapy in combination with EGFR TKIs, such as erlotinib or osimertinib, and/or in combination with immunotherapies, such as anti-PD-1 immunotherapy, for treatment of NSCLC, while exploring pathways to accelerated FDA approval of this combination in NSCLC patients. We also may pursue clinical trials using multi-drug combinations of Oncoprex with additional targeted therapies and immunotherapies.
- **Investigate the Effectiveness of Oncoprex in Other Cancers.** We may also explore the combination of Oncoprex and other therapies in other cancers such as soft tissue, kidney, head and neck, and/or breast cancer. We may also pursue development of additional proprietary genes, alone or in combination with EGFR TKIs such as erlotinib or osimertinib and/or with immunotherapies.

- **Prepare to Commercialize Oncoprex.** We plan to continue to develop the manufacturing, process development and other capabilities needed to commercialize Oncoprex.
- **Pursue Strategic Partnerships.** As we gather additional clinical data, we plan to pursue strategic partnerships with other developers and providers of anti-cancer drugs to investigate possible therapeutic combinations of Oncoprex with drugs manufactured by others, to accelerate the development of our current and potential product candidates through co-development and to increase the commercial opportunities for our current and potential product candidates.
- **Develop Our Platform Technology.** We plan to investigate the applicability of our platform technology with additional anti-cancer drugs.
- **Acquire Additional Technologies.** We are investigating other technologies for possible acquisition, and plan to add additional technologies to our pipeline should we have the opportunity to do so on acceptable financial terms.

Corporate Information

We were incorporated in Delaware in April 2009. Our principal executive offices are located at 1601 Trinity Street, Bldg. B, Suite 3.322, Austin, TX 78712, and our telephone number is (512) 537-7997. Our corporate website address is www.genprex.com. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our securities.

THE OFFERING

Common stock offered by us 7,620,000 shares.

Common stock to be outstanding immediately after this offering 27,849,841 shares.

Public offering price \$1.05 per share.

Use of proceeds We estimate the net proceeds from this offering will be approximately \$7.2 million, after deducting the placement agent's fees and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for working capital and other general corporate purposes. See "Use of Proceeds" beginning on page S-12 of this prospectus supplement for additional detail.

Risk factors Investing in our securities is highly speculative and involves a high degree of risk. You should carefully consider the information set forth in the "Risk Factors" section beginning on page S-9 this prospectus supplement and other information included or incorporated by reference into this prospectus supplement before deciding to invest in our securities.

Trading symbol Our common stock is listed on The Nasdaq Capital Market under the symbol "GNPX."

The number of shares of common stock to be outstanding immediately after this offering is based on 20,229,841 shares of common stock outstanding as of January 22, 2020, and excludes as of that date:

- 7,476,056 shares of common stock underlying warrants to purchase shares of our common stock at a weighted average exercise price of \$1.45 per share;
- 5,982,923 shares of common stock underlying options to purchase shares of our common stock at a weighted average exercise price of \$2.66 per share;
- 208,050 shares of common stock reserved for issuance under our 2018 Employee Stock Purchase Plan; and
- 2,530,975 shares of common stock reserved for issuance under our 2018 Equity Incentive Plan.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks described below and the risk factors contained in our Annual Report, together with other information in this prospectus supplement, and the accompanying prospectus, and the information and documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.

Risks Related to This Offering

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses, and these financial losses could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. We may invest the net proceeds from this offering, pending their use, in a manner that does not produce income or that loses value.

If you purchase securities in this offering, you will suffer immediate dilution of your investment.

The public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase securities in this offering, you will pay an effective price per share of common stock that substantially exceeds our net tangible book value per share after giving effect to this offering. Based on a public offering price of \$1.05 per share of common stock, if you purchase securities in this offering, you will experience immediate dilution of \$0.63 per share, representing the difference between the public offering price of the securities and our pro forma as adjusted net tangible book value per share after giving effect to this offering. Furthermore, if any of our outstanding options or warrants are exercised at prices below the public offering price, we grant additional options or other awards under our equity incentive plans or issue additional warrants, you may experience further dilution of your investment. See the section entitled “Dilution” below for a more detailed illustration of the dilution you would incur if you participate in this offering.

If you purchase securities in this offering, you may also experience future dilution as a result of future equity offerings.

To raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price paid by investors in this offering. We may sell shares or other securities in any other offering at a price per share that is less than the price paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be higher or lower than the price paid by investors in this offering.

We have no intention of declaring dividends in the foreseeable future.

The decision to pay cash dividends on our common stock rests with our board of directors and will depend on our earnings, unencumbered cash, capital requirements and financial condition. We do not anticipate declaring any dividends in the foreseeable future, as we intend to use any excess cash for the development, operation and expansion of our business. Investors in our common stock should not expect to receive dividend income on their investment, and investors will be dependent on the appreciation of our common stock, if any, to earn a return on their investment.

If we are not able to comply with the applicable continued listing requirements or standards of The Nasdaq Capital Market (“Nasdaq”), Nasdaq could delist our common stock.

Our common stock is currently listed on Nasdaq. In order to maintain such listing, we must satisfy minimum financial and other continued listing requirements and standards, including those regarding director independence and independent committee requirements, minimum stockholders’ equity, minimum share price, and certain corporate governance requirements.

On June 10, 2019, the Company notified Nasdaq that it was not in compliance with Nasdaq Listing Rule 5605(c)(2)(A) as a result of the resignation of a member of the Company’s board who was also a member of the Company’s Audit Committee. Nasdaq Listing Rule 5605(c)(2)(A) requires the Audit Committee to have at least three independent members (as defined by Nasdaq Listing Rule 5605(a)(2) and Rule 10A-3(b)(1) under the Securities Exchange Act of 1934), at least one of whom is an audit committee financial expert. As a result of the resignation of Dr. Bonfiglio, the Company no longer has an Audit Committee comprised of three independent directors. The Nasdaq Listing Rules provide for a cure period during which the Company may regain compliance with Nasdaq Listing Rule 5605(c)(2)(A). Under Nasdaq Listing Rule 5605(c)(4), the Company shall have until the earlier of its next annual meeting of stockholders or one year from the occurrence of the event that caused the failure to comply with Nasdaq Listing Rule 5605(c)(2)(A); provided, however, that if the next annual meeting of stockholders occurs no later than 180 days following the event that caused the vacancy, the Company shall instead have 180 days from such event to regain compliance.

In addition, on September 10, 2019, we were notified by Nasdaq that the bid price of our common stock had failed to satisfy the minimum bid price requirement and in accordance with Nasdaq’s Listing Rules, the Company has been granted a 180 calendar day compliance period, or until March 9, 2020, to regain compliance with the minimum bid price requirements. During the compliance period, the Company’s shares of common stock will continue to be listed and traded on The Nasdaq Capital Market. To regain compliance, the closing bid of the Company’s shares of common stock must meet or exceed \$1.00 per share for at least ten consecutive business days during the 180 calendar day grace period. If the Company is not in compliance by March 9, 2020, the Company may be afforded a second 180 calendar day grace period. To qualify, the Company would be required to meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for The Nasdaq Capital Market, with the exception of the minimum bid price requirements. In addition, the Company would be required to notify Nasdaq of its intent to cure the minimum bid price deficiency by effecting a reverse stock split, if necessary.

There can be no assurances that we will be able to regain compliance with Nasdaq’s listing standards or if we do later regain compliance with Nasdaq’s listing standards, will be able to continue to comply with the applicable listing standards. If we are unable to maintain compliance with these Nasdaq requirements, our common stock will be delisted from Nasdaq.

If Nasdaq delists our common stock, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our securities;
- a determination that our common stock is a “penny stock” which will require brokers trading in our common stock to adhere to more stringent rules and possibly resulting in a reduced level of trading activity in the secondary trading market for our common stock;
- a limited amount of news and analyst coverage for our company; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

If we are unable to secure contract manufacturers with capabilities to produce the products that we require, we could experience further delays in reopening enrollment of the second phase of our Phase I/II clinical trial.

