

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

AMENDMENT NO. 2 TO

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

GREENLANE HOLDINGS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or
Organization)

5099
(Primary Standard Industrial
Classification Code Number)

83-0806637
(I.R.S. Employer
Identification Number)

1095 Broken Sound Parkway, Suite 100
Boca Raton, Florida
(887) 292-7660
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

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

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

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

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

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

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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

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



Up to 5,025,125 shares of Class A Common Stock
Up to 5,025,125 Pre-Funded Warrants to purchase shares of Class A Common Stock
Up to 10,050,250 Common Warrants to purchase shares of Class A Common Stock
Up to 15,075,375 shares of Class A Common Stock underlying such
Pre-Funded Warrants and Common Warrants

We are offering up to \$10.0 million in units (“Units”) of Greenlane Holdings, Inc. at an assumed offering price of \$1.99 per Unit. Each Unit consists of one share of Class A common stock, \$0.01 par value per share (“Class A common stock”) or one pre-funded warrant (“Pre-Funded Warrant”) in lieu thereof, and two Common Warrants (as defined below). The shares of Class A common stock and Common Warrants are immediately separable and will be issued separately. Our shares of Class A common stock are listed on The Nasdaq Global Market (“Nasdaq”) under the symbol “GNLN.” On June 22, 2023, the last reported sale price of our shares of Class A common stock on Nasdaq was \$1.99 per share.

We are offering to certain purchasers whose purchase of Class A common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% of our outstanding shares of Class A common stock immediately following the consummation of this offering, the opportunity to purchase, if any such purchaser so chooses, Pre-Funded Warrants in lieu of Units that otherwise would result in such purchaser’s beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding shares of Class A common stock. The Pre-Funded Warrants and accompanying Common Warrants are identical to the Units, except that each Pre-Funded Warrant is exercisable for one share of Class A common stock at an exercise price of \$0.0001, the assumed purchase price for a Pre-Funded Warrant and accompanying Common Warrants is \$1.9899 and the Pre-Funded Warrants do not expire until exercised. The Pre-Funded Warrants are immediately exercisable and may be exercised at any time until all of the Pre-Funded Warrants are exercised in full. For each Pre-Funded Warrant we sell, the number of shares of Class A common stock we are offering will be decreased on a one-for-one basis.

Our shares of Class A common stock and Pre-Funded Warrants are being offered together with warrants, or “Common Warrants,” to purchase up to 10,050,250 shares of our Class A common stock. Each share of Class A common stock and Pre-Funded Warrant will be sold together with two Common Warrants. Each Common Warrant has an assumed exercise price of \$1.99 per share (representing 100% of the assumed public offering price per Unit to be sold in this offering) and will expire on the fifth anniversary of the original issuance date. Because we will issue two Common Warrants for each share of Class A common stock and for each Pre-Funded Warrant sold in this offering, the number of Common Warrants sold in this offering will not change as a result of a change in the mix of shares of Class A common stock and Pre-Funded Warrants sold.

Our Units can only be purchased together in this offering, but are immediately separable and will be issued separately. Shares of Class A common stock issuable from time to time upon exercise of the Pre-Funded Warrants and Common Warrants are also being offered by this prospectus. These securities are being sold in this offering to certain purchasers under a Securities Purchase Agreement between us and the purchasers.

The public offering price for our securities in this offering will be determined at the time of pricing and may be at a discount to the then-current market price. The recent market price used throughout this prospectus may not be indicative of the final offering price. The final public offering price will be determined through negotiation between us and investors based upon a number of factors, including our history and our prospects, the industry in which we operate, our past and present operating results, the previous experience of our executive officers and the general condition of the securities markets at the time of this offering. There is no established public trading market for the Pre-Funded Warrants or the Common Warrants, and we do not expect markets to develop. Without an active trading market, the liquidity of the Pre-Funded Warrants and the Common Warrants will be limited. In addition, we do not intend to list the Pre-Funded Warrants or the Common Warrants on the Nasdaq, any other national securities exchange or any other trading system.

The securities offered in this prospectus involve a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risks and uncertainties under the heading “Risk Factors” beginning on page 11 of this prospectus.

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

There is no minimum number of securities or minimum aggregate amount of proceeds for this offering to close. We have engaged A.G.P./Alliance Global Partners, or the placement agent, as our exclusive placement agent in connection with this offering. The placement agent is not purchasing or selling the securities offered by us, and is not required to arrange for the purchase or sale of any specific number or dollar amount of our securities, but will use its reasonable best efforts to solicit offers to purchase the securities offered by this prospectus. We have agreed to pay the placement agent a cash fee equal to 7.0% of the aggregate gross proceeds raised in this offering as set forth in the table below. See “Plan of Distribution” beginning on page 25 of this prospectus for more information.

	Per Unit	Pre-Funded Warrant and Accompanying Common Warrants ⁽¹⁾	Total
Public offering price	\$	\$	\$
Placement agent fees	\$	\$	\$
Proceeds to us (before expenses) ⁽²⁾⁽³⁾	\$	\$	\$

- (1) Includes proceeds from the assumed exercise of the Pre-Funded Warrants in cash.
- (2) We also have agreed to reimburse the placement agent for certain of its offering-related expenses. See “Plan of Distribution” for a complete description of the compensation to be received by the placement agent.
- (3) Does not include proceeds from the exercise of the Common Warrants in cash, if any.

Delivery of the securities is expected to be made on or about _____, 2023.

Sole Placement Agent

A.G.P.

The date of this prospectus is , 2023.

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No dealer, salesperson or other person is authorized to give any information or to represent anything not contained or incorporated by reference in this prospectus. You must not rely on any unauthorized information or representations. 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 is current only as of its date.

This prospectus contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. We obtained the industry and market data in this prospectus from our own research as well as from industry and general publications, surveys and studies conducted by third parties. This data involves a number of assumptions and limitations and contains projections and estimates of the future performance of the industries in which we operate that are subject to a high degree of uncertainty. We caution you not to give undue weight to such projections, assumptions and estimates.

Unless otherwise indicated or the context otherwise requires, all references in this prospectus to the terms “Greenlane,” the “Company,” “us,” “we” or “our” refer to Greenlane Holdings, Inc., a Delaware corporation, and its consolidated subsidiaries.

ABOUT THIS PROSPECTUS

The registration statement of which this prospectus forms a part that we have filed with the Securities and Exchange Commission (the “SEC”) includes and incorporates by reference certain exhibits that provide more detail of the matters discussed in this prospectus. You should read this prospectus and the related exhibits filed with the SEC, together with the additional information described under the heading “*Where You Can Find Additional Information*” elsewhere in this prospectus.

You should rely only on the information contained in this prospectus or incorporated by reference into this prospectus, any supplement to this prospectus or in any free writing prospectus, filed with the SEC. We have not, and the placement agent has not, authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus or any related free writing prospectus. 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 is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

We may also provide a prospectus supplement or post-effective amendment to the registration statement of which this prospectus is a part to add information to, or update or change information contained in, this prospectus. Any statement so modified will be deemed to constitute a part of this prospectus only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus. You should read both this prospectus and any applicable prospectus supplement or post-effective amendment to the registration statement together with the additional information to which we refer you in the section titled “*Where You Can Find Additional Information*” elsewhere in this prospectus.

We are not offering to sell or seeking offers to purchase these securities in any jurisdiction where the offer or sale is not permitted. We have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus and any free writing prospectus related to this offering in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions relating to this offering and the distribution of this prospectus and any such free writing prospectus

applicable to that jurisdiction.

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

FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein and therein contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (set forth in Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)), that involve risks and uncertainties. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “estimate,” “plan,” “project,” “continuing,” “ongoing,” “expect,” “believe,” “intend,” “may,” “will,” “should,” “could” and similar expressions. Examples of forward-looking statements include, without limitation:

- statements regarding our management initiatives and liquidity position;
- statements regarding our growth and other strategies, and expectations with respect to results of operations or liquidity;
- statements concerning projections, predictions, expectations, estimates or forecasts as to our business, financial and operational results and future economic performance;

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- statements regarding our industry;
- statements of management’s goals and objectives;
- statements regarding laws, regulations, and policies relevant to our business;
- projections of revenue, earnings, capital structure and other financial items;
- assumptions underlying statements regarding us or our business; and
- other similar expressions concerning matters that are not historical facts.

Forward-looking statements should not be read as a guarantee of future performance or results and will not necessarily be accurate indications of the times at, or by, which such performance or results will be achieved. Forward-looking statements are based on information available at the time those statements are made or management’s good faith belief as of that time with respect to future events and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause such differences include, but are not limited to, those discussed in Part I, Item 1A of our Annual Report on Form 10-K under the heading “*Risk Factors*” or “Part II — Item 1A — Risk Factors” in our Quarterly Reports on Form 10-Q which is incorporated by reference in this prospectus and in other documents that we file from time to time with the SEC.

Forward-looking statements involve estimates, assumptions, known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from any future results, performances, or achievements expressed or implied by the forward-looking statements. These risks include, but are not limited to, those listed below and those discussed in greater detail in Part I, Item 1A of our Annual Report on Form 10-K under the heading “*Risk Factors*.”

- the potential delisting of our Class A common stock from the Nasdaq in the future;
- our strategy, outlook, and growth prospects;
- general economic trends, trends in the industry, and the competitive markets in which we operate;
- our ability to generate adequate cash from our existing business to support our growth
- our ability to raise capital on favorable terms, or at all, to support the continued growth of the business, including high inflation and increasing interest rates;
- our dependence on, and our ability to establish and maintain business relationships with third-party suppliers and service suppliers, including vulnerability to third-party transportation risks;
- our ability to accurately estimate demand for our products and maintain appropriate levels of inventory;
- our ability to maintain or improve our operating margins and meet sales expectations;
- our ability to adapt to changes in consumer spending and general economic conditions;
- our ability to maintain consumer brand recognition and loyalty of our products;
- our ability to protect our intellectual property rights and use or license certain trademarks;
- our ability to successfully identify and complete strategic acquisitions and/or dispositions;
- our ability to address product defects and contamination of, or damage to, our products;
- our exposure to potential various claims, lawsuits, and administrative proceedings;
- our and our customers’ ability to establish or maintain banking relationships;
- the impact of governmental laws and regulations and the outcomes of regulatory or agency proceedings;
- fluctuations in U.S. federal, state, local, and foreign tax obligations and changes in tariffs;

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- any unfavorable scientific studies on the long-term health risks of vaporizers, electronic cigarettes, or cannabis and hemp-derived products, including cannabidiol (“CBD”);
- failure of our information technology systems to support our current and growing business;
- our ability to prevent and recover from Internet security breaches;
- our sensitivity to global economic conditions and international trade issues;
- the onset of an economic recession in the United States or other countries, including the impact of the ongoing war in Ukraine, and their impact on the economy generally;
- natural disasters, adverse weather conditions, operating hazards, environmental incidents and labor disputes;
- public health crises;

- increased costs as a result of being a public company; and
- our failure to maintain adequate internal controls over financial reporting.

Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially and adversely affect our business, financial condition or operating results. This prospectus, and the documents incorporated by reference in this prospectus contain market data that we obtained from industry sources, including independent industry publications. In presenting this information, we have also made assumptions based on such data and other similar sources and on our knowledge of, and our experience to date in, the markets for our products. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we believe the market data included in this prospectus is generally reliable, such information is inherently imprecise.

The forward-looking statements speak only as of the date on which they are made, and, except as required by law, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Consequently, you should not place undue reliance on forward-looking statements.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus that we consider important. This summary does not contain all of the information you should consider before investing in our securities. You should read this summary together with the entire prospectus, including the risks related to our business, our industry, investing in our securities that we describe under “Risk Factors” and our consolidated financial statements and the related notes before making an investment in our securities.

Greenlane Holdings, Inc.

