

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

**Amendment No. 1 to
FORM S-1**
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Gevo, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

8731
(Primary Standard Industrial
Classification Code Number)

87-0747704
(I.R.S. Employer
Identification Number)

**345 Inverness Drive South, Building C, Suite 310
Englewood, Colorado 80112
(303) 858-8358**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Patrick R. Gruber
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Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

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

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

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

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

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

Large accelerated filer
Non-accelerated filer

Accelerated filer
Smaller reporting company
Emerging growth company

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

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to Be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
Series 1 Units consisting of:(4)	\$15,000,000	\$1,947.00
One share of Common Stock, par value \$0.01 per share(2)	—	—
One Series 2020-A Warrant to purchase one share of Common Stock(2)(3)	—	—
Series 2 Units consisting of: (4)	—	—
One Pre-Funded Series 2020-B Warrant to purchase one share of Common Stock(2)(3)	—	—
One Series 2020-A Warrant to purchase one share of Common Stock(2)(3)	—	—
Common Stock issuable upon exercise of the Series 2020-A Warrants(2)	\$15,000,000	\$1,947.00
Common Stock issuable upon exercise of the Pre-Funded Series 2020-B Warrants(2)(3)	—	—
Total	\$30,000,000	\$3,894.00(5)

- (1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act").
- (2) Pursuant to Rule 416 under the Securities Act, the securities being registered hereunder include such indeterminate number of additional shares of common stock as may be issued after the date hereof as a result of stock splits, stock dividends or similar transactions.
- (3) No additional registration fee is payable pursuant to Rule 457(i) under the Securities Act.
- (4) The proposed maximum aggregate offering price of the Series 1 units proposed to be sold in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any Series 2 units offered and sold in the offering, and the proposed maximum aggregate offering price of the Series 2 units to be sold in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any Series 1 units sold in the offering. Accordingly, the proposed maximum aggregate offering price of the Series 1 units and Series 2 units (including the shares of common stock issuable upon exercise of the pre-funded 2020-B Warrants included in the Series 2 units), if any, is \$15,000,000.
- (5) Previously paid.

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

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

SUBJECT TO COMPLETION, DATED JUNE 18, 2020

PRELIMINARY PROSPECTUS



Gevo, Inc.

**Up to 12,820,512 Series 1 Units, each consisting of One Share of Common Stock
and One Series 2020-A Warrant to Purchase One Share of Common Stock
and**

**Up to 12,820,512 Series 2 Units, each consisting of One Pre-Funded Series 2020-B Warrant to Purchase
One Share of Common Stock and One Series 2020-A Warrant
to Purchase One Share of Common Stock**

**(Shares of Common Stock Underlying the Series 2020-A Warrants)
and**

(Shares of Common Stock Underlying the Pre-Funded Series 2020-B Warrants)

We are offering for sale up to 12,820,512 Series 1 units, with each Series 1 unit consisting of one share of our common stock and one Series 2020-A warrant to purchase one share of our common stock. Each full Series 2020-A warrant entitles the holder thereof to purchase one share of our common stock. Each Series 1 unit will be sold at a fixed price of \$ _____ per Series 1 unit until the completion of this offering. The Series 1 units will not be issued or certificated. The shares of common stock and the Series 2020-A warrants are immediately separable and will be issued separately, but will be purchased together in this offering.

We are also offering to those purchasers, if any, whose purchase of Series 1 units in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock following the consummation of this offering, the opportunity to purchase, if such purchaser so chooses, in lieu of Series 1 units that would otherwise result in beneficial ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock, up to 12,820,512 Series 2 units. Each Series 2 unit will consist of one pre-funded Series 2020-B warrant to purchase one share of our common stock and one Series 2020-A warrant to purchase one share of our common stock. Each full pre-funded Series 2020-B warrant entitles the holder thereof to purchase one share of our common stock. Each Series 2 unit will be sold at a fixed price of \$ _____ per Series 2 unit until the completion of this offering, which is the offering price per Series 1 unit, minus \$0.01. For each Series 2 unit we sell, the number of Series 1 units we are offering will be decreased on a one-for-one basis. Because we will issue one Series 2020-A warrant as part of each Series 1 unit and Series 2 unit, the number of Series 2020-A warrants sold in this offering will not change as a result of a change in the mix of the Series 2 units and Series 1 units sold. The Series 2 units will not be issued or certificated. The pre-funded Series 2020-B warrants and the Series 2020-A warrants are immediately separable and will be issued separately, but will be purchased together in this offering. The shares of our common stock issuable from time to time upon exercise of the Series 2020-A warrants and the pre-funded Series 2020-B warrants are also being offered pursuant to this prospectus.

The Series 2020-A warrants will be exercisable on the date of issuance and will expire on the _____ anniversary of the date of issuance with an exercise price of \$ _____ per share of common stock. The pre-funded Series 2020-B warrants will be exercisable on the date of issuance and will expire when exercised in full, with an exercise price of \$0.01 per share of common stock. The purchase price of \$ _____ per share will be pre-paid, except for a nominal exercise price of \$0.01 per share, upon issuance of the pre-funded Series 2020-B warrants and, consequently, no additional payment or other consideration (other than the nominal exercise price of \$0.01 per share) will be required to be delivered to us by the holder upon exercise. See "Description of Warrants" for more information on the securities offered hereby.

The placement agent has agreed to use reasonable best efforts to arrange for the sale of the securities. There is no required minimum number of securities or amount of proceeds that must be sold as a condition to completion of this offering.

Our common stock is listed on the Nasdaq Capital Market under the symbol "GEVO." On June 17, 2020, the last reported sale price of our common stock on the Nasdaq Capital Market was \$1.17 per share. The Series 2020-A warrants and the pre-funded Series 2020-B warrants are not, and will not be, listed for trading on any national securities exchange or other trading system.

Investing in our securities involves a high degree of risk. Before buying any securities, you should review carefully the risks and uncertainties described under the heading "[Risk Factors](#)" beginning on page 12 of this prospectus and in the documents incorporated by reference into this prospectus.

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

We have retained H.C. Wainwright & Co., LLC, or the placement agent, as our exclusive placement agent to use its reasonable best efforts to solicit offers to purchase the securities in this offering. The placement agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. Because there is no minimum number of securities or amount of proceeds required as a condition

to closing in this offering, the actual public offering amount, placement agent's fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amounts set forth above and throughout this prospectus. We have agreed to pay the placement agent fees set forth in the table below, which assumes that we sell all of the securities we are offering.

	Per Series 1 Unit	Per Series 2 Unit	Total
Public offering price	\$	\$	\$
Placement agent fees(1)	\$	\$	\$
Proceeds, before expenses, to us(2)	\$	\$	\$

- (1) We have also agreed to reimburse the placement agent's legal fees and expenses in the amount of up to \$100,000. See "Plan of Distribution" for a description of the compensation to be received by the placement agent.
- (2) Because there is no minimum offering amount required as a condition to closing in this offering, the actual public offering amount, placement agent fees and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amounts set forth above. For more information, see "Plan of Distribution."

Delivery of the shares of common stock, the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby is expected to be made on or about _____, 2020.

H.C. Wainwright & Co.

The date of this prospectus is _____, 2020.

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We have not, and the placement agent has not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the placement agent take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

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

TRADEMARKS

We use various of our trademarks, including, without limitation, Gevo® and GIFT™, in this prospectus and the documents incorporated by reference herein. This prospectus includes, and the documents incorporated by reference herein include, trademarks, trade names and service marks that are the property of other organizations.

Solely for convenience, trademarks and trade names referred to in this prospectus and the documents incorporated by reference herein appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we or the applicable owner will not assert, to the fullest extent under applicable law, our or its rights to these trademarks and trade names.

MARKET AND INDUSTRY DATA

Unless otherwise indicated, information contained in this prospectus and the documents incorporated by reference herein concerning our industry and the markets in which we operate, including our general expectations and market position, market opportunity, market size and market share, is based on information from our own management estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. This data involves a number of assumptions and limitations. In addition, assumptions and estimates of our and our industry's future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Risk Factors" and elsewhere in this prospectus and in the sections entitled "Risk Factors" in our [Annual Report on Form 10-K for the year ended December 31, 2019, filed with the Securities and Exchange Commission \(the "SEC"\) on March 17, 2020 \(the "2019 Annual Report"\)](#), and our [Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, filed with the SEC on May 13, 2020 \(the "2020 Q1 Quarterly Report"\)](#), each of which is incorporated by reference herein. These and other factors could cause our future performance to differ materially from our assumptions and estimates and those made by third parties.

PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our securities, you should read this entire prospectus carefully, including the documents incorporated by reference herein, including the section entitled “Risk Factors” included elsewhere in this prospectus, the sections entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes thereto, which are incorporated by reference herein. Some of the statements in this prospectus and in the documents incorporated by reference herein, constitute forward-looking statements. See “Cautionary Note Regarding Forward-Looking Statements.”

In this prospectus, unless the context otherwise requires, references to “we,” “us,” “our,” the “Company” and “Gevo” refer to Gevo, Inc., a Delaware corporation, and its wholly owned or indirect subsidiaries, and their predecessors.

Overview

We are a growth-oriented renewable fuels company that is commercializing the next generation of renewable low-carbon liquid transportation fuels with the potential to achieve a “net zero” greenhouse gas (“GHG”) footprint and address global needs of reducing GHG emissions with sustainable alternatives to petroleum fuels. As next generation renewable fuels, our hydrocarbon transportation fuels have the advantage of being “drop-in” substitutes for conventional fuels that are derived from crude oil, working seamlessly and without modification in existing fossil-fuel based engines, supply chains and storage infrastructure. In addition to the potential of net zero carbon emissions across the whole fuel life-cycle, our renewable fuels eliminate other pollutants associated with the burning of traditional fossil fuels such as particulates and sulfur, while delivering superior performance. We believe that the world is substantially under-supplied with low-carbon, drop-in renewable fuels that can be immediately used in existing transportation engines and infrastructure, and we are uniquely positioned to grow in serving that demand.

Our production processes and fuel products have been proven to work. We use low-carbon, renewable resource-based carbohydrates as raw materials. In the near-term, our feedstocks will primarily consist of non-food corn. As our technology is applied globally, feedstocks can consist of sugar cane, molasses or other cellulosic sugars derived from wood, agricultural residues and waste. Our patented fermentation yeast biocatalyst produces isobutanol, a four-carbon alcohol, via the fermentation of renewable plant biomass carbohydrates. The resulting renewable isobutanol has a variety of direct applications but, more importantly to our fundamental strategy, serves as a building block to make renewable isooctane (which we refer to as renewable premium gasoline) and renewable jet fuel using simple and common chemical conversion processes. We also reduce or eliminate fossil-based process energy inputs by replacing them with renewable energy such as wind-powered electricity and renewable natural gas (“RNG”).

Our technology represents a new generation of renewable fuel technology that overcomes the limitations of first-generation biofuels, highlighted by the following:

- Potential to replace the whole gallon of liquid transportation fuels, including for airplanes, automobiles, boats, trucks and ships of all types, while delivering massively reduced or negative GHG emissions and reducing or eliminating pollutants such as particulates and sulfur, which have been linked to cancer and other human health issues;
- Drop-in compatibility and performance, without modification to existing vehicles, airplanes and other infrastructure;
- Scalability as a global and sustainable transportation fuel solution;
- Potential for a “net zero” or even negative carbon footprint for our fuel products across the lifecycles and value chains of our products through sustainable or regenerative agriculture practices to reduce the carbon footprint of the carbohydrates used to make our products and the use of renewable energy (such as wind power and biogas) to run our hydrocarbon plants;
- The production of value-added feed and food products, including protein, bran, and vegetable oil, to help feed the world using sustainably grown corn to make our products;
- Through our platform fermentation technology, we possess the ability to use carbohydrates from various types of feedstock (including starch, dextrose, sugar, molasses, agricultural residues, and wood), thereby allowing our technology to be used in various economic conditions and taking advantage of raw materials abundant in different parts of the world;

- Through our platform alcohols-to-hydrocarbons technology, which converts fermentation alcohols into chemical products, we have developed the ability to produce renewable chemicals such as aroma chemicals, flavorings, para-xylene for use polyester textile fibers and polyethylene terephthalate plastic used in drinking bottles; renewable synthetic rubber; renewable propylene and hydrogen. We expect to license these technologies in the future; and
- The opportunity to further optimize the performance of our biocatalyst to improve the economics associated with the production of our products.

Our Assets

Facilities

We operate two production facilities. First, we operate a demonstration plant in Silsbee, Texas that was developed and is operated in partnership with South Hampton Resources (the “South Hampton Facility”). The South Hampton Facility has a capacity of approximately 100,000 gallons per year of renewable hydrocarbon products, including renewable premium gasoline and renewable jet fuel, that is converted from our renewable isobutanol.

Second, we operate a wholly-owned, commercial-scale renewable isobutanol plant in Luverne, Minnesota (the “Luverne Facility”), which has a current capacity of approximately 1.5 million gallons per year of isobutanol. Using the proven technologies and experience gained at both the Luverne Facility and the South Hampton Facility, we intend to expand the Luverne Facility to produce substantially increased quantities of isobutanol and to add the production capacity to convert isobutanol into significant quantities of renewable premium gasoline and renewable jet fuel. We are planning to develop two production sites in addition to the Luverne Facility. Renewable fuel capacity under our initial planned expansions is expected to total 60-70 millions of gallons per year.

The Luverne Facility expansion is in development and we are evaluating additional production sites. There are many ethanol production facilities that are available or we expect will become available in the near future. We plan to acquire a site either through outright acquisition, or with a joint venture or partnership. Depending on the facility and design of the ethanol plant that we expect to acquire, we would expect to retrofit or build side by side production.

On April 2, 2020, we announced the engagement of Citigroup Global Markets, Inc. to assist us in exploring, among other things, project funding needed for the Luverne Facility expansion, as well as for other production expansion projects, in order to meet the growing, contracted demand for our renewable fuels. Concurrent with this offering, Citigroup is seeking to identify project equity investors consistent with our strategy to use project financing to finance the construction of production facilities to produce our products.

Take-or-Pay Contracts

We have a growing portfolio of long-term, take-or-pay contracts for our products. As of the date of this prospectus, we have entered into the following contracts, among others:

- **Delta Air Lines.** In December 2019, and as subsequently amended in April 2020, we entered into a long-term, take-or-pay purchase agreement with Delta Air Lines, Inc. (“Delta”) pursuant to which we agreed to sell and deliver 10 million gallons per year of renewable jet fuel to Delta, subject to certain conditions and exceptions, including Delta’s right to eliminate the take-or-pay requirements in certain circumstances. We expect to supply the renewable jet fuel to Delta upon completion of the proposed expansion of the Luverne Facility (the “Expanded Facility”), which we expect to occur by 2024.
- **Scandinavian Airlines System.** In October 2019, we entered into a long-term, take-or-pay purchase agreement with Scandinavian Airlines System (“SAS”) pursuant to which we agreed to sell and deliver renewable jet fuel to SAS, subject to certain conditions and exceptions. We expect to supply the renewable jet fuel to SAS upon completion of the Expanded Facility, which we expect to occur by 2024.
- **Air Total.** In August 2019, we entered into a take-or-pay purchase agreement with Air Total International, S.A. (“Air Total”) pursuant to which we agreed to supply renewable jet fuel to Air Total under a three-year offtake agreement. Air Total will initially purchase certain quantities of renewable jet fuel produced at the South Hampton Facility, and we expect to sell Air Total increasing amounts of renewable jet fuel upon the completion of two expansion projects to increase renewable jet fuel production capabilities at the Luverne Facility. We expect the expansion projects to be completed in 2023.

- **HCS Group GmbH.** In February 2019, we entered into a take-or-pay purchase agreement with HCS Holding GmbH (“HCS”), pursuant to which we agreed to supply renewable premium gasoline to HCS under a 10-year offtake agreement. HCS will initially purchase certain quantities of renewable premium gasoline produced at the South Hampton Facility. We expect the expansion project to be completed in 2023. Assuming the expansion project is completed, and subject to the terms and conditions of the agreement, HCS would purchase a minimum of 2,000,000 gallons per year and a maximum of 4,000,000 gallons per year.

Technology Licensing Agreements

We have other contracts focused on licensing our technology:

- **Praj Industries.** In April 2019, we entered into a binding, definitive Construction License Agreement with Praj Industries Ltd. (“Praj Industries”) to commercialize the production of renewable isobutanol using sugary-based feedstocks, such as juice, syrup and molasses made of sugarcane and sugar beets (the “Construction License Agreement”). Pursuant to the Construction License Agreement, Praj Industries will provide engineering procurement and construction services to certain third-party customers using a process design package that incorporates our proprietary isobutanol biocatalyst and is designed for use with sugary-based feedstocks (the “PDP”). The PDP is jointly owned by us and Praj. We have granted a license to Praj that would allow Praj to provide such services to certain third-party customers. In addition, we also signed a memorandum of understanding with Praj Industries to commercialize our renewable hydrocarbons products in India, including our renewable jet fuel and renewable isooctane, derived from our renewable isobutanol.

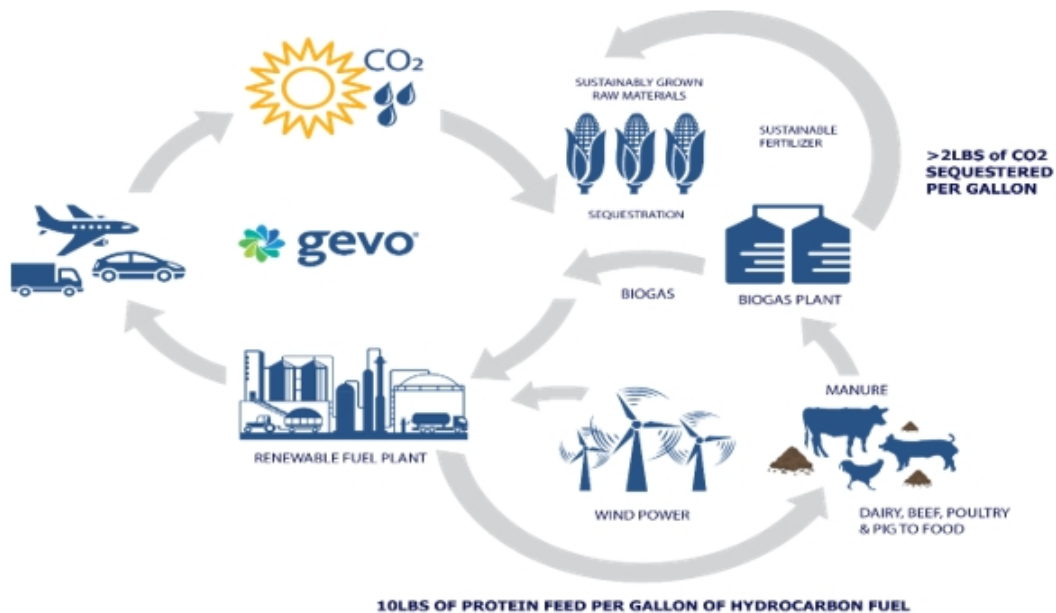
Intellectual Property

We have patents, trade secrets and know-how covering our technology, processes, catalysts, biocatalysts and plant operations:

- We have 118 patents and patent applications directed to our technologies and specific methods and products that support our business in the renewable fuels and bio industrial chemicals markets. We continue to file new patent applications, for which terms extend up to 20 years from the filing date in the U.S. We have also been issued multiple patents in the U.S. and in foreign jurisdictions.
- In addition to patents and patent applications, we have trade secrets that involve the biocatalyst, know-how and procedures to operate plants, and blockchain technology to track our products.
- Pursuant to the terms of a Patent Cross-License Agreement (the “License Agreement”), dated August 15, 2015, with Butamax Advanced Biofuels LLC (“Butamax”), we have certain rights to approximately 250 patents and patent applications owned by Butamax relating to renewable isobutanol.

Our Business System and Sustainability

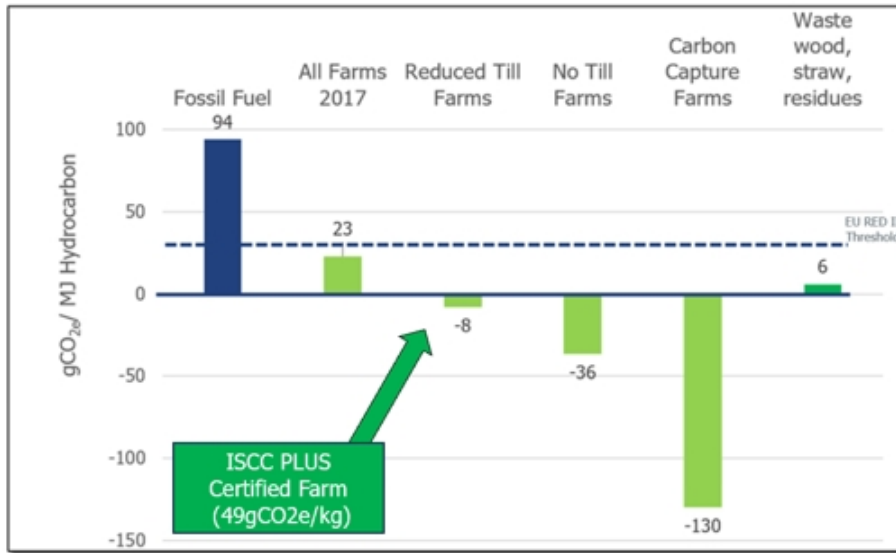
Our business system (from the raw materials to use of our advanced renewable fuels in all types of transportation) represents the entire circular economy in action. The graphic below is a summary representation of our business system at work in the Midwest region of the United States, and how each of the processes work together to produce advanced renewable fuels with a low-carbon footprint. We believe this system can work just as effectively in most other parts of the world.



In the above representation of our system, the most basic raw material for making our renewable fuel products is the carbon dioxide in the atmosphere (i.e. the GHG). Atmospheric carbon dioxide and water are captured by growing plants through photosynthesis (via sunlight) to produce carbohydrates. Carbohydrates sources already shown to work in our system include starch, dextrose, sucrose, molasses and from cellulose such as wood waste, wood and agricultural residues such as straw. In our first plants, we plan on using sustainably grown field corn as the carbohydrate source. Kernels of corn are comprised of approximately 70% carbohydrate and 30% protein. The kernels are ground up, and then the protein is separated from the carbohydrates either before or after the fermentation process. The carbohydrates are used for fermentation producing isobutanol. The protein is a valuable component of animal feed product delivering nutrition to animals in meat and dairy production. The feed products are value added, having the starch removed. With the starch removed, cattle and other livestock emit less enteric emissions than if they ate whole corn, yet 100% of the nutritional value of corn is delivered to the food chain. In our process, approximately 10 pounds of protein rich feed product is produced for each gallon of renewable fuel produced.

Reducing the fossil carbon footprint of the energy sources in our business system is important to reducing the carbon footprint of our renewable fuel products. In September 2019, we secured 5 megawatts of wind power from our partnership with Juhl Clean Energy Assets, Inc. to replace the grid electricity needed at the Luverne Facility. We are also establishing a supply of RNG to operate our process boilers at the Luverne Facility. We have contracted with three dairies in the Midwest that are expected to produce about 350,000 MMBtus of RNG per year using anaerobic digestion. About half of the RNG production is expected to be used at our Luverne Facility and the remaining production is expected to be sold in the RNG markets, which are highly developed in places like California. An additional benefit of RNG production is that nitrogen, phosphorus and potassium nutrients are captured from the manure and can be used as field fertilizer. We believe that practices around the full accounting for both negative and positive externalities are evolving and will increasingly benefit us.

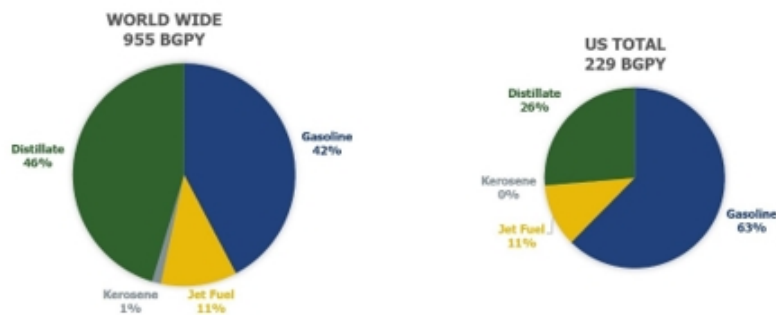
The impact of using renewable energy at our plants has potential to significantly reduce the carbon footprint associated with our products. When sustainable farming techniques used to grow our corn feedstocks (such as regenerative agriculture techniques) are accounted for, our renewable premium gasoline and renewable jet fuel products realize a GHG reduction of approximately 75% using EURED II calculation methods using the averages based upon the corn supplied to us (based upon the study by Sheehan, 2016). Furthermore, if we source feedstock from the farms that use conservation tillage such as strip tillage or drills, the corn GHG footprints are so low that we believe that we can run our total business system at a negative carbon footprint. We believe that we can achieve similar results by using waste wood, straw or municipal solid waste as feedstocks, depending upon the GHG footprint of the feedstock and the energy source used for production.