As the second phase of a Phase I/II clinical trial, MD Anderson researchers are conducting a Phase II clinical trial evaluating Oncoprex in combination with erlotinib in NSCLC. The Phase II trial began in June 2015. We have encountered delays in reopening enrollment primarily because the GMP manufacturing facility at MD Anderson did not have the capacity to produce additional drug product, and requested that, with MD Anderson's assistance, we transfer the portion of the process which such manufacturing facility had performed to a third party manufacturer. Although we have contracted with contract manufacturers with capabilities to produce the products that we require, no assurance can be given that such contract manufacturers will be able to, and receive all approvals to, produce product sufficient for our trials. In accordance with cGMPs, changing manufacturers may require the re-validation of manufacturing processes and procedures, and may require further preclinical studies or clinical trials to show comparability between the materials produced by different manufacturers. Changing our current or future contract manufacturers may be difficult and could be costly if we do make such a change, which could result in our inability to manufacture our clinical product candidate and a delay in the development of our clinical product candidate. Further, in order to maintain our development timelines in the event of a change in a third-party contract manufacturer, we may incur higher costs to manufacture our clinical product candidate. Furthermore, we may open enrollment at one or more other clinical trial sites prior to, or in lieu of, reopening enrollment at MD Anderson. Any additional clinical trial sites that we open will require approval of the Investigational Review Board, or IRB, and no assurance can be given the IRB will approve such sites in a timely manner, if at all.

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern, which may hinder our ability to obtain future financing.

Our financial statements as of December 31, 2018 have been prepared under the assumption that we will continue as a going concern for the next twelve months. Our independent registered public accounting firm included in its opinion for the year ended December 31, 2017 an explanatory paragraph referring to our recurring losses from operations and expressing substantial doubt in our ability to continue as a going concern without additional capital becoming available. Our ability to continue as a going concern is dependent upon our ability to obtain additional equity or debt financing, reduce expenditures and to generate significant revenue. Our financial statements as of December 31, 2018 did not include any adjustments that might result from the outcome of this uncertainty. The reaction of investors to the inclusion of a going concern statement by our auditors, and our potential inability to continue as a going concern, in future years could materially adversely affect our share price and our ability to raise new capital or enter into strategic alliances. Furthermore, we also could be required to seek funds through arrangements with collaborative partners or otherwise that may require us to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us.

Our executive officers, directors and principal stockholders, if they choose to act together, have the ability to control all matters submitted to stockholders for approval.

Upon the closing of this offering, the number of shares of our common stock beneficially owned by our executive officers, directors and principal stockholders and their respective affiliates who owned more than 5% of our outstanding shares of common stock before this offering, will, in the aggregate, represent approximately 33.42% of our outstanding common stock. As a result, if these stockholders were to choose to act together, they would be able to control all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, would control the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets.

This concentration of voting power may:

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

Future sales of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. As of January 22, 2020, we had 20,229,841 shares of common stock outstanding, all of which shares were, and continue to be, eligible for sale in the public market, subject in some cases to compliance with the requirements of Rule 144, including the volume limitations and manner of sale requirements. In addition, all of the shares offered under this prospectus supplement and the accompanying prospectus will be freely tradable without restriction or further registration upon issuance.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the common stock in this offering will be approximately \$7.2 million, after deducting the placement agent's fees and estimated offering expenses payable by us.

We currently intend to use the net proceeds from this offering for working capital and other general corporate purposes.

This expected use of net proceeds from this offering and our existing cash and cash equivalents represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. We have no current agreements, commitments or understandings for any material acquisitions or licenses of any products, businesses or technologies.

As of the date of this prospectus supplement, we cannot predict with certainty all the uses for the net proceeds to be received upon the completion of this offering or the amounts we will spend on the uses set forth above. Pending our use of the net proceeds from this offering, we intend to invest a portion of the net proceeds in a variety of capital preservation investments, including short-term, interest-bearing instruments and U.S. government securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain earnings, if any, to finance the growth and development of our business. We do not expect to pay any cash dividends on our common stock in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in any financing instruments, provisions of applicable law and other factors the board deems relevant.

CAPITALIZATION

The following table sets forth our consolidated cash and cash equivalents, equity and total capitalization as of September 30, 2019:

- on an actual basis;
- on a pro forma basis to reflect (i) the sale of 3,167,986 shares of common stock at a price of \$0.40 per share in November 2019, (ii) the sale of 961,000 shares of common stock at a price of \$0.24 per share in January 2020, and (iii) the issuance of 258,000 shares of common stock issued in October 2019, December 2019, and January 2020 to consultants in consideration for services; and
- on a pro forma as adjusted basis to give effect to the sale of 7,620,000 shares of our common stock in this offering and the application of the estimated net proceeds as described under "Use of Proceeds."

You should read the data set forth in the table below in conjunction with the section of this prospectus supplement under the caption "Use of Proceeds" as well as our "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and notes and other financial information included or incorporated by reference in this prospectus supplement.

	At September 30, 2019		
	Actual	Pro Forma	Pro Forma As Adjusted
Cash and cash equivalents	\$ 2,548,434	\$ 3,957,565	\$ 11,318,485
Preferred stock \$0.001 par value: 10,000,000 shares authorized; no shares issued and outstanding	—	—	—
Common stock \$0.001 par value: 200,000,000 shares authorized; 15,842,855, 20,229,841, and 27,849,841 shares issued and outstanding, respectively	15,843	20,230	27,850
Additional paid-in capital	41,569,745	43,053,195	50,406,495
Accumulated deficit	(38,054,490)	(38,054,490)	(38,054,490)
Total stockholders' equity	3,531,098	5,018,935	12,379,855
Total capitalization	\$ 3,531,098	\$ 5,018,935	\$ 12,379,855

The number of shares of our common stock outstanding after this offering is based on 15,842,855 shares of our common stock outstanding as of September 30, 2019 and excludes as of that date:

- 7,476,056 shares of common stock underlying warrants to purchase shares of our common stock at a weighted average exercise price of \$1.45 per share;
- 5,982,923 shares of common stock underlying options to purchase shares of our common stock at a weighted average exercise price of \$2.66 per share;
- 208,050 shares of common stock reserved for issuance under our 2018 Employee Stock Purchase Plan; and
- 2,530,975 shares of common stock reserved for issuance under our 2018 Equity Incentive Plan;

DILUTION

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

Our net tangible book value as of September 30, 2019 was approximately \$3.1 million, or \$0.20 per share of common stock. Net tangible book value per share is determined by dividing the net of total tangible assets less total liabilities, by the aggregate number of shares of common stock outstanding as of September 30, 2019.

Our pro forma net tangible book value as of September 30, 2019 was approximately \$4.4 million, or \$0.22 per share after giving effect to (i) our receipt of net proceeds of \$1,093,491 from our November 2019 offering and the issuance of 3,167,986 shares of common stock and (ii) our receipt of \$230,640 from our January 2020 offering and the issuance of 961,000 shares of common stock.

After giving effect to the sale by us of 7,620,000 shares of common stock at the public offering price of \$1.05 per share of common stock, and after deducting the placement agent's fees and estimated offering expenses, our pro forma as adjusted net tangible book value as of September 30, 2019 would have been approximately \$11.6 million, or \$0.42 per share of common stock. This represents an immediate increase in pro forma net tangible book value of \$0.20 per share to our existing stockholders and an immediate dilution of \$0.63 per share of common stock issued to the investors participating in this offering.

The following table illustrates this per share dilution:

	Amount
Public offering price per share	\$ 1.05
Pro forma net tangible book value per share at September 30, 2019	\$ 0.22
Increase in pro forma net tangible book value per share to the existing stockholders attributable to this offering	\$ 0.20
Pro forma as adjusted net tangible book value per share attributable to this offering	\$ 0.42
Dilution per share to investors participating in this offering	\$ 0.63

The number of shares of our common stock outstanding to be outstanding after this offering is based on 15,842,855 shares of our common stock outstanding as of September 30, 2019 and excludes as of that date:

- 7,476,056 shares of common stock underlying warrants to purchase shares of our common stock at a weighted average exercise price of \$1.45 per share;
- 5,982,923 shares of common stock underlying options to purchase shares of our common stock at a weighted average exercise price of \$2.66 per share;
- 208,050 shares of common stock reserved for issuance under our 2018 Employee Stock Purchase Plan;
- 2,530,975 shares of common stock reserved for issuance under our 2018 Equity Incentive Plan;
- 4,128,986 shares of common stock issued in our November 2019 and January 2020 registered direct offerings; and
- 258,000 shares of common stock issued in October 2019, December 2019, and January 2020 to consultants in consideration for services.

DESCRIPTION OF COMMON STOCK

Our authorized capital stock consists of 200,000,000 shares of common stock, \$0.001 par value per share, and 10,000,000 shares of preferred stock, \$0.001 par value per share. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of January 22, 2020, there were 20,229,841 shares of our common stock issued and outstanding and no shares of preferred stock issued and outstanding.