Founded in 2005, Greenlane is a premier global platform for the development and distribution of premium cannabis accessories, vape devices, and lifestyle products. In 2021, we completed several transformative acquisitions including the acquisition of two proprietary house brands, Eyce and DaVinci, along with a larger merger with KushCo Holdings, Inc., adding a significant industrial line of business to the Greenlane platform. These acquisitions strengthened our leading position as a consumer ancillary products house-of-brands business by adding two established brands to our portfolio (Eyce and DaVinci), and significantly expanded our customer network, bringing strategic relationships with leading cannabis multi-state-operators, cannabis single-state operators, and Canadian licensed-producers. Greenlane is a leading ancillary cannabis company, providing a wide array of consumer ancillary products and industrial ancillary products to thousands of cannabis producers, processors, brands, and retailers, in addition to specialty retailers, smoke shops and head shops, convenience stores, and consumers directly through our own proprietary web stores and large online marketplaces such as Amazon.

We have been developing a world-class portfolio of our own proprietary brands (the “Greenlane Brands”) that we believe will, over time, deliver higher margins and create long-term value for our customers and shareholders. Our wholly-owned Greenlane Brands includes our recently launched a more affordable product line – Groove, innovative silicone pipes and accessories – Eyce, best-in-class premium vaporizer brand – DaVinci, premium smoke shop and ancillary product brand – Higher Standards. We also have category exclusive licenses for the premium Marley Natural branded products, as well as the K.Haring Glass Collection.

The Greenlane Brands, along with a curated set of third-party products, are offered to customers through our proprietary, owned and operated e-commerce platforms which include Vapor.com, Vaposhop.com, DaVinciVaporizer.com, PuffItUp.com, HigherStandards.com, EyceMolds.com and MarleyNaturalShop.com. These platforms allow us to reach customers directly with helpful resources and a seamless purchasing experience.

We merchandise vaporizers, packaging, and other ancillary products in the United States, Canada, Europe and Latin America. We distribute products to retailers through wholesale operations and distribute products to consumers through e-commerce activities and our flagship Higher Standards store in New York City’s famed Chelsea Market. We operate our own distribution centers in the United States, while also utilizing third-party logistics locations in the United States, Canada, and Europe.

We manage our business in two different, but complementary, business segments. The first is the Consumer Goods segment, which focuses on serving consumers across wholesale, retail and e-commerce operations—offering both our Greenlane Brands as well as ancillary products and accessories from select leading third-party brands, such as Storz and Bickel, Genco Science, PAX, Cookies and more. This segment forms a central part of our growth strategy, especially as it relates to scaling our own portfolio of higher-margin proprietary owned brands. In addition to our Consumer Goods segment, we have our Industrial Goods segment, which focuses on serving Cannabis Operators by providing ancillary products essential to their daily operations and growth, such as packaging and vaporization solutions, including our Greenlane Brand Pollen Gear.

Corporate Information

We were incorporated in Delaware on May 2, 2018, and are the sole manager of Greenlane Holdings, LLC (the “Operating Company”), a Delaware limited liability company that was formed on September 1, 2015. All of our assets are held by, and our operations are primarily conducted through, the Operating Company and its wholly owned subsidiaries. As of March 31, 2023, we owned all of the interests in the Operating Company.

Our executive offices are located at 1095 Broken Sound Parkway, Suite 100, Boca Raton, Florida 33487. Our telephone number at our executive offices is (877) 292-7660 and our corporate website is www.gnln.com. The information on, or accessible through, our website is not incorporated into and does not constitute a part of this prospectus or any other report or document we file with or furnish to the SEC.

Recent Developments

June 2023 Reverse Stock Split

On June 2, 2023, we filed a Certificate of Amendment to our Amended and Restated Certificate of Incorporation (the “charter”) with the Secretary of State of the State of Delaware (the “SSSD”), which effected a one-for-10 reverse stock split (the “2023 Reverse Stock Split”) of our issued and outstanding shares of Class A common stock and Class B common stock, \$0.0001 par value per share (the “Class B common stock” and together with the Class A common stock, the “common stock”) at 5:01 PM Eastern Time on June 5, 2023. As a result of the 2023 Reverse Stock Split, every 10 shares of common stock issued and outstanding were converted into one share of common stock. We paid cash in lieu of fractional shares, and accordingly, no fractional shares were issued in connection with the 2023 Reverse Stock Split.

Warrant Amendments

As previously disclosed, we issued _____, _____, and _____ warrants (collectively, the “Prior Warrants”). On _____, 2023, we amended the Prior Warrants to, among other things, reduce the exercise price of the Prior Warrants to \$ _____ per share with respect to _____ shares of Class A common stock issuable upon exercise of the Prior Warrants.

The foregoing description of the amendments to the Prior Warrants is not complete and is qualified in its entirety by reference to the full text of the Form of Prior

Summary of Risk Factors

An investment in our securities is subject to a number of risks, including risks related to this offering, our business and industry, as well as risks related to our shares of Class A common stock. You should carefully consider all of the information in this prospectus and the documents incorporated by reference into this prospectus before making an investment in our securities. The following list summarizes some, but not all, of these risks. Please read the information in the section entitled “*Risk Factors*” on page 11 of this prospectus and in Item 1A “Risk Factors” of our [Annual Report on Form 10-K for the year ended December 31, 2022](#) which is incorporated herein by reference, for a more thorough description of these and other risks.

- In the past we have failed, and in the future we may fail, to meet the listing standards of Nasdaq, and as a result our Class A common stock may become delisted, which could have a material adverse effect on the liquidity of our Class A common stock.
- If we are unable to successfully execute our management initiatives, we will have significant cash constraints, which would have a material and adverse impact on our business and results of operations and ability to pay our debts as they come due.
- Our management will have broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds, and the proceeds may not be deployed successfully.
- This is a reasonable best efforts offering, in which no minimum number or dollar amount of securities is required to be sold, and we may not raise the amount of capital we believe is required for our business plans.
- Our goodwill and other assets have been subject to impairment and may continue to be subject to impairment in the future.
- The number of shares of our Class A common stock available for future issuance or sale, including upon exercise of the Pre-Funded Warrants and Common Warrants being offered by this prospectus, could adversely affect the per-share trading price of our Class A common stock.
- Future offerings of debt or equity securities, which could rank senior to our Class A common stock, may materially and adversely affect the market price of our Class A common stock.
- You may experience future dilution as a result of future equity offerings.
- Resales of our Class A common stock in the public market by our stockholders as a result of this offering may cause the market price of our Class A common stock to fall.
- This offering may cause the trading price of our Class A common stock to decrease.
- There is no public market for the Pre-Funded Warrants or Common Warrants being offered in this offering.
- The Pre-Funded Warrants and Common Warrants are speculative in nature.
- We may not receive any additional funds upon the exercise of the Pre-Funded Warrants or Common Warrants.

The Offering

Shares of Class A common stock outstanding prior to this offering	1,599,314 shares of Class A common stock.
Securities offered by us	Up to 15,075,375 shares of Class A common stock in the aggregate represented by up to 5,025,125 shares of Class A common stock, or Pre-Funded Warrants to purchase up to 5,025,125 shares of Class A common stock and Common Warrants to purchase up to 10,050,250 shares of Class A common stock. Each share of Class A common stock and Pre-funded Warrant will be sold together with two Common Warrants.
Offering price	\$1.9899 per Pre-Funded Warrant and accompanying Common Warrants and \$1.99 per Unit, assuming the offering price is equal to the closing price of our common stock on June 22, 2023.

Pre-Funded Warrants	We are offering to certain purchasers whose purchase of shares of Class A common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% of our outstanding shares of Class A common stock immediately following the closing of this offering, the opportunity to purchase, if such purchasers so choose, Pre-Funded Warrants, in lieu of shares of Class A common stock that would otherwise result in any such purchaser's beneficial ownership, together with its affiliates and certain related parties, exceeding 4.99% (or, at the election of such purchaser, 9.99%) of our outstanding shares of Class A common stock immediately following the consummation of this offering. The purchase price of each Pre-Funded Warrant is equal to the purchase price of the Units in this offering minus \$0.0001, the exercise price of each Pre-Funded Warrant. Each Pre-Funded Warrant is immediately exercisable and may be exercised at any time until it has been exercised in full. For each Pre-Funded Warrant we sell, the number of Units we are offering will be decreased on a one-for-one basis. This offering also relates to the shares of Class A common stock issuable upon exercise of any Pre-Funded Warrants sold in this offering.
Shares of Class A common stock to be outstanding after this offering	Up to 6,624,439 shares of Class A common stock assuming no sales of Pre-Funded Warrants which, if sold, would reduce the number of Units that we are offering on a one-for-one basis.
Common Warrants	Each Unit shall consist of a share of Class A Common Stock and two Common Warrants and each Pre-Funded Warrant will be sold together with two Common Warrants. Each Common Warrant has an exercise price per share equal to 100% of the public offering price of Units in this offering and expires on the fifth anniversary of the original issuance date. Because we will issue two Common Warrants in each Unit and with each Pre-Funded Warrant sold in this offering, the number of Common Warrants sold in this offering will not change as a result of a change in the mix of shares of Class A common stock and Pre-Funded Warrants sold. This prospectus also relates to the shares of Class A common stock issuable upon exercise of any Common Warrants sold in this offering.

Use of proceeds	We intend to use the net proceeds from this offering for general corporate purposes, which may include, without limitation, servicing our debt obligations under our promissory notes issued in conjunction with a business acquisition, working capital, product development, and capital expenditures. See <i>"Use of Proceeds"</i> on page 15 of this prospectus.
Transfer Agent and Registrar	EQ Shareowner Services.
Risk factors	See <i>"Risk Factors"</i> beginning on page 11 of this prospectus for a discussion of factors you should carefully consider before deciding to invest in our securities.
Listing	Our shares of Class A common stock are listed on the Nasdaq under the symbol "GNLN." We do not intend to apply for a listing of the Pre-Funded Warrants or the Common Warrants on any national securities exchange or other nationally recognized trading system.
Outstanding Shares	
The number of shares of our Class A common stock to be outstanding immediately after the offering is based on 1,598,563 shares of Class A common stock outstanding as of March 31, 2023, as adjusted for the Reverse Stock Splits defined further below, and excludes, as of such date:	
<ul style="list-style-type: none"> • 22,710 outstanding stock options with a weighted average exercise price of \$546.25; • 1,852,444 outstanding warrants with a weighted average exercise price of \$72.38; • 90,111 shares of Class A common stock reserved for future issuance under the Second Amended and Restated 2019 Equity Incentive Plan (the "2019 Equity Plan"); • 209,862 additional shares of Class A common stock approved for issuance under the Third Amended and Restated 2019 Equity Incentive Plan (the "Third Amended Plan") by the Company's shareholders at its 2023 annual meeting of stockholders (the "2023 Annual Meeting"), which have not yet been registered for issuance as of the date of this prospectus; and • a variable number of shares of Class A common stock potentially issuable under a business acquisition earnout arrangement. 	
Unless otherwise indicated, all information in this prospectus assumes no exercise of the outstanding options or warrants described above and no exercise of the Pre-Funded Warrants or Common Warrants being offered hereunder.	

SELECTED FINANCIAL DATA

On August 4, 2022, we filed a Certificate of Amendment to the charter with the SSSD, which effected a one-for-20 reverse stock split (the “2022 Reverse Stock Split”) of our issued and outstanding shares of common stock at 5:01 PM Eastern Time on August 9, 2022. As a result of the 2022 Reverse Stock Split, every 20 shares of common stock issued and outstanding were converted into one share of common stock. We paid cash in lieu of fractional shares, and accordingly, no fractional shares were issued in connection with the 2022 Reverse Stock Split.

On June 2, 2023, we filed a Certificate of Amendment to the charter with the SSSD, which effected the 2023 Reverse Stock Split at 5:01 PM Eastern Time on June 5, 2023. As a result of the 2023 Reverse Stock Split, every 10 shares of common stock issued and outstanding were converted into one share of common stock. We paid cash in lieu of fractional shares, and accordingly, no fractional shares were issued in connection with the 2023 Reverse Stock Split.