Our technology and business system embrace a new generation of systemic sustainability. We are focused on, and committed to, addressing the problem of supplying transportation fuels with a meaningful alternative that reduces GHGs and pollution, including the land utilization practices to generate our raw materials. We are working to establish accountability for the sustainability attributes of our entire business system, from the establishment of audited certification of our feedstocks (i.e. International Sustainability and Carbon Certification System and the Roundtable on Sustainable Biomaterials), to the development of distributed ledger technology in partnership with Blocksize Capital to enable the tracking of sustainability attributes proving assurance of sustainability to our customers.

Market Opportunities

Low-Carbon Footprint Renewable Fuels. Liquid transportation fuels are historically dominated by fossil, carbon-based raw materials. A barrel of oil is fractionated in the refining process into jet fuel, gasoline and diesel fuel. The amount of fossil-based fuels used worldwide for transportation totaled 965 billion gallons per year in 2017, according to the U.S. Energy Information Administration (the “EIA”), with U.S. demand of 229 billion gallons per year, not counting bunker fuel. The graphic below shows a breakdown of the products making up the liquid transportation fuel demand in 2017:



The size of the liquid transportation fuel markets is expected to remain steady through 2050 according to the EIA, even with the increased deployment of electric vehicles and hybrid vehicles. In addition, based on recent fundamental trends (including increasing petroleum demand, especially from emerging markets), regulatory initiatives worldwide and in the U.S. (such as California’s Low Carbon Fuel Standard) and the changing political discourse throughout the world with an increased focus on climate change, we believe there will be an increased need for economical, renewable and environmentally sensitive alternatives to existing liquid transportation fuels.

We believe that mandates for low-carbon fuels will continue to spread around the world as countries grapple with GHG reductions. We also believe that our renewable premium gasoline, jet fuel and diesel fuel products can rapidly gain market share as industry, political and regulatory trends accelerate over time. Our technology has the ability to be deployed globally. The rate of deployment will be driven by economics and financial returns on production facilities utilizing our technology.

Animal Feed and Proteins. A valuable byproduct of our fermentation process for the production of isobutanol is a nutritious protein stream that can be sold as animal feed. Our business model does not impose a ‘food versus fuel choice’; the carbohydrates we convert do not possess healthy nutritional content and cannot be utilized in the food chain in any meaningful or beneficial way.

Future Potential Products and Licensable Technologies

Para-Xylene for Polyester Materials. We have a technology to convert an intermediate from our hydrocarbon process into a key ingredient for polyester plastics and fiber. This key ingredient, para-xylene, enables 100% renewable polyester materials and has already been produced at demonstration plant scale, and proven to work. The market size for para-xylene is estimated to be about 50 million metric tons per year. Our technology is differentiated by how we make para-xylene in that it is made in simple steps without complicated side products. The potential market, ignoring price, would be on the order of 35 to 40 million metric tons per year. This technology would be an add on incremental expansion to a plant that makes jet fuel and isooctane, and therefore could be sized for specialty products, which could command a premium price.

Ethanol and/or isobutanol into diesel fuel. We possess the technology to convert ethanol into diesel and jet fuel. This technology has been demonstrated at lab scale. We see that this technology could be deployed after an isooctane plant is operational because there is a side stream that could be blended to into gasoline. This technology could work synergistically with renewable premium gasoline.

Alcohols into olefins. We have developed the technology to convert ethanol into propylene while generating hydrogen gas. The propylene is fully renewable and suitable for conversion into polypropylene into fibers and plastics. The hydrogen produced is suitable for fuel cell or other uses. We expect that we would license this technology in the future.

Alcohols to specialty chemicals. We have developed a catalytic technology to convert fermentation alcohols into specialty chemicals for fragrances, flavors and aromas.

Our Strategy

Our products address global needs for drop-in low-carbon, clean-burning, high-performance fuels. Our strategy is to exploit our patented technology, process know-how, proven operations, proven product performance, business systems and product offtake agreements to develop and install renewable fuel production capacity that provides project investors with attractive, risk-adjusted financial returns while also providing our company substantial streams of fee income around technology licensing, project construction management and operations and maintenance roles, as well as substantial residual project equity cash flow distributions. Our strategy minimizes the use of our capital in constructing projects.

Key elements of our strategy include:

- ***Continue to enter into supply agreements for low-carbon hydrocarbon fuels made from alcohols like isobutanol with customers to support capacity growth using project financing or other less expensive and less dilutive forms of capital.*** We intend to continue to build on our existing customer contracts, such as our supply agreements with Delta, SAS, Air Total and HCS, by entering into additional binding off-take agreements that would economically support the expansion of the Luverne Facility to increase the production capability of isobutanol and its derivative hydrocarbon products. If we are able to obtain sufficient new supply agreements, we expect to be able to raise capital to fund such conversion of the Luverne Facility using project financing or other less expensive and less dilutive forms of capital as compared to corporate equity and warrant offerings that we are conducting herewith and have used in the past.
- ***Upon receipt of project financing, we plan to expand the Luverne Facility to produce renewable premium gasoline and jet fuel.*** Upon, and subject to, securing adequate financing, we plan to expand the Luverne Facility to enable the production of isobutanol and its derivative products at levels sufficient to supply our initial larger scale off-take agreements.

- **Expand the global production capacity of renewable premium gasoline, jet fuel and diesel fuel, and intermediates for chemical and plastics production via licensing core and adjacent technologies around the world.** We have proven that our isobutanol production process works in full-scale fermenter systems at the Luverne Facility, and we have also proven that our renewable isobutanol can be readily converted to hydrocarbon products at the Silsbee Facility. Our technology can be used to produce isobutanol from feedstocks other than corn, such as sugar, molasses, agricultural residues (e.g., straw, bagasse, stover), wood and wood residues and biogenic municipal solid waste. Feedstocks differ in their abundance around the world. We intend to expand the global production of isobutanol and its derivative hydrocarbon products beyond the Luverne Facility through a low-cost, high-margin licensing model, in collaboration with partners such as Praj Industries, with whom we have previously announced a joint development agreement. We have several technologies that we expect to eventually license. We have already proven that fully renewable polyester can be produced using intermediates from our renewable premium gasoline production. We have developed a technology to convert ethanol to hydrogen and propylene. We have developed a technology to convert short chain fermentation alcohols into fine chemicals such as flavors and fragrances.
- **Grow our business to achieve economies of scale to reduce selling prices of renewable fuels.** We believe that the long-term price of oil is relevant to the demand for our products, and the value in the market for reducing carbon should make our selling prices more attractive in the future. In addition, as we scale up our business and achieve economies of scale, we can drive down our selling price of our renewable fuels to make our products more economical and attractive to our customers. We believe we can drive economies of scale by securing additional offtake supply agreements, with continued expansion of our production facilities and/or licensing our technology to others. Already, the net selling price to the customer approaches parity with fossil-based fuels. We also believe that with additional plants using our technology and with contracts for products that we expect to establish, we should be able to achieve attractive reinvestment economics making further plant buildouts attractive to project investors.
- **Establish a business system that has potential to deliver “net zero” carbon emission fuel products.** The concept of “net zero” carbon emissions is based on using sustainably produced, renewable resource-based raw materials as the product carbon source combined with reducing or eliminating fossil-based process energy inputs by using renewable electricity and RNG. The full life-cycle carbon footprint of our products, from generation of feedstocks to actual burning of the fuels, can be zero or even negative if regenerative or sustainable agricultural practices are used for the feedstock production. Our potential use of blockchain techniques could allow a complete and accurate accounting for positive and negative contributions to environmental metric which, in turn, would enable value transfers that incentivize systemic renewable and regenerative business practices across the value chain.
- **Undertake incremental process improvements to lower energy consumption at the Luverne Facility.** By investing additional capital at the Luverne Facility, we believe that we can lower the carbon intensity (i.e. lower the carbon dioxide emissions from the Luverne Facility) for our isobutanol and its derivative hydrocarbon products. The infrastructure could also be used for low carbon ethanol markets if the economics were warranted.

Competitive Strengths

- **Platform technologies and products to address large markets.** Because isobutanol can be readily converted into hydrocarbon products, including isooctane, isooctene, renewable jet fuel, lubricants, polyester, rubber, plastics, fibers and other polymers, we believe that the addressable markets are very large; potentially ultimately reaching 40% of the global petrochemicals markets depending on the price of oil and the market value of carbon footprint reduction.
- **Growing, take-or-pay contracted demand for our renewable products.** We currently have take-or-pay contracts in place for a maximum of 17 million gallons per year of our renewable premium gasoline and jet fuel. We believe these take-or-pay contracts are suitable for sponsoring debt and equity project financing for expansion of our production capabilities.
- **Proven commercial production processes.** Our renewable isobutanol production technology has been proven to work at a commercial scale in a 1 million liter fermenter at our Luverne Facility. Additional trains of proven fermentation equipment and systems will be needed to increase capacity at the site. Our technology to convert renewable isobutanol into renewable jet fuel, isooctane, isooctene and para-xylene (building block for polyester) has been proven at our Silsbee Facility.
- **Proven commercial products, renewable premium gasoline and jet fuel.**
 - **Renewable premium gasoline.** We produce a product called isooctane that we refer to as renewable premium gasoline. We have demonstrated that isooctane makes up 50% to 60% of fossil-based gasoline, and we believe isooctane is a direct substitute for alkylate and reformate. Given that our isooctane is renewable, we have the ability to produce a renewable premium gasoline. We believe that our renewable premium gasoline is substantially similar to fossil-based premium gasoline. Subject to receipt of certain regulatory approvals, our renewable premium gasoline could be a direct substitute for fossil-based premium gasoline for use in commerce in the U.S. Additionally, our renewable isooctane, like alkylate or reformate, when added to lower-octane fossil-based gasoline, produces a higher octane premium gasoline simultaneously lowering the GHG footprint and other pollution emissions. Because of the high octane of our isooctane product, our customer HCS has been supplying the F1 Racing Circuit in the E.U. In the U.S., the combination of “drop-in” to existing fleets and infrastructure while lowering the GHG footprint and pollution was a major driver for the City of Seattle to begin adoption of our renewable fuels in their fuel supply. We believe other municipal fleets looking to lower their carbon footprint are likely to follow because of the very low switching cost compared to alternatives such as electric vehicles, compressed natural gas vehicles or other clean technologies, which would require new fleets of vehicles and supporting infrastructure. In the consumer gasoline markets, we expect that the demand will grow for premium gasoline with high octane ratings as more cars come onto the road with engines designed for high miles per gallon.

- o **Renewable Jet Fuel.** In 2016, ASTM International included our renewable jet fuel in ASTM D7566 (Standard Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons), which means that our renewable jet fuel can be used in commercial aviation on a blended basis up to 50% with petroleum-based jet fuel. In fact, our renewable jet fuel has been used to fuel commercial flights in the U.S. by Alaska Airlines, Lufthansa, United Airlines, Etihad, Cathay Pacific Airways, Emirates, Japan Airlines, Korean Air and Atlas Air. In addition, our renewable isobutanol has been sold commercially in the Houston market as a fuel blendstock.
- **Existing commercial-scale production facility.** Our Luverne Facility is located in the middle of the U.S. with access to attractively priced renewable wind power electricity (for our electricity demand), renewable natural gas (for thermal energy), certified sustainable corn as a feedstock, rail services, and a trained production leadership team who knows how to produce Gevo products and train employees.
- **Retrofit and side-by-side ethanol and isobutanol production.** We have demonstrated that we can retrofit an existing ethanol plant for isobutanol production and manage both ethanol and isobutanol production using different yeasts without causing cross contamination, while still operating an integrated and efficient plant. This means that as Gevo production technologies expand, greenfield production sites are not required and existing low-cost ethanol infrastructure that is underutilized in today's ethanol markets can be converted to produce isobutanol, which can be further converted to renewable fuels such as renewable premium gasoline and renewable jet fuel. We believe the current ethanol market presents significant acquisition opportunities for Gevo suitable for retrofit at attractive prices.
- **Abundant, readily sourced feedstocks available globally.** Through our platform fermentation technology, we have the ability to use carbohydrates from various types of feedstock (including starch, dextrose, sugar, molasses, agricultural residues and wood), allowing our technology to be used in various economic conditions. The feedstocks are abundantly available across the globe, typically at reasonable prices and easily aggregated.
- **Experienced management team.** Our management team brings over 100 years of combined experienced in the development and commercialization of low-carbon products, projects and businesses.

Recent Developments

COVID-19

On March 31, 2020, we announced that, due to the impact the COVID-19 pandemic has had on the economy and our industry, we suspended production operations at the Luverne Facility for the foreseeable future. In connection with the suspension of operations and the overall economic disruption caused by the COVID-19 pandemic, we also terminated 30 employees who worked at both the Luverne Facility and at our corporate headquarters in Colorado.

In response to the impact of the COVID-19 pandemic, each of Patrick R. Gruber, our Chief Executive Officer, Christopher M. Ryan, our President, Chief Operating Officer and Chief Technology Officer, L. Lynn Smull, our Chief Financial Officer, Timothy J. Cesarek, our Chief Commercial Officer, Geoffrey T. Williams, Jr., our General Counsel and Secretary, and Carolyn M. Romero, our Vice President—Controller and Principal Accounting Officer (collectively, the “Officers”) accepted 20% reductions to their base salaries. These reductions became effective as of April 1, 2020 for a period of 90 days thereafter. In connection with the 20% salary reduction, the Officers were granted Company stock in the form of restricted stock awards in an amount equal to the 20% reduction. Certain remaining employees that earn above a certain dollar threshold also agreed to take a 20% salary reduction over the next three months, with the 20% portion to be paid in the form of restricted stock awards. With these steps, we expect to save several million dollars of cash burn during 2020.

Corporate Information

We were incorporated in Delaware in June 2005 under the name Methanotech, Inc. and filed an amendment to our certificate of incorporation changing our name to Gevo, Inc. on March 29, 2006. Our principal executive offices are located at 345 Inverness Drive South, Building C, Suite 310, Englewood, Colorado 80112, and our telephone number is (303) 858-8358. We maintain an internet website at www.gevo.com. Information contained in or accessible through our website does not constitute part of this prospectus.

THE OFFERING

Series 1 units offered by us in this offering	Up to Series 1 units.
Series 2 units offered by us in this offering	Up to Series 2 units. We are offering to those purchasers whose purchase of Series 1 units in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% or 9.99%, at the election of the purchaser, of our outstanding common stock following the consummation of this offering, the opportunity to purchase, if such purchaser so chooses, Series 2 units, in lieu of Series 1 units that would otherwise result in beneficial ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock. For each Series 2 unit we sell, the number of Series 1 units we are offering will be decreased on a one-for-one basis. Because we will issue a Series 2020-A warrant as part of each Series 1 unit and Series 2 unit, the number of Series 2020-A warrants sold in this offering will not change as a result of a change in the mix of the Series 2 units and Series 1 units sold.
Common stock offered by us in this offering	shares of common stock.
Series 2020-A warrants offered by us in the offering	Series 2020-A warrants to purchase up to shares of common stock. Each full Series 2020-A warrant will entitle the holder to purchase one share of common stock. The Series 2020-A warrants will be exercisable on the date of issuance and will expire on the anniversary of the date of issuance at an exercise price of \$ per share of common stock This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the Series 2020-A warrants. The exercise price of the Series 2020-A warrants and the number of shares into which the Series 2020-A warrants may be exercised are subject to adjustment in certain circumstances.
Pre-funded Series 2020-B warrants offered by us in the offering	Pre-funded Series 2020-B warrants to purchase up to shares of common stock. Each full pre-funded Series 2020-B warrant will entitle the holder to purchase one share of common stock. The pre-funded Series 2020-B warrants will be exercisable on the date of issuance and will expire when exercised in full, at an exercise price of \$0.01 per share of common stock. The purchase price of \$ per share will be pre-paid, except for a nominal exercise price of \$0.01 per share, upon issuance of the pre-funded Series 2020-B warrants and, consequently, no additional payment or other consideration (other than the nominal exercise price of \$0.01 per share) will be required to be delivered to us by the holder upon exercise. This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the pre-funded Series 2020-B warrants. The exercise price of the pre-funded Series 2020-B warrants and the number of shares into which the pre-funded Series 2020-B warrants may be exercised are subject to adjustment in certain circumstances.

Beneficial Ownership Limitation in Series 2020-A warrants and the pre-funded Series 2020-B warrants

A holder (together with its affiliates) may not exercise any portion of the Series 2020-A warrants and/or pre-funded Series 2020-B warrants to the extent that the holder, together with its affiliates and certain related parties, would beneficially own more than 4.99% (or, at the election of the holder prior to the date of issuance, 9.99%) of our outstanding common stock after exercise. The holder may increase or decrease this beneficial ownership limitation to any other percentage not in excess of 9.99% upon notice to us, provided that, in the case of an increase of such beneficial ownership limitation, such notice shall not be effective until 61 days following notice to us.

Shares of common stock outstanding after this offering (assuming the exercise of all of the pre-funded Series 2020-B warrants offered hereby)

shares of common stock.

Use of proceeds

We estimate that our net proceeds from this offering will be approximately \$ million, based on an assumed public offering price of \$ per Series 1 unit and assuming the sale of Series 1 units and no sale of any Series 2 units in this offering, after deducting the placement agent's fees and estimated offering expenses payable by us.

We intend to use the net proceeds received from this offering to fund working capital and for other general corporate purposes. See "Use of Proceeds."

Because this is a best efforts offering with no minimum amount of securities or offering proceeds as a condition to closing, we may not sell all or any of the securities offered hereby. As a result, we may receive significantly less in net proceeds than we currently estimate.

Risk factors

Investing in our securities involves a high degree of risk. See the section entitled "Risk Factors" of this prospectus and the section entitled "Risk Factors" in the documents incorporated by reference herein for a discussion of factors you should carefully consider before investing in our securities.

Nasdaq Capital Market symbol

"GEVO." The Series 2020-A warrants and the pre-funded Series 2020-B warrants are not, and will not be, listed for trading on any national securities exchange or other nationally recognized trading system, including the Nasdaq Capital Market.

Unless otherwise noted, the number of shares of common stock to be outstanding immediately after this offering as set forth above is based on 14,614,890 shares outstanding as of March 31, 2020, and excludes:

- 1,561 shares of our common stock issuable upon exercise of outstanding options at a weighted-average exercise price of \$928.79 per share;
- 1,393,081 shares of our common stock issuable upon the vesting and settlement of outstanding restricted stock awards at a weighted-average grant date fair value of \$1.83 per share;
- 54,669 shares of our common stock issuable upon exercise of outstanding warrants at a weighted-average exercise price of \$155.09 per share;

- 1,679,947 shares of common stock available for future grant under our Amended and Restated 2010 Stock Incentive Plan (the “2010 Plan”);
- 190 shares of common stock available for issuance pursuant to our Employee Stock Purchase Plan (the “ESPP”); and
- _____ shares of common stock issuable upon the exercise of the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby.

Unless otherwise indicated, the information in this prospectus assumes no exercise of the Series 2020-A warrants offered hereby.

RISK FACTORS

An investment in our securities involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the following risks and uncertainties, as well as those discussed under the caption “Risk Factors” in the documents incorporated by reference herein. If any of the risks described in this prospectus or the documents incorporated by reference herein, actually occur, our business, prospects, financial condition or operating results could be harmed. In that case, the trading price of our securities could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently believe are immaterial may also impair our business operations and our liquidity. You should also refer to the other information contained in this prospectus, or incorporated by reference herein, including our financial statements and the related notes thereto and the information set forth under the heading “Cautionary Note Regarding Forward-Looking Statements.”

Risks Related to Legal and Regulatory

We may face substantial delays in obtaining regulatory approvals for use of our renewable premium gasoline product, which could substantially hinder our ability to commercialize our renewable premium gasoline product in the U.S.

Commercialization of our renewable premium gasoline product in the U.S. requires approvals from state and/or federal agencies. Before we can sell our renewable premium gasoline product as a fuel or as a gasoline blendstock, we must obtain certain approvals or certifications from the U.S. Environmental Protection Agency (“EPA”). There can be no assurances that the EPA will grant such approvals or certifications. Any delay or failure in receiving approval will slow or prevent the commercialization of our renewable premium gasoline product, which could have a material adverse effect on our business, financial condition and results of operations.

Additionally, California requires that fuels meet both its fuel certification requirements and a separate state low-carbon fuel standard. Any delay or failure in receiving approval for our renewable premium gasoline product will slow or prevent the commercialization of our renewable premium gasoline product, which could have a material adverse effect on our business, financial condition and results of operations.

There are also various third-party certification organizations, such as ASTM International and Underwriters’ Laboratories, Inc., involved in standard-setting regarding the transportation, dispensing and use of liquid fuel in the U.S. and abroad. These organizations may change the current standards and additional requirements may be enacted that could prevent or delay approval of our renewable premium gasoline product. The process of seeking required approvals and the continuing need for compliance with applicable standards may require the expenditure of substantial resources, and there is no guarantee that we will satisfy these standards in a timely manner, if ever.

Risks Related to this Offering and Owning Our Securities

Management will have broad discretion as to the use of the net proceeds from this offering, and may not use the proceeds 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. For example, management could invest the proceeds in assets that do not produce attractive returns or to make acquisitions of properties or businesses that do not prove to be attractive or otherwise are unsuccessful. Conversely, management may not be able to identify and complete investments or acquisitions. Our failure to apply these funds effectively could have a material adverse effect on our business, financial condition and results of operations and cause the price of our common stock to decline.

This is a best efforts offering, no minimum number of securities or amount of proceeds is required to be sold, and we may not raise the amount of capital we believe is required for our business plans.

The placement agent has agreed to use its reasonable best efforts to solicit offers to purchase the securities in this offering. The placement agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. There is no required minimum number of securities or amount of proceeds that must be sold as a condition to completion of this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth above. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to fund our business plans. Thus, we may not raise the amount of capital we believe is required for our operations in the short-term and may need to raise additional funds, which may not be available or available on terms acceptable to us.

A large number of shares issued in this offering may be sold in the market following this offering, which may depress the market price of our common stock.

As of March 31, 2020, there were 14,614,890 shares of our common stock outstanding. All of our issued and outstanding shares, including the shares issued in this offering and issuable upon exercise of the Series 2020-A warrants and the pre-funded Series 2020-B warrants may be sold in the market following this offering, except for any shares held by our “affiliates,” as that term is defined in Rule 144 under the Securities Act of 1933, as amended (the “Securities Act”), and will be freely tradeable.

Each of our directors and executive officers will enter into a lock-up agreement in connection with this offering, which will restrict their sales of our common stock for a period of _____ days after the closing date of this offering, subject to certain exceptions. The placement agent may, in its sole discretion and at any time or from time to time before the termination of the period, release all or any portion of the securities subject to lock-up agreements. These lock-up agreements affect approximately 1,616,425 shares of our common stock currently outstanding. Sales of stock by any of our executive officers or directors could have a material adverse effect on the trading price of our common stock.

Sales of substantial amounts of our common stock in the public market after this offering, or the perception that such sales will occur, could depress the market price of our common stock. Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. If there are more shares of common stock offered for sale than buyers are willing to purchase, then the market price of our common stock may decline to a market price at which buyers are willing to purchase the offered shares of common stock and sellers remain willing to sell the shares.

The Series 2020-A warrants and the pre-funded Series 2020-B warrants issued in this offering may not have any value.

The Series 2020-A warrants will be exercisable on the date of issuance and will expire on the _____ anniversary of the date of issuance at an exercise price of \$ _____ per share of common stock. The pre-funded Series 2020-B warrants will be exercisable on the date of issuance and will expire when exercised in full, at an exercise price of \$ _____ per share of common stock. The purchase price of \$ _____ per share of the pre-funded Series 2020-B warrants will be pre-paid, except for a nominal exercise price of \$0.01 per share, upon issuance of the pre-funded Series 2020-B warrants and, consequently, no additional payment or other consideration (other than the nominal exercise price of \$0.01 per share) will be required to be delivered to us by the holder upon exercise. In the event our common stock price does not exceed the exercise price of the Series 2020-A warrants and/or the pre-funded Series 2020-B warrants issued in this offering during the period when such warrants are exercisable, such warrants may not have any value.

Holders of our common stock may not be permitted to exercise warrants that they hold on account of a beneficial ownership limitation.

The Series 2020-A warrants and the pre-funded Series 2020-B warrants being offered hereby will prohibit a holder from exercising its warrants if doing so would result in such holder beneficially owning more than 4.99% (or, at the election of the holder prior to the date of issuance, 9.99%), of our common stock. Any holder may increase or decrease this beneficial ownership limitation to any other percentage not in excess of 9.99% upon notice to us, provided that, in the case of an increase of such beneficial ownership limitation, such notice shall not be effective until 61 days following notice to us. As a result, you may not be able to exercise your warrants for shares of our common stock at a time when it would be financially beneficial for you to do so.

There is no public market for the Series 2020-A warrants to purchase shares of our common stock or the pre-funded Series 2020-B warrants to purchase shares of our common stock being offered by us in this offering.

There is no established public trading market for the Series 2020-A warrants to purchase shares of our common stock or the pre-funded Series 2020-B warrants to purchase shares of our common stock being offered by us in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the Series 2020-A warrants or the pre-funded Series 2020-B warrants on any national securities exchange or other trading system. Without an established market, the liquidity of the Series 2020-A warrants and the pre-funded Series 2020-B warrants may be extremely limited or non-existent.