Our common stock is traded on The Nasdaq Capital Market under the symbol "GNPX". On January 22, 2020, the last reported sale price of our common stock on The Nasdaq Capital Market was \$1.89 per share.

The material terms of our common stock are described under the heading "Description of Capital Stock" in the accompanying prospectus beginning on page 17.

PLAN OF DISTRIBUTION

A.G.P./Alliance Global Partners has agreed to act as lead placement agent and Joseph Gunnar & Company, LLC, has agreed to act as co-placement agent which we refer to as the placement agents, in connection with this offering. The placement agents are not purchasing or selling any of the shares of our common stock offered by this prospectus supplement, but will use their reasonable best efforts to arrange for the sale of the securities offered by this prospectus supplement. We have entered into a securities purchase agreement directly with investors in connection with this offering. We will make offers only to a limited number of accredited investors. The offering is expected to close on or about January 27, 2020, subject to customary closing conditions, without further notice to you.

Fees and Expenses

We have agreed to pay the placement agents a placement agents' fee equal to 8% of the aggregate purchase price of the shares of our common stock sold in this offering. The following table shows the per share and total cash placement agents' fees we will pay to the placement agents in connection with the sale of the shares of our common stock offered pursuant to this prospectus supplement and the accompanying prospectus.

	<i>Per Share</i>	<i>Total</i>
Public offering price	\$ 1.05	\$ 8,001,000
Placement agents' fees ⁽¹⁾	\$ 0.084	\$ 640,080
Proceeds to us before expenses	\$ 0.966	\$ 7,360,920

(1) We have also agreed to reimburse the placement agent for certain expenses. See below.

In addition, we have agreed to reimburse the placement agent's expenses up to \$100,000 upon closing the offering. We estimate that the total expenses of the offering payable by us, excluding the placement agent fees and expenses, will be approximately \$170,000.

Regulation M

The placement agents may be deemed to be underwriters within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by them and any profit realized on the resale of the shares sold by them while acting as principals might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, each placement agent would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares by the placement agents acting as principals. Under these rules and regulations, the placement agents:

- may not engage in any stabilization activity in connection with our securities; and
- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

Nasdaq Listing

Our common stock is listed on The Nasdaq Capital Market under the symbol "GNPX." On January 22, 2020, the last reported sale price of our common stock on the Nasdaq Capital Market was \$1.89 per share.

Indemnification

We have agreed to indemnify the placement agents and other specified persons against certain civil liabilities, including liabilities under the Securities Act and the Exchange Act, and to contribute to payments that the placement agents may be required to make in respect of such liabilities.

Other Relationships

The placement agents or their affiliates may in the future engage in transactions with, and may perform, from time to time, investment banking and advisory services for us in the ordinary course of their business and for which they would receive customary fees and expenses. In addition, in the ordinary course of their business activities, the placement agents and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates.

Specifically, on November 22, 2019, we sold an aggregate of 3,167,986 shares of our common stock in a registered direct offering to certain accredited investors. In a concurrent private placement, we sold to the purchasers in the registered direct offering a warrant to purchase one share of common stock for each share of common stock purchased by such purchaser in the registered direct offering. Joseph Gunnar & Co., LLC acted as placement agent for the offerings. In connection with the offerings, we issued Joseph Gunnar & Co., LLC warrants to purchase an aggregate of 443,518 shares of common stock. In addition, we paid Joseph Gunnar & Co., LLC approximately \$93,704 for commissions and expense reimbursement. Furthermore, in connection with the November 2019 registered direct offering and concurrent private placement pursuant to which we entered into an engagement agreement with Joseph Gunnar & Co., LLC, we granted Joseph Gunnar & Co., LLC a right of first refusal on all public offerings for a period of six months after the expiration of such engagement agreement.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Sheppard, Mullin, Richter & Hampton LLP, New York, New York. Gracin & Marlow, LLP, New York, New York, has acted as counsel for the placement agents in connection with certain matters relating to this offering.

EXPERTS

Daszkal Bolton LLP, an independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K and 10-K/A for the year ended December 31, 2018, as set forth in its report, which is incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Daszkal Bolton LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at <https://www.genprex.com>. Our website is not a part of this prospectus supplement and is not incorporated by reference in this prospectus.

This prospectus supplement is part of a registration statement we filed with the SEC. This prospectus supplement and the accompanying prospectus omit some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus supplement and in the accompanying prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference is considered to be part of this prospectus supplement and the accompanying prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus supplement and the accompanying prospectus are continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus supplement and the accompanying prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus supplement or the accompanying prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus supplement and the accompanying prospectus incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 filed with the SEC on April 1, 2019, as amended on October 16, 2019;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 filed with the SEC on May 15, 2019, as amended on May 20, 2019 and October 16, 2019, our Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 filed with the SEC on August 13, 2019, as amended on October 16, 2019 and our Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 as filed with the SEC on November 14, 2019;
- our Current Reports on Form 8-K filed with the SEC on January 31, 2019, February 19, 2019, June 11, 2019, September 13, 2019, November 22, 2019, January 6, 2020, January 9, 2020, January 17, 2020 and January 21, 2020;
- our definitive proxy statement on Schedule 14A for our 2019 Annual Meeting of Stockholders filed with the SEC on April 30, 2019;
- our definitive proxy statement on Schedule 14A for our 2020 Special Meeting of Stockholders filed with the SEC on December 23, 2019; and
- the description of our capital stock contained in our Registration Statement on Form 8-A filed with the SEC on October 13, 2017.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Genprex, Inc.
1601 Trinity Street, Bldg. B, Suite 3.322
Austin, Texas 78712
Attention: Investor Relations
Telephone: (512) 537-7997

PROSPECTUS



\$25,000,000

**Common Stock
Preferred Stock
Debt Securities
Warrants
Units**

From time to time, we may offer up to \$25,000,000 of any combination of the securities described in this prospectus in one or more offerings. We may also offer securities as may be issuable upon conversion, redemption, repurchase, exchange or exercise of any securities registered hereunder, including any applicable anti-dilution provisions.

This prospectus provides a general description of the securities we may offer. Each time we offer securities, we will provide specific terms of the securities offered in a supplement to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference, before you invest in any of the securities being offered.

This prospectus may not be used to consummate a sale of any securities unless accompanied by a prospectus supplement.

Our common stock is traded on the Nasdaq Capital Market under the symbol "GNPX." On September 30, 2019, the last reported sales price of our common stock was \$0.80 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing on the Nasdaq Capital Market or any securities market or other exchange of the securities, if any, covered by the prospectus supplement.

We will sell these securities directly to investors, through agents designated from time to time or to or through underwriters or dealers, on a continuous or delayed basis. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution" in this prospectus. If any agents or underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such agents or underwriters and any applicable fees, commissions, discounts or over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

The aggregate market value of our outstanding common stock held by non-affiliates was approximately \$9,859,715, which was calculated based on 10,601,844 shares of outstanding common stock held by non-affiliates as of October 2, 2019, and a price per share of \$0.93, the closing price of our common stock on September 16, 2019. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities pursuant to this registration statement with a value more than one-third of the aggregate market value of our common stock held by non-affiliates in any 12-month period, so long as the aggregate market value of our common stock held by non-affiliates is less than \$75.0 million. In the event that subsequent to the effective date of this registration statement, the aggregate market value of our outstanding common stock held by non-affiliates equals or exceeds \$75.0 million, then the one-third limitation on sales shall not apply to additional sales made pursuant to this registration statement. We have sold no securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to, and including, the date of this registration statement.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is October 28, 2019.

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS	5
SUMMARY	6
RISK FACTORS	14
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	15
USE OF PROCEEDS	16
DESCRIPTION OF CAPITAL STOCK	17
DESCRIPTION OF DEBT SECURITIES	20
DESCRIPTION OF WARRANTS	24
DESCRIPTION OF UNITS	26
LEGAL OWNERSHIP OF SECURITIES	27
PLAN OF DISTRIBUTION	29
LEGAL MATTERS	31
EXPERTS	31
WHERE YOU CAN FIND MORE INFORMATION	31
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	31

No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

For investors outside the United States: Neither we nor any of the underwriters have taken any action that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

Market data and certain industry data and forecasts used throughout this prospectus were obtained from internal company surveys, market research, consultant surveys, publicly available information, reports of governmental agencies and industry publications and surveys. Industry surveys, publications, consultant surveys and forecasts generally state that the information contained therein has been obtained from sources believed to be reliable, but that the accuracy and completeness of such information is not guaranteed. While we are not aware of any misstatements regarding the industry data presented in this prospectus, our estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “Risk Factors” in this prospectus.