The following selected financial data presents selected share and per share data reflecting the effect of the 2022 Reverse Stock Split and the 2023 Reverse Stock Split (collectively, the “Reverse Stock Splits”) on our statements of operations data for the three months ended March 31, 2023 and 2022, and the years ended December 31, 2022 and 2021. We derived the selected financial data from our consolidated financial statements included in our [Annual Report on Form 10-K for the year ended December 31, 2022](#) and our condensed consolidated financial statements for the three months ended March 31, 2023 included in our [Quarterly Report on Form 10-Q for the quarter ended March 31, 2023](#), which is incorporated herein by reference, as adjusted to reflect the Reverse Stock Splits for all periods presented. Our results for interim periods are not necessarily indicative of the results that may be expected for any other future period.

You should read the summary selected consolidated financial information outlined below in conjunction with the information included under the headings “Use of Proceeds,” and “Description of Capital Stock,” as well as in conjunction with our [Annual Report on Form 10-K for the fiscal year ended December 31, 2022](#) and our [Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023](#), each of which are incorporated by reference in this prospectus.

Statement of Operations Data (in thousands except per share amounts)	Three Months Ended March 31,		Year Ended December 31,	
	2023	2022	2022	2021
Net sales	\$ 23,959	\$ 46,534	\$ 137,085	\$ 166,060
Gross profit	\$ 5,519	\$ 5,968	\$ 24,983	\$ 33,853
Net loss	\$ (10,248)	\$ (18,749)	\$ (125,858)	\$ (53,423)
Net loss attributable to Greenlane Holdings, Inc.	\$ (10,194)	\$ (15,332)	\$ (115,760)	\$ (30,583)
Net loss attributable to Class A common stock per share— basic and diluted ⁽¹⁾	\$ (6.40)	\$ (34.00)	\$ (153.70)	\$ (158.50)
Weighted average shares of Class A common stock outstanding — basic and diluted ⁽¹⁾	1,599	451	753	193

(1) All share and per share information has been adjusted to reflect the Reverse Stock Splits.

RISK FACTORS

An investment in our securities involves substantial risks. In addition to other information in this prospectus, you should carefully consider the following risks and the risks described in our [Annual Report on Form 10-K for the fiscal year ended December 31, 2022](#) under the caption “Item 1A. Risk Factors,” as well as other information and data set forth in this prospectus and the documents incorporated by reference herein, before making an investment decision with respect to our securities. The occurrence of any of the following risks could materially and adversely affect our business, prospects, financial condition, and our results of operations, which could cause you to lose all or a part of your investment in our securities. Some statements in this prospectus, including statements in the following risk factors, constitute forward-looking statements. See “Forward-Looking Statements.”

In the past we have failed, and in the future we may fail, to meet the listing standards of Nasdaq, and as a result our Class A common stock may become delisted, which could have a material adverse effect on the liquidity of our Class A common stock.

Our failure to maintain our listing and our Class A common stock being delisted from Nasdaq would make it more difficult for stockholders to dispose of their shares of Class A common stock and more difficult to obtain accurate price quotations on our Class A common stock.

If we fail to continue to satisfy the continued listing requirements of Nasdaq, such as the corporate governance or public float requirements, or the minimum closing bid price requirement, Nasdaq will take steps to delist our Class A common stock. As a result of several factors, including but not limited to our financial performance, market sentiment about the cannabis industry, volatility in the financial markets generally due to the tightening of monetary policy by the Board of Governors of the United States Federal Reserve Bank and other geopolitical events, events such as the ongoing war in Ukraine, the per share price of our Class A common stock has declined below the minimum bid price threshold required for continued listing. Such a delisting would likely have a negative effect on the price of our Class A common stock and would impair your ability to sell or purchase our Class A common stock when you wish to do so, as well as adversely affect our ability to issue additional securities and obtain additional financing in the future.

For example, on February 25, 2022, we received a deficiency letter from the Listing Qualifications Department of the Nasdaq (the “Nasdaq Staff”), notifying us that, for the last 30 consecutive business days, the closing bid price for our Class A common stock had closed below the minimum \$1.00 per share required for continued listing on the Nasdaq pursuant to Nasdaq Listing Rule 5450(a)(1) (“Rule 5450(a)(1)”).

On August 4, 2022, we filed a Certificate of Amendment to our charter with the Secretary of State of the State of Delaware, which effected the 2022 Reverse Stock Split at 5:01 PM Eastern Time on August 9, 2022. On August 24, 2022, we were notified by the Nasdaq Staff that we had regained compliance with Rule 5450(a)(1) and that the matter had been closed.

On December 13, 2022, we received a new deficiency letter from the Nasdaq Staff notifying us that we were out of compliance with Rule 5450(a)(1) for a second time and were given until June 12, 2023 to regain compliance with Rule 5450(a)(1).

On June 2, 2023, we filed a Certificate of Amendment to the charter with the SSSD, which effected the 2023 Reverse Stock Split at 5:01 PM Eastern Time on June 5, 2023. On June 22, 2023, we were notified by the Nasdaq Staff that we had regained compliance with Rule 5450(a)(1) and that the matter had been closed.

There are many factors that may adversely affect our minimum bid price. Many of these factors are outside of our control. As a result, we may not be able to sustain compliance with Rule 5450(a)(1) in the long term. Any potential delisting of our Class A common stock from the Nasdaq would likely result in decreased liquidity and increased volatility for our Class A common stock and would adversely affect our ability to raise additional capital or to enter into strategic transactions, in addition to adversely impacting the perception of our financial condition and could cause reputational harm to investors and parties conducting business with us. Any potential delisting of our Class A common stock from the Nasdaq would also make it more difficult for our stockholders to sell our Class A common stock.

In the event of a delisting, we would take actions to restore our compliance with Nasdaq Marketplace Rules, but we can provide no assurances that the listing of our Class A common stock would be restored, that our Class A common stock will remain above the Nasdaq minimum bid price requirement or that we otherwise will remain in compliance with the Nasdaq Marketplace Rules.

Our ability to fund our ongoing capital requirements will depend on many factors, and if we are unsuccessful in increasing sales, executing on our management initiatives, and generating positive cash flows we may have significant cash constraints, which would have a material and adverse impact on our business and results of operations and ability to pay our debts as they come due.

Our ability to fund our capital requirements out of our available cash and cash generated from our operations in the future will depend on many factors, but largely on our ability to (i) increase sales of our products, (ii) execute on our management initiatives, and (iii) generate positive cash flow and/or profits from our operations. If we are not successful in generating needed funds from operations, we may need to further reduce our costs, which measures could include selling or consolidating certain operations or assets, and delaying, canceling or scaling back product development and marketing programs. In addition, our low cash balance and negative cash flow may cause an inability to pay our vendors on time, purchase all the inventory we need, and meet various other obligations going forward. Also, if we are not successful in generating funds from operations substantial doubt may be raised about our status as a going concern.

We can provide no assurances that we will successfully be able to execute our previously announced management initiatives or obtain alternative financing in order to meet our capital needs. Furthermore, we can provide no assurances that our creditors will allow us to extend payment plans or maturity dates in the event we are not able to access sufficient capital in the near term.

Our management will have broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds, and the proceeds may not be deployed successfully.

Our management will have broad discretion as to the use of the net proceeds from any offering by us and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for us.

This is a reasonable best efforts offering, in which no minimum number or dollar amount of securities 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 that must be sold as a condition to completion of this offering, and there can be no assurance that the offering contemplated hereby will ultimately be consummated. Even if we sell securities offered hereby, because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount is not presently determinable and may be substantially less than the maximum amount 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. 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.

The number of shares of our Class A common stock available for future issuance or sale, including upon exercise of the Pre-Funded Warrants and Common Warrants offered by this prospectus, could adversely affect the per-share trading price of our Class A common stock.

As of March 31, 2023, approximately 1.6 million shares of our Class A common stock were outstanding, which does not include approximately 1.9 million shares of Class A common stock issuable upon the exercise of outstanding warrants or approximately .02 million shares of Class A common stock issuable upon the exercise of outstanding options. Furthermore, the Third Amended Plan was approved at the 2023 Annual Meeting, which, once registered, will increase the number of shares of Class A common stock available for future award grants by 209,862 shares to an aggregate of 319,862 shares of Class A common stock available for issuance under the Third Amended Plan. The 209,862 share increase represents approximately 13% of the combined total of the outstanding shares of our Class A common stock as of March 31, 2023.

We cannot predict whether future issuances or sales of shares of our Class A common stock will decrease the per-share trading price of our Class A common stock.

Future offerings of debt or equity securities, which could rank senior to our Class A common stock, may materially and adversely affect the market price of our Class A common stock.

If we decide to issue debt or equity securities in the future, which could rank senior to our Class A common stock, it is likely that such securities will be governed by an indenture or other instrument containing covenants restricting our operating flexibility. Additionally, any convertible or exchangeable securities that we issue in the future may have rights, preferences and privileges more favorable than those of our Class A common stock and may result in dilution to owners of our Class A common stock.

Future issuances and sales of debt or equity securities, or the perception that such issuances and sales could occur, may cause prevailing market prices for our Class A common stock to decline and may adversely affect our ability to raise additional capital in the financial markets at times and prices favorable to us. We and, indirectly, our stockholders will bear the cost of issuing and servicing such securities. Because our decision to issue debt or equity securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of our future offerings. Therefore, holders of our Class A common stock will bear the risk of our future offerings reducing the market price of our Class A common stock and diluting the value of their stock holdings in us.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of Class A common stock or other securities convertible into or exchangeable for our shares of Class A common stock that could result in further dilution to investors purchasing our shares in this offering or result in downward pressure on the price of our shares of Class A common stock. We may sell shares of Class A common stock or other securities in any other offering at prices that are higher or lower than the prices paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing shareholders.

Resales of our Class A common stock in the public market by our stockholders as a result of this offering may cause the market price of our Class A common stock to fall.

Sales of a significant number of shares of our Class A common stock could occur at any time. The issuance of new shares of our Class A common stock could result in

resales of our Class A common stock by our current stockholders concerned about the potential dilution of their holdings. In turn, these resales could have the effect of depressing the market price for our Class A common stock and the value of the pre-funded warrants and warrants.

This offering may cause the trading price of our Class A common stock to decrease.

The price per Unit, together with the number of shares of Class A common stock we propose to issue and ultimately will issue if this offering is completed, may result in an immediate decrease in the market price of our Class A common stock. This decrease may continue after the completion of this offering.

There is no public market for the Pre-Funded Warrants or Common Warrants being offered in this offering.

There is no established public trading market for the Pre-Funded Warrants or Common Warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the Pre-Funded Warrants or Common Warrants on the Nasdaq or any national securities exchange or other nationally recognized trading system. Without an active market, the liquidity of the Pre-Funded Warrants and Common Warrants will be limited.

The Pre-Funded Warrants and Common Warrants are speculative in nature.

The Pre-Funded Warrants and Common Warrants do not confer any rights of Class A common stock ownership on their holders, such as voting rights or the right to receive dividends, but rather merely represent the right to acquire shares of Class A common stock at a fixed price for a limited period of time. Specifically, commencing on the date of issuance, holders of the Common Warrants may exercise their right to acquire Class A common stock and pay an exercise price of \$1.99 per share, subject to certain adjustments, prior to five years from the date on which such warrants were issued, after which date any unexercised Common Warrants will expire and have no further value. Holders of Pre-Funded Warrants have identical rights, except that the Pre-Funded Warrants have an exercise price of \$0.0001 and do not expire until exercised in full. Moreover, following this offering, the market value of the Pre-Funded Warrants and Common Warrants, if any, is uncertain and there can be no assurance that the market value of the Pre-Funded Warrants and Common Warrants will equal or exceed their imputed offering price. The Pre-Funded Warrants and Common Warrants will not be listed or quoted for trading on any market or exchange. There can be no assurance that the market price of the Class A common stock will ever equal or exceed the exercise price of the Common Warrants and consequently, whether it will ever be profitable for holders of the Common Warrants to exercise the warrants.

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We may not receive any additional funds upon the exercise of the Pre-Funded Warrants or Common Warrants.