Except as set forth in the applicable Series 2020-A warrant or pre-funded Series 2020-B warrant, holders of our warrants will have no rights as common stockholders until such holders exercise their warrants and acquire our common stock.

Until you acquire shares of our common stock upon exercise of your Series 2020-A warrant or pre-funded Series 2020-B warrants, you will have no rights with respect to the shares of our common stock underlying such warrants, except for those rights set forth in the Series 2020-A warrants or pre-funded Series 2020-B warrants. Upon exercise of your warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

We may not be permitted by the agreements governing our indebtedness, including our secured indebtedness with affiliates of Whitebox Advisors LLC (collectively, "Whitebox"), to repurchase our warrants, including the Series 2020-A warrants offered hereby, and we may not have the ability to do so.

Under certain circumstances, if a "fundamental transaction" or "extraordinary transaction" (as such terms are defined in our various warrants) occurs, holders of our warrants, including the Series 2020-A warrants offered hereby, may require us to repurchase, for cash, the remaining unexercised portion of such warrants for an amount of cash equal to the value of the warrant as determined in accordance with the Black-Scholes option pricing model and the terms of our warrants. Our ability to repurchase our warrants, including the Series 2020-A warrants offered hereby, depends on our ability to generate cash flow in the future. To some extent, this is subject to general economic, financial, competitive, legislative and regulatory factors and other factors that are beyond our control. We cannot assure you that we will maintain sufficient cash reserves or that our business will generate cash flow from operations at levels sufficient to permit us to repurchase our warrants, including the Series 2020-A warrants offered hereby. In addition, any such repurchase of our warrants, including the Series 2020-A warrants offered hereby, may result in a default under the agreements governing our indebtedness, including our secured indebtedness with Whitebox, unless we are able to obtain such lender's consent prior to the taking of such action. If we were unable to obtain such consent, compliance with the terms of our warrants, including the Series 2020-A warrants offered hereby, would trigger an event of default under such agreements governing our indebtedness.

Future issuances of our common stock or instruments convertible or exercisable into our common stock, including in connection with conversions of our 2020/21 Notes or exercises of warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, may materially and adversely affect the price of our common stock and cause dilution to our existing stockholders.

Historically, we have raised capital by issuing common stock and warrants in underwritten public offerings because no other reasonable sources of capital were available. These underwritten public offerings of common stock and warrants have materially and adversely affected the prevailing market prices of our common stock and caused significant dilution to our stockholders. We have also historically raised capital or refinanced outstanding debt through the issuance of convertible notes.

We may need to raise capital through these public offerings of common stock, warrants and convertible debt in the future.

We may obtain additional funds through public or private debt or equity financings, subject to certain limitations in the agreements governing our indebtedness, including the 2020/21 Notes. If we issue additional shares of common stock or instruments convertible into common stock, it may materially and adversely affect the price of our common stock. In addition, the conversion of some or all of the 2020/21 Notes and/or the exercise of some or all of our warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, may dilute the ownership interests of our stockholders, and any sales in the public market of any of our common stock issuable upon such conversion or exercise could adversely affect prevailing market prices of our common stock. Additionally, under the terms of certain of our outstanding warrants, including the Series 2020-A warrants offered hereby, in the event that a warrant is exercised at a time when we do not have an effective registration statement covering the underlying shares of common stock on file with the SEC, such warrant may be “net” or “cashless” exercised, which will dilute the ownership interests of existing stockholders without any corresponding benefit to the Company of a cash payment for the exercise price of such warrant.

As of March 31, 2020, we had approximately \$14.4 million in outstanding 2020/21 Notes. Any conversion of the outstanding 2020/21 Notes (including any interest that is paid in kind) into shares of our common stock could depress the trading price of our common stock. In addition, under the terms of the 2020/21 Notes, subject to certain restrictions, we have the option to issue common stock to any converting holder in lieu of making any required make-whole payment in cash. If we elect to issue our common stock for such payment, it will be at the same conversion rate that is applicable to conversions of the principal amount of the 2020/21 Notes. If we elect to issue additional shares of our common stock for such payments, this may cause significant additional dilution to our existing stockholders.

Our stock price may be volatile, and your investment in our securities could suffer a decline in value.

The market price of shares of our common stock has experienced significant price and volume fluctuations. We cannot predict whether the price of our common stock will rise or fall. A variety of factors may have a significant effect on our stock price, including:

- actual or anticipated fluctuations in our liquidity, financial condition and operating results;
- the position of our cash and cash equivalents;
- actual or anticipated changes in our growth rate relative to our competitors;
- actual or anticipated fluctuations in our competitors’ operating results or changes in their growth rate;
- announcements of technological innovations by us, our partners or our competitors;
- announcements by us, our partners or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- the entry into, modification or termination of licensing arrangements, marketing arrangements, and/or research, development, commercialization, supply, off-take or distribution arrangements;
- our ability to consistently produce commercial quantities of isobutanol, renewable hydrocarbon products and ethanol at the Luverne Facility, the planned Expanded Facility and the ramp up production to nameplate capacity;

- our ability to repay our indebtedness when it becomes due;
- our ability to refinance, restructure or convert our current and future indebtedness;
- additions or losses of customers or partners;
- our ability to obtain certain regulatory approvals for the use of our isobutanol and ethanol in various fuels and chemicals markets;
- commodity prices, including oil, ethanol and corn prices;
- additions or departures of key management or scientific personnel;
- competition from existing products or new products that may emerge;
- issuance of new or updated research reports by securities or industry analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- litigation involving us, our general industry or both;
- disputes or other developments related to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- announcements or expectations of additional financing efforts or the pursuit of strategic alternatives;
- changes in existing laws, regulations and policies applicable to our business and products, and the adoption of or failure to adopt carbon emissions regulation;
- sales of our common stock or equity-linked securities, such as warrants, by us or our stockholders;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- general market conditions in our industry; and
- general economic and market conditions.

Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of shares of our common stock, regardless of our operating performance, and cause the value of your investment to decline. Holders who receive common stock upon exercise of our warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, will be subject to the risk of volatility and a reduction in the market price of our common stock. In addition, the existence of our 2020/21 Notes and our outstanding warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, may encourage significant amounts of short selling in our common stock by market participants, or the perception that a significant amount of short sales could occur, because the conversion of the 2020/21 Notes or exercise of our warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, could depress the price of our common stock and could cause material changes to the volume of our common stock traded on the Nasdaq Capital Market. “Short selling” is the sale of a security that the seller does not own, including a sale that is completed by the seller's delivery of a “borrowed” security (i.e. the short seller’s promise to deliver the security).

Additionally, in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation or other derivative shareholder lawsuits. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management’s attention from other business concerns, which could seriously harm our business regardless of the outcome.

The price of our common stock could also be affected by possible sales of common stock by investors who view our 2020/21 Notes or warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, as a more attractive means of equity participation in us and by hedging or engaging in arbitrage activity involving our common stock. The hedging or arbitrage could, in turn, affect the trading prices of our warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, if any trading market becomes established, or any common stock that holders receive upon exercise of such warrants.

Sales of a substantial number of shares of our common stock or securities linked to our common stock, such as our 2020/21 Notes and warrants (should an established market for such securities then exist), including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, in the public market could occur at any time. These sales, or the perception in the market that such sales may occur, could reduce the market price of our common stock.

In addition, certain holders of our outstanding common stock (including shares of our common stock issuable upon the conversion of certain 2020/21 Notes or upon exercise of certain outstanding warrants) have rights, subject to certain conditions, to require us to file registration statements covering their shares and to include their shares in registration statements that we may file for ourselves or other stockholders, though such registration rights do not apply to this offering.

Our quarterly operating results may fluctuate in the future. As a result, we may fail to meet or exceed the expectations of investment research analysts or investors, which could cause our stock price to decline.

Our financial condition and operating results have varied significantly in the past and may continue to fluctuate from quarter to quarter and year to year in the future due to a variety of factors, many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations are described in [2019 Annual Report](#), and [2020 Q1 Quarterly Report](#), each of which is incorporated by reference herein, and other reports that we have filed with the SEC. Accordingly, the results of any prior quarterly or annual periods should not be relied upon as indications of our future operating performance.

The indebtedness under our 2020/21 Notes is secured by substantially all of our assets. As a result of these security interests, such assets would only be available to satisfy claims of our unsecured creditors or to holders of our equity securities if we were to become insolvent to the extent the value of such assets exceeded the amount of our indebtedness and other obligations.

Indebtedness under our 2020/21 Notes is secured by a first lien on substantially all of our assets. Accordingly, if an event of default were to occur, holders of our 2020/21 Notes would have a priority right to our assets, to the exclusion of our general creditors, in the event of our bankruptcy, insolvency, liquidation, or reorganization. In that event, our assets would first be used to repay in full all indebtedness and other obligations secured by our assets, resulting in all or a portion of our assets being unavailable to satisfy the claims of our unsecured indebtedness. Only after satisfying the claims of our unsecured creditors and our subsidiaries' unsecured creditors would any amount be available for distribution to holders of our equity securities.

The terms of the agreements governing our indebtedness, including the indenture governing our 2020/21 Notes, may restrict our ability to engage in certain transactions.

The terms of the agreements governing our indebtedness, including the indenture governing the 2020/21 Notes, may prohibit us from engaging in certain actions, including disposing of certain assets, granting or otherwise allowing the imposition of a lien against certain assets, incurring certain kinds of additional indebtedness, acquiring or merging with other entities, or making dividends and other restricted payments unless we receive the prior approval of the requisite holders of the 2020/21 Notes. If we are unable to obtain such approval, we could be prohibited from engaging in transactions which could be beneficial to our business and our stockholders or could be forced to repay such indebtedness in full.

The indenture governing the 2020/21 Notes may prohibit us from engaging in certain mergers or acquisitions and if a fundamental change occurs prior to the maturity date of the 2020/21 Notes, holders of the 2020/21 Notes will have the right, at their option, to require us to repurchase all or a portion of their 2020/21 Notes and to pay the holders of the 2020/21 Notes a make-whole payment equal to 14% of the aggregate amount being purchased. In addition, if a fundamental transaction occurs, holders of some of our warrants, including the Series 2020-A warrants offered hereby, will have the right, at their option, to require us to repurchase the unexercised portion of such warrants for an amount in cash equal to the value of such warrants, as determined in accordance with the Black-Scholes option pricing model and the terms of such warrants. These and other provisions could prevent or deter a third party from acquiring us, even where the acquisition could be beneficial to you.

The conversion or exercise prices, as applicable, of the 2020/21 Notes and warrants, including the Series 2020-A warrants offered hereby, can fluctuate under certain circumstances which, if triggered, can result in potentially material further dilution to our stockholders.

The conversion price of the 2020/21 Notes can fluctuate in certain circumstances, including in the event that there is a dividend or distribution paid on shares of our common stock, in the event of a contractual conversion under certain circumstances or a conversion following a notice of redemption or a subdivision, combination or reclassification of our common stock. In such instances, the conversion price of the 2020/21 Notes can fluctuate materially lower than the current conversion price of \$2.442 per share or 0.4095 shares per \$1.00 of principal.

The number of shares of common stock for which certain of our warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, are exercisable may be adjusted in the event that we undertake certain stock dividends, splits, combinations, or distributions.

The interest rate of the 2020/21 Notes can fluctuate under certain circumstances which, if triggered, can result in potentially material further dilution to our stockholders.

The interest rate of the 2020/21 Notes can fluctuate in certain circumstances, including in the event of a default of our obligations under the indenture governing the 2020/21 Notes or the registration rights agreements, if any, entered into in connection with the 2020/21 Notes. In addition, the interest on the 2020/21 Notes may be payable in-kind. As we may pay a portion of the interest on the 2020/21 Notes in kind, by either increasing the principal amount of the outstanding 2020/21 Notes or issuing additional 2020/21 Notes, any increase to the interest rate applicable to the 2020/21 Notes could result in additional dilution to investors in our common stock.

We may not have the ability to pay interest on the 2020/21 Notes, repurchase or redeem the 2020/21 Notes, if applicable, or repay the 2020/21 Notes at maturity.

If we elect to redeem the 2020/21 Notes prior to their maturity on December 31, 2020, or April 21, 2021 if the maturity date is automatically extended under certain circumstances, the redemption price of any 2020/21 Notes redeemed by us will be paid for in cash. Our ability to pay the interest on the 2020/21 Notes, to repurchase or redeem the 2020/21 Notes, to refinance our indebtedness and to fund working capital needs and planned capital expenditures depends on our ability to generate cash flow in the future. To some extent, this is subject to general economic, financial, competitive, legislative and regulatory factors and other factors that are beyond our control. We cannot assure you that we will maintain sufficient cash reserves or that our business will generate cash flow from operations at levels sufficient to permit us to pay the interest on the 2020/21 Notes, to repurchase or redeem the 2020/21 Notes, to pay any cash amounts that may become due upon conversion of the 2020/21 Notes or repay the 2020/21 Notes at maturity, or that our cash needs will not increase. In addition, any such repurchase or redemption of the 2020/21 Notes, even if such action would be in our best interests, may result in a default under the agreements governing our indebtedness unless we are able to obtain the applicable lender's consent prior to the taking of such action.

Our failure to repurchase tendered 2020/21 Notes at a time when the repurchase is required by the indenture governing the 2020/21 Notes would constitute a default under such 2020/21 Notes and would permit holders of such notes to accelerate our obligations under the 2020/21 Notes. Such default may also lead to a default under the agreements governing any of our current and future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay such indebtedness and repurchase the 2020/21 Notes or make cash payments upon conversions thereof.

If we are unable to generate sufficient cash flow from operations in the future to service our indebtedness and meet our other needs, we may have to refinance all or a portion of our indebtedness, obtain additional funds through public or private debt or equity financings, reduce expenditures or sell assets that we deem necessary to our business. Our ability to take some or all of these actions will be subject to certain limitations in the agreements governing our indebtedness, including the 2020/21 Notes, and we cannot assure you that any of these measures would be possible or that any additional financing could be obtained on favorable terms, or at all. The inability to obtain additional financing on commercially reasonable terms could have a material adverse effect on our financial condition, which could cause the value of your investment to decline. Additionally, if we were to conduct a public or private offering of securities, any new offering would be likely to dilute our stockholders' equity ownership.

If a fundamental change (as defined in the indenture governing the 2020/21 Notes) occurs, holders of the 2020/21 Notes may require us to repurchase, for cash, all or a portion of their 2020/21 Notes. In such circumstance we would be required to offer to repurchase the 2020/21 Notes at 100% of principal plus accrued and unpaid interest to, but not including, the repurchase date. We would also be required to pay the holders of the 2020/21 Notes a fundamental change make-whole payment equal to the aggregate amount of interest that would have otherwise been payable on such notes to, but not including, the maturity date of such 2020/21 Notes.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies.

We may, subject to certain limitations in the agreements governing our indebtedness, including our secured indebtedness under the 2020/21 Notes, seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and licensing arrangements. To the extent that we raise additional capital through the sale or issuance of equity, warrants or convertible debt securities, the ownership interest of our existing shareholders will be diluted, and the terms of such securities may include liquidation or other preferences that adversely affect your rights as a stockholder. If we raise capital through debt financing, it may involve agreements that include covenants further limiting or restricting our ability to take certain actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through strategic partnerships or licensing agreements with third parties, we may have to relinquish valuable rights to our technologies or grant licenses on terms that are not favorable to us. If we are unable to raise additional funds when needed, we may be required to delay, limit, reduce or terminate our development and commercialization efforts.

Our ability to raise capital is limited by the Securities Act and SEC rules and regulations.

Under current SEC rules and regulations, because the aggregate market value of our common stock held by non-affiliates, or public float, was less than \$75 million (calculated as set forth in Form S-3 and SEC rules and regulations) at the time of filing of our [2019 Annual Report](#), which is incorporated by reference herein, the amount we can raise through primary public offerings of our securities in any twelve-month period using a registration statement on Form S-3 will be limited to one-third of our public float until such time that our public float equals or exceeds \$75 million. Alternative means of raising capital through sales of our securities, including through the use of a registration statement on Form S-1 or in private placements of equity or debt securities, may be more costly and time-consuming and more difficult to market to potential investors, which may have a material adverse effect on our ability to raise capital, our liquidity position and strategy.

The issuance of share-based payment awards under our stock incentive plan may cause dilution to our existing stockholders and may affect the market price of our common stock.

We have used, and in the future we may continue to use, stock options, stock grants and other equity-based incentives, either pursuant to the 2010 Plan, or outside of the 2010 Plan, to provide motivation and compensation to our directors, officers, employees and key independent consultants. The award of any such incentives will result in an immediate and potentially substantial dilution to our existing shareholders and could result in a decline in the value of our stock price.

As of March 31, 2020, there were 1,561 shares subject to outstanding options that are or will become eligible for sale in the public market to the extent permitted by any applicable vesting requirements and Rules 144 and 701 under the Securities Act. The exercise of these options and the sale of the underlying shares of common stock and the sale of stock issued pursuant to stock grants may have an adverse effect upon the price of our common stock, which in turn may have an adverse effect upon the trading price of our warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby.

As of March 31, 2020, there were 1,679,947 shares of common stock available for future grant under our 2010 Plan and 190 shares of common stock reserved for issuance under our ESPP. These shares can be freely sold in the public market upon issuance and once vested.

Furthermore, on March 31, 2020, we announced that, in response to the impact of the global COVID-19 pandemic, each of Patrick R. Gruber, our Chief Executive Officer, Christopher M. Ryan, our President, Chief Operating Officer and Chief Technology Officer, L. Lynn Smull, our Chief Financial Officer, Timothy J. Cesarek, our Chief Commercial Officer, Geoffrey T. Williams, Jr., our General Counsel and Secretary, and Carolyn M. Romero, our Vice President—Controller and Principal Accounting Officer (collectively, the “Officers”) accepted 20% reductions to their base salaries. These reductions became effective as of April 1, 2020 for a period of 90 days thereafter. In connection with the 20% salary reduction, the Officers were granted Company stock in the form of restricted stock awards in an amount equal to the 20% reduction. Certain remaining employees that earn above a certain dollar threshold also agreed to take a 20% salary reduction over the next three months, with the 20% portion to be paid in the form of restricted stock awards. With these steps, we expect to save several million dollars of cash burn during 2020. However, the issuance of the 239,155 shares of restricted stock in connection with the foregoing may cause dilution to our existing stockholders and may affect the market price of our common stock.

We may pay vendors in stock as consideration for their services, which may result in additional costs and may cause dilution to our existing stockholders.

In order for us to preserve our cash resources, we may in the future pay vendors, including technology partners, in shares, warrants or options to purchase shares of our common stock rather than cash. Payments for services in stock may materially and adversely affect our stockholders by diluting the value of outstanding shares of our common stock. In addition, in situations where we agree to register the shares issued to a vendor, this will generally cause us to incur additional expenses associated with such registration.

We do not anticipate paying cash dividends, and accordingly, stockholders must rely on stock appreciation for any return on their investment.

We have never paid cash dividends on our common stock and we do not expect to pay cash dividends on our common stock at any time in the foreseeable future. The future payment of dividends directly depends upon our future earnings, capital requirements, financial requirements and other factors that our board of directors will consider. As a result, only appreciation of the price of our common stock, which may never occur, will provide a return to stockholders. Investors seeking cash dividends should not invest in our common stock.

If securities or industry analysts do not publish research or reports about our business, or publish negative reports about our business, our stock price and trading volume could decline. The trading market for our common stock will be influenced by the research and reports that securities or industry analysts publish about us or our business.

We do not have any control over securities or industry analysts. If one or more of the analysts who cover us downgrade our common stock or change their opinion of our common stock, our common stock price would likely decline which in turn would likely cause a decline in the value of our warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, and 2020/21 Notes. If one or more of these analysts cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our common stock price and the price of our warrants, including the Series 2020-A warrants and the pre-funded Series 2020-B warrants offered hereby, and 2020/21 Notes to decline or the trading volume of our common stock to decline.

We are subject to anti-takeover provisions in our amended and restated certificate of incorporation, our amended and restated bylaws and under Delaware law that could delay or prevent an acquisition of the Company, even if the acquisition would be beneficial to our stockholders.

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws may delay or prevent an acquisition of the Company. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws provide for a board of directors that is divided into three classes with staggered three-year terms, provide that all stockholder action must be effected at a duly called meeting of the stockholders and not by a consent in writing, and further provide that only our board of directors may call a special meeting of the stockholders. These provisions may also frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, who are responsible for appointing the members of our management team. Furthermore, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law (the "DGCL"), which prohibits, with some exceptions, stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us. Finally, our charter documents establish advance notice requirements for nominations for election to our board of directors and for proposing matters that can be acted upon at stockholder meetings. Although we believe these provisions together provide an opportunity to receive higher bids by requiring potential acquirers to negotiate with our board of directors, they would apply even if an offer to acquire the Company may be considered beneficial by some stockholders.

Our Amended and Restated Certificate of Incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our Amended and Restated Certificate of Incorporation provides that the Court of Chancery of the State of Delaware shall, unless we consent in writing to the selection of an alternative forum, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or its stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (iv) any action asserting a claim governed by the internal affairs doctrine, in each case subject to said Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein.

The exclusive forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents. Stockholders who do bring a claim in the Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near the State of Delaware. The Court of Chancery may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. Alternatively, if a court were to find the choice of forum provision contained in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition. Notwithstanding the foregoing, the exclusive forum provision shall not preclude or contract the scope of exclusive federal or concurrent jurisdiction for actions brought under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or the Securities Act, or the respective rules and regulations promulgated thereunder.

Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. This exclusive forum provision may limit a stockholder's ability to bring a claim in a judicial forum of its choosing for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees.

If a court were to find the exclusive forum provision contained in our Amended and Restated Certificate of Incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations, and financial condition. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management and other employees.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein each contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. When used in this prospectus and the documents incorporated by reference herein, the words “expect,” “believe,” “anticipate,” “estimate,” “intend,” “plan” and similar expressions are intended to identify forward-looking statements. These statements relate to future events or our future financial or operational performance and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievement to differ materially from those expressed or implied by these forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. These forward-looking statements include, among other things, statements about: risks and uncertainties related to our ability to sell our products, our ability to expand or continue production of isobutanol, renewable hydrocarbon products and ethanol at our Luverne Facility, our ability to meet our production, financial and operational guidance, our strategy to pursue low-carbon renewable fuels for sale into California and elsewhere, our ability to replace our fossil-based energy sources with renewable energy sources at the Luverne Facility and elsewhere, our ability and plans to construct a commercial hydrocarbon facility to produce renewable premium gasoline and renewable jet fuel, our ability to raise additional funds to continue operations and/or expand the Luverne Facility, our ability to perform under our existing renewable hydrocarbon offtake agreements and other supply agreements we may enter into in the future, our ability to obtain project finance debt and third-party equity for our RNG project, our ability to produce isobutanol, renewable hydrocarbon products and ethanol on a commercial level and at a profit, achievement of advances in our technology platform, the success of our upgraded production facility, the availability of suitable and cost-competitive feedstocks, our ability to gain market acceptance for our products, the expected cost-competitiveness and relative performance attributes of our isobutanol, renewable hydrocarbon products and ethanol, additional competition and changes in economic conditions, the future price and volatility of petroleum and products derived from petroleum, the impact of COVID-19 on our business, financial condition and results of operations and our ability to effectively use the net proceeds from this offering. Important factors could cause actual results to differ materially from those indicated or implied by forward-looking statements such as those contained in documents we have filed with the SEC, including, but not limited to, those in the sections entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the documents incorporated by reference herein, and the section entitled “Risk Factors” of this prospectus. All forward-looking statements in this prospectus and the documents incorporated by reference herein are qualified entirely by the cautionary statements included in this prospectus and the documents incorporated by reference herein. These risks and uncertainties or other important factors could cause actual results to differ materially from results expressed or implied by forward-looking statements contained in this prospectus and the documents incorporated by reference herein. These forward-looking statements speak only as of the date made. We undertake no intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, and you should not rely on the forward-looking statements as representing our views as of any date subsequent to the date such statement is made.

USE OF PROCEEDS

We estimate that our net proceeds from this offering will be approximately \$ _____ million, based on an assumed public offering price of \$ _____ per Series 1 unit and assuming the sale of _____ Series 1 units and no sale of any Series 2 units in this offering, after deducting the placement agent's fees and estimated offering expenses payable by us. This amount excludes the proceeds, if any, from the exercise of the Series 2020-A warrants issued in this offering. If all of the Series 2020-A warrants sold in this offering were to be exercised in cash at an assumed exercise price of \$ _____ per share, we would receive additional net proceeds of approximately \$ _____ million. We cannot predict when or if these Series 2020-A warrants will be exercised. It is possible that the Series 2020-A warrants may expire and may never be exercised. This is a best efforts offering with no minimum number of securities or amount of proceeds as a condition of closing and we may not sell all or any of these Series 1 units or Series 2 units offered pursuant to this prospectus. As a result, we may receive significantly less in net proceeds.