The terms “Genprex,” the “Company,” “our,” or “we” refer to Genprex, Inc. and, unless the context otherwise requires, its predecessors.

ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, utilizing a “shelf” registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus in one or more offerings up to a total aggregate offering price of \$25,000,000. This prospectus provides you with a general description of the securities we may offer.

Each time we sell securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the 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 and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in any documents that we have incorporated by reference into this prospectus. You should read this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the information incorporated herein by reference as described under the heading “Incorporation of Certain Information by Reference,” before investing in any of the securities offered.

THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

Neither we, nor any agent, underwriter or dealer has authorized any person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus, any applicable prospectus supplement or any related free writing prospectus prepared by or on behalf of us or to which we have referred you. This prospectus, any applicable supplement to this prospectus or any related free writing prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus, any applicable supplement to this prospectus or any related free writing prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

You should not assume that the information contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus, any applicable prospectus supplement or any related free writing prospectus is delivered, or securities are sold, on a later date.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find More Information.”

SUMMARY

This summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Company Overview

Genprex™ is a clinical stage gene therapy company developing a new approach to treating cancer, based upon our novel proprietary technology platform, including our initial product candidate, Oncoprex™ immunogene therapy, or Oncoprex. Our platform technologies are designed to administer cancer fighting genes by encapsulating them into nanoscale hollow spheres called nanovesicles, which are then administered intravenously and taken up by tumor cells where they express proteins that are missing or found in low quantities. Oncoprex has a multimodal mechanism of action whereby it interrupts cell signaling pathways that cause replication and proliferation of cancer cells, re-establishes pathways for apoptosis, or programmed cell death, in cancer cells, and modulates the immune response against cancer cells. Oncoprex has also been shown to block mechanisms that create drug resistance.

We hold an exclusive worldwide license from The University of Texas MD Anderson Cancer Center, or MD Anderson, to patents covering the therapeutic use of a series of genes that have been shown in preclinical and clinical research to have cancer fighting properties.

With Oncoprex, we are initially targeting non-small cell lung cancer, or NSCLC. Researchers at MD Anderson have conducted two Phase I clinical trials and are currently conducting an ongoing Phase II clinical trial of Oncoprex plus erlotinib in NSCLC. According to the World Health Organization, lung cancer is the leading cause of cancer deaths worldwide, killing more people than breast, colon, kidney, liver, prostate and skin cancers, and is the second most common type of cancer. Each year, there are over 1.8 million new lung cancer cases and 1.6 million deaths from lung cancer worldwide, and in the United States there are over 225,000 new cases and more than 150,000 deaths from lung cancer per year. NSCLC represents 80% of all lung cancers. According to a 2016 American Cancer Society report, the five-year survival rate for Stage IV (metastatic) NSCLC is about 1%, and overall survival for lung cancer has not improved appreciably in the last 25 years. We believe that there is a significant unmet medical need for new treatments for NSCLC in the United States and globally, and we believe that Oncoprex may be suitable for a majority of NSCLC patients.

We believe that our platform technologies could allow delivery of a number of cancer fighting genes, alone or in combination with other cancer therapies, to combat multiple types of cancer. Our research and development pipeline, discussed in “Our Pipeline” below, demonstrates our clinical and preclinical progress to date.

Cancer results from genetic mutations. Mutations that lead to cancer are usually present in two major classes of genes: oncogenes, which are involved in functions such as signal transduction and transcription; and tumor suppressor genes, which play a role in governing cell proliferation by regulating transcription. Transduction is the process by which chemical and physical signals are transmitted through cells. Transcription is the process by which a cell’s DNA sequence is copied to make RNA molecules, which then play a role in protein expression. In normal cells, mutations in oncogenes are discovered and targeted for elimination by tumor suppressor genes. In cancer cells, the oncogene mutations may overwhelm the natural tumor suppression processes, or those tumor suppression processes may be impaired or absent. Functional alterations due to mutations in oncogenes or tumor suppressor genes may result in the abnormal and uncontrolled growth patterns characteristic of cancer. These genetic alterations facilitate such malignant growth by affecting signal transduction pathways and transcription, thus inhibiting normal growth signaling in the cell, circumventing the natural process of apoptosis, evading the immune system’s response to cancer, and inducing angiogenesis, which is the formation of new blood vessels that supply cancer cells.

The most common genetic alterations present in NSCLC are in tumor suppressor genes, against which few targeted small molecule drugs have been developed. Each of the two sets of chromosomes in the cell nucleus includes two copies of each gene, called alleles, which may be identical or may show differences. In most situations, tumor suppressor genes require both alleles of a gene to be deleted or inactivated to impair tumor suppression activity and lead to tumor growth. The replacement of just one functional allele may therefore be enough to restore the normal cellular functions of growth regulation and apoptosis.

Among the genetic conditions associated with lung cancer are the overexpression of epidermal growth factor receptors, or EGFRs, and mutations of kinases. Kinases are enzymes that play an important role in signal transduction through the modification of proteins by adding or taking away phosphate groups, a process called (de-)phosphorylation, to change the proteins' function. When two EGFR transmembrane proteins are brought to proximity on the cell membrane surface, or dimerize, either through a ligand, or binding molecule, that binds to the extracellular receptor, or through some other process, the intracellular protein-kinase domains can autophosphorylate, and activate downstream processes, including cell signaling pathways that can lead to either cell cycle arrest or cell growth and proliferation. EGFRs and kinases can act similarly to a switch that turns "on" and "off" when phosphate groups are either added or taken away. Mutated kinases can have a malfunctioning on/off switch, causing the switch to be stuck in the "on" position or failing to turn the switch "off," leading to the loss of cell control.

A subset of NSCLC patients (approximately 10% of NSCLC patients of North American and European descent and approximately 30% to 50% of NSCLC patients of Asian descent) carry an EGFR mutation that makes their tumors sensitive to tyrosine kinase inhibitors, or TKIs, such as erlotinib. However, even for these patients, tumor resistance to TKIs frequently develops within two years, resulting in eventual disease progression. Erlotinib generally does not benefit NSCLC patients who do not have this activating EGFR mutation. However, our clinical and preclinical data have shown that the combination of Oncoprex and erlotinib can increase anti-tumor activity even in cancers without the EGFR mutations, as well as in cancers that have become resistant to erlotinib. For this reason, we believe Oncoprex may be suitable for the majority of NSCLC patients.

Cancer can spread when cells' natural cancer suppression functions are impaired. The tumor suppressor gene called Tumor Suppressor Candidate 2, or TUSC2 (which was formerly known as FUS1) has been shown to affect both cell proliferation and apoptosis. TUSC2 is a pan-kinase inhibitor, which means that it has the ability to inhibit multiple kinase receptors, such as EGFR and platelet-derived growth factor receptor, or PDGFR. TUSC2 is frequently inactivated early in the development of lung cancer, and loss of TUSC2 expression in NSCLC is associated with significantly worse overall survival compared to patients with normal TUSC2 expression. Many types of cancer cells, including approximately 85% of NSCLC cells, lack expression of TUSC2.

Cancer can also spread when the body's natural immune functions are impaired, including by the cancer cells themselves. PD-1, or Programmed Death-1, is a receptor expressed on the surface of activated T cells, which are part of the body's immune system. PD-L1, or Programmed Death Ligand-1, is a protein/receptor expressed on the surface of cancer and other cells. The binding of PD-1 to PD-L1 has been speculated to contribute to cancer cells' ability to evade the body's immune response. PD-1 and molecules like it are called immune checkpoints, because they can impede the normal immune response, for example by blocking the T cells from attacking the cancer cells. In many cancers, PD-L1 receptors are up-regulated, and substantial research is now being performed in the emerging field of immuno-oncology to discover drugs or antibodies that could block PD-L1 and similar receptors. It is believed that blocking the PD-1/PD-L1 interaction pathway and other similar checkpoints, such as cytotoxic T-lymphocyte-associated protein 4, or CTLA-4, with drugs called checkpoint inhibitors can prevent cancer cells from inactivating T cells.

Our Oncoprex immunogene therapy is designed to interrupt cell signaling pathways that cause replication and proliferation of cancer cells, and to target and kill cancer cells via receptor pathways, and also to stimulate the natural immune responses against cancer. Oncoprex combines features of gene therapy and immunotherapy in that it up-regulates TUSC2 expression in the cell, and also increases the anti-tumor immune cell population and down-regulates PD-L1 receptors, thereby boosting the immune response to cancer.