Each Pre-Funded Warrant and Common Warrant may be exercised by way of a cashless exercise, meaning that the holder may not pay a cash purchase price upon exercise, but instead would receive upon such exercise the net number of shares of our Class A common stock determined according to the formula set forth in the Pre-Funded Warrant or Common Warrant. Accordingly, we may not receive any additional funds upon the exercise of the Pre-Funded Warrants or Common Warrants.

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USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately \$9.0 million, assuming the sale of all securities being offered hereby, after deducting the placement agent fee and estimated offering expenses payable by us and excluding the proceeds, if any, from the subsequent exercise of the Pre-Funded Warrants or the Common Warrants. However, because this offering is being conducted on a reasonable best efforts basis we may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us.

We currently intend to use the net proceeds from this offering for general corporate purposes, which may include, without limitation, servicing our debt obligations under our promissory note issued in conjunction with a business acquisition, working capital, product development, and capital expenditures. The amounts and timing of our actual expenditures will depend on numerous factors, including those described under “Risk Factors” in this prospectus and the documents incorporated by reference herein, as well as the amount of cash used in our operations. As a result, our management will have broad discretion to allocate the net proceeds from this offering. Pending the application of the net proceeds from any sale of securities under this prospectus, we may invest the net proceeds in interest-bearing accounts, money market accounts and/or interest-bearing securities.

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DIVIDEND POLICY

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

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DESCRIPTION OF CAPITAL STOCK

The following summary of the material terms of our common stock does not purport to be complete. For a complete description, we refer you to the Delaware General Corporation Law, or the DGCL, and to our charter and bylaws. For a more complete understanding of our common stock, we encourage you to read carefully this entire prospectus, as well as our charter and bylaws, each of which is incorporated herein by reference, and the following summary is qualified in its entirety by reference to our charter and bylaws. See “Where To Find Additional Information” for information on how to obtain documents from us, including our charter and bylaws.

General

We have one class of securities outstanding, our Class A common stock, \$0.01 par value, registered under Section 12 of the Exchange Act. As of March 31, 2023, no shares of Class B common stock were outstanding and we held all of the common units in the Operating Company.

The following is a description of the rights and privileges of our common stock and related provisions of the charter, our amended and restated bylaws (the “bylaws”), and applicable provisions of Delaware law. This description is qualified in its entirety by, and should be read in conjunction with, our charter and bylaws and the applicable provisions of Delaware law.

Our charter provides that our authorized capital stock consists of 600,000,000 shares of our Class A common stock, 30,000,000 shares of our Class B common stock and 10,000,000 shares of preferred stock, \$0.0001 par value per share.

Class A Common Stock

Issuance of Class A Common Stock with our Common Units

We may undertake any action, including, without limitation, a reclassification, dividend, division or recapitalization with respect to shares of our Class A common stock, to the extent necessary to maintain a one-to-one ratio between the number of common units of the Operating Company (“common units”) we own, and the number of outstanding shares of our Class A common stock, disregarding unvested shares issued in connection with stock incentive plans, shares issuable upon the exercise, conversion or exchange of certain convertible or exchangeable securities and treasury stock.

Voting Rights

Holders of our Class A common stock are entitled to cast one vote per share. Holders of our Class A common stock are not entitled to cumulative voting in the election of directors. Generally, holders of all classes of our common stock, including classes not registered under the Exchange Act, vote together as a single class and an action is approved by our stockholders if the number of votes cast in favor of the action exceeds the number of votes cast in opposition to the action, except in a contested director election where directors are elected by a plurality of the votes cast. Except as otherwise provided by applicable law, amendments to our charter must be approved by a majority or, in some cases, two-thirds of the combined voting power of all shares entitled to vote thereon, voting together as a single class.

Dividend Rights

Holders of our Class A common stock share ratably (based on the number of shares of our Class A common stock held) if and when any dividend is declared by our Board out of funds legally available therefor, subject to restrictions, whether statutory or contractual (including with respect to any outstanding indebtedness), on the declaration and payment of dividends and to any restrictions on the payment of dividends imposed by the terms of any outstanding preferred stock or any class or series of stock having a preference over, or the right to participate with, our Class A common stock with respect to the payment of dividends.

Liquidation Rights

On our liquidation, dissolution or winding up, each holder of our Class A common stock will be entitled to a pro rata distribution of the net assets, if any, available for distribution to common stockholders.

Other Matters

No shares of our Class A common stock are subject to redemption or have preemptive rights to purchase additional shares of our Class A common stock. Holders of shares of our Class A common stock do not have subscription, redemption or conversion rights.

Authorized but Unissued Shares

The authorized but unissued shares of our Class A common stock will be available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of our Class A common stock could render it more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Trading

Our Class A common stock is listed on Nasdaq under the symbol “GNLN.”

Transfer Agent and Registrar

The transfer agent and registrar for our Class A common stock is EQ Shareowner Services. The transfer agent’s address is 3200 Cherry Creek South Drive, Suite 430, Denver, CO 80209, and its telephone number is (303) 282-4800.

Preferred Stock

General

Our charter provides that we may issue up to 10,000,000 shares of preferred stock, \$0.0001 par value per share. Our charter authorizes our Board to increase or decrease the number of authorized shares without stockholder approval. As of March 31, 2023, no shares of our preferred stock were issued and outstanding.

Subject to the limitations prescribed by Delaware law and our charter and bylaws, our Board is authorized to establish the number of shares constituting each series of preferred stock and to fix the designations and powers, preferences and relative, participating, optional or other special rights and qualifications, limitations or restrictions thereof, including such provisions as may be desired concerning voting, redemption, dividends, dissolution or the distribution of assets, conversion or exchange, and such other subjects or matters as may be fixed by resolution of our Board or duly authorized committee thereof.

The prospectus or prospectus supplement relating to the series of preferred stock offered thereby will describe the specific terms of such securities, including:

- the title and stated value of such preferred stock;
- the number of shares of such preferred stock offered, the liquidation preference per share and the offering price of such shares;
- the dividend rate(s), period(s) and payment date(s) or method(s) of calculation thereof applicable to such preferred stock;

- whether dividends shall be cumulative or non-cumulative and, if cumulative, the date from which dividends on such preferred stock shall accumulate;
- the procedures for any auction and remarketing, if any, for such preferred stock;

- the provisions for a sinking fund, if any, for such preferred stock;
- the provisions for redemption, if applicable, of such preferred stock;
- any listing of such preferred stock on any securities exchange;
- the terms and conditions, if applicable, upon which shares of such preferred stock will be convertible into shares of our Class A common stock, including the conversion price (or manner of calculation thereof) and conversion period;
- a discussion of material U.S. federal income tax considerations applicable to such preferred stock;
- any limitations on issuance of any series of preferred stock ranking senior to or on a parity with such series of preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
- any other specific terms, preferences, rights, limitations or restrictions of such preferred stock.

OUR OPERATING COMPANY AND THE OPERATING AGREEMENT

The following is a summary of the material provisions of the Fourth Amended and Restated Operating Agreement of Greenlane Holdings, LLC, or the Operating Agreement, a copy of which is filed as an exhibit to the registration statement of which this prospectus is a part. This summary does not purport to be complete and is subject to and qualified in its entirety by reference to applicable provisions of the Delaware General Corporation Law, as amended, and the operating agreement. See “Where To Find Additional Information.” For purposes of this section, references to “we,” “our,” “us” and “our company” refer to Greenlane Holdings, Inc. alone, and not to its subsidiaries. For the purposes of this section, references to the “Operating Company” refer to Greenlane Holdings, LLC, a subsidiary of Greenlane Holdings, Inc.

General

We operate our business through the Operating Company (Greenlane Holdings, LLC) and its subsidiaries. We and the other members party thereto have entered into the Fourth Amended and Restated Operating Agreement of Greenlane Holdings, LLC (the “Operating Agreement”). As of March 31, 2023, we were the sole member of the Operating Company and held all of the common units. The operations of the Operating Company and the rights and obligations of the holders of common units, are set forth in the Operating Agreement.

Appointment as Manager

Under the Operating Agreement, we are the sole manager of the Operating Company. As the manager, we control all day-to-day business affairs and decision-making of the Operating Company without the approval of any other member, unless otherwise stated in the Operating Agreement. As such, we, through our officers and directors, are responsible for all operational and administrative decisions of the Operating Company and the day-to-day management of the Operating Company’s business.

Compensation

We are entitled to compensation for our services as the manager. We are entitled to reimbursement by the Operating Company for all fees and expenses incurred on behalf of the Operating Company, including all expenses associated with this offering and maintaining its corporate existence, and all fees, expenses and costs of being a public company (including expenses incurred in connection with public reporting obligations, proxy statements, stockholder meetings, stock exchange fees, transfer agent fees, legal fees, SEC and FINRA filing fees and offering expenses) and maintaining its corporate existence, including all costs of maintaining our Board and its committees, executive compensation and certain insurance policies.

Capitalization

The Operating Agreement provides for a single class of common membership units, which we refer to as the “common units.” The Operating Agreement reflects a split of common units such that we acquired one common unit with the net proceeds received by us from the initial public offering from the sale of one share of our Class A common stock. Each of our common units entitles the holder to a pro rata share of the net profits and net losses and distributions of the Operating Company. As of March 31, 2023, we held all of the common units in the Operating Company.

Distributions

The Operating Agreement requires “tax distributions,” as that term is defined in the Operating Agreement, to be made by the Operating Company to its “members,” as that term is defined in the Operating Agreement. Tax distributions will be made at least annually to each member of the Operating Company, including us, based on such member’s allocable share of the taxable income of the Operating Company and at a commencing tax rate equal to the highest effective marginal combined federal, state and local income tax rate applicable to corporate or individual taxpayers that may potentially apply to any member for the relevant period taking into account (i) any deductions pursuant to Section 199A of the Code, and (ii) the character of the relevant tax items (e.g., ordinary or capital), as we, as the sole manager of the Operating Company, reasonably determine. For this purpose, the taxable income of the Operating Company, and our allocable share of such taxable income, shall be determined without regard to any tax basis adjustments that result from our deemed or actual purchase of common units from the members. The tax rate used to determine tax distributions will apply regardless of the actual final tax liability of any such member. Tax distributions will also be made only to the extent all distributions from the Operating Company for the relevant period were otherwise insufficient to enable each member to cover its tax liabilities as calculated in the manner described above. The Operating Agreement also allows for distributions to be made by the Operating Company to its members on a pro rata basis out of “distributable cash,” as that term is defined in the Operating Agreement. We expect the Operating Company may make distributions out of distributable cash periodically to the extent permitted by the agreements governing its indebtedness and as required by the Operating Company for its capital and other needs, such that we in turn are able to make dividend payments, if any, to the holders of our Class A common stock.

Maintenance of One-to-One Ratio of Shares of Class A Common Stock and Common Units Owned by Us

Our charter and the Operating Agreement require that we and the Operating Company, respectively, at all times maintain a ratio of one common unit owned by us for each share of our Class A common stock issued by us (subject to certain exceptions for treasury shares and shares underlying certain convertible or exchangeable securities).

Dissolution

The Operating Agreement provides that the decision of the manager, with the approval of the holders of a majority of the outstanding common units, will be required to voluntarily dissolve the Operating Company. In addition to a voluntary dissolution, the Operating Company will be dissolved upon a change of control transaction under certain circumstances, as well as upon the entry of a decree of judicial dissolution or other circumstances in accordance with Delaware law. Upon a dissolution event, the proceeds of a liquidation will be distributed in the following order: (i) first, to pay all expenses of winding up the Operating Company; and (ii) second, to pay all debts and liabilities and obligations of the Operating Company. All remaining assets of the Operating Company will be distributed to the members pro-rata in accordance with their respective percentage ownership interests in the Operating Company (as determined based on the number of common units held by a member relative to the aggregate number of all outstanding common units).

Indemnification and Exculpation

The Operating Agreement provides for indemnification for all expenses, liabilities and losses reasonably incurred by any person by reason of the fact that such person is or was a member or is or was serving at the request of the Operating Company as the manager, an officer, an employee or an agent of the Operating Company; provided, however, that there will be no indemnification for actions made not in good faith or in a manner which the person did not reasonably believe to be in or not opposed to the best interests of the Operating Company, or, with respect to any criminal action or proceeding other than by or in the right of the Operating Company, where the person had reasonable cause to believe the conduct was unlawful, or for breaches of any representations, warranties or covenants by such person or its affiliates contained in the Operating Agreement or in other agreements with the Operating Company.