A \$1.00 increase or decrease in the assumed public offering price of \$ _____ per Series 1 unit, based on the last reported sale price for our common stock as reported on the Nasdaq Capital Market on _____, 2020, would increase or decrease the net proceeds to us by approximately \$ _____ million, after deducting the placement agent's fees and estimated offering expenses payable by us and excluding the proceeds, if any, from the exercise of the Series 2020-A warrants issued in this offering, and assuming the sale of _____ Series 1 units and no sale of any Series 2 units in this offering.

We intend to use the net proceeds received from this offering to fund working capital and for other general corporate purposes. As of the date of this prospectus, we cannot specify with certainty all of the particular uses of the proceeds from this offering. Accordingly, we will retain broad discretion over the use of such proceeds.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of March 31, 2020 on:

- an actual basis;
- an as adjusted basis to give effect to the receipt of estimated net proceeds of \$ million from this offering, after deducting the placement agent's fees and estimated offering expenses payable by us.

You should read this information in conjunction with the information contained elsewhere in this prospectus, including "Use of Proceeds," and the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our unaudited consolidated financial statements and the related notes thereto, each included in our [2020 Q1 Quarterly Report](#), which is incorporated by reference herein, and the other financial information contained, or incorporated by reference, in this prospectus.

(in thousands of dollars, except share and per share information)	As of March 31, 2020	
	Actual	As Adjusted
	(unaudited)	
Cash and cash equivalents	\$ 9,289	\$
Debt:		
2020/21 Notes, net	\$ 14,050	\$
Notes payable - other	607	
Other long-term liabilities	435	
Stockholders' equity:		
Common stock, \$0.01 par value per share; 250,000,000 shares authorized; 14,614,890 shares issued and outstanding, actual; shares issued and outstanding, as adjusted	145	
Additional paid-in capital	531,587	
Accumulated deficit	(467,239)	
Total stockholders' equity	64,493	
Total capitalization	\$ 79,585	\$

The number of shares of our common stock outstanding shown in the foregoing table and calculations excludes:

- 1,561 shares of our common stock issuable upon exercise of outstanding options at a weighted-average exercise price of \$928.79 per share;
- 1,393,081 shares of our common stock issuable upon the vesting and settlement of outstanding restricted stock awards at a weighted-average grant date fair value of \$1.83 per share;
- 54,669 shares of our common stock issuable upon exercise of outstanding warrants at a weighted-average exercise price of \$155.09 per share;
- 1,679,947 shares of common stock available for future grant under our 2010 Plan;
- 190 shares of common stock available for issuance pursuant to our ESPP; and
- shares of common stock issuable upon the exercise of the Series 2020-A warrants offered hereby.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, such as the terms of the agreements governing our indebtedness, general business conditions, and other factors that our board of directors may deem relevant. In addition, the terms of the agreements governing our indebtedness place certain limitations on the amount of cash dividends we can pay, even if no amounts are currently outstanding.

DESCRIPTION OF CAPITAL STOCK

The following summary of the terms of our capital stock is based upon our amended and restated certificate of incorporation and our amended and restated bylaws. The summary is not complete and is qualified by reference to our amended and restated certificate of incorporation and our amended and restated bylaws, each of which is filed as an exhibit to the registration statement of which this prospectus forms a part. We encourage you to read our amended and restated certificate of incorporation, our amended and restated bylaws and the applicable provisions of the DGCL for additional information.

Authorized and Outstanding Capital Stock

Our authorized capital stock consists of 250,000,000 shares of common stock, par value \$0.01 per share, and 10,000,000 shares of preferred stock, par value \$0.01 per share, issuable in one or more series designated by our board of directors. As of April 30, 2020, there were 14,883,077 shares of common stock and no shares of preferred stock outstanding.

Common Stock

The holders of our common stock have one vote per share. Holders of common stock are not entitled to vote cumulatively for the election of directors. Generally, all matters to be voted on by stockholders must be approved by a majority, or, in the case of election of directors, by a plurality, of the votes cast at a meeting at which a quorum is present, voting together as a single class, subject to any voting rights granted to holders of any then outstanding preferred stock. Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to participate equally in dividends when and as dividends may be declared by our board of directors out of funds legally available for the payment of dividends. In the event of our voluntary or involuntary liquidation, dissolution or winding up, the prior rights of our creditors and the liquidation preference of any preferred stock then outstanding must first be satisfied. The holders of common stock will be entitled to share in the remaining assets on a pro rata basis. No shares of common stock are subject to redemption or have redemptive rights to purchase additional shares of common stock.

Our common stock is listed on the Nasdaq Capital Market under the symbol “GEVO”.

Preferred Stock

Our amended and restated certificate of incorporation provides that we may issue shares of preferred stock from time to time in one or more series. Our board of directors is authorized to fix the voting rights, if any, designations, powers, preferences, qualifications, limitations and restrictions thereof, applicable to the shares of each series of preferred stock. Our board of directors may, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of our common stock, including the likelihood that such holders will receive dividend payments and payments upon liquidation, and could have anti-takeover effects, including preferred stock or rights to acquire preferred stock in connection with implementing a stockholder rights plan. The ability of our board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control or the removal of our existing management. There are currently no shares of preferred stock outstanding.

Anti-Takeover Provisions

The DGCL, our amended and restated certificate of incorporation, and our amended and restated bylaws contain provisions that could discourage or make more difficult a change in control of us, including an acquisition of us by means of a tender offer, a proxy contest and removal of our incumbent officers and directors, without the support of our board of directors. A summary of these provisions follows.

Statutory Business Combination Provision

We are subject to Section 203 of the DGCL, which, subject to certain exceptions, prohibits a Delaware corporation from engaging in any “business combination” with an “interested stockholder” for a period of three years following the time that such stockholder became an interested stockholder, unless:

- the board of directors of the corporation approves either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder, prior to the time the interested stockholder attained that status;

- upon the closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding, for purposes of determining the number of shares outstanding, those shares owned by persons who are directors and also officers and by 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 that is not owned by the interested stockholder.

With certain exceptions, an “interested stockholder” is a person or group who or which owns 15% or more of the corporation’s outstanding voting stock (including any rights to acquire stock pursuant to an option, warrant, agreement, arrangement or understanding, or upon the exercise of conversion or exchange rights, and stock with respect to which the person has voting rights only), or is an affiliate or associate of the corporation and was the owner of 15% or more of such voting stock at any time within the previous three years.

In general, 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 of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- 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; or
- 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.

A Delaware corporation may “opt out” of this provision with an express provision in its original certificate of incorporation or an express provision in its amended and restated certificate of incorporation or bylaws resulting from a stockholders’ amendment approved by at least a majority of the outstanding voting shares. However, we have not “opted out” of this provision. Section 203 could prohibit or delay mergers or other takeover or change-in-control attempts and, accordingly, may discourage attempts to acquire us.

Election and Removal of Directors

Our amended and restated certificate of incorporation provides for our board of directors to be divided into three classes, with staggered three-year terms. Only one class of directors is elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the shares of common stock outstanding are able to elect all of our directors. Directors may be removed only with cause by the affirmative vote of the holders of at least a majority of the outstanding shares entitled to vote on such removal.

No Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that any action required or permitted to be taken by the holders of common stock at an annual or special meeting of stockholders must be effected at a duly called meeting and may not be taken or effected by written consent of the stockholders.

Stockholder Meetings

Under our amended and restated certificate of incorporation and our amended and restated bylaws, only our board of directors, acting pursuant to a resolution adopted by a majority of the directors then in office, may call a special meeting of the stockholders, and any business conducted at any special meeting will be limited to the purpose or purposes specified in the notice for such special meeting.

Requirements for Advance Notification of Stockholder Nominations and Proposals

In order for our stockholders to bring nominations or business before an annual meeting properly, they must comply with certain notice requirements as provided by our amended and restated bylaws. Typically, in order for such notices to be timely, they must be provided to us not earlier than the close of business on the 120th day prior to the one-year anniversary of the preceding year's annual meeting and not later than the close of business on the 90th day prior to the one-year anniversary of the preceding year's annual meeting. For such notices to be timely in the event the annual meeting is advanced more than 30 days prior to or delayed by more than 70 days after the one-year anniversary of the preceding year's annual meeting, notice must be provided to us not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or, if later, the 10th day following the day on which public announcement of the date of such meeting is first made.

Exclusive Forum Provision

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware shall, unless we consent in writing to the selection of an alternative forum, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or its stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (iv) any action asserting a claim governed by the internal affairs doctrine, in each case subject to said Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. Notwithstanding this exclusive forum provision, the exclusive forum provision shall not preclude or contract the scope of exclusive federal or concurrent jurisdiction for actions brought under the Exchange Act or the Securities Act, or the respective rules and regulations promulgated thereunder.

Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. This exclusive forum provision may limit a stockholder's ability to bring a claim in a judicial forum of its choosing for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees.

Amendment of Charter Provisions

The affirmative vote of the holders of at least 66-2/3% of the voting power of all of the then-outstanding shares of our voting stock, voting together as a single class, is required to, among other things, alter, amend or repeal certain provisions of our amended and restated certificate of incorporation, including those related to the classification of our board of directors, the amendment of our bylaws and certificate of incorporation, restrictions against stockholder actions by written consent, the designated parties entitled to call a special meeting of the stockholders and the indemnification of officers and directors.

Our amended and restated bylaws may only be amended (or new bylaws adopted) by our board of directors or the affirmative vote of the holders of at least 66-2/3% of the voting power of all of the then-outstanding shares of our voting stock.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company. Its address is 6201 15th Avenue, Brooklyn, New York 11219 and its telephone number is (718) 921-8300.

DESCRIPTION OF WARRANTS

Series 2020-A Warrants

The following description of the Series 2020-A warrants is a summary, is not complete and is subject to, and qualified in its entirety by, the provisions of the Series 2020-A warrants, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. It summarizes only those aspects of the Series 2020-A warrants that we believe will be most important to your decision to invest in the Series 2020-A warrants. You should keep in mind, however, that it is the terms in the Series 2020-A warrants, and not this summary, which define your rights as a holder of the Series 2020-A warrants. There may be other provisions in the Series 2020-A warrants that are also important to you. You should read the form of the Series 2020-A warrants for a full description of the terms of the Series 2020-A warrants.

Duration and Exercise Price

Each full Series 2020-A warrant entitles the holder thereof to purchase one share of our common stock at an exercise price equal to \$ _____ per share. The Series 2020-A warrants will be exercisable during the period commencing on the date of issuance and will expire on the _____ year anniversary of the date of issuance.

Exercisability

The Series 2020-A warrants may be exercised by delivering to the Company a duly-executed notice of election to exercise the Series 2020-A warrant and delivering to the Company cash payment of the exercise price. Upon delivery of the written notice of election to exercise the Series 2020-A warrant and cash payment of the exercise price, on and subject to the terms and conditions of the Series 2020-A warrants, we will deliver or cause to be delivered to such holder, the number of whole shares of common stock to which the holder is entitled, which shares shall be delivered in book-entry form. If a Series 2020-A warrant is exercised for fewer than all of the shares of common stock for which such Series 2020-A warrant may be exercised, then upon request of the holder and surrender of such Series 2020-A warrant, we shall issue a new Series 2020-A warrant exercisable for the remaining number of shares of common stock.

A holder (together with its affiliates) may not exercise any portion of the Series 2020-A warrants to the extent that the holder (together with its affiliates) would beneficially own more than 4.99% (or, at the election of the holder prior to the date of issuance, 9.99%) of our outstanding common stock after exercise. The holder may increase or decrease this beneficial ownership limitation to any other percentage not in excess of 9.99%, upon notice to us, provided that, in the case of an increase of such beneficial ownership limitation, such notice shall not be effective until 61 days following notice to us.

Cashless Exercise

If, and only if, a registration statement relating to the issuance of the shares underlying the Series 2020-A warrants is not then effective or the prospectus therein is not available for use, a holder of Series 2020-A warrants may exercise the Series 2020-A warrants on a cashless basis, where the holder receives the net value of the Series 2020-A warrants in shares of common stock. However, if an effective registration statement and the prospectus is available for the issuance of the shares underlying the Series 2020-A warrants, a holder may only exercise the Series 2020-A warrants through a cash exercise. Shares issued pursuant to a cashless exercise would be issued pursuant to Section 3(a)(9) of the Securities Act of 1933, as amended (the "Securities Act"), and the shares of common stock issued upon such cashless exercise would take on the registered characteristics of the Series 2020-A warrants being exercised.

Failure to Timely Deliver Shares of Common Stock

If we fail to timely deliver shares of common stock pursuant to any exercise of the Series 2020-A warrants, and such exercising holder elects or is required to purchase shares of common stock (in an open market transaction or otherwise) to deliver in satisfaction of a sale by such holder of all or a portion of the shares of common stock for which such Series 2020-A warrant was exercised, then we will be required to deliver an amount in cash by which holder's purchase price, including commissions, exceeds the number of shares of common stock to be delivered multiplied by the price at which the sell order was executed and, at option of holder, reinstate the portion of warrant for the exercise that was not honored or deliver the number of shares of common stock.

Fundamental Transaction

If, at any time while the Series 2020-A warrants are outstanding, we directly or indirectly, in one or more related transactions, enter into a fundamental transaction, which includes any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock as further described in the Series 2020-A warrants, then each holder shall become entitled to receive the same amount and kind of securities, cash or property as such holder would have been entitled to receive upon the occurrence of such fundamental transaction if the holder had been, immediately prior to such fundamental transaction, the holder of the number of shares of common stock then issuable upon exercise of such holder's Series 2020-A warrants. Any successor to us, surviving entity or the corporation purchasing or otherwise acquiring such assets shall assume the obligation to deliver to the holder such alternate consideration, and the other obligations, under the Series 2020-A warrants. In addition, upon a fundamental transaction, the holder will have the right to require us to repurchase its Series 2020-A warrant at its fair value using the Black Scholes option pricing formula in the Series 2020-A warrants; provided, however, that, if the fundamental transaction is not within our control, including not approved by our board of directors, then the holder shall only be entitled to receive the same type or form of consideration (and in the same proportion), at the Black Scholes value of the unexercised portion of the warrant, that is being offered and paid to the holders of our common stock in connection with the fundamental transaction.

Certain Adjustments

The exercise price and the number and type of securities purchasable upon exercise of the Series 2020-A warrants are subject to adjustment upon certain reclassifications, stock dividends and stock splits. We have the right at any time during the term of the Series 2020-A warrants to reduce the then-existing exercise price, with respect to all or any portion of any outstanding Series 2020-A warrants to any amount and for any period of time deemed appropriate by our board of directors, in its sole discretion.

Pro Rata Distributions

If, at any time while the Series 2020-A warrants are outstanding, we declare or make any dividend or other distribution of our assets to holders of shares of our common stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) or we grant, issue or sell any options, convertible securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of common stock (in each case, "Series 2020-A Distributed Property"), then each holder of a Series 2020-A warrant shall receive, with respect to the shares of common stock issuable upon exercise of such Series 2020-A warrant, the Series 2020-A Distributed Property that such holder would have been entitled to receive had the holder been the record holder of such number of shares of common stock issuable upon exercise of the warrant immediately prior to the record date for such Series 2020-A Distributed Property.

Authorized and Unreserved Shares of Common Stock

So long as any of the Series 2020-A warrants remain outstanding, we are required to maintain a number of authorized and unreserved shares of common stock equal to the number of shares of common stock issuable upon the exercise of all of the Series 2020-A warrants then outstanding.

Fractional Shares

No fractional shares will be issued upon exercise of the Series 2020-A warrants, but we will pay a cash adjustment or round up to the next whole share in connection with any fractional share.

Rights as a Stockholder

Except as set forth in the Series 2020-A warrants, the Series 2020-A warrants do not confer upon holders any voting or other rights as stockholders of the Company.

Trading Market

There is no established public trading market available for the Series 2020-A warrants on any national securities exchange or other nationally recognized trading system. In addition, we do not intend to apply to list the Series 2020-A warrants on any national securities exchange or other nationally recognized trading system, including the Nasdaq Capital Market.

Pre-Funded Series 2020-B Warrants

The following description of the pre-funded Series 2020-B warrants is a summary, is not complete and is subject to, and qualified in its entirety by, the provisions of the pre-funded Series 2020-B warrants, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. It summarizes only those aspects of the pre-funded Series 2020-B warrants that we believe will be most important to your decision to invest in the pre-funded Series 2020-B warrants. You should keep in mind, however, that it is the terms in the pre-funded Series 2020-B warrants, and not this summary, which define your rights as a holder of the pre-funded Series 2020-B warrants. There may be other provisions in the pre-funded Series 2020-B warrants that are also important to you. You should read the form of the pre-funded Series 2020-B warrants for a full description of the terms of the pre-funded Series 2020-B warrants.

Duration and Exercise Price

Each pre-funded Series 2020-B warrant entitles the holder thereof to purchase one share of our common stock at an exercise price equal to \$ _____ per share. The purchase price of \$ _____ per share, except for a nominal exercise price of \$0.01 per share, will be pre-paid to us upon issuance of the pre-funded Series 2020-B warrants and, consequently, no additional payment or other consideration (other than the nominal exercise price of \$0.01 per share) will be required to be delivered to us by the holder upon exercise. The pre-funded Series 2020-B warrants will be exercisable during the period commencing on the date of issuance and expire when exercised in full.

The purpose of the pre-funded Series 2020-B warrants is to enable investors that may have restrictions on their ability to beneficially own more than 4.99% or 9.99%, at the investor's election, of our outstanding common stock following the consummation of this offering the opportunity to invest capital into the Company without triggering such ownership restrictions. By receiving pre-funded Series 2020-B warrants in lieu of the shares of common stock contained in the Series 1 units which would result in such holders' ownership exceeding 4.99% or 9.99%, as applicable, such holders will have the ability to purchase the shares underlying the pre-funded Series 2020-B warrants for nominal consideration at a later date.

Exercisability

The pre-funded Series 2020-B warrants may be exercised by delivering to the Company a duly-executed written notice of election to exercise the pre-funded Series 2020-B warrant and delivering to the Company cash payment of the nominal exercise price of \$0.01 per share. Upon delivery of the written notice of election to exercise the pre-funded Series 2020-B warrant and cash payment of the nominal exercise price of \$0.01 per share, on and subject to the terms and conditions of the pre-funded Series 2020-B warrants, we will deliver or cause to be delivered such holder the number of whole shares of common stock to which the holder is entitled, which shares shall be delivered in book-entry form. If a pre-funded Series 2020-B warrant is exercised for fewer than all of the shares of common stock for which such pre-funded Series 2020-B warrant may be exercised, then upon request of the holder and surrender of such pre-funded Series 2020-B warrant, we shall issue a new pre-funded Series 2020-B warrant exercisable for the remaining number of shares of common stock.

A holder (together with its affiliates) may not exercise any portion of the pre-funded Series 2020-B warrants to the extent that the holder (together with its affiliates) would beneficially own more than 4.99% (or, at the election of the holder prior to the date of issuance, 9.99%) of our outstanding common stock after exercise. The holder may increase or decrease this beneficial ownership limitation to any other percentage not in excess of 9.99 upon notice to us, provided that, in the case of an increase of such beneficial ownership limitation, such notice shall not be effective until 61 days following notice to us.

Cashless Exercise

At any time while the pre-funded Series 2020-B warrants are outstanding, a holder of pre-funded Series 2020-B warrants may exercise the pre-funded Series 2020-B warrants on a cashless basis pursuant to the formula in the pre-funded Series 2020-B warrants. Shares issued pursuant to a cashless exercise would be issued pursuant to Section 3(a)(9) of the Securities Act, and the shares of common stock issued upon such cashless exercise would take on the registered characteristics of the pre-funded Series 2020-B warrants being exercised.

Failure to Timely Deliver Shares of Common Stock

If we fail to timely deliver shares of common stock pursuant to any pre-funded Series 2020-B warrant exercise, and such exercising holder elects or is required to purchase shares of common stock (in an open market transaction or otherwise) to deliver in satisfaction of a sale by such holder of all or a portion of the shares of common stock for which such pre-funded Series 2020-B warrant was exercised, then we will be required to deliver an amount in cash by which holder's purchase price, including commissions, exceeds the number of shares of common stock to be delivered multiplied by the price at which the sell order was executed and, at option of holder, reinstate the portion of warrant for the exercise that was not honored or deliver the number of shares of common stock.

Fundamental Transaction

If, at any time while the pre-funded Series 2020-B warrants are outstanding, we directly or indirectly, in one or more related transactions, enter into a fundamental transaction, which includes any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock as further described in the pre-funded Series 2020-B warrants, then each holder shall become entitled to receive the same amount and kind of securities, cash or property as such holder would have been entitled to receive upon the occurrence of such fundamental transaction if the holder had been, immediately prior to such fundamental transaction, the holder of the number of shares of common stock then issuable upon exercise of such holder's pre-funded Series 2020-B warrants. Any successor to us, surviving entity or the corporation purchasing or otherwise acquiring such assets shall assume the obligation to deliver to the holder such alternate consideration, and the other obligations, under the pre-funded Series 2020-B warrants.

Certain Adjustments

The exercise price and the number and type of securities purchasable upon exercise of the pre-funded Series 2020-B warrants are subject to adjustment upon certain reclassifications, stock dividends and stock splits.

Pro Rata Distributions

If, at any time while the pre-funded Series 2020-B warrants are outstanding, we declare or make any dividend or other distribution of our assets to holders of shares of our common stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) or we grant, issue or sell any options, convertible securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of common stock (in each case, "Series 2020-B Distributed Property"), then each holder of a pre-funded Series 2020-B warrant shall receive, with respect to the shares of common stock issuable upon exercise of such pre-funded Series 2020-B warrant, the Series 2020-B Distributed Property that such holder would have been entitled to receive had the holder been the record holder of such number of shares of common stock issuable upon exercise of the warrant immediately prior to the record date for such Series 2020-B Distributed Property.

Authorized and Unreserved Shares of Common Stock

So long as any of the pre-funded Series 2020-B warrants remain outstanding, we are required to maintain a number of authorized and unreserved shares of common stock equal to the number of shares of common stock issuable upon the exercise of all of the pre-funded Series 2020-B warrants then outstanding.

Fractional Shares

No fractional shares will be issued upon exercise of the pre-funded Series 2020-B warrants, but we will pay a cash adjustment or round up to the next whole share in connection with any fractional share.

Rights as a Stockholder

Except as set forth in the pre-funded Series 2020-B warrants, the pre-funded Series 2020-B warrants do not confer upon holders any voting or other rights as stockholders of the Company.

Trading Market

There is no established public trading market available for the pre-funded Series 2020-B warrants on any national securities exchange or other nationally recognized trading system. In addition, we do not intend to apply to list the pre-funded Series 2020-B warrants on any national securities exchange or other nationally recognized trading system, including the Nasdaq Capital Market.

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

The following is a summary of the material U.S. federal income tax consequences arising from and relating to the acquisition, ownership and disposition of (i) shares of common stock acquired as part of the Series 1 units (“shares of common stock”), (ii) warrants acquired as part of the Series 1 units or Series 2 units (“warrants”) and (iii) shares of common stock received on the exercise of the warrants (“warrant shares”).

Scope of this Summary

This summary is for general information purposes only and does not purport to be a complete analysis or listing of all potential U.S. federal income tax consequences related to the acquisition, ownership and disposition of shares of common stock, warrants and warrant shares. Except as specifically set forth below, this summary does not discuss applicable tax reporting requirements. In addition, this summary does not take into account the individual facts and circumstances of any particular holder that may affect the U.S. federal income tax consequences to such holder.

Accordingly, this summary is not intended to be, and should not be construed as, legal or tax advice with respect to any particular holder. Each holder should consult its own tax advisors regarding the U.S. federal, state and local, and non-U.S. tax consequences related to the acquisition, ownership and disposition of shares of common stock, warrants and warrant shares.

No legal opinion from U.S. legal counsel or ruling from the Internal Revenue Service (the “IRS”) has been requested, or will be obtained, regarding the U.S. federal income tax consequences related to the acquisition, ownership and disposition of shares of common stock, warrants and warrant shares. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, or contrary to, the positions taken in this summary.

Authorities

This summary is based upon provisions of the Internal Revenue Code of 1986, as amended (the “Code”), regulations, rulings and judicial decisions as of the date hereof. Those authorities may be changed, perhaps retroactively, or be subject to differing interpretations, so as to result in U.S. federal tax considerations different from those summarized below.

U.S. Holders

As used in this summary, the term “U.S. Holder” means a beneficial owner of shares of common stock, warrants or warrant shares acquired pursuant to this prospectus that is, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the U.S.;
- a corporation (or other entity taxable as a corporation) organized under the laws of the U.S., any state thereof or the District of Columbia;
- an estate whose income is subject to U.S. federal income taxation regardless of its source; or
- a trust that (1) is subject to the primary supervision of a court within the U.S. and the control of one or more U.S. persons for all substantial decisions or (2) has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

Non-U.S. Holders

For purposes of this summary, a “Non-U.S. holder” means a beneficial owner of shares of common stock, warrants, or warrant shares acquired pursuant to this prospectus that is neither a U.S. Holder nor a partnership (or an entity or arrangement treated as a partnership for U.S. federal income tax purposes). A Non-U.S. Holder should review the discussion under the heading “Non-U.S. Holders” below for more information.