Oncoprex consists of a TUSC2 gene encapsulated in a nanovesicle made from lipid molecules with a positive electrical charge. Oncoprex is injected intravenously and can specifically target cancer cells, which generally have a negative electrical charge. Once Oncoprex is taken up into a cancer cell, the TUSC2 gene is expressed into a protein that is capable of restoring certain defective functions arising in the cancer cell. Oncoprex nanovesicles are designed to deliver the functioning TUSC2 gene to cancer cells while minimizing their uptake by normal tissue. Tumor biopsy studies conducted at MD Anderson show that the uptake of TUSC2 in tumor cells after Oncoprex treatment is 10 to 25 times the uptake in normal cells. We believe that Oncoprex, unlike other gene therapies, which either need to be delivered directly into tumors or require cells to be removed from the body, re-engineered and then reinserted into the body, is the first systemic gene therapy to be used for cancer in humans.

Clinical data from the evaluation of 25 patients in our Phase I/II clinical trial, as well as our preclinical data, indicate that Oncoprex can be combined with the widely used anti-cancer drug erlotinib (marketed as Tarceva® by Genentech, Inc.) in humans. Erlotinib is a tyrosine kinase inhibitor, or TKI, which uses a mechanism of action similar to that of pan-kinase inhibitors to block the action of tyrosine kinases, which are a type of kinase involved in many cell functions, including cell signaling, growth and division. In addition, MD Anderson researchers have conducted preclinical studies combining Oncoprex with:

- the TKI gefitinib (marketed as Iressa® by AstraZeneca Pharmaceuticals) in animals and in human NSCLC cells;
- MK2206 in animals (MK2206 is an inhibitor of AKT kinases, which affect cell signaling pathways downstream from tyrosine kinases);
- an anti-PD-1 antibody equivalent to the checkpoint inhibitor pembrolizumab (marketed as Keytruda® by Merck & Co.) in animals;
- an anti-PD-1 antibody equivalent to the checkpoint inhibitor nivolumab (marketed as Opdivo® by Bristol-Myers Squibb Company) in animals; and
- an anti-CTLA4 antibody equivalent to ipilimumab (marketed as Yervoy® by Bristol-Myers Squibb Company) in animals.

The manufacturers of the marketed drugs were not involved in any of our clinical or preclinical studies. In studies involving marketed drugs, the drugs were administered concurrently with Oncoprex without being modified in any way, and the antibodies used in our preclinical studies that did not use the marketed drugs were the non-humanized equivalent to marketed drugs.

Data from these clinical and preclinical studies indicate that combining Oncoprex with these other therapies yields results more favorable than either these therapies or Oncoprex alone, with minimal side effects relative to other lung cancer drugs, thereby potentially making Oncoprex a therapy complementary to these cancer treatments. In addition, based on our clinical and preclinical studies and on preclinical studies conducted by others, we believe that Oncoprex could be combined with other lung cancer drugs that have similar mechanisms of action to the drugs mentioned above, such as nivolumab (marketed as Opdivo® by Bristol-Myers Squibb Company) and atezolizumab (marketed as Tecentriq® by Genentech/Roche). We have not conducted any preclinical or clinical studies combining Oncoprex with atezolizumab.

Researchers at MD Anderson have collaborated with other researchers to identify other genes, such as those in the 3p21.3 chromosomal region, that may act as tumor suppressors or have other cancer fighting functions. We hold rights to certain of these genes under license agreements with MD Anderson. Data from preclinical studies performed by others suggest that product candidates that could be derived from our technology platform could be effective against other types of cancer, including glioblastoma, head and neck, breast, renal cell (kidney), and soft tissue sarcoma, as well as NSCLC. Therefore, our platform technologies may allow delivery of a number of cancer fighting genes, alone or in combination with other cancer therapies, to combat multiple types of cancer.

In 2012, MD Anderson researchers completed a Phase I clinical trial of Oncoprex as a monotherapy. The primary objective of this Phase I trial was to assess the toxicity of Oncoprex administered intravenously and to determine the MTD and recommended Phase II dose of Oncoprex alone. Secondary objectives were to assess the expression of TUSC2 following intravenous delivery of Oncoprex in tumor biopsies and also to assess the anticancer activity of Oncoprex. This trial demonstrated that Oncoprex was well tolerated and established the MTD and the therapeutic dosage for Oncoprex at 0.06 mg/kg administered every 21 days. Although this trial was not designed to show changes in outcomes, a halt in cancer growth was observed in a number of patients, and tumor regressions occurred in primary lung tumors and metastatic cancers in the liver, pancreas, and lymph nodes. In addition, pre- and post-treatment patient biopsies demonstrated that intravenous Oncoprex selectively and preferentially targeted patients' cancer cells, and suggested that clinical anti-cancer activity was mediated by TUSC2.

We believe that Oncoprex' combination of pan-kinase inhibition, direct induction of apoptosis, anti-cancer immune modulation and complementary action with targeted drugs and immunotherapies is unique, and positions Oncoprex to provide treatment for patients with NSCLC and possibly other cancers, who are not benefitting from currently offered therapies.

MD Anderson researchers have completed the first phase of a Phase I/II clinical trial of Oncoprex in combination with erlotinib in patients with Stage IV (metastatic) or recurrent NSCLC that is not potentially curable by radiotherapy or surgery, whether or not they have received prior chemotherapy, and whether or not they have an activating EGFR mutation. The Phase I portion of the trial was a dose-escalating study with primary endpoints of establishing the safety and tolerability of the combination of Oncoprex and erlotinib, and establishing the Maximum Tolerated Dose, or MTD. The secondary endpoint of the Phase I portion of the trial was to assess the toxicity of the combination of Oncoprex with erlotinib. In the Phase I portion of the trial, which began in 2014, 18 subjects were treated, and the MTD was determined to be the highest tested dose: 0.6 mg/kg of Oncoprex administered every 21 days and 150 mg of erlotinib per day. Toxicities were found to compare favorably with those of other lung cancer drugs.

The Phase II portion of the trial is designed to include subjects treated with the combination of Oncoprex and erlotinib at the MTD with the primary goal of measuring the response rate, and secondary endpoints of stable disease, time to progression and overall survival. The response rate for cancer therapies is defined under the Response Evaluation Criteria in Solid Tumors, or RECIST, as Complete Response (CR) + Partial Response (PR); disease control rate is defined under the RECIST criteria as Complete Response (CR) + Partial Response (PR) + Stable Disease (SD) > 8 weeks.

Enrollment criteria for the second phase of the Phase I/II clinical trial are identical to those in the first phase. The Phase II portion of the trial began in June 2015 and is ongoing at MD Anderson. Of the 39 patients allowed in the protocol for the Phase II portion of the trial, 10 have been enrolled and nine are evaluable for response under the trial protocol, because they have received two or more cycles of treatment. Interim results show that four of the patients had tumor regression and one patient had a Complete Response, or CR under the RECIST criteria. The patient with the CR had disappearance of the lung primary tumor, as well as lung, liver, and lymph node metastases. The median response duration for all patients, which is defined as the median time between when response is first noted to the time when cancer progression is observed, was three months. The response rate for the nine patients evaluated to date was 11% and the disease control rate for the nine patients was 78%.

The response rate and disease control rate to date in the Phase II portion of our Phase I/II clinical trial substantially exceeds the response rate of 7% (with no CRs) and disease control rate of 58% reported for a clinical trial of the TKI afatinib (marketed as Gilotrif® by Boehringer Ingelheim Pharmaceuticals, Inc.) in a study referred to as the LUX-Lung 1 clinical trial. A total of 585 patients were enrolled in that Phase IIB/III clinical trial, whose primary endpoint was overall survival and whose secondary endpoints were progression-free survival, RECIST response, quality of life and safety. The LUX-Lung 1 clinical trial was a randomized, double blinded Phase IIB/III clinical trial treating subjects with Stage IIB or IV adenocarcinoma, a type of NSCLC. The Phase II portion of our Phase I/II trial is not blinded, and is designed to treat NSCLC subjects regardless of EGFR status.

Preliminary analysis of the early data from the Phase II portion of our Phase I/II trial supports our belief that Oncoprex may provide medical benefit in several subpopulations of NSCLC patients for which there is an unmet medical need, and may provide pathways for accelerated approval by the US Food and Drug Administration, or FDA. As a result of these initial findings, in April 2016, we suspended enrollment of new patients in the Phase II portion of the trial to collect additional trial data and have it analyzed in order to seek FDA guidance as to whether the protocol for this clinical trial could be modified to expand enrollment and also to divide the patients into cohorts with a view toward seeking accelerated approval in one or more of these cohort populations. We subsequently decided not to modify the trial, but to continue it as originally designed. Although this clinical trial is currently closed to new patient enrollment, it is not terminated, and is considered “ongoing” because activities such as patient follow-up and further data collection and analysis continue.