We, as the manager, and our affiliates, will not be liable to the Operating Company, its members or their affiliates for damages incurred by any acts or omissions as the manager, provided that the acts or omissions of these exculpated persons are not the result of fraud, intentional misconduct, knowing violations of law, or breaches of the Operating Agreement or other agreement with the Operating Company.

Amendments

As the sole member of the Operating Company, we may amend the Operating Agreement at any time in our sole discretion.

DESCRIPTION OF WARRANTS TO BE ISSUED AS PART OF THIS OFFERING

The following summary of certain terms and provisions of Pre-Funded Warrants and Common Warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the forms of such warrants, which are filed as exhibits to the registration statement of which this prospectus is a part. Prospective investors should carefully review the terms and provisions set forth in such forms of warrants for a complete description of the terms and conditions of the Pre-Funded Warrants and Common Warrants. The Pre-Funded Warrants will be issued separately from the accompanying Common Warrants and may be transferred separately immediately thereafter.

Pre-Funded Warrants Being Offered in this Offering

Duration and Exercise Price

Each Pre-Funded Warrant offered hereby will have an initial exercise price equal to \$0.0001 per share of Class A common stock. The Pre-Funded Warrants will be immediately exercisable and may be exercised at any time until the Pre-Funded Warrants are exercised in full. The exercise price and number of shares issuable upon exercise is subject to appropriate proportional adjustment in the event of share dividends, share splits, reorganizations or similar events affecting our Class A common stock and the exercise price.

Exercisability

The Pre-Funded Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice and, within the earlier of (i) two trading days and (ii) the number of trading days comprising the standard settlement period with respect to the Class A common stock as in effect on the date of delivery of the notice of exercise thereafter, payment in full for the number of shares of Class A common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder may not exercise any portion of the Pre-Funded Warrant to the extent that the holder, together with its affiliates and any other persons acting as a group together with any such persons, would own more than 4.99% (or, at the election of the purchaser, 9.99%) of the number of shares of Class A common stock outstanding immediately after exercise (the "Beneficial Ownership Limitation"); provided that a holder with a Beneficial Ownership Limitation of 4.99%, upon notice to us and effective sixty-one (61) days after the date such notice is delivered to us, may increase the Beneficial Ownership Limitation so long as it in no event exceeds 9.99% of the number of shares of Class A common stock outstanding immediately after exercise.

Cashless Exercise

If, at the time a holder exercises its Pre-Funded Warrants, a registration statement registering the issuance of the shares of Class A common stock underlying the Pre-Funded Warrants under the Securities Act is not then effective or available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may only exercise its Pre-Funded Warrants (either in whole or in part), at such time by means of a cashless exercise in which the holder shall be entitled to receive upon such exercise the net number of shares of Class A common stock determined according to a formula set forth in the Pre-Funded Warrants, which generally provides for a number of shares equal to (A) (1) the volume weighted average price on (x) the trading day preceding the notice of exercise, if the notice of exercise is executed and delivered on a day that is not a trading day or prior to the opening of "regular trading hours" on a trading day or (y) the trading day of the notice of exercise, if the notice of exercise is executed and delivered after the close of "regular trading hours" on such trading day, or (2) the bid price on the day of the notice of exercise, if the notice of exercise is executed during "regular trading hours" on a trading day and is delivered within two hours thereafter, less (B) the exercise price, multiplied by (C) the number of shares of Class A common stock the Pre-Funded Warrant was exercisable into, with such product then divided by the number determined under clause (A) in this sentence.

Fractional Shares

No fractional shares of Class A common stock will be issued upon the exercise of the Pre-Funded Warrants. Rather, we will, at our election, and in lieu of the issuance of such fractional share, either (i) pay cash in an amount equal to such fraction multiplied by the exercise price or (ii) round up to the next whole share issuable upon exercise of the Pre-Funded Warrant.

Transferability

Subject to applicable laws, a Pre-Funded Warrant may be transferred at the option of the holder upon surrender of the Pre-Funded Warrant to us together with the appropriate instruments of transfer and funds sufficient to pay any transfer taxes payable upon such transfer.

Trading Market

There is no trading market available for the Pre-Funded Warrants on any securities exchange or nationally recognized trading system. We do not intend to list the Pre-Funded Warrants on any securities exchange or nationally recognized trading system. The shares of Class A common stock issuable upon exercise of the Pre-Funded Warrants are currently listed on Nasdaq under the symbol "GNLN."

Rights as a Stockholder

Except as otherwise provided in the Pre-Funded Warrants or by virtue of such holder's ownership of shares of Class A common stock, the holders of the Pre-Funded Warrants do not have the rights or privileges of holders of our Class A common stock, including any voting rights, until they exercise their Pre-Funded Warrants.

Fundamental Transaction

In the event of a fundamental transaction, as described in the Pre-Funded Warrants and generally including any reorganization, recapitalization or reclassification of our Class A common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding shares of Class A common stock, the holders of the Pre-Funded Warrants will be entitled to receive upon exercise of the Pre-Funded Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Pre-Funded Warrants immediately prior to such fundamental transaction.

Common Warrants Being Offered in this Offering

Duration and Exercise Price

Each Common Warrant offered hereby will have an initial exercise price equal to \$1.99 per share of Class A common stock. The Common Warrants will be immediately exercisable and will expire on the fifth anniversary of the original issuance date. The exercise price and number of shares of Class A common stock issuable upon exercise is subject to appropriate proportional adjustment in the event of share dividends, share splits, reorganizations or similar events affecting our Class A common stock and the exercise price.

Exercisability

The Common Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice and, within the earlier of (i) two trading days and (ii) the number of trading days comprising the standard settlement period with respect to the Class A common stock as in effect on the date of delivery of the notice of exercise thereafter, payment in full for the number of shares of Class A common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder may not exercise any portion of the Common Warrant to the extent that the holder, together with its affiliates and any other persons acting as a group together with any such persons, would own more than 4.99% (or, at the election of the purchaser, 9.99%) of the number of shares of Class A common stock outstanding immediately after exercise (the "Beneficial Ownership Limitation"); provided that a holder with a Beneficial Ownership Limitation of 4.99%, upon notice to us and effective sixty-one (61) days after the date such notice is delivered to us, may increase the Beneficial Ownership Limitation so long as it in no event exceeds 9.99% of the number of shares of Class A common stock outstanding immediately after exercise.

Cashless Exercise

If, at the time a holder exercises its Common Warrants, a registration statement registering the issuance of the shares of Class A common stock underlying the Common Warrants under the Securities Act is not then effective or available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may only exercise its Common Warrants (either in whole or in part), at such time by means of a cashless exercise in which the holder shall be entitled to receive upon such exercise the net number of shares of Class A common stock determined according to a formula set forth in the Common Warrants, which generally provides for a number of shares of Class A common stock equal to (A) (1) the volume weighted average price on (x) the trading day preceding the notice of exercise, if the notice of exercise is executed and delivered on a day that is not a trading day or prior to the opening of "regular trading hours" on a trading day or (y) the trading day of the notice of exercise, if the notice of exercise is executed and delivered after the close of "regular trading hours" on such trading day, or (2) the bid price on the day of the notice of exercise, if the notice of exercise is executed during "regular trading hours" on a trading day and is delivered within two hours thereafter, less (B) the exercise price, multiplied by (C) the number of shares of Class A common stock the Common Warrant was exercisable into, with such product then divided by the number determined under clause (A) in this sentence.

Fractional Shares

No fractional shares of Class A common stock will be issued upon the exercise of the Common Warrants. Rather, we will, at our election, and in lieu of the issuance of such fractional share, either (i) pay cash in an amount equal to such fraction multiplied by the exercise price or (ii) round up to the next whole share issuable upon exercise of the Common Warrant.

Transferability

Subject to applicable laws, a Common Warrant may be transferred at the option of the holder upon surrender of the Common Warrant to us together with the appropriate instruments of transfer and funds sufficient to pay any transfer taxes payable upon such transfer.

Trading Market

There is no trading market available for the Common Warrants on any securities exchange or nationally recognized trading system. We do not intend to list the Common Warrants on any securities exchange or nationally recognized trading system. The shares of Class A common stock issuable upon exercise of the Common Warrants are currently listed on Nasdaq under the symbol “GNLN.”

Rights as a Stockholder

Except as otherwise provided in the Common Warrants or by virtue of such holder’s ownership of shares of Class A common stock, the holders of the Common Warrants do not have the rights or privileges of holders of our Class A common stock, including any voting rights, until they exercise their Common Warrants.

Fundamental Transaction

In the event of a fundamental transaction, as described in the Common Warrants and generally including any reorganization, recapitalization or reclassification of our Class A common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding shares of Class A common stock, the holders of the Common Warrants will be entitled to receive upon exercise of the Common Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Common Warrants immediately prior to such fundamental transaction. Additionally, in the event of a fundamental transaction, we or any successor entity will, at the option of the holder of a Common Warrant 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 thereof), purchase the Common Warrant from the holder by paying to the holder an amount of consideration equal to the value of the remaining unexercised portion of such Common Warrant on the date of consummation of the fundamental transaction based on the Black-Scholes option pricing model, determined pursuant to a formula set forth in the Common Warrants. The consideration paid to the holder will be the same type or form of consideration that was offered and paid to the holders of shares of Class A common stock in connection with the fundamental transaction; provided that if no such consideration was offered or paid, the holders of Class A common stock will be deemed to have received Class A common stock of the successor entity in such fundamental transaction for purposes of this provision of the Common Warrants.

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PLAN OF DISTRIBUTION

A.G.P./Alliance Global Partners, which we refer to herein as the placement agent, located at 590 Madison Avenue 28th Floor, New York, NY 10022, has agreed to act as our exclusive placement agent in connection with this offering subject to the terms and conditions of a placement agency agreement. The placement agent is not purchasing or selling any of the securities offered by this prospectus, nor is it required to arrange the purchase or sale of any specific number or dollar amount of securities, but it has agreed to use its reasonable best efforts to arrange for the sale of all of the securities offered hereby. Therefore, we will enter into a securities purchase agreement directly with the institutional investors, at the investor’s option, who purchase our securities in this offering. Investors who do not enter into a securities purchase agreement shall rely solely on this prospectus in connection with the purchase of our securities in 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 Units, and Pre-Funded Warrants and accompanying Common Warrants being offered pursuant to this prospectus on or about _____, 2023.

We have agreed to indemnify the placement agent and specified other persons against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the placement agent may be required to make in respect thereof.

Fees and Expenses

This offering is being conducted on a “reasonable best efforts” basis and 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 securities. We have agreed to pay the placement agent fees set forth in the table below.

	Per Unit	Per Pre-Funded Warrant and Accompanying Common Warrants ⁽¹⁾	Total
Public offering price	\$	\$	\$
Placement agent fees	\$	\$	\$
Proceeds to us (before expenses) ⁽²⁾	\$	\$	\$

(1) Includes proceeds from the assumed exercise of the Pre-Funded Warrants in cash.

(2) Does not include proceeds from the exercise of the Common Warrants in cash, if any.

We have agreed to pay to the placement agent a cash fee equal to 7.0% of the aggregate gross proceeds raised in this offering.

We have also agreed to reimburse the placement agent at closing for legal and other expenses incurred by the placement agent in connection with this offering in an amount equal to \$75,000 and for certain non-accountable expenses, up to \$25,000. We estimate the total expenses payable by us for this offering, excluding the placement agent fees and expenses, will be approximately \$200,000.