Holders Subject to Special U.S. Federal Income Tax Rules

This summary deals only with persons or entities who hold shares of common stock, warrants or warrant shares as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment purposes). This summary does not address all aspects of U.S. federal income taxation that may be applicable to holders in light of their particular circumstances or to holders subject to special treatment under U.S. federal income tax law, such as: banks, insurance companies, and other financial institutions; dealers or traders in securities, commodities or foreign currencies; regulated investment companies; U.S. expatriates or former long-term residents of the U.S.; persons holding shares of common stock, warrants or warrant shares as part of a straddle, appreciated financial position, synthetic security, hedge, conversion transaction or other integrated investment; persons holding shares of common stock, warrants or warrant shares as a result of a constructive sale; real estate investment trusts; U.S. Holders that have a “functional currency” other than the U.S. dollar; holders that acquired shares of common stock, warrants, or warrant shares in connection with the exercise of employee stock options or otherwise as consideration for services; or holders that are “controlled foreign corporations” or “passive foreign investment companies.” Holders that are subject to special provisions under the Code, including holders described immediately above, should consult their own tax advisors regarding the U.S. federal, state and local, and non-U.S. tax consequences arising from and relating to the acquisition, ownership and disposition of shares of common stock, warrants and warrant shares.

If an entity classified as a partnership for U.S. federal income tax purposes holds shares of common stock, warrants or warrant shares, the tax treatment of a partner generally will depend on the status of the partner and the activities of the partnership. This summary does not address the tax consequences to any such owner or entity. Partners of entities or arrangements that are classified as partnerships for U.S. federal income tax purposes should consult their own tax advisors regarding the U.S. federal income tax consequences arising from and relating to the acquisition, ownership and disposition of shares of common stock, warrants and warrant shares.

Tax Consequences Not Addressed

This summary does not address the U.S. state and local, U.S. federal estate and gift, U.S. federal alternative minimum tax, or non-U.S. tax consequences to holders of the acquisition, ownership and disposition of shares of common stock, warrants and warrant shares. Each holder should consult its own tax advisors regarding the U.S. state and local, U.S. federal estate and gift, U.S. federal alternative minimum tax, and non-U.S. tax consequences of the acquisition, ownership and disposition of shares of common stock, warrants and warrant shares.

Characterization of the Units

For U.S. federal income tax purposes, the purchase by U.S. Holders or Non-U.S. Holders of a Series 1 unit comprised of one share of common stock and one Series 2020-A warrant under this prospectus will be treated as the purchase of two components: a component consisting of one share of common stock and a component consisting of one Series 2020-A warrant to purchase one share of common stock. Similarly, the purchase of a Series 2 unit comprised of a pre-funded Series 2020-B warrant and one Series 2020-A warrant under this prospectus will be treated as the purchase of two components: a component consisting of a pre-funded Series 2020-B warrant to purchase one share of common stock and a component consisting of one Series 2020-A warrant to purchase one share of common stock (each of the Series 1 units and the Series 2 units, a “unit”). The purchase price for each unit will be allocated between these two components based upon our determination of the relative fair market values of such components at the time the unit is purchased, which we will complete following the closing of the offering. This allocation of the purchase price for each unit will establish the holder’s initial tax basis for U.S. federal income tax purposes in the components that comprise each unit.

For this purpose, we will allocate part of the purchase price for each unit to each component which comprises such unit. This allocation will be based upon our determination of the relative values of such components, which we will complete following the closing of the offering. This allocation is binding on you unless you explicitly disclose in a statement attached to your timely filed U.S. federal income tax return for the tax year that includes your acquisition date of the unit that your allocation of the purchase price is different than our allocation. However, the IRS will not be bound by our allocation of the purchase price for such units, and therefore, the IRS or a U.S. court may not respect our allocation. Each holder should consult its own tax advisor regarding the allocation of the purchase price for the units.

U.S. Holders

Exercise of Warrants

A U.S. Holder generally will not recognize gain or loss on the exercise of a warrant and related receipt of a warrant share (unless cash is received in lieu of the issuance of a fractional warrant share). A U.S. Holder’s initial tax basis in the warrant share received on the exercise of a warrant should be equal to the sum of (i) the U.S. Holder’s tax basis in the warrant plus (ii) the exercise price paid by the U.S. Holder on the exercise of the warrant. A U.S. Holder’s holding period for the warrant share received on the exercise of a warrant will begin on the day the warrant is exercised by the U.S. Holder. It is possible, however, that a U.S. Holder’s holding period of the warrant share received upon the exercise of a pre-funded Series L warrant will begin on the day after the U.S. Holder purchased the pre-funded Series L warrant. U.S. Holders should consult their own tax advisor regarding the holding period for warrant shares received upon the exercise of pre-funded Series L warrants.

The U.S. federal income tax treatment of a cashless exercise of warrants into warrant shares is unclear, and the tax consequences of a cashless exercise could differ from the consequences upon the exercise of a warrant described in the preceding paragraph. U.S. Holders should consult their own tax advisors regarding the U.S. federal income tax consequences of a cashless exercise of warrants.

Disposition of Warrants

A U.S. Holder will recognize gain or loss on the sale or other taxable disposition of a warrant in an amount equal to the difference, if any, between (i) the amount of cash plus the fair market value of any property received upon such taxable disposition and (ii) the U.S. Holder's tax basis in the warrant sold or otherwise disposed of. Any such gain or loss generally will be a capital gain or loss, which will be long-term capital gain or loss if the U.S. Holder's holding period in the warrant is more than one year at the time of the taxable disposition. Long-term capital gains recognized by certain non-corporate U.S. Holders (including individuals) may be eligible for preferential rates of taxation. Deductions for capital losses are subject to limitations under the Code.

Expiration of Warrants without Exercise

Upon the lapse or expiration of a warrant, a U.S. Holder will recognize a loss in an amount equal to such U.S. Holder's tax basis in the warrant. Any such loss generally will be a capital loss and will be long-term capital loss if the U.S. Holder's holding period in the warrant is more than one year at the time of the lapse or expiration. Deductions for capital losses are subject to limitations under the Code.

Certain Adjustments to the Warrants

Under Section 305 of the Code, an adjustment to the number of warrant shares that will be issued on the exercise of the warrants, or an adjustment to the exercise price of the warrants, may be treated as a constructive distribution to a U.S. Holder of the warrants if, and to the extent that, such adjustment has the effect of increasing such U.S. Holder's proportionate interest in our "earnings and profits" or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to our stockholders). Adjustments to the exercise price of a warrant made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the warrants generally should not result in a constructive distribution (see the more detailed discussion of the rules applicable to distributions made by us at "Distributions on Shares of Common Stock and Warrant Shares" below).

Distributions on Shares of Common Stock and Warrant Shares

We have never declared or paid any cash dividends on our common stock and do not anticipate paying any cash dividends on our common stock in the foreseeable future. If we were to pay cash dividends in the future, such distributions made on shares of common stock and warrant shares generally would be included in a U.S. Holder's income as ordinary dividend income to the extent of our current or accumulated earnings and profits (determined under U.S. federal income tax principles) as of the end of our taxable year in which the distribution occurred. Dividends received by certain non-corporate U.S. Holders may be eligible for taxation at preferential rates provided certain holding period and other requirements are satisfied. Distributions in excess of our current and accumulated earnings and profits would be treated as a return of capital to the extent of a U.S. Holder's adjusted tax basis in the shares and thereafter as capital gain from the sale or exchange of such shares, which would be taxable according to rules discussed under the heading "Sale, Certain Redemptions or Other Taxable Dispositions of Shares of Common Stock and Warrant Shares," below. Dividends received by a corporate holder may be eligible for a dividends received deduction, subject to applicable limitations.

Sale, Certain Redemptions or Other Taxable Dispositions of Shares of Common Stock and Warrant Shares

Upon the sale, certain qualifying redemptions, or other taxable disposition of shares of common stock or warrant shares, a U.S. Holder generally will recognize capital gain or loss equal to the difference, if any, between (i) the amount of cash and the fair market value of any property received upon such taxable disposition and (ii) the U.S. Holder's adjusted tax basis in the shares of common stock or warrant shares sold or otherwise disposed of. Such capital gain or loss will be long-term capital gain or loss if a U.S. Holder's holding period in the shares of common stock or warrant shares is more than one year at the time of the taxable disposition. Long-term capital gains recognized by certain non-corporate U.S. Holders (including individuals) may be eligible for taxation at preferential rates. Deductions for capital losses are subject to limitations under the Code.

Additional Tax on Passive Income

Individuals, estates and certain trusts whose income exceeds certain thresholds will be required to pay a 3.8% Medicare surtax on “net investment income” including, among other things, dividends and net gain from disposition of property (other than property held in certain trades or businesses). U.S. Holders should consult their own tax advisors regarding the effect, if any, of this tax on their ownership and disposition of shares of common stock, warrants and warrant shares.

Information Reporting and Backup Withholding

Information reporting requirements generally will apply to payments of dividends on shares of common stock and warrant shares and to the proceeds of a sale of shares of common stock, warrants or warrant shares paid to a U.S. Holder unless the U.S. Holder is an exempt recipient (such as a corporation). Backup withholding will apply to those payments if the U.S. Holder fails to provide its correct taxpayer identification number, or certification of exempt status, or if the U.S. Holder is notified by the IRS that it has failed to report in full payments of interest and dividend income. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules generally will be allowed as a refund or a credit against a U.S. Holder’s U.S. federal income tax liability, if any, provided the required information is furnished in a timely manner to the IRS.

Non-U.S. Holders

Exercise of Warrants

A Non-U.S. Holder generally will not recognize gain or loss for U.S. tax purposes on the exercise of a warrant and related receipt of a warrant share (unless cash is received in lieu of the issuance of a fractional warrant share and certain other conditions are present, as discussed below under “Sale or Other Taxable Disposition of Shares of Common Stock, Warrants and Warrant Shares”).

The U.S. federal income tax treatment of a cashless exercise of warrants into warrant shares is unclear, and the tax consequences of a cashless exercise could differ from the consequences upon the exercise of a warrant described in the preceding paragraph. Non-U.S. Holders should consult their own tax advisors regarding the U.S. federal income tax consequences of a cashless exercise of warrants.

Expiration of Warrants without Exercise

Upon the lapse or expiration of a warrant, a Non-U.S. Holder will not recognize a capital loss unless such Non-U.S. Holder is otherwise subject to U.S. federal income tax.

Certain Adjustments to the Warrants

Under Section 305 of the Code, an adjustment to the number of warrant shares that will be issued on the exercise of the warrants, or an adjustment to the exercise price of the warrants, may be treated as a constructive distribution to a Non-U.S. Holder of the warrants if, and to the extent that, such adjustment has the effect of increasing such Non-U.S. Holder’s proportionate interest in our “earnings and profits” or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to our stockholders). Adjustments to the exercise price of a warrant made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the warrants should generally not result in a constructive distribution. See the more detailed discussion of the rules applicable to distributions made by us under the heading “Distributions on Shares of Common Stock and Warrant Shares” below.

Distributions on Shares of Common Stock and Warrant Shares

We have never declared or paid any cash dividends on our common stock and do not anticipate paying any cash dividends on our common stock in the foreseeable future. If we were to pay cash dividends in the future on our common stock, they would be subject to U.S. federal income tax in the manner described below.

Cash distributions on shares of common stock and warrant shares generally will constitute dividends for U.S. federal income tax purposes to the extent paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles as of the end of our taxable year in which the distribution occurred. Distributions in excess of current and accumulated earnings and profits will be applied against and reduce a Non-U.S. Holder's tax basis in shares of common stock or warrant shares, to the extent thereof, and any excess will be treated as capital gain realized on the sale or other disposition of the shares and subject to tax in the manner described under the heading "Sale or Other Taxable Disposition of Shares of Common Stock, Warrants and Warrant Shares," below.

Any dividends paid to a Non-U.S. Holder with respect to shares of common stock or warrant shares that constitute dividends under the rules described above generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. However, dividends that are effectively connected with the conduct of a trade or business by a Non-U.S. Holder within the U.S. and, where an income tax treaty applies, are attributable to a U.S. permanent establishment of the Non-U.S. Holder, are not subject to this withholding tax, but instead are subject to U.S. federal income tax on a net income basis at applicable individual or corporate rates. A Non-U.S. Holder generally must deliver an IRS Form W-8ECI certifying under penalties of perjury that such dividends are effectively connected with a U.S. trade or business of the holder in order for effectively connected dividends to be exempt from this withholding tax. Any such effectively connected dividends received by a foreign corporation may be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

A Non-U.S. Holder of shares of common stock or warrant shares who is entitled to and wishes to claim the benefits of an applicable treaty rate (and avoid backup withholding as discussed below) with respect to dividends received generally will be required to (i) complete an IRS Form W-8BEN or W-8BEN-E (or an acceptable substitute form) and make certain certifications, under penalty of perjury, to establish its status as a non-U.S. person and its entitlement to treaty benefits or (ii) if the stock is held through certain foreign intermediaries, satisfy the relevant certification requirements of applicable U.S. Treasury regulations. Special certification and other requirements apply to certain Non-U.S. Holders that are entities rather than individuals.

The certification requirements described above must be satisfied prior to the payment of dividends and may be required to be updated periodically. A Non-U.S. Holder eligible for a reduced rate of U.S. federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

Sale or Other Taxable Disposition of Shares of Common Stock, Warrants and Warrant Shares

In general, a Non-U.S. Holder of shares of common stock, warrants or warrant shares will not be subject to U.S. federal income tax with respect to gain recognized on a sale or other disposition of such shares of common stock, warrants or warrant shares, unless: (i) the gain is effectively connected with a trade or business of the Non-U.S. Holder in the U.S. and, where a tax treaty applies, is attributable to a U.S. permanent establishment of the Non-U.S. Holder (in which case, the special rules described below apply), (ii) in the case of a Non-U.S. Holder who is an individual, such holder is present in the U.S. for 183 or more days in the taxable year of the sale or other disposition and certain other conditions are met, in which case the gain would be subject to a flat 30% tax, or such reduced rate as may be specified by an applicable income tax treaty, which may be offset by U.S. source capital losses, even though the individual is not considered a resident of the U.S.; or (iii) subject to certain exceptions, we are or have been a "U.S. real property holding corporation," as such term is defined in Section 897(c) of the Code, during the shorter of the five-year period ending on the date of disposition or the holder's holding period of our shares of common stock, warrants or warrant shares.

We believe we currently are not, and do not anticipate becoming, a "U.S. real property holding corporation" for U.S. federal income tax purposes.

Any gain described in (i) above will be subject to U.S. federal income tax at the regular graduated rates. If the Non-U.S. Holder is a corporation, under certain circumstances, that portion of its earnings and profits that is effectively connected with its U.S. trade or business, subject to certain adjustments, generally would be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each Non-U.S. Holder the amount of dividends paid to such holder on the shares of common stock and warrant shares and the tax withheld (if any) with respect to such dividends, regardless of whether withholding was required. Copies of the information returns reporting such dividends and any withholding may also be made available to the tax authorities in the country in which the Non-U.S. Holder resides under the provisions of an applicable income tax treaty or information sharing agreement. In addition, dividends paid to a Non-U.S. Holder may be subject to backup withholding unless applicable certification requirements are met.

Payment of the proceeds of a sale of shares of common stock or warrant shares within the U.S. or conducted through certain U.S. related financial intermediaries is subject to information reporting and, depending upon the circumstances, backup withholding unless the Non-U.S. Holder certifies under penalties of perjury that it is not a U.S. person (and the payor does not have actual knowledge or reason to know that the holder is a U.S. person) or the holder otherwise establishes an exemption.

Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against such holder's U.S. federal income tax liability provided the required information is timely furnished to the IRS.

Foreign Account Tax Compliance Act ("FATCA")

Legislation commonly referred to as the Foreign Account Tax Compliance Act and associated guidance, or FATCA, generally will impose a 30% U.S. federal withholding tax on any "withholdable payment" (as defined below) paid to (i) a "foreign financial institution" (as specifically defined in the legislation), whether such foreign financial institution is the beneficial owner or an intermediary, unless such foreign financial institution agrees to verify, report and disclose its U.S. "account" holders (as specifically defined in the legislation) and meets certain other specified requirements, or (ii) a non-financial foreign entity, whether such non-financial foreign entity is the beneficial owner or an intermediary, unless such entity provides a certification that the beneficial owner of the payment does not have any substantial U.S. owners or provides the name, address and taxpayer identification number of each such substantial U.S. owner and certain other specified requirements are met. In certain cases, the relevant foreign financial institution or non-financial foreign entity may qualify for an exemption from, or be deemed to be in compliance with, these rules. Under final regulations and other current guidance, "withholdable payments" generally include dividends on shares of common stock and warrant shares, and will include the gross proceeds of a disposition of shares of common stock, warrants, and warrant shares, on or after January 1, 2019. Investors are urged to consult their own tax advisors regarding the possible application of these rules to their investment in our units, shares of common stock, warrants, and warrant shares.

PLAN OF DISTRIBUTION

Pursuant to an engagement agreement, we have engaged H.C. Wainwright & Co., LLC, or the placement agent, to act as our exclusive placement agent in connection with this offering of our securities pursuant to this prospectus. The placement agent has agreed to use reasonable best efforts to arrange for the sale of the securities pursuant to this prospectus. The terms of this offering are subject to market conditions and negotiations between us, the placement agent and prospective investors. The engagement agreement does not give rise to any commitment by the placement agent to purchase any of our securities and the placement agent is not required to arrange the purchase or sale of any specific number or dollar amount of securities. The placement agent will have no authority to bind us by virtue of the engagement agreement and the placement agent does not guarantee that it will be able to raise new capital in any prospective offering. The placement agent may engage sub-agents or selected dealers to assist with the offering.

We will enter into a securities purchase agreement directly with institutional investors, at such investor's option, which purchase our securities in this offering, providing such investors with certain representations, warranties and covenants from us, which representations, warranties and covenants will not be available to other investors which do not enter into a securities purchase agreement. Investors which do not enter into a securities purchase agreement shall rely solely on this prospectus in connection with the purchase of our securities in the offering.

There is no required minimum number of securities or amount of proceeds that must be sold as a condition to completion of this offering.

We will deliver the securities being issued to the investors upon receipt of investor funds for the purchase of the securities offered pursuant to this prospectus. We expect to deliver the securities being offered pursuant to this prospectus on or about _____, 2020.

The placement agent may distribute this prospectus electronically.

Commissions and Expenses

We have agreed to pay the placement agent a total cash fee equal to 7.0% of the gross proceeds of this offering. This fee will be distributed among the placement agent and any selected-dealers that it has retained to act on their behalf in connection with this offering. The following table shows the per unit placement agent fees payable to the placement agent by us in connection with this offering.

	<u>Per Series 1 Unit</u>	<u>Per Series 2 Unit</u>
Public offering price	\$	\$
Placement agent's fees payable by us	\$	\$
Proceeds, before expenses, to us	\$	\$

We will also reimburse the placement agent for the placement agent's legal fees and expenses in the amount of up to \$100,000 and \$12,900 for closing fees. We estimate the total offering expenses of this offering that will be payable by us, excluding the placement agent fees and expenses, will be approximately \$ _____.

Right of First Refusal

Subject to certain exceptions, we have also granted the placement agent a right of first refusal for a period of 12 months following the closing of the offering.

Other Relationships

The placement agent and its respective affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates.

Determination of offering price

The actual offering price of the securities we are offering will be negotiated between us, the placement agent and prospective investors, based on the trading of our shares of common stock prior to the offering, among other things, and may be at a discount to the current market price. The securities offered hereby will be sold at a fixed price until the completion of the offering.

Lock-up Agreements

We and each of our officers and directors have agreed with the placement agent to be subject to a lock-up period of ninety days following the date of closing of the offering pursuant to this prospectus, subject to certain customary exceptions, provided that, after thirty days following the closing date, we are permitted to issue shares of common stock in our “at the market” offering with H.C. Wainwright & Co., LLC as sales agent and securities that convertible into common stock solely in connection with the payoff or refinancing of our 2020/21 Notes. This means that, during the applicable lock-up period, we may not issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of common stock or their equivalents, subject to certain exceptions. The placement agent may waive the terms of these lock-up agreements in its sole discretion and without notice. In addition, subject to certain exceptions, we have agreed to not issue any securities that are subject to a price reset based on the trading prices of our common stock or upon a specified or contingent event in the future, or enter into any agreement to issue securities at a future determined price, for one year following the date of closing of the offering pursuant to this prospectus. The placement agent may waive this prohibition in its sole discretion and without notice.

Regulation M

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by the placement agent and any profit realized on the resale of the securities sold by the placement agent while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, the 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 securities by the placement agent acting as principal. Under these rules and regulations, the placement agent (i) may not engage in any stabilization activity in connection with our securities; and (ii) 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 it has completed its participation in the distribution.

Indemnification

We have agreed to indemnify the placement agent and specified other persons against certain liabilities, including liabilities under the Securities Act, relating to or arising out of the placement agent’s activities under the placement agency agreement and to contribute to payments that the placement agent may be required to make in respect of such liabilities.

Listing

Our shares of common stock are listed on the Nasdaq Capital Market under the symbol “GEVO”. We do not plan to list the Series 2020-A warrants or pre-funded Series 2020-B warrants on the Nasdaq Capital Market or any other securities exchange or trading market.

LEGAL MATTERS

The validity of the securities offered by this prospectus will be passed upon for us by Perkins Coie LLP, Denver, Colorado. Ellenoff Grossman & Schole LLP, New York, New York will act as counsel for the placement agent in connection with this offering.

EXPERTS

The audited consolidated financial statements incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated by reference in reliance upon the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the securities being offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the securities offered hereby, we refer you to the registration statement and the exhibits filed thereto. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement.

We file annual, quarterly and special reports, proxy statements and other information with the SEC. The SEC maintains an internet website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us. You may also access our reports and proxy statements free of charge at our website, www.gevo.com. The information contained in, or that can be accessed through, our website is not part of this prospectus. The prospectus included in this filing is part of a registration statement filed by us with the SEC. The full registration statement can be obtained from the SEC, as indicated above, or from us.

INCORPORATION OF CERTAIN DOCUMENTS 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 another document that we have filed separately with the SEC. We hereby incorporate by reference the following information or documents into this prospectus, except for information “furnished” under Item 2.02 or Item 7.01 of Form 8-K or other information “furnished” to the SEC which is not deemed filed and not incorporated in this prospectus:

- our [Annual Report on Form 10-K for the year ended December 31, 2019](#), filed with the SEC on March 17, 2020;
- our [Definitive Proxy Statement on Schedule 14A relating to our 2020 Annual Meeting of Stockholders](#), filed on April 20, 2020;
- our [Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020, filed with the SEC on May 13, 2020](#); and
- our Current Reports on Forms 8-K filed with the SEC on [January 13, 2020](#), [March 23, 2020](#), [March 31, 2020](#), [April 9, 2020](#), and [June 5, 2020](#).

Any information in any of the foregoing documents will automatically be deemed to be modified or superseded to the extent that information in this prospectus or in a later filed document that is incorporated or deemed to be incorporated herein by reference modifies or replaces such information.

We also incorporate by reference any future filings (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) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, until we sell all of the securities offered by this prospectus. Information in such future filings updates and supplements the information provided in this prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

Upon written or oral request, we will provide to you, without charge, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits which are specifically incorporated by reference into such documents. Requests should be directed to: Gevo, Inc., Attention: Investor Relations, 345 Inverness Drive South, Building C, Suite 310, Englewood, Colorado 80112, telephone (303) 858-8358.



Gevo, Inc.

**Up to 12,820,512 Series 1 Units, each consisting of One Share of Common Stock
and One Series 2020-A Warrant to Purchase One Share of Common Stock
and**

**Up to 12,820,512 Series 2 Units, each consisting of One Pre-Funded Series 2020-B Warrant to
Purchase One Share of Common Stock and One Series 2020-A Warrant
to Purchase One Share of Common Stock**

**(Shares of Common Stock Underlying the Series 2020-A Warrants)
and**

(Shares of Common Stock Underlying the Pre-Funded Series 2020-B Warrants)

PROSPECTUS

H.C. Wainwright & Co.

, 2020

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. Other Expenses of Issuance and Distribution

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than placement agent's fees, all of which will be paid by the registrant. All amounts are estimated except the Securities and Exchange Commission (the "SEC") registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the Nasdaq listing fee.

SEC registration fee	\$	3,894
FINRA filing fee		*
Nasdaq listing fee		*
Accounting fees and expenses		*
Legal fees and expenses		*
Printing and engraving expenses		*
Transfer agent and registrar fees and expenses		*
Blue-sky fees and expenses		*
Miscellaneous		*
Total	\$	<u> *</u>

* To be provided by amendment.