We now plan to reopen enrollment in the current version of the Phase II portion of the trial. We have encountered delays in reopening this trial at MD Anderson; and will likely reopen the trial at one or more other clinical trial sites. We intend to use a portion of our available funds to add additional clinical trial sites.

Our Oncoprex immunogene therapy technology was discovered through a lung cancer research consortium from MD Anderson and The University of Texas Southwestern Medical Center, or UTSWMC, along with the National Cancer Institute, or NCI. The TUSC2 discovery teams included Jack A. Roth, MD, FACS, chairman of our Scientific and Medical Advisory Board. We have assembled a team of experts in clinical and translational research, including laboratory scientists, medical oncologists and biostatisticians, to pursue the development and commercialization of Oncoprex and other potential product candidates.

Our technology discoveries and research and development programs have been the subjects of numerous peer-reviewed publications and have been supported by Small Business Innovation Research, or SBIR, grants and grants from the National Institutes of Health, the United States Department of Treasury, and the State of Texas. We hold a worldwide, exclusive license from MD Anderson to patents covering the therapeutic use of TUSC2 and other genes that have been shown to have cancer fighting properties, as well as a number of related technologies, including 30 issued patents, and two pending patent applications.

Our Pipeline

We are developing Oncoprex, our lead product candidate, to be administered with erlotinib for NSCLC. We are also conducting preclinical research with the goal of developing Oncoprex to be administered with immunotherapies in NSCLC. In addition, we have conducted research into other tumor suppressor genes associated with chromosome 3p21.3. Our research and development pipeline is shown below:



Our Strategy

We intend to develop and commercialize treatments for cancer based on our proprietary gene therapy platform, alone or in combination with other cancer therapies. Key elements of our strategy include:

- **Conduct Ongoing and New Clinical Trials.** We plan to continue clinical trials of Oncoprex immunogene therapy in combination with EGFR TKIs, such as erlotinib, and/or in combination with immunotherapies, such as anti-PD-1 immunotherapy, for treatment of NSCLC, while exploring pathways to accelerated Food and Drug Administration, or FDA, approval of this combination in NSCLC patients. We also may pursue clinical trials using multi-drug combinations of Oncoprex with additional targeted therapies and immunotherapies.
- **Investigate the Effectiveness of Oncoprex in Other Cancers.** We may also explore the combination of Oncoprex and other therapies in other cancers such as soft tissue, kidney, head and neck, and/or breast cancer. We may also pursue development of additional proprietary genes, alone or in combination with EGFR TKIs such as erlotinib and/or with immunotherapies.
- **Prepare to Commercialize Oncoprex.** We plan to continue to develop the manufacturing, process development and other capabilities needed to commercialize Oncoprex.
- **Pursue Strategic Partnerships.** As we gather additional clinical data, we plan to pursue strategic partnerships with other developers and providers of anti-cancer drugs to investigate possible therapeutic combinations of Oncoprex with drugs manufactured by others, to accelerate the development of our current and potential product candidates through co-development and to increase the commercial opportunities for our current and potential product candidates.
- **Develop Our Platform Technology.** We plan to investigate the applicability of our platform technology with additional anti-cancer drugs.

Corporate Information

We were incorporated in Delaware in April 2009. Our principal executive offices are located at 1601 Trinity Street, Bldg. B, Suite 3.322, Austin, TX 78712, and our telephone number is (512) 537-7997. Our corporate website address is www.genprex.com. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock.

The Securities We May Offer

We may offer shares of our common stock and preferred stock, various series of debt securities and warrants to purchase any of such securities, up to a total aggregate offering price of \$100,000,000 from time to time in one or more offerings under this prospectus, together with any applicable prospectus supplement and any related free writing prospectus, at prices and on terms to be determined by market conditions at the time of the relevant offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- maturity, if applicable;
- original issue discount, if any;
- rates and times of payment of interest or dividends, if any;
- redemption, conversion, exchange or sinking fund terms, if any;
- conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;
- ranking, if applicable;
- restrictive covenants, if any;
- voting or other rights, if any; and
- important U.S. federal income tax considerations.

The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

We may sell the securities directly to investors or through underwriters, dealers or agents. We, and our underwriters or agents, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement:

- the names of those underwriters or agents;
- applicable fees, discounts and commissions to be paid to them;
- details regarding over-allotment options, if any; and
- the estimated net proceeds to us.

Common Stock. We may issue shares of our common stock from time to time. Holders of our common stock are entitled to one vote per share for the election of directors and on all other matters that require stockholder approval. Subject to any preferential rights of any then outstanding preferred stock, in the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in the assets remaining after payment of liabilities and the liquidation preferences of any then outstanding preferred stock. Our common stock does not carry any preemptive rights enabling a holder to subscribe for, or receive shares of, any class of our common stock or any other securities convertible into shares of any class of our common stock, or any redemption rights.

Preferred Stock. We may issue shares of our preferred stock from time to time, in one or more series. Under our amended and restated certificate of incorporation, our board of directors has the authority, without further action by stockholders, to designate up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, qualifications and restrictions granted to or imposed upon the preferred stock, including dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference and sinking fund terms, any or all of which may be greater than the rights of the common stock. To date, none of the 10,000,000 authorized shares of preferred stock have been designated by our board of directors. Convertible preferred stock will be convertible into our common stock or exchangeable for our other securities. Conversion may be mandatory or at the option of the holders of our preferred stock and would be at prescribed conversion rates.

We will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designation relating to that series. We will incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

Debt Securities. We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsecured and unsubordinated debt. The subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all of our senior indebtedness. Convertible debt securities will be convertible into our common stock or preferred stock. Conversion may be mandatory or at the holder's option and would be at prescribed conversion rates.

The debt securities will be issued under one or more documents called indentures, which are contracts between us and a national banking association or other eligible party, as trustee. In this prospectus, we have summarized certain general features of the debt securities. We urge you, however, to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the series of debt securities being offered, as well as the complete indentures that contain the terms of the debt securities. A form of indenture has been filed as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

Warrants. We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities. Any warrants issued under this prospectus may be evidenced by warrant certificates. Warrants may be issued under a separate warrant agreement to be entered into between us and the investors or a warrant agent. We will indicate the name and address of the warrant agent, if applicable, in the prospectus supplement relating to the particular series of warrants being offered. Our Board of Directors will determine the terms of the warrants. In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the particular series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. Forms of the warrant agreements and forms of warrant certificates containing the terms of the warrants being offered, and supplemental warrant agreements and forms of warrant certificates will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

Units. We may offer units consisting of our common stock or preferred stock, debt securities and/or warrants to purchase any of these securities 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 the unit agent in the applicable prospectus supplement relating to a particular series of units. This prospectus contains only a summary of certain general features of the units. The applicable prospectus supplement will describe the particular features of the units being offered thereby. You should read any prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms and provisions and will be incorporated by reference into the registration statement of which this prospectus is a part from reports we file with the SEC.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in our Annual Report on Form 10-K for the year ended December 31, 2018, as updated by our annual, quarterly and other reports and documents that are incorporated by reference into this prospectus, before deciding whether to purchase any of the securities being registered pursuant to the registration statement of which this prospectus is a part. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities, and the occurrence of any of these risks might cause you to lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations.

Our common stock could be subject to delisting from Nasdaq.

On September 10, 2019, Genprex, Inc. (the “Company”) received a letter from the Listing Qualifications Department (the “Staff”) of the Nasdaq Stock Market (“Nasdaq”) notifying the Company that, for the last 30 consecutive business days, the closing bid price for the Company’s common stock was below the minimum \$1.00 per share requirement for continued listing on The Nasdaq Capital Market as set forth in Nasdaq Listing Rule 5550(a)(2) (the “Minimum Bid Price Requirement”). The Nasdaq letter had no immediate effect on the listing of the Company’s common stock on the Nasdaq Capital Market.