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 it and any profit realized on the resale of the shares sold by it 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:

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

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Lock-Up Agreements

Our directors, officers and beneficial owners of 5% or more of our outstanding shares of Class A common stock have entered into lock-up agreements. Under these agreements, these individuals have agreed, subject to specified exceptions, not to sell or transfer any shares of Class A common stock or securities convertible into, or exchangeable or exercisable for, shares of our Class A common stock during a period ending 90 days after the date of this prospectus, without first obtaining the written consent of the placement agent, subject to certain exceptions. Specifically, these individuals have agreed, in part, not to:

- offer, pledge, sell, contract to sell or otherwise dispose of our securities or any securities convertible into or exercisable or exchangeable for shares of Class A common stock;
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our securities, whether any such transaction is to be settled by delivery of our securities, in cash or otherwise;
- make any demand for or exercise any right with respect to the registration of any of our securities;
- publicly disclose the intention to make any offer, sale, pledge or disposition of, or to enter into any transaction, swap, hedge, or other arrangement relating to any of our securities.

Notwithstanding these limitations, our securities may be transferred under limited circumstances, including, without limitation, by gift, will or intestate succession.

We have agreed with the placement agent to be subject to a lock-up period of 90 days following the date of closing of the offering pursuant to this prospectus. This means that, during the applicable lock-up period, subject to certain limited exceptions, we may not, without the prior written consent of the placement agent: (i) issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Class A common stock or Class A common stock equivalents, or (ii) file any registration statement or amendment or supplement thereto, other than the preliminary prospectus or the prospectus related to this offering or a registration statement on Form S-8 in connection with any employee benefit plan. 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 shares of Class A 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 a period of 180 days following the closing date of this offering.

Determination of Offering Price

The public offering price of the securities we are offering was negotiated between us and the investors, in consultation with the placement agent based on the trading of our shares of Class A common stock prior to the offering, among other things. Other factors considered in determining the public offering price of the securities we are offering include our history and prospects, the industry in which we operate, our past and present operating results, the stage of development of our business, our business plans for the future and the extent to which they have been implemented, the previous experience of our executive officers, general conditions of the securities markets at the time of the offering and such other factors as were deemed relevant.

Listing

Our shares of Class A common stock are listed on Nasdaq under the trading symbol "GNLN." We do not plan to list the Pre-Funded Warrants or Common Warrants on Nasdaq or any other securities exchange or trading market.

Discretionary Accounts

The placement agent does not intend to confirm sales of the securities offered hereby to any accounts over which it has discretionary authority.

Other Activities and Relationships

The placement agent and certain of its affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The placement agent and certain of its affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the placement agent and certain of its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the placement agent or its affiliates enter into a lending relationship with us, they will routinely hedge their credit exposure to us consistent with their customary risk management policies. The placement agent and its affiliates may hedge such exposure by entering into transactions that consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the shares of Class A common stock offered hereby. Any such short positions could adversely affect future trading prices of the shares of Class A common stock offered hereby. The placement agent and certain of its affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

LEGAL MATTERS

Certain legal matters in connection with this offering will be passed upon for us by Morrison & Foerster LLP, including the validity of the shares of our Class A common stock offered by this prospectus. Certain matters will be passed upon for the placement agent by Thompson Hine LLP.

EXPERTS

Marcum LLP, an independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2022 and December 31, 2021 and for the year then ended as set forth in its report included in our [annual report on Form 10-K for the year ended December 31, 2022](#), which is incorporated by reference into this prospectus and elsewhere in the registration statement of which this prospectus is a part. Our consolidated financial statements are incorporated by reference in reliance on

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act for securities being offered by this prospectus. This prospectus, which is part of the registration statement, does not contain all of the information included in the registration statement and the exhibits. For further information about us and the Class A common stock offered by this prospectus, you should refer to the registration statement and its exhibits. References in this prospectus to any of our contracts or other documents are not necessarily complete, and you should refer to the exhibits attached to the registration statement for copies of the actual contract or document. SEC filings are also available to the public at the SEC's website at www.sec.gov. You may also access our SEC filings free of charge on our website at <http://www.gnl.com>. You should not consider information on our website to be part of this prospectus.

We are subject to the reporting and information requirements of the Exchange Act and, as a result, we file periodic and current reports, proxy statements and other information with the SEC. We make our periodic reports and other information filed with or furnished to the SEC, available, free of charge, through our website as soon as reasonably practicable after those reports and other information are filed with or furnished to the SEC.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

We incorporate information into this prospectus by reference, which means that we disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, except to the extent superseded by information contained herein or by information contained in documents filed with or furnished to the SEC after the date of this prospectus. This prospectus incorporates by reference the documents set forth below that have been previously filed or furnished, as applicable, with the SEC:

- [our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 31, 2023;](#)
- [our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023, filed with the SEC on May 15, 2023,](#) as amended by [Amendment No. 1 thereto filed with the SEC on May 16, 2023;](#)

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- [our Definitive Proxy Statement, filed with the SEC on April 27, 2023;](#) and
- our Current Reports on Form 8-K filed with the SEC on [April 12, 2023](#), [May 17, 2023](#), [June 5, 2023](#) and [June 22, 2023](#).

We also incorporate by reference into this prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of this prospectus until we have sold all of the securities to which this prospectus relates or the offering is otherwise terminated; provided, however, that we are not incorporating any information furnished under either Item 2.02 or Item 7.01 of any current report on Form 8-K. These documents may include, among others, Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

You may obtain copies of any of these filings by contacting Greenlane Holdings, Inc. as described below, or by contacting the SEC or accessing its website as described above. Documents incorporated by reference are available without charge, excluding all exhibits unless an exhibit has been specifically incorporated by reference into those documents, by requesting them in writing, by telephone or via the Internet at:

Greenlane Holdings, Inc.
1095 Broken Sound Parkway, Suite 100
Boca Raton, Florida 33487
(877) 292-7660
Website: <http://www.gnl.com>

THE INFORMATION CONTAINED ON, OR ACCESSIBLE THROUGH, OUR WEBSITE IS NOT INCORPORATED INTO AND DOES NOT CONSTITUTE A PART OF THIS PROSPECTUS.

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Up to 5,025,125 shares of Class A Common Stock
Up to 5,025,125 Pre-Funded Warrants to purchase shares of Class A Common Stock
Up to 10,050,250 Common Warrants to purchase shares of Class A Common Stock

Up to 15,075,375 shares of Class A Common Stock underlying such
Pre-Funded Warrants and Common Warrants

PROSPECTUS

Sole Placement Agent

A.G.P.

, 2023

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale and distribution of the securities being registered. All amounts except the SEC registration fee are estimated. The following table itemizes the expenses incurred by us in connection with the issuance and registration of the securities being registered hereunder.

SEC registration fee	\$	1,102
Legal fees and expenses	\$	150,000
Accounting fees and expenses	\$	30,000
Printing expenses	\$	10,000
Miscellaneous expenses	\$	8,898
Total	\$	200,000

Item 14. Indemnification of Officers and Directors.

Delaware law permits a Delaware corporation to include in its charter a provision limiting the liability of its directors and officers to the corporation and its stockholders for money damages except for liability resulting from (a) actual receipt of an improper benefit or profit in money, property or services or (b) active and deliberate dishonesty that is established by a final judgment and is material to the cause of action. Our charter contains a provision which eliminates our directors' and officers' liability to the maximum extent permitted by Delaware law.

Delaware law requires a Delaware corporation (unless its charter provides otherwise, which our charter does not) to indemnify a director or officer who has been successful in the defense of any proceeding to which he or she is made or threatened to be made a party by reason of his or her service in that capacity. Delaware law permits a Delaware corporation to indemnify its present and former directors and officers, among others, against judgments, penalties, fines, settlements and reasonable expenses actually incurred by them in connection with any proceeding to which they may be made or threatened to be made a party by reason of their service in those or other capacities unless it is established that: (a) the act or omission of the director or officer was material to the matter giving rise to the proceeding and (i) was committed in bad faith or (ii) was the result of active and deliberate dishonesty; (b) the director or officer actually received an improper personal benefit in money, property or services; or (c) in the case of any criminal proceeding, the director or officer had reasonable cause to believe that the act or omission was unlawful. However, under Delaware law, a Delaware corporation may not indemnify for an adverse judgment in a suit by or in the right of the corporation or for a judgment of liability on the basis that personal benefit was improperly received, unless in either case a court orders indemnification and then only for expenses. In addition, Delaware law permits a Delaware corporation to advance reasonable expenses to a director or officer upon the corporation's receipt of (a) a written affirmation by the director or officer of his or her good faith belief that he or she has met the standard of conduct necessary for indemnification by the corporation and (b) a written undertaking by him or her or on his or her behalf to repay the amount paid or reimbursed by the corporation if it is ultimately determined that the standard of conduct was not met.

Our charter authorizes us, to the maximum extent permitted by Delaware law, to obligate ourselves and our bylaws obligate us, to indemnify any present or former director or officer or any individual who, while a director or officer of our company and at our request, serves or has served as a director, officer, partner, trustee, member or manager of another corporation, real estate investment trust, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise and who is made or threatened to be made a party to the proceeding by reason of his or her service in that capacity from and against any claim or liability to which that individual may become subject or which that individual may incur by reason of his or her service in any of the foregoing capacities and to pay or reimburse his or her reasonable expenses in advance of final disposition of a proceeding. Our charter and bylaws also permit us to indemnify and advance expenses to any individual who served a predecessor of our company in any of the capacities described above and any employees or agents of our company or a predecessor of our company.

We have entered into indemnification agreements with each of our executive officers and directors whereby we have agreed to indemnify such executive officers and directors to the fullest extent permitted by Delaware law against all expenses and liabilities, subject to limited exceptions. These indemnification agreements also provide that upon an application for indemnity by an executive officer or director to a court of appropriate jurisdiction, such court may order us to indemnify such executive officer or director. In addition, our directors and officers are indemnified for specified liabilities and expenses pursuant to the operating agreement of Greenlane Holdings, LLC, our subsidiary and Operating Company.

Insofar as the foregoing provisions permit indemnification of directors, officer or persons controlling us for liability arising under the Securities Act, we have been informed that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Item 15. Recent Sales of Unregistered Securities.

None.

Item 16. Exhibits and Financial Statement Schedules.

The Exhibits to this registration statement are listed on the exhibit index, which appears elsewhere herein and is incorporated herein by reference.

Item 17. Undertakings.

- (a) 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 SEC 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.
 - (iii) To include 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), (1)(ii) and (1)(iii) above 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 SEC 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; *provided, however*, that paragraphs (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 Securities and Exchange 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, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. 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 first use, 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 date of first use.
- (5) That, for the purpose of determining liability of the undersigned Registrant under the Securities Act to any purchaser in the initial distribution of the securities, 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.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 Securities and Exchange Commission such indemnification is against public policy as expressed in the 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 Act and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

Exhibit No.	Description
1.1*	Form of Placement Agency Agreement by and between Greenlane Holdings, Inc. and A.G.P. / Alliance Global Partners.
3.1	Amended and Restated Certificate of Incorporation of Greenlane Holdings, Inc. (Incorporated by reference to Exhibit 3.1 to Greenlane's Quarterly Report on Form 10-Q, filed November 15, 2021).
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Greenlane Holdings, Inc., effective August 9, 2022 (Incorporated by reference to Exhibit 3.1 to Greenlane's Current Report on Form 8-K, filed on August 4, 2022).
3.3	Second Amended and Restated Bylaws of Greenlane Holdings, Inc. (Incorporated by reference to Exhibit 3.2 to Greenlane's Current Report on Form 8-K, filed April 25, 2019).
3.4	Amendment to the Second Amended and Restated Bylaws of Greenlane Holdings, Inc. (Incorporated by reference to Exhibit 3.1 to Greenlane's Current Report on Form 8-K, filed on April 12, 2023).
3.5	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Greenlane Holdings, Inc., effective June 5, 2023 (Incorporated by reference to Exhibit 3.1 to Greenlane's Current Report on Form 8-K, filed on June 2, 2023).