ITEM 14. Indemnification of Directors and Officers

Under Section 145 of the Delaware General Corporation Law (the "DGCL"), a corporation has the power to indemnify its directors and officers under certain prescribed circumstances and, subject to certain limitations, against certain costs and expenses, including attorneys' fees, judgments, fines and amounts paid in settlement, actually and reasonably incurred in connection with any threatened, pending or completed action, suit or proceeding, whether criminal, civil, administrative or investigative, to which any of them is a party by reason of his being a director or officer of the corporation if it is determined that he acted in accordance with the applicable standard of conduct set forth in such statutory provision. In addition, a corporation may advance expenses incurred by a director or officer in defending a proceeding upon receipt of an undertaking from such person to repay any amount so advanced if it is ultimately determined that such person is not eligible for indemnification. The registrant's amended and restated certificate of incorporation provides that, pursuant to the DGCL, the registrant's directors shall not be liable for monetary damages to the fullest extent authorized under applicable law, including for breach of the directors' fiduciary duty of care to the registrant and the registrant's stockholders. This provision in the registrant's amended and restated certificate of incorporation does not eliminate the duty of care, and in appropriate circumstances equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each director will continue to be subject to liability for breach of the director's duty of loyalty, for acts or omissions not in good faith or involving intentional misconduct or knowing violations of the law, for actions leading to improper personal benefit to the director, and for payment of dividends or approval of stock repurchases or redemptions that are unlawful under Delaware law. The provision also does not affect a director's responsibilities under any other law, such as the federal securities laws or state or federal environmental laws.

Article 10 of the registrant's amended and restated bylaws provides that the registrant will indemnify, to the fullest extent authorized by the DGCL, each person who was or is made a party or is threatened to be made a party to or is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was a director or officer of the registrant, whether the basis of such proceeding is alleged action in an official capacity as a director or officer or in any other capacity while serving as a director or officer against all expenses, liability and loss reasonably incurred or suffered by such person in connection therewith.

In addition to the above, the registrant has entered into indemnification agreements with each of the registrant's directors and officers. These indemnification agreements provide the registrant's directors and officers with the same indemnification and advancement of expenses as described above, and provide that our directors and officers will be indemnified to the fullest extent authorized by any future Delaware law that expands the permissible scope of indemnification. The registrant also has directors' and officers' liability insurance, which provides coverage against certain liabilities that may be incurred by the registrant's directors and officers in their capacities as directors and officers of the registrant.

ITEM 15. Recent Sales of Unregistered Securities

Set forth below is information regarding shares of capital stock issued by the registrant since January 1, 2017 that were not registered under the Securities Act of 1933, as amended (the "Securities Act"). Also included is the consideration received by the registrant for such shares and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed. On April 21, 2015, January 5, 2017 and June 1, 2018, the registrant effected a one-for-fifteen reverse stock split, a one-for-twenty reverse stock split and a one-for-twenty reverse stock split, respectively. All share amounts, per share data, share prices, exercise prices and conversion rates have not been adjusted retroactively to reflect these reverse stock splits.

1. On January 9, 2017, Gevo, Inc. (the "Company") entered into private exchange agreements with certain holders of the Company's 7.5% Convertible Senior Notes due 2022 (the "2022 Notes") to exchange an aggregate of \$3.125 million of principal amount of 2022 Notes for an aggregate of 731,732 shares of the Company's common stock, and such shares were issued on January 10, 2017 and January 11, 2017.
2. On January 11, 2017, the Company entered into a private exchange agreement with a holder of the 2022 Notes to exchange \$2.0 million of principal amount of 2022 Notes for 505,000 shares of the Company's common stock, and such shares were issued on January 12, 2017.
3. On January 17, 2017, the Company entered into a private exchange agreement with a holder of the 2022 Notes to exchange \$2.275 million of principal amount of 2022 Notes for 587,000 shares of the Company's common stock, and such shares were issued on January 18, 2017.
4. On January 30, 2017, the Company entered into a private exchange agreement with a holder of the 2022 Notes to exchange \$1.0 million of principal amount of 2022 Notes for 331,650 shares of the Company's common stock, and such shares were issued on January 31, 2017.
5. On June 9, 2017, the Company entered into a private exchange agreement with a holder of the 2022 Notes to exchange \$485,000 of principal amount of 2022 Notes for 736,671 shares of the Company's common stock, and such shares were issued on June 12, 2017.
6. On April 19, 2017, the Company entered into an Exchange and Purchase Agreement (the "Purchase Agreement") with the holders (the "Holders") of the Company's 10.0% Convertible Senior Secured Notes due 2017 (the "2017 Notes"). Pursuant to the terms of the Purchase Agreement, the Holders, subject to certain conditions, agreed to exchange all of the outstanding principal amount of the 2017 Notes for an equal principal amount of the Company's newly created 12.0% Convertible Senior Secured Notes due 2020 (the "2020 Notes"), plus an amount in cash equal to the accrued and unpaid interest (other than interest paid in kind) on the 2017 Notes (the "Exchange"). Pursuant to the Purchase Agreement, the Company also granted the Holders an option (the "Purchase Option") to purchase up to an additional aggregate principal amount of \$5.0 million of 2020 Notes (the "Option Notes"), at a purchase price equal to the aggregate principal amount of such Option Notes purchased, having identical terms (other than with respect to the issue date and restrictions on transfer relating to compliance with applicable securities law) to the 2020 Notes issued, at any time on or within ninety (90) days of the closing of the Exchange. On June 20, 2017, the Company completed the Exchange and cancelled the 2017 Notes. The 2020 Notes are convertible into shares of the Company's common stock, subject to certain terms and conditions. The initial conversion price of the 2020 Notes was equal to \$0.7359 per share of common stock, or 1.3589 shares of common stock per \$1 principal amount of 2020 Notes (the "Conversion Price"). In addition, upon certain equity financing transactions by the Company, the Holders had a one-time right to reset the Conversion Price (the "Reset Provision") (i) in the first ninety (90) days following the exchange date, at a 25% premium to the common stock price in the equity financing and (ii) after ninety (90) and to and including one hundred eighty (180) days following the closing of the Exchange, at a 35% premium to the common stock share price in the equity financing.
7. On January 4, 2018, the Company entered into a private exchange agreement with a holder of the 2022 Notes to exchange \$515,000 of principal amount of 2022 Notes for 780,303 shares of the Company's common stock, and such shares were issued on January 5, 2018.
8. On June 19, 2018 and June 21, 2018, the Company received conversion notices from the holders of its 2020 Notes to convert an aggregate of approximately \$3.2 million in aggregate principal amount of 2020 Notes for an aggregate of 260,793 shares of the Company's common stock at a conversion rate of 0.0679 shares of common stock per \$1 principal amount of 2020 Notes.

9. During June 2018, the Company received notices of exercise from holders of its Series K warrants to purchase common stock to issue an aggregate of 300,510 shares of common stock for total gross proceeds of approximately \$1.26 million.
10. On January 10, 2020, the Company entered into an Exchange and Purchase Agreement (as amended, the “2020/21 Purchase Agreement”) with the guarantors party thereto and the Holders of the 2020 Notes. Pursuant to the terms of the 2020/21 Purchase Agreement, the Holders, subject to certain conditions, agreed to exchange all of the outstanding principal amount of the 2020 Notes, which was approximately \$14.1 million including unpaid accrued interest, for approximately \$14.4 million in aggregate principal amount of the Company’s newly created 12.0% Convertible Senior Secured Notes due 2020/21 (the “New Notes”) (the “2020/21 Exchange”). Pursuant to the 2020/21 Purchase Agreement, the Company also granted the Holders an option (the “2020/21 Purchase Option”) to purchase up to an additional aggregate principal amount of approximately \$7.14 million of New Notes (the “2020/21 Option Notes”), at a purchase price equal to the aggregate principal amount of such 2020/21 Option Notes purchased less an original issue discount of 2.0%, having identical terms (other than with respect to the issue date and restrictions on transfer relating to compliance with applicable securities law) to the New Notes issued, at any time during the period beginning on the date of closing of the 2020/21 Exchange and ending on the later of (a) one hundred eighty (180) days thereafter, and (b) thirty (30) days following the date on which the Stockholder Approval (as defined below) is obtained. In addition, on January 10, 2020, the Company completed the Exchange, terminated the existing indenture and cancelled the 2020 Notes. The New Notes are convertible into shares of the Company’s common stock voluntarily by the Holder at the conversion price, subject to certain terms and conditions. The initial conversion price of the New Notes is equal to \$2.4420 per share of the Company’s common stock (the “2020/21 Conversion Price”), or 0.4095 shares of the Company’s common stock per \$1 principal amount of New Notes. The Company and the Holders may also mutually agree on other conversions of the New Notes into shares of the Company’s common stock on a monthly basis (a “Contractual Conversion”). The 2020/21 Conversion Price in a Contractual Conversion will be reduced to the lesser of the then-applicable 2020/21 Conversion Price or a 10% discount to the average of the daily VWAP of the Company’s common stock for the three forward trading days prior to the date of the Contractual Conversion.

No underwriters were involved in the foregoing sales and/or exchanges of securities. The securities described in this Item 15 were issued to investors in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Section 3(a)(9) of the Securities Act, as securities exchanged by the registrant with its existing security holders exclusively where no commission or other remuneration is paid or given directly or indirectly for soliciting the exchange. All purchasers of the securities described above represented to the registrant in connection with their respective purchases and/or exchanges that they were accredited investors and were acquiring the shares for their own account for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The purchasers and/or recipients received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from such registration.

ITEM 16. Exhibits and Financial Statement Schedules

(a) Exhibits

Exhibit No.	Description	Form	File No.	Filing Date	Exhibit	Filed Herewith
1.1*	Engagement Letter, dated as of May 15, 2020, between Gevo, Inc. and H.C. Wainwright & Co., LLC.					
3.1	Amended and Restated Certificate of Incorporation of Gevo, Inc.	10-K	001-35073	03/29/11	3.1	
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	06/10/13	3.1	
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	07/09/14	3.1	
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	04/22/15	3.1	
3.5	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	01/06/17	3.1	
3.6	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Gevo, Inc.	8-K	001-35073	06/04/18	3.1	

3.7	Amended and Restated Bylaws of Gevo, Inc.	10-K	001-35073	03/29/11	3.2	
4.1	Form of Gevo, Inc. Common Stock Certificate.	S-1	333-168792	01/19/11	4.1	
4.2	Fifth Amended and Restated Investors' Rights Agreement, dated March 26, 2010.	S-1	333-168792	08/12/10	4.2	
4.3†	Stock Issuance and Stockholder's Rights Agreement, dated July 12, 2005, by and between Gevo, Inc. and California Institute of Technology.	S-1	333-168792	08/12/10	4.3	
4.4**	Indenture, dated January 10, 2020, by and among Gevo, Inc., the guarantors party thereto, and Wilmington Savings Fund Society, FSB, as trustee and as collateral trustee.	8-K	001-35073	01/13/20	4.1	
4.5	First Supplemental Indenture, dated April 7, 2020, by and among Gevo, Inc., the guarantors party thereto, Wilmington Savings Fund Society, FSB, as trustee and as collateral trustee, the requisite holders and Whitebox Advisors LLC.	8-K	001-35073	04/09/20	4.1	
4.6	Registration Rights Agreement, dated January 10, 2020, by and among Gevo, Inc. and the investors named therein.	8-K	001-35073	01/13/20	4.2	
4.7	2015 Common Stock Unit Series C Warrant Agreement, dated May 19, 2015, by and between Gevo, Inc. and American Stock Transfer & Trust Company, LLC.	8-K	001-35073	05/20/15	4.1	
4.8	Form of Series D Warrant to Purchase Common Stock.	8-K	001-35073	12/15/15	4.1	
4.9	Form of Amendment No. 1 to Series D Warrant.	8-K	001-35073	06/13/16	4.1	
4.10	Form of Series F Warrant to Purchase Common Stock.	8-K	001-35073	04/05/16	4.1	
4.11	Form of Series 1 Warrant to Purchase Common Stock.	8-K	001-35073	09/15/16	4.1	
4.12	Form of Series K Warrant to Purchase Common Stock.	8-K	001-35073	02/22/17	4.1	
4.13	Description of Securities.	10-K	001-35073	03/17/20	4.13	
4.14	Form of Series 2020-A Warrant to Purchase Common Stock.					X
4.15	Form of Pre-Funded Series 2020-B Warrant to Purchase Common Stock.					X
5.1	Opinion of Perkins Coie LLP.					X
10.1†	Ethanol and Isobutanol Purchase and Marketing Agreement, dated February 16, 2018, between Eco-Energy, LLC and Agri-Energy, LLC.	8-K	001-35073	02/22/18	10.1	
10.2†	License Agreement, dated July 12, 2005, by and between Gevo, Inc. and the California Institute of Technology, as amended.	S-1	333-168792	11/04/10	10.6	
10.3†	Amendment No. 4, dated October 1, 2010, to the License Agreement, by and between Gevo, Inc. and the California Institute of Technology, dated July 12, 2005.	S-1	333-168792	10/21/10	10.10	
10.4#	Gevo, Inc. 2006 Omnibus Securities and Incentive Plan.	S-1	333-168792	08/12/10	10.11	
10.5#	Form of Stock Option Agreement under the 2006 Omnibus Securities and Incentive Plan.	S-1	333-168792	08/12/10	10.13	
10.6#	Gevo, Inc. Amended and Restated 2010 Stock Incentive Plan.	8-K	001-35073	06/05/20	10.1	
10.7#	Form of Restricted Stock Unit Agreement under the 2010 Stock Incentive Plan.	S-1	333-168792	01/19/11	10.15	
10.8#	Form of Restricted Shares Award Agreement under the Amended and Restated 2010 Stock Incentive Plan.	10-Q	001-35073	08/8/18	10.7	
10.9#	Form of Stock Option Award Agreement under the Amended and Restated 2010 Stock Incentive Plan.	10-Q	001-35073	08/8/18	10.6	
10.10#	Form of Stock Appreciation Rights Award Agreement under the Amended and Restated 2010 Stock Incentive Plan.	10-Q	001-35073	08/8/18	10.8	
10.11#	Gevo, Inc. Employee Stock Purchase Plan.	S-8	333-172771	03/11/11	4.7	
10.12#	Gevo, Inc. Executive Health Management Plan.	10-Q	001-35073	11/2/11	10.1	
10.13#	Form of Indemnification Agreement between Gevo, Inc. and its directors and officers.	S-1	333-168792	01/19/11	10.33	
10.14#	Employment Agreement, dated June 4, 2010, by and between Gevo, Inc. and Patrick Gruber.	S-1	333-168792	11/04/10	10.14	
10.15#	Amendment Agreement, dated December 21, 2011, by and between Gevo, Inc. and Patrick Gruber.	8-K	001-35073	12/27/11	10.1	

10.16#	Second Amendment Agreement, dated February 16, 2015, by and between Gevo, Inc. and Patrick Gruber.	8-K	001-35073	02/17/15	10.1
10.17#	Employment Agreement, dated June 4, 2010, by and between Gevo, Inc. and Christopher Ryan.	S-1	333-168792	11/04/10	10.16
10.18#	Offer of Employment Letter, dated December 21, 2015, by and between Gevo, Inc. and Geoffrey T. Williams, Jr.	10-Q	001-35073	05/09/17	10.1
10.19#	Change of Control Agreement for Geoffrey T. Williams, Jr., dated February 18, 2016.	10-Q	001-35073	05/09/17	10.2
10.20#	Offer Letter, dated July 20, 2019, by and between Gevo, Inc. and Carolyn Romero.	10-Q	001-35073	11/13/19	10.1
10.21#	Offer Letter, dated November 9, 2019, by and between Gevo, Inc. and L. Lynn Smull.	8-K	001-35073	11/15/19	10.1
10.22†	Lease of Space, dated September 13, 2012, between Hines REIT 345 Inverness Drive, LLC and Gevo, Inc.	10-K	001-35073	03/26/13	10.48
10.23†	First Amendment to Lease, effective December 11, 2015, between Hines REIT 345 Inverness Drive, LLC and Gevo, Inc.	10-K	001-35073	03/30/16	10.62
10.24†	Price Risk Management, Origination and Merchandising Agreement, dated June 1, 2015, by and between Agri-Energy, LLC and FCStone Merchant Services, LLC.	10-Q	001-35073	08/07/15	10.3
10.25	Grain Bin Lease Agreement, dated June 1, 2015, by and between Agri-Energy, LLC and FCStone Merchant Services LLC.	10-Q	001-35073	08/07/15	10.4
10.26	Unsecured Guaranty Agreement, dated June 1, 2015, by Gevo, Inc. in favor of FCStone Merchant Services, LLC.	10-Q	001-35073	08/07/15	10.5
10.27†	First Amendment to Grain Bin Lease Agreement, dated December 21, 2017, Agri-Energy, LLC and FCStone Merchant Services, LLC.	10-K	001-35073	03/28/18	10.27
10.28	Second Amendment to the Grain Bin Lease Agreement, dated May 1, 2018, between Agri-Energy LLC, and FCStone Merchant Services, LLC.	10-Q	001-35073	08/08/18	10.5
10.29†	First Amendment to Price Risk Management, Origination and Merchandising Agreement, dated December 21, 2017, Agri-Energy, LLC and FCStone Merchant Services, LLC.	10-K	001-35073	03/28/18	10.28
10.30†	Settlement Agreement and Mutual Release, dated August 22, 2015, by and among Gevo, Inc., Butamax Advanced Biofuels, LLC, E.I. du Pont de Nemours & Company and BP Biofuels North America LLC.	10-Q	001-35073	11/05/15	10.2
10.31†	Patent Cross-License Agreement, dated August 22, 2015, by and between Gevo, Inc. and Butamax Advanced Biofuels LLC.	10-Q	001-35073	11/05/15	10.3
10.32+	Construction License Agreement, dated April 4, 2019, by and between Gevo, Inc. and Praj Industries Ltd.	8-K	001-35073	04/09/19	10.1
10.33	Joint Development Agreement, dated April 4, 2019, by and between Gevo, Inc. and Praj Industries Ltd.	8-K	001-35073	04/09/19	10.2
10.34+	Development License Agreement, dated April 4, 2019, by and between Gevo, Inc. and Praj Industries Ltd.	8-K	001-35073	04/09/19	10.3
10.35†	Renewable Isooctane Purchase and Sale Agreement, dated February 21, 2019 by and between Gevo, Inc. and HCS Group GmbH.	8-K	001-35073	02/27/19	10.1
10.36	At-The-Market Offering Agreement, dated February 13, 2018, between Gevo, Inc. and H.C. Wainwright & Co., LLC	8-K	001-35073	02/13/18	1.1
10.37	Amendment to At-The-Market Offering Agreement and Engagement Agreement, dated June 20, 2018, between Gevo, Inc. and H.C. Wainwright & Co., LLC.	8-K	001-35073	06/20/18	1.2
10.38	Amendment to At-The-Market Offering Agreement, dated June 25, 2018, between Gevo, Inc. and H.C. Wainwright & Co., LLC.	8-K	001-35073	06/25/18	1.3
10.39	Amendment to At-The-Market Offering Agreement and Engagement Agreement, dated June 28, 2018, between Gevo, Inc. and H.C. Wainwright & Co., LLC.	8-K	001-35073	06/28/18	1.4

10.40	Amendment to At-The-Market Offering Agreement and Engagement Agreement, dated August 15, 2019, between Gevo, Inc. and H.C. Wainwright & Co., LLC.	8-K	001-35073	08/15/19	1.5	
10.41+	Renewable ATJ Purchase and Sale Agreement, effective July 26, 2019, by and between Gevo, Inc. and Air Total International, S.A.	8-K	001-35073	08/13/19	10.1	
10.42+	Fuel Sales Agreement, dated as of December 11, 2019, by and between Gevo, Inc. and Delta Air Lines, Inc.	8-K	001-35073	12/17/19	10.1	
10.43+	Amendment No. 1 to Fuel Sales Agreement, dated as of April 22, 2020, by and between Gevo, Inc. and Delta Air Lines, Inc.	8-K	001-35073	4/28/20	10.1	
10.44**	Exchange and Purchase Agreement, dated January 10, 2020, by and among Gevo, Inc., the guarantors party thereto, the holders named in Schedule I thereto, and Whitebox Advisors LLC, in its capacity as representative of the holders.	8-K	001-35073	01/13/20	10.1	
10.45	Letter Agreement, dated April 7, 2020, by and among Gevo, Inc., the guarantors party thereto and Whitebox Advisors LLC, for itself and on behalf of the holders.	8-K	001-35073	04/09/20	10.1	
10.46	Form of Securities Purchase Agreement.					X
21.1	List of Subsidiaries.	S-1	333-168792	10/01/10	21.1	
23.1	Consent of Grant Thornton LLP.					X
23.2	Consent of Perkins Coie LLP (contained in the opinion filed as Exhibit 5.1).					X
24.1*	Power of Attorney (included on signature page).					

* Previously filed.

† Certain portions have been omitted pursuant to a confidential treatment request. Omitted information has been filed separately with the SEC.

+ Certain portions of the exhibit have been omitted pursuant to Rule 601(b)(10) of Regulation S-K. The omitted information is (i) not material and (ii) would likely cause competitive harm to the Company if publicly disclosed.

** Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K under the Securities Exchange Act of 1934, as amended.

Indicates a management contract or compensatory plan or arrangement.

(b) Financial Statement Schedules

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

ITEM 17. Undertakings

The undersigned registrant hereby undertakes:

(1) to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (1)(i), (ii), and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement;

(2) that, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

(4) that, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date;

(5) that, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser;

(6) that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(7) insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue; and

(8) that:

(i) for purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and

(ii) for the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Englewood, State of Colorado, on June 18, 2020.

GEVO, INC.

By: /s/ Patrick R. Gruber
Patrick R. Gruber
Chief Executive Officer

POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Patrick R. Gruber</u> Patrick R. Gruber, Ph.D.	Chief Executive Officer (Principal Executive Officer) and Director	June 18, 2020
<u>*</u> L. Lynn Smull	Chief Financial Officer (Principal Financial Officer)	June 18, 2020
<u>*</u> Carolyn M. Romero, CPA	VP – Controller (Principal Accounting Officer)	June 18, 2020
<u>*</u> Ruth I. Dreessen	Chairperson of the Board of Directors	June 18, 2020
<u>*</u> Gary W. Mize	Director	June 18, 2020
<u>*</u> Andrew J. Marsh	Director	June 18, 2020
<u>*</u> Johannes Minho Roth	Director	June 18, 2020
<u>*</u> William H. Baum	Director	June 18, 2020

* By: /s/ Geoffrey T. Williams, Jr.
Geoffrey T. Williams, Jr., Attorney-in-Fact

SERIES 2020-A COMMON STOCK PURCHASE WARRANT

GEVO, INC.

Warrant Shares: _____

Initial Exercise Date: _____, 2020

THIS SERIES 2020-A COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, _____ or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Initial Exercise Date") and on or prior to 5:00 p.m. (New York City time) on _____¹ (the "Termination Date") but not thereafter, to subscribe for and purchase from Gevo, Inc., a Delaware corporation (the "Company"), up to _____ shares (as subject to adjustment hereunder, the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

"Board of Directors" means the board of directors of the Company.

¹ Insert the date that is the five (5) year anniversary of the Initial Exercise Date, provided that, if such date is not a Trading Day, insert the immediately following Trading Day.

“Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.01 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Purchase Agreement” means the Securities Purchase Agreement, dated as of _____, 2020, by and among the Company and the purchasers signatory thereto.

“Registration Statement” means the Company’s registration statement on Form S-1 (File No. 333-238548).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Subsidiary” means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the Common Stock is traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means American Stock Transfer & Trust Company, LLC, the current transfer agent of the Company, with a mailing address of 6201 15th Avenue, Brooklyn, New York 11219 and a telephone number of (718) 921-8300, and any successor transfer agent of the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrants” means this Warrant and other Common Stock purchase warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the Warrant Shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The exercise price per share of Common Stock under this Warrant shall be \$____, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder's execution of the applicable Notice of Exercise if such Notice of Exercise is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Trading Day) pursuant to Section 2(a) hereof, which Bid Price shall be shown on supporting documents provided by the Holder to the Company within two Trading Days of delivery of the Notice of Exercise, or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of "regular trading hours" on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the "Warrant Share Delivery Date"). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise delivered on or prior to 9:30 a.m. (New York City time) on the Initial Exercise Date, which may be delivered at any time after the time of execution of the Purchase Agreement, the Company agrees to deliver the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Initial Exercise Date and the Initial Exercise Date shall be the Warrant Share Delivery Date for purposes hereunder.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% (or, upon election by a Holder prior to the issuance of any Warrants, 9.99%) of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or reclassification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a “Distribution”), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (and all of its Subsidiaries, taken as a whole), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder's option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, that, if the Fundamental Transaction is not within the Company's control, including not approved by the Company's Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. "Black Scholes Value" means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the "OV" function on Bloomberg, L.P. ("Bloomberg") determined as of the day immediately following the first public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (ii) an expected volatility equal to the lesser of 100% and the 100-day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, (iii) the underlying price per share used in such calculation shall be the highest VWAP during the five (5) Trading Days prior to the closing of the Fundamental Transaction, (iv) a zero cost of borrow and (v) a 360 day annualization factor. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds within five Business Days of the Holder's election (or, if later, on the effective date of the Fundamental Transaction). The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (and all of its Subsidiaries, taken as a whole) is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

g) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market, the Company may at any time during the term of this Warrant, subject to the prior written consent of the Holder, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. This Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a "cashless exercise" pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at 345 Inverness Drive South, Building C, Suite 310, Englewood, Colorado 80112, Attention: _____, facsimile number: _____, email address: _____, or such other facsimile number, email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

GEVO, INC.