In accordance with Nasdaq listing rules, the Company has been provided an initial period of 180 calendar days, or until March 9, 2020 (the “Compliance Date”), to regain compliance with the Minimum Bid Price Requirement. If, at any time during this 180-day period, the closing bid price of the Company’s common stock is at least \$1.00 for a minimum of 10 consecutive business days, unless the Staff exercises its discretion to extend such 10-day period, the Staff will provide the Company written confirmation of compliance with the Minimum Bid Price Requirement and the matter will be closed. If the Company does not regain compliance by the Compliance Date, the Company may be eligible for an additional 180 calendar day compliance period. To qualify for such additional compliance period, the Company would have to meet the continued listing requirements of the Nasdaq Capital Market, except for the Minimum Bid Price Requirement, and the Company would need to provide written notice of its intention to cure the deficiency during the additional compliance period. If the Company is not eligible for the additional compliance period or it appears to the Staff that the Company will not be able to cure the deficiency or if the Staff exercises its discretion to not provide such additional compliance period, the Staff will provide written notice to the Company that its common stock will be subject to delisting. At that time, the Company may appeal the Staff’s delisting determination to a Nasdaq Hearings Panel.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Investing in our securities involves a high degree of risk. This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus and each prospectus supplement contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that involve a number of risks and uncertainties. Although our forward-looking statements reflect the good faith judgment of our management, these statements can only be based on facts and factors currently known by us. Consequently, these forward-looking statements are inherently subject to risks and uncertainties, and actual results and outcomes may differ materially from results and outcomes discussed in the forward-looking statements.

Forward-looking statements can be identified by the use of forward-looking words such as “believes,” “expects,” “hopes,” “may,” “will,” “plan,” “intends,” “estimates,” “could,” “should,” “would,” “continue,” “seeks,” “pro forma,” or “anticipates,” or other similar words (including their use in the negative), or by discussions of future matters such as the development of new products, technology enhancements, possible collaborations and other statements that are not historical. These statements include but are not limited to statements under the captions “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and in other sections incorporated by reference from our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, as applicable, as well as our other filings with the SEC. You should be aware that the occurrence of any of the events discussed under the heading “Risk Factors” in any applicable prospectus supplement and any documents incorporated by reference herein or therein could substantially harm our business, operating results and financial condition and that if any of these events occurs, it could adversely affect the value of an investment in our securities.

The cautionary statements made in this prospectus are intended to be applicable to all related forward-looking statements wherever they may appear in this prospectus or in any prospectus supplement or any documents incorporated by reference herein or therein. We urge you not to place undue reliance on these forward-looking statements, which speak only as of the date they are made. Except as required by law, we assume no obligation to update our forward-looking statements, even if new information becomes available in the future.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of the securities offered hereby. Except as described in any prospectus supplement or any related free writing prospectus that we may authorize to be provided to you, we currently intend to use the net proceeds from the sale of the securities offered hereby for general corporate purposes, which may include research and development, capital expenditures, working capital and general and administrative expenses. We may also use a portion of the net proceeds to repay any debts and/or acquire or invest in businesses, products and technologies that are complementary to our own, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus. We have not determined the amount of net proceeds to be used specifically for any of the foregoing purposes. We will set forth in the applicable prospectus supplement or free writing prospectus our intended use for the net proceeds received from the sale of any securities sold pursuant to the prospectus supplement or free writing prospectus. Pending these uses, we intend to invest the net proceeds in short- and intermediate-term, investment-grade, interest-bearing securities.

Each time we offer securities under this prospectus, we will describe the intended use of the net proceeds from that offering in the applicable prospectus supplement. The actual amount of net proceeds we spend on a particular use will depend on many factors, including, our future capital expenditures, the amount of cash required by our operations, and our future revenue growth, if any.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 200,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share. All of our authorized preferred stock is undesignated. The following description of our capital stock, together with any additional information we include in any applicable prospectus supplement or any related free writing prospectus, summarizes the material terms and provisions of our common stock and the preferred stock that we may offer under this prospectus. While the terms we have summarized below will apply generally to any future common stock or preferred stock that we may offer, we will describe the particular terms of any class or series of these securities in more detail in the applicable prospectus supplement. This summary of the rights of our common and preferred stockholders and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws and of the Delaware General Corporation Law is not complete. For more detailed information, please see our amended and restated certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the Delaware General Corporation Law.

Common Stock

Outstanding Shares.

As of October 2, 2019, there were 15,842,855 shares of voting common stock issued and outstanding held of record by 221 stockholders.

As of October 2, 2019, there were an aggregate of 5,905,583 shares of common stock subject to outstanding options under our 2009 Equity Incentive Plan and our 2018 Equity Incentive Plan. In addition, as of August 30, 2019, there were 3,864,552 shares of common stock issuable upon the exercise of outstanding warrants.

Voting

Our voting common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our voting common stock entitled to vote in any election of directors can elect all of the directors standing for election.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding-up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

Rights and Preferences

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

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Preferred Stock

Under our amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of convertible preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Anti-Takeover Effects of Provisions of Our Amended and Restated Certificate of Incorporation, Our Amended and Restated Bylaws and Delaware Law

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law, or Section 203. Section 203 generally prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years following the time that such stockholder became an interested stockholder, unless:

- prior to such time the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (1) by persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to such time, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

- permit our board of directors to issue up to 10,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate (including the right to approve an acquisition or other change in our control);

- provide that the authorized number of directors may be changed only by resolution of the board of directors;
- provide that the board of directors or any individual director may only be removed with cause and the affirmative vote of the holders of at least 66-2/3% of the voting power of all of our then outstanding common stock;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- divide our board of directors into three classes;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner and also specify requirements as to the form and content of a stockholder's notice;
- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose);
- provide that special meetings of our stockholders may be called only by the chairman of the board, our Chief Executive Officer or by the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors; and
- provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to us or our stockholders, (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action asserting a claim against us governed by the internal affairs doctrine. This exclusive forum provision would not apply to actions brought to enforce any liability or duty created by the Securities Act or the Exchange Act or any other claim over which the federal courts have exclusive jurisdiction. To the extent that any such claims may be based upon federal law claims, Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder, and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Although our amended and restated certificate of incorporation contains the choice of forum provision described above, it is possible that a court could rule that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

The amendment of any of these provisions, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require approval by the holders of at least 66-2/3% of our then-outstanding common stock.

Limitations on Liability and Indemnification of Officers and Directors

Our certificate of incorporation and bylaws limit the liability of our officers and directors and provide that we will indemnify our officers and directors, in each case, to the fullest extent permitted by the Delaware General Corporation Law. We have obtained directors' and officers' liability insurance coverage.

Nasdaq Capital Market Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol "GNPX".

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is V Stock Transfer, LLC. The transfer agent and registrar's address is 18 Lafayette Place, Woodmere, New York 11598.

DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue the debt securities under the indenture that we will enter into with the trustee named in the indenture. The indenture will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

General

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as “discount securities,” which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with “original issue discount,” or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- any limit upon the aggregate principal amount that may be issued;
- the maturity date or dates;
- the form of the debt securities of the series;
- the applicability of any guarantees;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;
- if the price (expressed as a percentage of the aggregate principal amount thereof) at which such debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;
- the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder’s option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;

- any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depositary for such global security or securities;
- if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;
- if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;
- additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;
- additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due and payable;
- additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;
- additions to or changes in the provisions relating to satisfaction and discharge of the indenture;
- additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;
- whether interest will be payable in cash or additional debt securities at our or the holders' option and the terms and conditions upon which the election may be made;
- the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any, and principal amounts of the debt securities of the series to any holder that is not a "United States person" for federal tax purposes;
- any restrictions on transfer, sale or assignment of the debt securities of the series; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common stock or our other securities (including securities of a third party). We will include provisions as to settlement upon conversion or exchange and whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than a subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate. If the debt securities are convertible into or exchangeable for our other securities or securities of other entities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default under the Indenture

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indenture with respect to any series of debt securities that we may issue:

- if we fail to pay any installment of interest on any series of debt securities, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by us in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of interest for this purpose;

- if we fail to pay the principal of, or premium, if any, on any series of debt securities as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to such series; provided, however, that a valid extension of the maturity of such debt securities in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of principal or premium, if any;
- if we fail to observe or perform any other covenant or agreement contained in the debt securities or the indenture, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive written notice of such failure, requiring the same to be remedied and stating that such is a notice of default thereunder, from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indenture, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity. The holders of a majority in 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 trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies only if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request;
- such holders have offered to the trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred by the trustee in compliance with the request; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indenture.