- [4.1 Form of Stock Certificate \(Incorporated by reference to Exhibit 4.1 to Greenlane’s Registration Statement on Form S-1/A, filed on April 8, 2019\).](#)
- [4.2 Form of Convertible Promissory Note \(Incorporated by reference to Exhibit 4.2 to Greenlane’s Registration Statement on Form S-1, filed on March 20, 2019\).](#)
- [4.3 Description of Registrant’s Securities registered pursuant to Section 12 of the Securities Exchange Act of 1934 \(Incorporated by reference to Exhibit 4.3 to Greenlane’s Annual Report on Form 10-K, filed on April 24, 2020\).](#)
- [4.4 Form of June 2022 Standard Warrant \(Incorporated by reference to Exhibit 4.1 to Greenlane’s Current Report on Form 8-K, filed on June 28, 2022\).](#)
- [4.5 Form of June 2022 Pre-Funded Warrant \(Incorporated by reference to Exhibit 4.2 to Greenlane’s Current Report on Form 8-K, filed June 28, 2022\).](#)
- [4.6 Form of October 2022 Standard Warrant \(Incorporated by reference to Exhibit 4.1 to Greenlane’s Current Report on Form 8-K, filed on November 1, 2022\).](#)
- [4.7 Form of October 2022 Pre-Funded Warrant \(Incorporated by reference to Exhibit 4.2 to Greenlane’s Current Report on Form 8-K, filed November 1, 2022\).](#)
- [4.8 Form of August 2021 Standard Warrant \(Incorporated by reference to Exhibit 4.1 to Greenlane’s Current Report on Form 8-K, filed August 10, 2021\).](#)
- [4.9 Form of August 2021 Pre-Funded Warrant \(Incorporated by reference to Exhibit 4.2 to Greenlane’s Current Report on Form 8-K, filed August 10, 2021\).](#)
- [4.10 Form of Assumed June 12, 2018 KushCo Warrant, dated as of August 31, 2021 \(Incorporated by reference to Exhibit 4.4 to Greenlane’s Quarterly Report on Form 10-Q, filed November 15, 2021\).](#)
- [4.11 Form of Assumed January 18, 2019 KushCo Warrant, dated as of August 31, 2021 \(Incorporated by reference to Exhibit 4.5 to Greenlane’s Quarterly Report on Form 10-Q, filed November 15, 2021\).](#)
- [4.12 Form of Assumed August 21, 2019 KushCo Warrant, dated as of August 31, 2021 \(Incorporated by reference to Exhibit 4.6 to Greenlane’s Quarterly Report on Form 10-Q, filed November 15, 2021\).](#)

Exhibit No.	Description
4.13	Form of Assumed September 30, 2019 KushCo Warrant, dated as of August 31, 2021 (Incorporated by reference to Exhibit 4.7 to Greenlane’s Quarterly Report on Form 10-Q, filed November 15, 2021).
4.14	Form of Assumed February 10, 2020 KushCo Warrant, dated as of August 31, 2021 (Incorporated by reference to Exhibit 4.8 to Greenlane’s Quarterly Report on Form 10-Q, filed November 15, 2021).
4.15	Form of Assumed February 24, 2021 KushCo Warrant, dated as of August 31, 2021 (Incorporated by reference to Exhibit 4.9 to Greenlane’s Quarterly Report on Form 10-Q, filed November 15, 2021).
4.16	Form of Stock Option Assumption Notice – KushCo Options (Incorporated by reference to Exhibit 99.2 to Greenlane’s Registration Statement on Form S-8, filed August 31, 2021).
4.17*	Form of June 2023 Standard Warrant.
4.18*	Form of June 2023 Pre-Funded Warrant.
4.19**	Form of Prior Warrant Amendment.
5.1*	Opinion of Morrison & Foerster LLP regarding the legality of the securities being registered.
10.1†	Form of Stock Option Agreement (Incorporated by reference to Exhibit 10.19 to Greenlane’s Registration Statement on Form S-1, filed on March 20, 2019).
10.2	Tax Receivable Agreement between Greenlane Holdings, Inc., Greenlane Holdings, LLC and the Members of Greenlane Holdings, LLC (Incorporated by reference to Exhibit 10.4 to Greenlane’s Current Report on Form 8-K, filed April 25, 2019).
10.3	Registration Rights Agreement between Greenlane Holdings, Inc. and the Original Members of Greenlane Holdings, LLC (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed April 25, 2019).
10.4	Fourth Amended and Restated Operating Agreement of Greenlane Holdings, LLC (Incorporated by reference to Exhibit 10.4 to Greenlane’s Annual Report on Form 10-K, filed March 31, 2022).
10.5	Risk Participation of ERC Claim Agreement, dated as of February 16, 2023 (Incorporated by reference to Exhibit 10.2 to Greenlane’s Quarterly Report on Form 10-Q, filed May 15, 2023).
10.6*	Form of June 2023 Securities Purchase Agreement.
10.7	Reorganization Agreement among Greenlane Holdings, Inc., Greenlane Holdings, LLC and the Members listed on the signature pages thereto (Incorporated by reference to Exhibit 10.3 to Greenlane’s Current Report on Form 8-K, filed April 25, 2019).
10.8	Purchase and Sale Agreement, dated as of August 16, 2022, by and between 1095 Broken Sound Pwky LLC and ASC Capital LLC (Incorporated by reference to Exhibit 10.3 to Greenlane’s Quarterly Report on Form 10-Q, filed November 14, 2022).
10.9	Form of Indemnification Agreement, by and between Greenlane Holdings, Inc. and each of its Directors and Officers (Incorporated by reference to Exhibit 10.2 to Greenlane’s Quarterly Report on Form 10-Q, filed November 16, 2020).

Exhibit No.	Description
<u>10.10†</u>	<u>Second Amended and Restated Greenlane Holdings, Inc. 2019 Equity Incentive Plan (Incorporated by reference to Exhibit 10.1 to Greenlane’s Registration Statement on Form S-8, filed August 31, 2022).</u>
<u>10.11</u>	<u>Contribution Agreement, dated as of February 20, 2018, by and among Greenlane Holdings, LLC (f/k/a Jacoby Holdings LLC), the Sellers named therein and Better Life Products, Inc., as Seller Representative (Incorporated by reference to Exhibit 10.10 to Greenlane’s Registration Statement on Form S-1, filed on March 20, 2019).</u>
<u>10.12</u>	<u>Contribution Agreement, dated as of January 4, 2019, by and among Greenlane Holdings, LLC, Pollen Gear Holdings, LLC and Pollen Gear LLC. (Incorporated by reference to Exhibit 10.18 to Greenlane’s Registration Statement on Form S-1, filed on March 20, 2019).</u>
<u>10.13</u>	<u>Form of August 2021 Securities Purchase Agreement (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed August 10, 2021).</u>
<u>10.14</u>	<u>Separation and General Release Agreement by and between Warehouse Goods LLC and Adam Schoenfeld, dated as of March 9, 2022 (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed on March 10, 2022).</u>
<u>10.15</u>	<u>Placement Agency Agreement, dated August 9, 2021 (Incorporated by reference to Exhibit 10.2 to Greenlane’s Current Report on Form 8-K, filed August 10, 2021).</u>
<u>10.16</u>	<u>Assignment and Assumption Agreement, dated as of November 5, 2018, by and between Jacoby & Co. Inc. and Warehouse Goods LLC, relating to Employment Agreement with Adam Schoenfeld (Incorporated by reference to Exhibit 10.17 to Greenlane’s Registration Statement on Form S-1, filed on March 20, 2019).</u>
<u>10.17†</u>	<u>Separation and General Release Agreement by and between Warehouse Goods LLC and Aaron LoCascio, dated as of December 30, 2021 (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed January 4, 2022).</u>
<u>10.18†</u>	<u>Employment Agreement by and between Warehouse Goods LLC and Nicholas Kovacevich, dated as of March 10, 2022 (Incorporated by reference to Exhibit 10.2 to Greenlane’s Current Report on Form 8-K, filed March 10, 2022).</u>
<u>10.19†</u>	<u>Separation and General Release Agreement by and between Warehouse Goods LLC and William Mote, dated as of May 16, 2022 (Incorporated by reference to Exhibit 10.4 to Greenlane’s Quarterly Report on Form 10-Q, filed May 16, 2022).</u>
<u>10.20</u>	<u>Form of June 2022 Securities Purchase Agreement (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed June 28, 2022).</u>
<u>10.21</u>	<u>Placement Agency Agreement, dated June 27, 2022 (Incorporated by reference to Exhibit 10.2 to Greenlane’s Current Report on Form 8-K, filed June 28, 2022).</u>
<u>10.22</u>	<u>Membership Interest Purchase Agreement, dated as of July 19, 2022, by and among Warehouse Goods LLC and Portofino Partners LLC (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed July 19, 2022).</u>
<u>10.23†</u>	<u>Separation and General Release Agreement by and between Warehouse Goods LLC and Rodrigo de Oliveira, dated as of August 12, 2022 (Incorporated by reference to Exhibit 10.4 to Greenlane’s Quarterly Report on Form 10-Q, filed August 15, 2022).</u>

Exhibit No.	Description
<u>10.24†</u>	<u>Further Amended and Restated Employment Agreement by and between Warehouse Goods LLC and Craig Snyder, dated as of January 1, 2023 (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed January 6, 2023).</u>
<u>10.25</u>	<u>Form of October 2022 Securities Purchase Agreement (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed November 1, 2022).</u>
<u>10.26</u>	<u>Placement Agency Agreement, dated October 27, 2022 (Incorporated by reference to Exhibit 10.2 to Greenlane’s Current Report on Form 8-K, filed November 1, 2022).</u>
<u>10.27†</u>	<u>Amended and Restated Employment Agreement by and between Warehouse Goods LLC and Nicholas Kovacevich, dated as of October 6, 2022 (Incorporated by reference to Exhibit 10.1 to Greenlane’s Current Report on Form 8-K, filed October 7, 2022).</u>
<u>10.28</u>	<u>Loan and Security Agreement, dated as of August 8, 2022, by and between Greenlane Holdings, Inc., the subsidiaries of Greenlane Holdings, Inc. named therein as guarantors, the parties thereto from time to time as lenders, and WhiteHawk Capital Partners LP, as the agent for the Lenders (Incorporated by reference to Exhibit 10.4 to Greenlane’s Quarterly Report on Form 10-Q, filed November 14, 2022).</u>
<u>10.29</u>	<u>Form of Guaranty Agreement by and between Greenlane Holdings, Inc., the subsidiaries of Greenlane Holdings, Inc. named therein as guarantors, the parties thereto from time to time as Lenders, and WhiteHawk Capital Partners LP, as the agent for the Lenders (included in Exhibit 10.28).</u>
<u>10.30</u>	<u>Form of Pledge Agreement by and between Greenlane Holdings, Inc., the subsidiaries of Greenlane Holdings, Inc. named therein as guarantors, the parties thereto from time to time as Lenders, and WhiteHawk Capital Partners LP, as the agent for the Lenders (included in Exhibit 10.28).</u>
<u>10.31</u>	<u>Form of U.S. Intellectual Property Security Agreement by and between Greenlane Holdings, Inc., the subsidiaries of Greenlane Holdings, Inc. named therein as guarantors, the parties thereto from time to time as Lenders, and WhiteHawk Capital Partners LP, as the agent for the Lenders (included in Exhibit 10.28).</u>
<u>10.32</u>	<u>Form of Canadian Security Agreement by and between Greenlane Holdings, Inc., the subsidiaries of Greenlane Holdings, Inc. named therein as guarantors, the parties thereto from time to time as Lenders, and WhiteHawk Capital Partners LP, as the agent for the Lenders (included in Exhibit 10.28).</u>

10.33	Form of Canadian Intellectual Property Security Agreement, dated as of August 8, 2022, by and between Greenlane Holdings, Inc., the subsidiaries of Greenlane Holdings, Inc. named therein as guarantors, the parties thereto from time to time as Lenders, and WhiteHawk Capital Partners LP, as the agent for the Lenders (included in Exhibit 10.28).
10.34†	Employment Agreement by and between Warehouse Goods LLC and Lana Reeve, dated as of December 6, 2022 (Incorporated by reference to Exhibit 10.1 to Greenlane's Current Report on Form 8-K, filed December 8, 2022).
21.1	List of subsidiaries of Greenlane Holdings, Inc. (Incorporated by reference to Exhibit 21.1 to Greenlane's Annual Report on Form 10-K, filed on March 31, 2023).
23.1*	Consent of Marcum LLP

Exhibit No.