By: _____
Name:
Title:

NOTICE OF EXERCISE

TO: **GEVO, INC.**

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

[SIGNATURE OF HOLDER]

Name of Holder: _____

Signature of Authorized Signatory of Holder: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____ (Please Print)
Address: _____ (Please Print)
Phone Number: _____
Email Address: _____
Dated: _____, _____
Holder's Signature:
Holder's Address:

PREFUNDED SERIES 2020-B COMMON STOCK PURCHASE WARRANT

GEVO, INC.

Warrant Shares: _____

Initial Exercise Date: _____, 2020

THIS PREFUNDED SERIES 2020-B COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, _____ or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Initial Exercise Date") until this Warrant is exercised in full (the "Termination Date") but not thereafter, to subscribe for and purchase from Gevo, Inc., a Delaware corporation (the "Company"), up to _____ shares (as subject to adjustment hereunder, the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

"Board of Directors" means the board of directors of the Company.

"Business Day" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to "stay at home", "shelter-in-place", "non-essential employee" or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.01 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Purchase Agreement” means the Securities Purchase Agreement, dated as of _____, 2020, by and among the Company and the purchasers signatory thereto.

“Registration Statement” means the Company’s registration statement on Form S-1 (File No. 333-238548).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Subsidiary” means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the Common Stock is traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means American Stock Transfer & Trust Company, LLC, the current transfer agent of the Company, with a mailing address of 6201 15th Avenue, Brooklyn, New York 11219 and a telephone number of (718) 921-8300, and any successor transfer agent of the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrants” means this Warrant and other prefunded Common Stock purchase warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the Warrant Shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The aggregate exercise price of this Warrant, except for a nominal exercise price of \$0.01 per Warrant Share, was pre-funded to the Company on or prior to the Initial Exercise Date and, consequently, no additional consideration (other than the nominal exercise price of \$0.01 per Warrant Share) shall be required to be paid by the Holder to any Person to effect any exercise of this Warrant. The Holder shall not be entitled to the return or refund of all, or any portion, of such pre-paid aggregate exercise price under any circumstance or for any reason whatsoever. The remaining unpaid exercise price per share of Common Stock under this Warrant shall be \$0.01, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. This Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder's execution of the applicable Notice of Exercise if such Notice of Exercise is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Trading Day) pursuant to Section 2(a) hereof, which Bid Price shall be shown on supporting documents provided by the Holder to the Company within two Trading Days of delivery of the Notice of Exercise, or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of "regular trading hours" on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the "Warrant Share Delivery Date"). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise delivered on or prior to 9:30 a.m. (New York City time) on the Initial Exercise Date, which may be delivered at any time after the time of execution of the Purchase Agreement, the Company agrees to deliver the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Initial Exercise Date and the Initial Exercise Date shall be the Warrant Share Delivery Date for purposes hereunder.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be [4.99%] [9.99%] of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or reclassification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a “Distribution”), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (and all of its Subsidiaries, taken as a whole), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (and all of its Subsidiaries, taken as a whole) is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. This Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a “cashless exercise” pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at 345 Inverness Drive South, Building C, Suite 310, Englewood, Colorado 80112, Attention: _____, facsimile number: _____, email address: _____, or such other facsimile number, email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

GEVO, INC.

By: _____

Name:

Title:

NOTICE OF EXERCISE

TO: **GEVO, INC.**

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

[SIGNATURE OF HOLDER]

Name of Holder: _____

Signature of Authorized Signatory of Holder: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____ (Please Print)
Address: _____ (Please Print)
Phone Number: _____
Email Address: _____
Dated: _____, _____
Holder's Signature:
Holder's Address:

June 18, 2020

Gevo, Inc.
345 Inverness Drive South
Building C, Suite 310
Englewood, Colorado 80112

Ladies and Gentlemen:

We have acted as counsel to Gevo, Inc., a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), of a registration statement on Form S-1 (File No. 333-238548) (the "Registration Statement"). The Registration Statement relates to the proposed issuance and sale by the Company of an aggregate of (i) up to \$15,000,000 of: (a) Series 1 Units (the "Units"), each consisting of one share of the Company's common stock, par value \$0.01 per share ("Shares"), and one Series 2020-A Warrant to purchase one Share (the "Common Stock Warrants") and (b) Series 2 Units (the "Pre-Funded Units"), each consisting of one Pre-Funded Series 2020-B Warrant to purchase one Share (the "Pre-Funded Warrants" and together with the Common Stock Warrants, the "Warrants") and one Common Stock Warrant, and (ii) the Shares issuable upon exercise of the Warrants (the "Warrant Shares"). The Units, the Pre-Funded Units, the Warrants, the Warrant Shares, and the Shares underlying the Units are collectively referred to herein as the "Securities." The Securities will be issued pursuant to the form of Securities Purchase Agreement filed as an exhibit to the Registration Statement (the "Securities Purchase Agreement").

We have examined the Registration Statement, the Warrants, the Securities Purchase Agreement and such documents and records of the Company and other documents as we have deemed necessary for the purposes of this opinion. In such examination, we have assumed the following: (i) the authenticity of original documents and the genuineness of all signatures; (ii) the conformity to the originals of all documents submitted to us as copies; and (iii) the truth, accuracy and completeness of the information, representations and warranties contained in the records, documents, instruments and certificates we have reviewed.

Based upon the foregoing, it is our opinion that:

1. The Shares underlying the Units have been duly authorized by all necessary corporate action of the Company and, upon (i) the due execution by the Company and registration by its registrar of such Shares, (ii) the offering and sale of such Shares in accordance with the Securities Purchase Agreement and (iii) receipt by the Company of the consideration therefor in accordance with the terms of the Securities Purchase Agreement, the Shares underlying the Units will be validly issued, fully paid and non-assessable.

2. Upon (i) the offering and sale of the Warrants in accordance with the Securities Purchase Agreement, (ii) the Warrants having been duly executed and delivered by the Company, and (iii) receipt by the Company of the consideration for the Warrants in accordance with the terms of the Securities Purchase Agreement, the Warrants will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

3. The Warrant Shares have been duly authorized by all necessary corporate action of the Company and, upon (i) the due execution by the Company and registration by its registrar of the Warrant Shares, and (ii) delivery and payment therefor upon exercise of the Warrants in accordance with their respective terms, the Warrant Shares will be validly issued, fully paid and non-assessable.

4. Upon (i) the offering and sale of the Securities underlying the Units and the Pre-Funded Units in accordance with the Securities Purchase Agreement, (ii) the Securities underlying the Units and the Pre-Funded Units having been duly executed and delivered by the Company, and (iii) receipt by the Company of the consideration for the Units and the Pre-Funded Units in accordance with the terms of the Securities Purchase Agreement, the Units and the Pre-Funded Units will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and any amendments thereto, including any and all post-effective amendments, and to the reference to us under the headings "Legal Matters" in the prospectus contained in the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or related rules and regulations of the Commission issued thereunder.

Very truly yours,

/s/ PERKINS COIE LLP

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this "Agreement") is dated as of _____, 2020, between Gevo, Inc. a Delaware corporation (the "Company"), and each purchaser identified on the signature pages hereto (each, including its successors and assigns, a "Purchaser" and collectively the "Purchasers").

WHEREAS, subject to the terms and conditions set forth in this Agreement and pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "Securities Act"), the Company desires to issue and sell to each Purchaser, and each Purchaser, severally and not jointly, desires to purchase from the Company, securities of the Company as more fully described in this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and each Purchaser agree as follows:

ARTICLE I.
DEFINITIONS

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms have the meanings set forth in this Section 1.1:

"Acquiring Person" shall have the meaning ascribed to such term in Section 4.5.

"Action" shall have the meaning ascribed to such term in Section 3.1(j).

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act.

"Board of Directors" means the board of directors of the Company.

"Business Day" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to "stay at home", "shelter-in-place", "non-essential employee" or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

"Closing" means the closing of the purchase and sale of the Securities pursuant to Section 2.1.

“Closing Date” means the Trading Day on which all of the Transaction Documents have been executed and delivered by the applicable parties thereto, and all conditions precedent to (i) the Purchasers’ obligations to pay the Subscription Amount and (ii) the Company’s obligations to deliver the Securities, in each case, have been satisfied or waived, but in no event later than the second (2nd) Trading Day following the date hereof.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.01 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Common Units” means each Common Unit consisting of (a) one Share and (b) one Common Warrant to purchase one Common Warrant Share.

“Common Unit Purchase Price” equals \$____ per each Common Unit, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

“Common Unit Subscription Amount” means, as to each Purchaser, the aggregate amount to be paid for the Common Units hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Common Unit Subscription Amount,” in United States dollars and in immediately available funds.

“Common Warrants” means, collectively, the Series 2020-A Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which Common Warrants shall be exercisable immediately and have a term of exercise equal to five years, in the form of Exhibit A-1 attached hereto.

“Common Warrant Shares” means the Common Stock issuable upon exercise of the Common Warrants.

“Company Counsel” means Perkins Coie LLP with offices located at 1900 Sixteenth Street, Suite 1400, Denver, Colorado 80202-5255.

“Disclosure Schedules” means the Disclosure Schedules of the Company delivered concurrently herewith.

“Disclosure Time” means, (i) if this Agreement is signed on a day that is not a Trading Day or after 9:00 a.m. (New York City time) and before midnight (New York City time) on any Trading Day, 9:01 a.m. (New York City time) on the Trading Day immediately following the date hereof, unless otherwise instructed as to an earlier time by the Placement Agent, and (ii) if this Agreement is signed between midnight (New York City time) and 9:00 a.m. (New York City time) on any Trading Day, no later than 9:01 a.m. (New York City time) on the date hereof, unless otherwise instructed as to an earlier time by the Placement Agent.

“EGS” means Ellenoff Grossman & Schole LLP, with offices located at 1345 Avenue of the Americas, New York, New York 10105-0302.

“Evaluation Date” shall have the meaning ascribed to such term in Section 3.1(s).

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Exempt Issuance” means the issuance of (a) shares of Common Stock, options, restricted stock or restricted stock units to employees, officers or directors of the Company pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company, (b) securities upon the exercise or exchange of or conversion of any Securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of this Agreement or upon the exercise or vesting of options, restricted stock, restricted stock units or other securities pursuant to any stock or option plan of the Company, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities (other than in connection with stock splits or combinations) or to extend the term of such securities, (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith from the date hereof until ninety (90) days following the Closing Date, and provided that any such issuance shall only be to a Person (or to the equityholders of a Person) which is, itself or through its subsidiaries, an operating company or an owner of an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities and (d) up to \$_____ of Units issued to other purchasers pursuant to the Prospectus concurrently with the Closing at the Common Unit Purchase Price and/or Prefunded Unit Purchase Price, less the aggregate Subscription Amount pursuant to this Agreement.

“FCPA” means the Foreign Corrupt Practices Act of 1977, as amended.

“FDA” shall have the meaning ascribed to such term in Section 3.1(hh).

“FDCA” shall have the meaning ascribed to such term in Section 3.1(hh).

“GAAP” shall have the meaning ascribed to such term in Section 3.1(h).

“Indebtedness” shall have the meaning ascribed to such term in Section 3.1(aa).

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3.1(p).

“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction (other than restrictions on transfer under applicable securities laws).

“Material Adverse Effect” shall have the meaning assigned to such term in Section 3.1(b).

“Material Permits” shall have the meaning ascribed to such term in Section 3.1(n).

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Pharmaceutical Product” shall have the meaning ascribed to such term in Section 3.1(hh).

“Placement Agent” means H.C. Wainwright & Co., LLC.

“Prefunded Units” means each Prefunded Unit consisting of (a) one Prefunded Warrant to purchase one Prefunded Warrant Share and (b) one Common Warrant to purchase one Common Warrant Share.

“Prefunded Unit Purchase Price” equals \$_____ per each Prefunded Unit, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

“Prefunded Unit Subscription Amount” means, as to each Purchaser, the aggregate amount to be paid for the Prefunded Units purchased hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Prefunded Unit Subscription Amount,” in United States dollars and in immediately available funds.

“Prefunded Warrants” means, collectively, the Series 2020-B Prefunded Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which Prefunded Warrants shall be exercisable immediately and shall expire when exercised in full, in the form of Exhibit A-2 attached hereto.

“Prefunded Warrant Shares” means the shares of Common Stock issuable upon exercise of the Prefunded Warrants.

“Preliminary Prospectus” means any preliminary prospectus included in the Registration Statement, as originally filed or as part of any amendment thereto, or filed with the Commission pursuant to Rule 424(a) of the rules and regulations of the Commission under the Securities Act.

“Pricing Prospectus” means (i) the Preliminary Prospectus relating to the Securities that was included in the Registration Statement immediately prior to ___ (New York City time) on the date hereof and (ii) any free writing prospectus (as defined in the Securities Act) identified on Schedule A hereto, taken together.

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the final prospectus filed with the Registration Statement.

“Purchaser Party” shall have the meaning ascribed to such term in Section 4.8.

“Registration Statement” means the effective registration statement with Commission (File No. 333-238548), as amended from time to time, which registers the sale of the Shares, the Warrants and the Warrant Shares to the Purchasers.

“Required Approvals” shall have the meaning ascribed to such term in Section 3.1(e).

“Rule 144” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“SEC Reports” shall have the meaning ascribed to such term in Section 3.1(h).

“Securities” means the Units, the Shares, the Warrants and the Warrant Shares.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Shares” means the shares of Common Stock issued or issuable to the Purchasers pursuant to this Agreement.

“Short Sales” means all “short sales” as defined in Rule 200 of Regulation SHO under the Exchange Act (but shall not be deemed to include locating and/or borrowing shares of Common Stock).

“Subscription Amount” means, as to each Purchaser, the Common Unit Subscription Amount and/or the Prefunded Unit Subscription Amount, as applicable, in accordance with Section 2.1 herein.

“Subsidiary” means any subsidiary of the Company as set forth on Schedule 3.1(a), and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“Transaction Documents” means this Agreement, the Warrants, all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Transfer Agent” means American Stock Transfer & Trust Company, LLC, the current transfer agent of the Company, with a mailing address of 6201 15th Avenue, Brooklyn, New York 11219 and a telephone number of (718) 921-8300, and any successor transfer agent of the Company.

“Units” means, collectively, the Common Units and the Prefunded Units.

“Variable Rate Transaction” shall have the meaning ascribed to such term in Section 4.12(b).

“Warrants” means, collectively, the Common Warrants and the Prefunded Warrants.

“Warrant Shares” means the shares of Common Stock issuable upon exercise of the Common Warrants and the Prefunded Warrants.

ARTICLE II.
PURCHASE AND SALE

2.1 Closing. On the Closing Date, upon the terms and subject to the conditions set forth herein, substantially concurrent with the execution and delivery of this Agreement by the parties hereto, the Company agrees to sell, and the Purchasers, severally and not jointly, agree to purchase, up to an aggregate of \$_____ of Common Units as determined pursuant to Section 2.2(a); provided, however, that, to the extent that a Purchaser determines, in its sole discretion, that such Purchaser (together with such Purchaser's Affiliates, and any Person acting as a group together with such purchaser or any of such Purchaser's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation, or as such Purchaser may otherwise choose, in lieu of purchasing Common Units such Purchaser may elect to purchase Prefunded Units at the Prefunded Unit Purchase Price in lieu of Common Units. The "Beneficial Ownership Limitation" shall be 4.99% (or, at the election of the Purchaser at Closing, 9.99%) of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of the Securities on the Closing Date. Unless otherwise directed by the Placement Agent, each Purchaser's Subscription Amount as set forth on the signature page hereto executed by such Purchaser shall be made available for "Delivery Versus Payment" settlement with the Company or its designee. The Company shall deliver to each Purchaser its respective Shares and Common Warrants and/or Prefunded Warrants (as applicable to such Purchaser) and Common Warrants, as determined pursuant to Section 2.2(a), and the Company and each Purchaser shall deliver the other items set forth in Section 2.2 deliverable at the Closing. Upon satisfaction of the covenants and conditions set forth in Sections 2.2 and 2.3, the Closing shall occur at the offices of EGS or such other location as the parties shall mutually agree. Each Purchaser acknowledges that, concurrently with the Closing and pursuant to the Prospectus, the Company may sell up to \$____ of additional Units to purchasers not party to this Agreement, less the aggregate Subscription Amount pursuant to this Agreement, and will issue to such purchasers such shares of Common Stock and Common Warrants or Prefunded Warrants and Common Warrants in the same form and at the same Common Unit Purchase Price or Prefunded Unit Purchase Price. Unless otherwise directed by the Placement Agent, settlement of the Shares shall occur via "Delivery Versus Payment" ("DVP") (i.e., on the Closing Date, the Company shall issue the Shares registered in the Purchasers' names and addresses and released by the Transfer Agent directly to the account(s) at the Placement Agent identified by each Purchaser; upon receipt of such Shares, the Placement Agent shall promptly electronically deliver such Shares to the applicable Purchaser, and payment therefor shall be made by the Placement Agent (or its clearing firm) by wire transfer to the Company). Notwithstanding anything herein to the contrary, with respect to any Notice(s) of Exercise (as defined in the Prefunded Warrants and Common Warrants) delivered on or prior to 9:30 a.m. (New York City time) on the Closing Date, which may be delivered at any time after the time of execution of this Agreement, the Company agrees to deliver the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Closing Date and the Closing Date shall be the Warrant Share Delivery Date (as defined in the Prefunded Warrants and Common Warrants) for purposes hereunder.

2.2 Deliveries.

(a) On or prior to the Closing Date, the Company shall deliver or cause to be delivered to each Purchaser the following:

- (i) this Agreement duly executed by the Company;
- (ii) a legal opinion of Company Counsel, substantially in the form of Exhibit B attached hereto, addressed to the Purchasers and the Placement Agent;
- (iii) subject to the penultimate sentence of Section 2.1, the Company shall have provided each Purchaser with the Company's wire instructions, on Company letterhead and executed by the Chief Executive Officer or Chief Financial Officer;
- (iv) subject to the penultimate sentence of Section 2.1, a copy of the irrevocable instructions to the Transfer Agent instructing the Transfer Agent to deliver on an expedited basis via The Depository Trust Company Deposit or Withdrawal at Custodian system ("DWAC") Shares equal to such Purchaser's Common Unit Subscription Amount divided by the Common Unit Purchase Price, registered in the name of such Purchaser;

(v) as to each Purchaser purchasing Prefunded Units, a Prefunded Warrant registered in the name of such Purchaser to purchase up to a number of shares of Common Stock as set forth in the Prefunded Warrant, with an exercise price equal to \$0.01;

(vi) a Common Warrant registered in the name of such Purchaser to purchase up to a number of shares of Common Stock equal to 100% of such Purchaser's Shares plus the Warrant Shares underlying such Purchaser's Prefunded Warrants on the date hereof, with an exercise price equal to \$_____, subject to adjustment therein; and

(vii) the Preliminary Prospectus and the Prospectus (which may be delivered in accordance with Rule 172 under the Securities Act).

(b) On or prior to the Closing Date, each Purchaser shall deliver or cause to be delivered to the Company the following:

(i) this Agreement duly executed by such Purchaser; and

(ii) such Purchaser's Subscription Amount, which shall be made available for "Delivery Versus Payment" settlement with the Company or its designee.

2.3 Closing Conditions.

(a) The obligations of the Company hereunder in connection with the Closing are subject to the following conditions being met:

(i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Purchasers contained herein (unless as of a specific date therein in which case they shall be accurate as of such date);

(ii) all obligations, covenants and agreements of each Purchaser required to be performed at or prior to the Closing Date shall have been performed; and

(iii) the delivery by each Purchaser of the items set forth in Section 2.2(b) of this Agreement.

(b) The respective obligations of the Purchasers hereunder in connection with the Closing are subject to the following conditions being met:

(i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Company contained herein (unless as of a specific date therein in which case they shall be accurate as of such date);

(ii) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date shall have been performed;

(iii) the delivery by the Company of the items set forth in Section 2.2(a) of this Agreement;

(iv) there shall have been no Material Adverse Effect with respect to the Company since the date hereof; and

(v) from the date hereof to the Closing Date, trading in the Common Stock shall not have been suspended by the Commission or the Company's principal Trading Market, and, at any time prior to the Closing Date, trading in securities generally as reported by Bloomberg L.P. shall not have been suspended or limited, or minimum prices shall not have been established on securities whose trades are reported by such service, or on any Trading Market, nor shall a banking moratorium have been declared either by the United States or New York State authorities nor shall there have occurred any material outbreak or escalation of hostilities or other national or international calamity of such magnitude in its effect on, or any material adverse change in, any financial market which, in each case, in the reasonable judgment of such Purchaser, makes it impracticable or inadvisable to purchase the Securities at the Closing.

ARTICLE III. REPRESENTATIONS AND WARRANTIES

3.1 Representations and Warranties of the Company. Except as set forth in the Disclosure Schedules, which Disclosure Schedules shall be deemed a part hereof and shall qualify any representation or otherwise made herein to the extent of the disclosure contained in the corresponding section of the Disclosure Schedules, the Company hereby makes the following representations and warranties to each Purchaser:

(a) Subsidiaries. All of the direct and indirect subsidiaries of the Company are set forth on Schedule 3.1(a). Except as set forth on Schedule 3.1(a), the Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities. If the Company has no subsidiaries, all other references to the Subsidiaries or any of them in the Transaction Documents shall be disregarded.

(b) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (i), (ii) or (iii), a "Material Adverse Effect") and no Proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(c) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's stockholders in connection herewith or therewith other than in connection with the Required Approvals. This Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(d) No Conflicts. The execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, anti-dilution or similar adjustments, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

(e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filings required pursuant to Section 4.4 of this Agreement, (ii) the filing with the Commission of the Prospectus, (iii) application(s) to each applicable Trading Market for the listing of the Shares and Warrant Shares for trading thereon in the time and manner required thereby, (iv) such filings as may be required by the rules and regulations of the Financial Industry Regulatory Authority and (v) such filings as are required to be made under applicable state securities laws (collectively, the “Required Approvals”).

(f) Issuance of the Securities; Registration. The Securities are duly authorized and the Shares and Warrants, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Warrant Shares, when issued in accordance with the terms of the Warrants will be validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to this Agreement and the Warrants. The Company has prepared and filed the Registration Statement in conformity with the requirements of the Securities Act, which became effective on _____, 2020 (the “Effective Date”), including the Prospectus, and such amendments and supplements thereto as may have been required to the date of this Agreement. The Registration Statement is effective under the Securities Act and no stop order preventing or suspending the effectiveness of the Registration Statement or suspending or preventing the use of the Preliminary Prospectus or the Prospectus has been issued by the Commission and no Proceedings for that purpose have been instituted or, to the knowledge of the Company, are threatened by the Commission. The Company, if required by the rules and regulations of the Commission, shall file the Prospectus with the Commission pursuant to Rule 424(b). At the time the Registration Statement and any amendments thereto became effective, at the date of this Agreement and at the Closing Date, the Registration Statement and any amendments thereto conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Pricing Prospectus and the Prospectus and any amendments or supplements thereto, at the time the Pricing Prospectus or the Prospectus, as applicable, or any amendment or supplement thereto was issued and at the Closing Date, conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(g) Capitalization. The capitalization of the Company as of the date hereof is as set forth on Schedule 3.1(g). The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the grant, exercise, vesting or settlement of equity awards under the Company's stock or option plans, the issuance of shares of Common Stock to employees pursuant to the Company's employee stock purchase plans and pursuant to the conversion and/or exercise of Common Stock Equivalents outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. Except as a result of the purchase and sale of the Securities or as set forth on Schedule 3.1(g), there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock or the capital stock of any Subsidiary, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents or capital stock of any Subsidiary. The issuance and sale of the Securities will not obligate the Company or any Subsidiary to issue shares of Common Stock or other securities to any Person (other than the Purchasers). There are no outstanding securities or instruments of the Company or any Subsidiary with any provision that adjusts the exercise, conversion, exchange or reset price of such security or instrument upon an issuance of securities by the Company or any Subsidiary. There are no outstanding securities or instruments of the Company or any Subsidiary that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to redeem a security of the Company or such Subsidiary. The Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Securities. There are no stockholders agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company's stockholders.

(h) SEC Reports; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Pricing Prospectus and the Prospectus, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Company has never been an issuer subject to Rule 144(i) under the Securities Act. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments.

(i) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, except as set forth on Schedule 3.1(i), (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company’s financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Securities contemplated by this Agreement or as set forth on Schedule 3.1(i), no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least 1 Trading Day prior to the date that this representation is made.

(j) Litigation. Except as set forth on Schedule 3.1(j), there is no action, suit, inquiry, notice of violation, Proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an “Action”) which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) could, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(k) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company’s or its Subsidiaries’ employees is a member of a union that relates to such employee’s relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(l) Compliance. Neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect.

(m) Environmental Laws. The Company and its Subsidiaries (i) are in compliance with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "Hazardous Materials") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder ("Environmental Laws"); (ii) have received all permits licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses; and (iii) are in compliance with all terms and conditions of any such permit, license or approval where in each clause (i), (ii) and (iii), the failure to so comply could be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect.