Modification of Indenture; Waiver

We and the trustee may change an indenture without the consent of any holders with respect to specific matters:

- to cure any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;
- to comply with the provisions described above under “Description of Debt Securities—Consolidation, Merger or Sale;”
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;

- to add to our covenants, restrictions, conditions or provisions such new covenants, restrictions, conditions or provisions for the benefit of the holders of all or any series of debt securities, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred upon us in the indenture;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;
- to make any change that does not adversely affect the interests of any holder of debt securities of any series in any material respect;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided above under “Description of Debt Securities—General” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment under any indenture by a successor trustee; or
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act.

In addition, under the indenture, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of any debt securities of any series;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any series of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

The indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- provide for payment;
- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- pay principal of and premium and interest on any debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we provide otherwise in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indenture provides that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, or DTC, or another depository named by us and identified in the applicable prospectus supplement with respect to that series. To the extent the debt securities of a series are issued in global form and as book-entry, a description of terms relating to any book-entry securities will be set forth in the applicable prospectus supplement.

At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will impose no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indenture at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indenture and the debt securities will be governed by and construed in accordance with the internal laws of the State of New York, except to the extent that the Trust Indenture Act of 1939 is applicable.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may consist of warrants to purchase common stock, preferred stock or debt securities and may be issued in one or more series. Warrants may be issued independently or together with common stock, preferred stock or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

If applicable, we will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, if any, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants being offered, including:

- the title of such securities;
- the offering price or prices and aggregate number of warrants offered;
- the currency or currencies for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at which, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which, and the currency in which, these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- the terms of any rights to force the exercise of the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special U.S. federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe 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.

Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent in connection with the exercise of the warrant.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Governing Law

Unless we provide otherwise in the applicable prospectus supplement, the warrants and warrant agreements, and any claim, controversy or dispute arising under or related to the warrants or warrant agreements, will be governed by and construed in accordance with the laws of the State of New York.

Enforceability of Rights by Holders of Warrants

If selected, each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

DESCRIPTION OF UNITS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the units that we may offer under this prospectus.

While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a Current Report on Form 8-K that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we sell under this prospectus, as well as the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We may issue units comprised of one or more debt securities, shares of common stock, shares of preferred stock and warrants in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We will describe in the applicable prospectus supplement the terms of the series of units, including:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock,” “Description of Debt Securities” and “Description of Warrants” will apply to each unit and to any common stock, preferred stock, debt security or warrant included in each unit, respectively.

Unit Agent

The name and address of the unit agent, if any, for any units we offer will be set forth in the applicable prospectus supplement.

Issuance in Series

We may issue units in such amounts and in numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

We, the unit agents and any of their agents may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary. See “Legal Ownership of Securities.”

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee or depository maintain for this purpose as the “holders” of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names as “indirect holders” of those securities. As we discuss below, indirect holders are not legal holders and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depository on behalf of other financial institutions that participate in the depository’s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Global securities will be registered in the name of the depository or its participants. Consequently, for global securities, we will recognize only the depository as the holder of the securities, and we will make all payments on the securities to the depository. The depository passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depository and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a global security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depository’s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not legal holders, of the securities.

Street Name Holders

A global security may be terminated in certain situations as described under “-Special Situations When a Global Security Will Be Terminated,” or issue securities that are not issued in global form. In these cases, investors may choose to hold their securities in their own names or in “street name.” Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depository will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any such trustee or depository will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee or third party employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the legal holder, we have no further responsibility for the payment or notice even if that legal holder is required, under agreements with its participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture, or for other purposes. In such an event, we would seek approval only from the legal holders, and not the indirect holders, of the securities. Whether and how the legal holders contact the indirect holders is up to the legal holders.

Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form because the securities are represented by one or more global securities or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depository's rules and procedures will affect these matters.

Global Securities

A global security is a security that represents one or any other number of individual securities held by a depository. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we issue to, deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depository. Unless we specify otherwise in the applicable prospectus supplement, the DTC will be the depository for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depository, its nominee or a successor depository, unless special termination situations arise. We describe those situations below under “-Special Situations When a Global Security Will Be Terminated.” As a result of these arrangements, the depository, or its nominee, will be the sole registered owner and legal holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depository or with another institution that does. Thus, an investor whose security is represented by a global security will not be a legal holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued as a global security, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations for Global Securities

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depository, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depository that holds the global security.

If securities are issued only as global securities, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in the global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depository's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in the global security;
- we and any applicable trustee have no responsibility for any aspect of the depository's actions or for its records of ownership interests in the global security, nor will we or any applicable trustee supervise the depository in any way;
- the depository may, and we understand that DTC will, require that those who purchase and sell interests in the global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and
- financial institutions that participate in the depository's book-entry system, and through which an investor holds its interest in the global security, may also have their own policies affecting payments, notices and other matters relating to the securities.

There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When a Global Security Will Be Terminated

In a few special situations described below, a global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own names, so that they will be direct holders. We have described the rights of holders and street name investors above.

A global security will terminate when the following special situations occur:

- if the depository notifies us that it is unwilling, unable or no longer qualified to continue as depository for that global security and we do not appoint another institution to act as depository within 90 days;
- if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The applicable prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depository, and neither we nor any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We may also sell equity securities covered by this registration statement in an “at the market offering” as defined in Rule 415 under the Securities Act. Such offering may be made into an existing trading market for such securities in transactions at other than a fixed price, either:

- on or through the facilities of the Nasdaq Capital Market or any other securities exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale; and/or
- to or through a market maker other than on the Nasdaq Capital Market or such other securities exchanges or quotation or trading services.

Such at-the-market offerings, if any, may be conducted by underwriters acting as principal or agent.

A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any underwriters, dealers or agents, if any;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents’ or underwriters’ compensation;
- any public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

Other than common stock, all securities we offer will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

We may enter into derivative transactions with third parties (including the writing of options), or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with such a transaction, the third parties may, pursuant to this prospectus and the applicable prospectus supplement, sell securities covered by this prospectus and the applicable prospectus supplement. If so, the third party may use securities borrowed from us or others to settle such sales and may use securities received from us to close out any related short positions. We may also loan or pledge securities covered by this prospectus and the applicable prospectus supplement to third parties, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus and the applicable prospectus supplement. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement or in a post-effective amendment.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. These transactions may be effected on any exchange or over-the-counter market or otherwise.

Any underwriters who are qualified market makers on the Nasdaq Capital Market may engage in passive market making transactions in the securities on the Nasdaq Capital Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

LEGAL MATTERS

The validity of the issuance of the securities offered hereby will be passed upon by Streusand, Landon, Ozburn & Lemmon, LLP, Austin, Texas. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in an appropriate prospectus supplement.

EXPERTS

Daszkal Bolton LLP, an independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2018, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Daszkal Bolton LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement, as well as any other document filed by us with the SEC, at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549. You can also request copies of these documents by writing to the SEC and paying a fee for the copying cost. You may obtain information on the operation of the Public Reference Room by calling the SEC at (800) SEC-0330. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including Genprex. The address of the SEC website is www.sec.gov.

We maintain a website at www.genprex.com. Information contained in or accessible through our website does not constitute a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC (File No. 001-38244):

- our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on April 1, 2019;

- our Quarterly Report on Form 10-Q/A for the period ended March 31, 2019, filed with the SEC on May 20, 2019;
- our Quarterly Report on Form 10-Q for the period ended June 30, 2019, filed with the SEC on August 13, 2019;
- our Current Reports on Form 8-K filed with the SEC on January 31, 2019, February 19, 2019, June 11, 2019, August 30, 2019, and September 13, 2019; and
- the description of our capital stock contained in our Registration Statement on Form 8-A filed with the SEC on October 13, 2017.

We also incorporate by reference into this prospectus all documents (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the initial filing of the registration statement of which this prospectus forms a part and prior to effectiveness of the registration statement, or (ii) after the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus but not delivered with this prospectus, including exhibits that are specifically incorporated by reference in that information. You should direct any requests for documents to Genprex, Inc., Attn: Corporate Secretary, 1701 Trinity Street, Bldg. B, Suite 3.322, Austin, Texas 78712.

You also may access these filings on our website at www.genprex.com. We do not incorporate the information on our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus or any supplement to this prospectus).

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.

Notwithstanding the statements in the preceding paragraphs, no document, report or exhibit (or portion of any of the foregoing) or any other information that was furnished and deemed by the rules of the SEC not to have been filed shall be incorporated by reference into this prospectus.

GENPREX, INC.

7,620,000 Shares of Common Stock

PROSPECTUS SUPPLEMENT

January 23, 2020

Lead Placement Agent

A.G.P.

Co-Placement Agent

Joseph Gunnar & Co.