(n) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits could not reasonably be expected to result in a Material Adverse Effect ("Material Permits"), and neither the Company nor any Subsidiary has received any notice of Proceedings relating to the revocation or modification of any Material Permit.

(o) Title to Assets. Except as set forth on Schedule 3.1(o), the Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title in all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (ii) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made therefor in accordance with GAAP and, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance.

(p) Intellectual Property. The Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights necessary or required for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have could have a Material Adverse Effect (collectively, the “Intellectual Property Rights”). None of, and neither the Company nor any Subsidiary has received a notice (written or otherwise) that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within two (2) years from the date of this Agreement. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the SEC Reports, a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as could not have or reasonably be expected to not have a Material Adverse Effect. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(q) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage at least equal to the aggregate gross proceeds of the offering pursuant to the Registration Statement and the Prospectus. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(r) Transactions With Affiliates and Employees. Except as set forth on Schedule 3.1(r), none of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(s) Sarbanes-Oxley; Internal Accounting Controls. The Company and the Subsidiaries are in compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the Closing Date. The Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established and maintains and evaluates disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

(t) Certain Fees. Except as set forth in the Pricing Prospectus or the Prospectus, no brokerage or finder's fees or commissions are or will be payable by the Company or any Subsidiary to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by the Transaction Documents.

(u) Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Securities, will not be or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an "investment company" subject to registration under the Investment Company Act of 1940, as amended.

(v) Registration Rights. Except as set forth on Schedule 3.1(v), no Person has any right to cause the Company or any Subsidiary to effect the registration under the Securities Act of any securities of the Company or any Subsidiary.

(w) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. The Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through the Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees to the Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.

(x) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's certificate of incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable to the Purchasers as a result of the Purchasers and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including without limitation as a result of the Company's issuance of the Securities and the Purchasers' ownership of the Securities.

(y) Disclosure. The Company confirms that neither it nor any other Person acting on its behalf has provided any of the Purchasers or their agents or counsel with any information that it believes constitutes or might constitute material, non-public information which is not otherwise disclosed in the Pricing Prospectus or the Prospectus. The Company understands and confirms that the Purchasers will rely on the foregoing representation in effecting transactions in securities of the Company. All of the disclosure furnished by or on behalf of the Company to the Purchasers regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby, including the Disclosure Schedules to this Agreement, is true and correct and, taken as a whole, does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement taken as a whole do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and agrees that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.2 hereof.

(z) No Integrated Offering. Assuming the accuracy of the Purchasers' representations and warranties set forth in Section 3.2, neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be aggregated with prior offerings by the Company for purposes of any applicable shareholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

(aa) Solvency. Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Securities hereunder, (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. Schedule 3.1(aa) sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments. For the purposes of this Agreement, "Indebtedness" means (x) any liabilities for borrowed money or amounts owed in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company's consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP. Except as set forth on Schedule 3.1(aa), neither the Company nor any Subsidiary is in default with respect to any Indebtedness.

(bb) Tax Status. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and its Subsidiaries each (i) has made or filed all United States federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company or of any Subsidiary know of no basis for any such claim.

(cc) Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of FCPA.

(dd) Accountants. The Company's independent registered public accounting firm is Grant Thornton LLP. To the knowledge and belief of the Company, such accounting firm (i) is a registered public accounting firm as required by the Exchange Act and (ii) shall express its opinion with respect to the financial statements to be included in the Company's Annual Report for the fiscal year ending December 31, 2020.

(ee) Acknowledgment Regarding Purchasers' Purchase of Securities. The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated thereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by any Purchaser or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchasers' purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

(ff) Acknowledgment Regarding Purchaser's Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding, it is understood and acknowledged by the Company that: (i) none of the Purchasers has been asked by the Company to agree, nor has any Purchaser agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) past or future open market or other transactions by any Purchaser, specifically including, without limitation, Short Sales or "derivative" transactions, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Company's publicly-traded securities; (iii) any Purchaser, and counterparties in "derivative" transactions to which any such Purchaser is a party, directly or indirectly, presently may have a "short" position in the Common Stock, and (iv) each Purchaser shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction. The Company further understands and acknowledges that (y) one or more Purchasers may engage in hedging activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value of the Warrant Shares deliverable with respect to Securities are being determined, and (z) such hedging activities (if any) could reduce the value of the existing stockholders' equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.

(gg) Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Company's placement agent in connection with the placement of the Securities.

(hh) FDA. Except as disclosed in the Pricing Prospectus or Prospectus:

(A) As to each product subject to the jurisdiction of the U.S. Food and Drug Administration ("FDA") under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder ("FDCA") that is manufactured, packaged, labeled, tested, distributed, sold, and/or marketed by the Company or any of its Subsidiaries (each such product, a "Pharmaceutical Product"), such Pharmaceutical Product is being manufactured, packaged, labeled, tested, distributed, sold and/or marketed by the Company in compliance with all applicable requirements under FDCA and similar laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, labeling, advertising, record keeping and filing of reports, except where the failure to be in compliance would not have a Material Adverse Effect.

(B) There is no pending, completed or, to the Company's knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory Proceeding, charge, complaint, or investigation) against the Company or any of its Subsidiaries, and none of the Company or any of its Subsidiaries has received any notice, warning letter or other communication from the FDA or any other governmental entity, which (i) contests the premarket clearance, licensure, registration, or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the sale of, or the labeling and promotion of any Pharmaceutical Product, (ii) withdraws its approval of, requests the recall, suspension, or seizure of, or withdraws or orders the withdrawal of advertising or sales promotional materials relating to, any Pharmaceutical Product, (iii) imposes a clinical hold on any clinical investigation by the Company or any of its Subsidiaries, (iv) enjoins production at any facility of the Company or any of its Subsidiaries, (v) enters or proposes to enter into a consent decree of permanent injunction with the Company or any of its Subsidiaries, or (vi) otherwise alleges any violation of any laws, rules or regulations by the Company or any of its Subsidiaries, and which, either individually or in the aggregate, would have a Material Adverse Effect.

(C) The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA. The Company has not been informed by the FDA that the FDA will prohibit the marketing, sale, license or use in the United States of any product proposed to be developed, produced or marketed by the Company nor has the FDA expressed any concern as to approving or clearing for marketing any product being developed or proposed to be developed by the Company.

(ii) Stock Option Plans. Each stock option granted by the Company under the Company's stock option plan was granted (i) in accordance with the terms of the Company's stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP and applicable law. No stock option granted under the Company's stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

(jj) Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

(kk) U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon Purchaser's request.

(ll) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries or Affiliates is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA") and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(mm) Money Laundering. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the "Money Laundering Laws"), and no Action or Proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.

3.2 Representations and Warranties of the Purchasers. Each Purchaser, for itself and for no other Purchaser, hereby represents and warrants as of the date hereof and as of the Closing Date to the Company as follows (unless as of a specific date therein, in which case they shall be accurate as of such date):

(a) Organization; Authority. Such Purchaser is either an individual or an entity duly incorporated or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or formation with full right, corporate, partnership, limited liability company or similar power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of the Transaction Documents and performance by such Purchaser of the transactions contemplated by the Transaction Documents have been duly authorized by all necessary corporate, partnership, limited liability company or similar action, as applicable, on the part of such Purchaser. Each Transaction Document to which it is a party has been duly executed by such Purchaser, and when delivered by such Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Purchaser, enforceable against it in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(b) Understandings or Arrangements. Such Purchaser is acquiring the Securities as principal for its own account and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Securities (this representation and warranty not limiting such Purchaser's right to sell the Securities pursuant to the Registration Statement or otherwise in compliance with applicable federal and state securities laws). Such Purchaser is acquiring the Securities hereunder in the ordinary course of its business.

(c) Purchaser Status. At the time such Purchaser was offered the Securities, it was, and as of the date hereof it is, and on each date on which it exercises any Warrants, it will be either: (i) an “accredited investor” as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Securities Act or (ii) a “qualified institutional buyer” as defined in Rule 144A(a) under the Securities Act.

(d) Experience of Such Purchaser. Such Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

(e) Access to Information. Such Purchaser acknowledges that it has had the opportunity to review the Transaction Documents (including all exhibits and schedules thereto) and the SEC Reports and has been afforded, (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to information about the Company and its financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment. Such Purchaser acknowledges and agrees that neither the Placement Agent nor any Affiliate of the Placement Agent has provided such Purchaser with any information or advice with respect to the Securities nor is such information or advice necessary or desired. Neither the Placement Agent nor any Affiliate has made or makes any representation as to the Company or the quality of the Securities and the Placement Agent and any Affiliate may have acquired non-public information with respect to the Company which such Purchaser agrees need not be provided to it. In connection with the issuance of the Securities to such Purchaser, neither the Placement Agent nor any of its Affiliates has acted as a financial advisor or fiduciary to such Purchaser.

The Company acknowledges and agrees that the representations contained in this Section 3.2 shall not modify, amend or affect such Purchaser’s right to rely on the Company’s representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transactions contemplated hereby. Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

ARTICLE IV.
OTHER AGREEMENTS OF THE PARTIES

4.1 Warrant Shares. If all or any portion of a Warrant is exercised at a time when there is an effective registration statement to cover the issuance or resale of the Warrant Shares, or if the Warrant is exercised via cashless exercise, the Warrant Shares issued pursuant to any such exercise shall be issued free of all legends (other than to a holder that is an affiliate, as such term is defined in Rule 144, of the Company). If at any time following the date hereof the Registration Statement (or any subsequent registration statement registering the sale or resale of the Warrant Shares) is not effective or is not otherwise available for the sale or resale of the Warrant Shares, the Company shall immediately notify the holders of the Warrants in writing that such registration statement is not then effective and thereafter shall promptly notify such holders when the registration statement is effective again and available for the sale or resale of the Warrant Shares (it being understood and agreed that the foregoing shall not limit the ability of the Company to issue, or any Purchaser to sell, any of the Warrant Shares in compliance with applicable federal and state securities laws). The Company shall use commercially reasonable best efforts to keep a registration statement (including the Registration Statement) registering the issuance or resale of the Warrant Shares effective during the term of the Warrants.

4.2 Furnishing of Information. Until the earlier of the time that (i) no Purchaser that originally entered into this Agreement on the date hereof (or an Affiliate of a Purchaser) owns Securities and (ii) the Warrants have expired or have been exercised in full, the Company covenants to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to Section 12 of the Exchange Act even if the Company is not then subject to the reporting requirements of the Exchange Act.

4.3 Integration. The Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be aggregated with the offer or sale of the Securities for purposes of the rules and regulations of any Trading Market such that it would require shareholder approval prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.

4.4 Securities Laws Disclosure; Publicity. The Company shall (a) by the Disclosure Time, issue a press release disclosing the material terms of the transactions contemplated hereby, and (b) file a Current Report on Form 8-K, including the Transaction Documents as exhibits thereto, with the Commission within the time required by the Exchange Act, provided that the Company shall not be required to file such a Current Report on Form 8-K if the Transaction Documents have been previously filed with the Commission as exhibits to a pre-effective or post-effective amendment to the Registration Statement. From and after the issuance of such press release, the Company represents to the Purchasers that it shall have publicly disclosed all material, non-public information delivered to any of the Purchasers by the Company or any of its Subsidiaries, or any of their respective officers, directors, employees or agents. In addition, effective upon the issuance of such press release, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, whether written or oral, between the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates on the one hand, and any of the Purchasers or any of their Affiliates on the other hand, shall terminate. The Company and each Purchaser shall consult with each other in issuing any other press releases with respect to the transactions contemplated hereby, and neither the Company nor any Purchaser shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of any Purchaser, or without the prior consent of each Purchaser, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law, in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. Notwithstanding the foregoing, the Company shall not publicly disclose the name of any Purchaser, or include the name of any Purchaser in any filing with the Commission or any regulatory agency or Trading Market, without the prior written consent of such Purchaser, except (a) as required by federal securities law in connection with the filing of final Transaction Documents with the Commission and (b) to the extent such disclosure is required by law or Trading Market regulations, in which case the Company shall provide the Purchasers with prior notice of such disclosure permitted under this clause (b).

4.5 Shareholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Purchaser is an “Acquiring Person” under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company, or that any Purchaser could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Securities under the Transaction Documents or under any other agreement between the Company and the Purchasers.

4.6 Non-Public Information. The Company covenants and agrees that neither it, nor any other Person acting on its behalf will provide any Purchaser or its agents or counsel with any information that constitutes, or the Company reasonably believes constitutes, material non-public information, unless prior thereto such Purchaser shall have consented to the receipt of such information and agreed with the Company to keep such information confidential. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company. To the extent that the Company, any of its Subsidiaries, or any of their respective officers, directors, agents, employees or Affiliates delivers any material, non-public information to a Purchaser without such Purchaser’s consent, the Company hereby covenants and agrees that such Purchaser shall not have any duty of confidentiality to the Company, any of its Subsidiaries, or any of their respective officers, directors, agents, employees or Affiliates, or a duty to the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates not to trade on the basis of, such material, non-public information, provided that the Purchaser shall remain subject to applicable law. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

4.7 Use of Proceeds. Except as set forth in the Pricing Prospectus and Prospectus, the Company shall use the net proceeds from the sale of the Securities hereunder for working capital purposes and shall not use such proceeds: (a) for the satisfaction of any portion of the Company’s debt (other than payment of trade payables in the ordinary course of the Company’s business and prior practices), (b) for the redemption of any Common Stock or Common Stock Equivalents, (c) for the settlement of any outstanding litigation or (d) in violation of FCPA or OFAC regulations.

4.8 Indemnification of Purchasers. Subject to the provisions of this Section 4.8, the Company will indemnify and hold each Purchaser and its directors, officers, shareholders, members, partners, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls such Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, shareholders, agents, members, partners or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a “Purchaser Party”) harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys’ fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents or (b) any action instituted against the Purchaser Parties in any capacity, or any of them or their respective Affiliates, by any stockholder of the Company who is not an Affiliate of such Purchaser Party, with respect to any of the transactions contemplated by the Transaction Documents (unless such action is solely based upon a material breach of such Purchaser Party’s representations, warranties or covenants under the Transaction Documents or any agreements or understandings such Purchaser Party may have with any such stockholder or any violations by such Purchaser Party of state or federal securities laws or any conduct by such Purchaser Party which is finally judicially determined to constitute fraud, gross negligence or willful misconduct). If any action shall be brought against any Purchaser Party in respect of which indemnity may be sought pursuant to this Agreement, such Purchaser Party shall promptly notify the Company in writing, and the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Purchaser Party. Any Purchaser Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Purchaser Party except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of counsel, a material conflict on any material issue between the position of the Company and the position of such Purchaser Party, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel. The Company will not be liable to any Purchaser Party under this Agreement (y) for any settlement by a Purchaser Party effected without the Company’s prior written consent, which shall not be unreasonably withheld or delayed; or (z) to the extent, but only to the extent that a loss, claim, damage or liability is attributable to any Purchaser Party’s breach of any of the representations, warranties, covenants or agreements made by such Purchaser Party in this Agreement or in the other Transaction Documents. The indemnification required by this Section 4.8 shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or are incurred. The indemnity agreements contained herein shall be in addition to any cause of action or similar right of any Purchaser Party against the Company or others and any liabilities the Company may be subject to pursuant to law.

4.9 Reservation of Common Stock. As of the date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue Shares pursuant to this Agreement and the Warrant Shares pursuant to any exercise of the Warrants. __

4.10 Listing of Common Stock. The Company hereby agrees to use best efforts to maintain the listing or quotation of the Common Stock on the Trading Market on which it is currently listed, and concurrently with the Closing, the Company shall apply to list or quote all of the Shares and Warrant Shares on such Trading Market and promptly secure the listing of all of the Shares, Warrant Shares on such Trading Market. The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the Shares and Warrant Shares, and will take such other action as is necessary to cause all of the Shares and Warrant Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then take all action reasonably necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules of the Trading Market. The Company agrees to maintain the eligibility of the Common Stock for electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

4.11 [RESERVED]

4.12 Subsequent Equity Sales.

(a) From the date hereof until ninety (90) days following the Closing Date, neither the Company nor any Subsidiary shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents, provided that the prohibition in this sentence shall have a term of thirty (30) days following the Closing Date solely in connection with (i) the issuance of shares of Common Stock in an "at the market" offering with H.C. Wainwright & Co., LLC as sales agent and (ii) the issuance of Common Stock Equivalents that are debt securities solely in connection with the payoff or refinancing of the Company's outstanding 12.0% Convertible Senior Secured Notes due 2020/21 which are described on Schedule 3.1(aa).

(b) From the date hereof until the one (1) year anniversary of the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. “Variable Rate Transaction” means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit, whereby the Company may issue securities at a future determined price; provided, however, that (i) the issuance of shares of Common Stock in an “at the market” offering with H.C. Wainwright & Co., LLC as sales agent and (ii) the issuance of Common Stock Equivalents that are debt securities solely in connection with the payoff or refinancing of the Company’s outstanding 12.0% Convertible Senior Secured Notes due 2020/21 which are described on Schedule 3.1(aa) shall not be deemed a Variable Rate Transaction. Any Purchaser shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(c) Notwithstanding the foregoing, this Section 4.12 shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance.

4.13 Equal Treatment of Purchasers. No consideration (including any modification of this Agreement) shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of this Agreement unless the same consideration is also offered to all of the parties to this Agreement. For clarification purposes, this provision constitutes a separate right granted to each Purchaser by the Company and negotiated separately by each Purchaser, and is intended for the Company to treat the Purchasers as a class and shall not in any way be construed as the Purchasers acting in concert or as a group with respect to the purchase, disposition or voting of Securities or otherwise.

4.14 Capital Changes. Until the one year anniversary of the Closing Date, the Company shall not undertake a reverse or forward stock split or reclassification of the Common Stock without the prior written consent of the Purchasers holding a majority in interest of the Shares, other than a stock split that, in the good faith determination of the Board of Directors, is required to enable the Company to comply with the required listing standards of the Company’s principal Trading Market or with the initial listing requirements of another Trading Market.

4.15 Exercise Procedures. The form of Notice of Exercise included in the Warrants set forth the totality of the procedures required of the Purchasers in order to exercise the Warrants. No additional legal opinion, other information or instructions shall be required of the Purchasers to exercise their Warrants. Without limiting the preceding sentences, no ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required in order to exercise the Warrants. No additional legal opinion, other information or instructions shall be required from the Purchasers to exercise their Warrants. The Company shall honor exercises of the Warrants and shall deliver Warrant Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

ARTICLE V.
MISCELLANEOUS

5.1 **Termination.** This Agreement may be terminated by any Purchaser, as to such Purchaser's obligations hereunder only and without any effect whatsoever on the obligations between the Company and the other Purchasers, by written notice to the other parties, if the Closing has not been consummated on or before the fifth (5th) Trading Day following the date hereof; provided, however, that no such termination will affect the right of any party to sue for any breach by any other party (or parties).

5.2 **Fees and Expenses.** Except as expressly set forth in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees (including, without limitation, any fees required for same-day processing of any instruction letter delivered by the Company and any exercise notice delivered by a Purchaser), stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchasers.

5.3 **Entire Agreement.** The Transaction Documents, together with the exhibits and schedules thereto, the Pricing Prospectus and the Prospectus, contain the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules.

5.4 **Notices.** Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email attachment at the email address as set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email attachment at the email address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2nd) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

5.5 **Amendments; Waivers.** No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and Purchasers which purchased at least 50.1% in interest of the Shares and Prefunded Warrants based on the initial Subscription Amounts hereunder or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought, provided that if any amendment, modification or waiver disproportionately and adversely impacts a Purchaser (or group of Purchasers), the consent of such disproportionately impacted Purchaser (or group of Purchasers) shall also be required. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right. Any proposed amendment or waiver that disproportionately, materially and adversely affects the rights and obligations of any Purchaser relative to the comparable rights and obligations of the other Purchasers shall require the prior written consent of such adversely affected Purchaser. Any amendment effected in accordance with this Section 5.5 shall be binding upon each Purchaser and holder of Securities and the Company.

5.6 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

5.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger). Any Purchaser may assign any or all of its rights under this Agreement to any Person to whom such Purchaser assigns or transfers any Securities, provided that such transferee agrees in writing to be bound, with respect to the transferred Securities, by the provisions of the Transaction Documents that apply to the "Purchasers."

5.8 No Third-Party Beneficiaries. The Placement Agent shall be the third party beneficiary of the representations and warranties of the Company in Section 3.1 and the representations and warranties of the Purchasers in Section 3.2. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as otherwise set forth in Section 4.8 and this Section 5.8.

5.9 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Action or Proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such Action or Proceeding is improper or is an inconvenient venue for such Proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such Action or Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If any party shall commence an Action or Proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company under Section 4.8, the prevailing party in such Action or Proceeding shall be reimbursed by the non-prevailing party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Action or Proceeding.

5.10 Survival. The representations and warranties contained herein shall survive the Closing and the delivery of the Securities.

5.11 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or “.pdf” signature page were an original thereof.

5.12 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

5.13 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights; provided, however, that, in the case of a rescission of an exercise of a Warrant, the applicable Purchaser shall be required to return any shares of Common Stock subject to any such rescinded exercise notice concurrently with the return to such Purchaser of the aggregate exercise price paid to the Company for such shares and the restoration of such Purchaser’s right to acquire such shares pursuant to such Purchaser’s Warrant (including, issuance of a replacement warrant certificate evidencing such restored right).

5.14 Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Securities.

5.15 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any Action for specific performance of any such obligation the defense that a remedy at law would be adequate.

5.16 Payment Set Aside. To the extent that the Company makes a payment or payments to any Purchaser pursuant to any Transaction Document or a Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

5.17 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights including, without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any Proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. For reasons of administrative convenience only, each Purchaser and its respective counsel have chosen to communicate with the Company through EGS. EGS does not represent any of the Purchasers and only represents the Placement Agent. The Company has elected to provide all Purchasers with the same terms and Transaction Documents for the convenience of the Company and not because it was required or requested to do so by any of the Purchasers. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers.

5.18 Liquidated Damages. The Company's obligations to pay any partial liquidated damages or other amounts owing under the Transaction Documents is a continuing obligation of the Company and shall not terminate until all unpaid partial liquidated damages and other amounts have been paid notwithstanding the fact that the instrument or security pursuant to which such partial liquidated damages or other amounts are due and payable shall have been canceled.

5.19 Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

5.20 Construction. The parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and shares of Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

5.21 **WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVES FOREVER TRIAL BY JURY.**

(Signature Pages Follow)

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

GEVO, INC.

Address for Notice:

By: _____

Name:

Title:

With a copy to (which shall not constitute notice):

E-Mail:

Fax:

Perkins Coie LLP
1900 Sixteenth Street, Suite 1400
Denver, Colorado 80202-5255
Attention: Ned Prusse
Email: nprusse@perkinscoie.com

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGE FOR PURCHASER FOLLOWS]

[PURCHASER SIGNATURE PAGES TO GEVO SECURITIES PURCHASE AGREEMENT]

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: _____

Signature of Authorized Signatory of Purchaser: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Email Address of Authorized Signatory: _____

Facsimile Number of Authorized Signatory: _____

Address for Notice to Purchaser:

Address for Delivery of Warrants to Purchaser (if not same as address for notice):

DWAC for Delivery of Shares:

Common Unit Subscription Amount: \$ _____

Common Units: _____

Shares: _____

Common Warrant Shares: Beneficial Ownership Blocker 4.99% or 9.99%

Prefunded Unit Subscription Amount: \$ _____

Prefunded Units: _____

Prefunded Warrant Shares: Beneficial Ownership Blocker 4.99% or 9.99%

Common Warrants: Beneficial Ownership Blocker 4.99% or 9.99%

EIN Number: _____

Notwithstanding anything contained in this Agreement to the contrary, by checking this box (i) the obligations of the above-signed to purchase the securities set forth in this Agreement to be purchased from the Company by the above-signed, and the obligations of the Company to sell such securities to the above-signed, shall be unconditional and all conditions to Closing shall be disregarded, (ii) the Closing shall occur by the second (2nd) Trading Day following the date of this Agreement and (iii) any condition to Closing contemplated by this Agreement (but prior to being disregarded by clause (i) above) that required delivery by the Company or the above-signed of any agreement, instrument, certificate or the like or purchase price (as applicable) shall no longer be a condition and shall instead be an unconditional obligation of the Company or the above-signed (as applicable) to deliver such agreement, instrument, certificate or the like or purchase price (as applicable) to such other party on the Closing Date.

[SIGNATURE PAGES CONTINUE]

Schedule A

Free Writing Prospectus

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 17, 2020, with respect to the consolidated financial statements of Gevo, Inc. and subsidiaries included in the Annual Report on Form 10-K for the year ended December 31, 2019, which is incorporated by reference in this Registration Statement and Prospectus. We consent to the incorporation by reference of the aforementioned report in the Registration Statement and Prospectus, and to the use of our name as it appears under the caption "Experts."

/s/ GRANT THORNTON LLP

Salt Lake City, Utah

June 18, 2020