Description

23.3*	Consent of Morrison & Foerster LLP (included in Exhibit 5.1)
24.1	Powers of Attorney (included on signature the signature page to the initial filing of this Registration Statement).
107*	Filing Fee Table

* Filed herewith.

† Indicates a management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Boca Raton, State of Florida, on June 23, 2023.

GREENLANE HOLDINGS, INC.

By: /s/ Craig Snyder
Name: Craig Snyder
Title: Chief Executive Officer

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>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Craig Snyder</u> Craig Snyder	Chief Executive Officer and Director (Principal Executive Officer)	June 23, 2023
<u>/s/ Lana Reeve</u> Lana Reeve	Chief Financial and Legal Officer (Principal Financial and Accounting Officer)	June 23, 2023
<u>*</u> Donald Hunter	Chairman of the Board of Directors	June 23, 2023
<u>*</u> Renah Persofsky	Director	June 23, 2023
<u>*</u> Aaron LoCascio	Director	June 23, 2023
<u>*</u> Jeff Uttz	Director	June 23, 2023
<u>* By: /s/ Craig Snyder</u> Craig Snyder Attorney-in-fact		

Greenlane Holdings Inc.
 1095 Broken Sound Parkway, Suite 100
 Boca Raton, FL 33487
 Attn: Chief Executive Officer

Dear Mr. Snyder:

This letter (the “**Agreement**”) constitutes the agreement between A.G.P./Alliance Global Partners, as placement agent (the “**Placement Agent**”), and Greenlane Holdings, Inc., a company incorporated under the laws of the State of Delaware (the “**Company**”), that the Placement Agent shall serve as the placement agent for the Company, on a “reasonable best efforts” basis, in connection with the proposed placement (the “**Placement**”) of units, with each unit consisting of a combination of (i) one share (a “**Share**” and, collectively, the “**Shares**”) of the Company’s Class A common stock, par value \$0.01 per share (the “**Common Stock**”), (ii) one warrant to purchase a share of Common Stock of the Company (the “**Common Warrants**”), and/or (iii) pre-funded warrants to purchase one share of Common Stock (the “**Pre-Funded Warrants**”, and together with the Common Warrants, the “**Warrants**,” and collectively with the Shares, the “**Securities**”), depending on the beneficial ownership percentage of the purchaser of the Common Stock following its purchase. The Securities shall be offered and sold under the Company’s registration statement on Form S-1 (File No. 333-269576) (the “**Registration Statement**”). The Securities actually placed by the Placement Agent are referred to herein as the “**Placement Agent Securities**.” The terms of the Placement shall be mutually agreed upon by the Company and the purchasers (each, a “**Purchaser**” and collectively, the “**Purchasers**”); *provided, however*, that nothing herein shall obligate the Company to issue any Securities or complete the Placement. The Company expressly acknowledges and agrees that the Placement Agent’s obligations hereunder are on a reasonable best efforts basis only and that the execution of this Agreement does not constitute a commitment by the Placement Agent to purchase the Securities and does not ensure the successful placement of the Securities or any portion thereof or the success of the Placement Agent with respect to securing any other financing on behalf of the Company. The Placement Agent may retain other brokers or dealers to act as sub-agents or selected-dealers on its behalf in connection with the Placement. Certain affiliates of the Placement Agent may participate in the Placement by purchasing some of the Placement Agent Securities. The sale of Placement Agent Securities to any Purchaser will be evidenced by a securities purchase agreement (the “**Purchase Agreement**”) between the Company and such Purchaser, in a form reasonably acceptable to the Company and the Purchaser. Capitalized terms that are not otherwise defined herein have the meanings given to such terms in the Purchase Agreement. Prior to the signing of any Purchase Agreement, officers of the Company will be available to answer inquiries from prospective Purchasers.

SECTION 1. REPRESENTATIONS AND WARRANTIES OF THE COMPANY; COVENANTS OF THE COMPANY.

A. Representations of the Company. With respect to the Placement Agent Securities, each of the representations and warranties (together with any related disclosure schedules thereto) and covenants made by the Company to the Purchasers in the Purchase Agreement in connection with the Placement, is hereby incorporated herein by reference into this Agreement (as though fully restated herein) and is, as of the date of this Agreement and as of the Closing Date, hereby made to, and in favor of, the Placement Agent. In addition to the foregoing, the Company represents and warrants that there are no affiliations with any FINRA member firm among the Company’s officers, directors or, to the knowledge of the Company, any five percent (5.0%) or greater stockholder of the Company, except as set forth in the Purchase Agreement and SEC Reports.

B. Covenants of the Company. The Company covenants and agrees to continue to retain (i) a firm of independent PCAOB registered public accountants for a period of at least three (3) years after the Closing Date and (ii) a competent transfer agent with respect to the Placement Agent Securities for a period of three (3) years after the Closing Date. Furthermore, the Company covenants and agrees that for ninety (90) days after the closing date of the Placement, the Company shall be restricted from issuing certain securities pursuant to the terms of Section 2.6 contained in Annex II to the Purchase Agreement.

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SECTION 2. REPRESENTATIONS OF THE PLACEMENT AGENT. The Placement Agent represents and warrants that it (i) is a member in good standing of FINRA, (ii) is registered as a broker/dealer under the Exchange Act, (iii) is licensed as a broker/dealer under the laws of the United States of America, applicable to the offers and sales of the Placement Agent Securities by the Placement Agent, (iv) is and will be a corporate body validly existing under the laws of its place of incorporation, (v) has full power and authority to enter into and perform its obligations under this Agreement. The Placement Agent will immediately notify the Company in writing of any change in its status with respect to subsections (i) through (v) above. The Placement Agent covenants that it will use its reasonable best efforts to conduct the Placement hereunder in compliance with the provisions of this Agreement and the requirements of applicable law.

SECTION 3. COMPENSATION. In consideration of the services to be provided for hereunder, the Company shall pay to the Placement Agent and/or its respective designees the following compensation:

A. a cash fee of seven percent (7.0%) of the aggregate gross proceeds raised from the sale of the Placement Securities (the “**Cash Fee**”); the Cash Fee shall be paid on the Closing Date.

B. The Company shall not be required to pay, compensate or reimburse the Placement Agent any fees or expenses except for the Cash Fee, \$75,000 for accountable expenses related to legal fees of counsel to the Placement Agent, and a non-accountable expense allowance up to \$25,000. The Placement Agent reserves the right to reduce any item of compensation or adjust the terms thereof as specified herein in the event that a determination shall be made by FINRA to the effect that the Placement Agent’s aggregate compensation is in excess of FINRA Rules or that the terms thereof require adjustment.

SECTION 4. INDEMNIFICATION.

A. To the extent permitted by law, with respect to the Placement Agent Securities, the Company will indemnify the Placement Agent and its affiliates, stockholders, directors, officers, employees, members and controlling persons (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) against all losses, claims, damages, expenses and liabilities, as the same are incurred (including the reasonable fees and expenses of counsel), relating to or arising out of its activities hereunder or pursuant to this Agreement, except to the extent that any losses, claims, damages, expenses or liabilities (or actions in respect thereof) are found in a final judgment (not subject to appeal) by a court of law to have resulted primarily and directly from a Placement Agent’s willful misconduct or gross negligence in performing the services described herein.

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B. Promptly after receipt by the Placement Agent of notice of any claim or the commencement of any action or proceeding with respect to which the Placement Agent is entitled to indemnity hereunder, the Placement Agent will notify the Company in writing of such claim or of the commencement of such action or proceeding, but failure to so notify the Company shall not relieve the Company from any obligation it may have hereunder, except and only to the extent such failure results in the forfeiture by the Company of substantial rights and defenses. If the Company so elects or is requested by the Placement Agent, the Company will assume the defense of such

action or proceeding and will employ counsel reasonably satisfactory to the Placement Agent and will pay the fees and expenses of such counsel. Notwithstanding the preceding sentence, the Placement Agent will be entitled to employ its own counsel separate from counsel for the Company and from any other party in such action if counsel for the Placement Agent reasonably determines that it would be inappropriate under the applicable rules of professional responsibility for the same counsel to represent both the Company and the Placement Agent. In such event, the reasonable fees and disbursements of no more than one such separate counsel will be paid by the Company, in addition to fees of local counsel. The Company will have the right to settle the claim or proceeding, provided that the Company will not settle any such claim, action or proceeding without the prior written consent of the Placement Agent, which will not be unreasonably withheld.

C. The Company agrees to notify the Placement Agent promptly of the assertion against it or any other person of any claim or the commencement of any action or proceeding relating to a transaction contemplated by this Agreement.

D. If for any reason the foregoing indemnity is unavailable to the Placement Agent or insufficient to hold the Placement Agent harmless, then the Company shall contribute to the amount paid or payable by the Placement Agent as a result of such losses, claims, damages or liabilities in such proportion as is appropriate to reflect not only the relative benefits received by the Company on the one hand and the Placement Agent on the other, but also the relative fault of the Company on the one hand and the Placement Agent on the other that resulted in such losses, claims, damages or liabilities, as well as any relevant equitable considerations. The amounts paid or payable by a party in respect of losses, claims, damages and liabilities referred to above shall be deemed to include any legal or other fees and expenses incurred in defending any litigation, proceeding or other action or claim. Notwithstanding the provisions hereof, the liable Placement Agent's share of the liability hereunder shall not be in excess of the amount of fees actually received, or to be received, by the Placement Agent under this Agreement (excluding any amounts received as reimbursement of expenses incurred by the Placement Agent).

E. These indemnification provisions shall remain in full force and effect whether or not the transaction contemplated by this Agreement is completed and shall survive the termination of this Agreement, and shall be in addition to any liability that the Company might otherwise have to any indemnified party under this Agreement or otherwise.

SECTION 5. ENGAGEMENT TERM. The Placement Agent's engagement hereunder will be until the earlier of (i) August 5, 2023 and (ii) the Closing Date. The date of termination of this Agreement is referred to herein as the "**Termination Date**." In the event, however, in the course of the Placement Agent's performance of due diligence it deems, it necessary to terminate the engagement, the Placement Agent may do so prior to the Termination Date. The Company may elect to terminate the engagement hereunder for any reason prior to the Termination Date but will remain responsible for fees pursuant to Section 3 hereof with respect to the Placement Agent Securities if sold in the Placement. Notwithstanding anything to the contrary contained herein, the provisions concerning the Company's obligation to pay any fees actually earned pursuant to Section 3 hereof and the provisions concerning confidentiality, indemnification and contribution contained herein will survive any expiration or termination of this Agreement. If this Agreement is terminated prior to the completion of the Placement, all fees due to the Placement Agent shall be paid by the Company to the Placement Agent on or before the Termination Date (in the event such fees are earned or owed as of the Termination Date). The Placement Agent agrees not to use any confidential information concerning the Company provided to the Placement Agent by the Company for any purposes other than those contemplated under this Agreement.

SECTION 6. COMPANY LOCK-UP AGREEMENTS. The Company, on behalf of itself and any successor entity, agrees that, without the prior written consent of the Placement Agent and Purchasers, it will not, for a period beginning on the date of this Agreement and ending on the date that is the ninetieth 90th day after the date of this Agreement (the "**Lock-Up Period**"), (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company; (ii) file or cause to be filed any registration statement with the Commission relating to the offering of any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company; (iii) complete any offering of debt securities of the Company, other than entering into a line of credit or asset-backed loan with a traditional bank; or (iv) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of capital stock of the Company, whether any such transaction described in clause (i), (ii), (iii) or (iv) above is to be settled by delivery of shares of capital stock of the Company or such other securities, in cash or otherwise.

The restrictions contained in this Section 6(a) (collectively, the "**Restrictions**") shall not apply to (i) the Securities, (ii) the issuance by the Company of securities of the Company pursuant to any documents, agreements or securities existing or outstanding as of the Closing Date, provided that such existing or outstanding documents, agreements or securities have not been amended since the date of this Agreement to increase the number of securities or to decrease the exercise price, exchange price or conversion price of securities (other than in connection with stock splits or combinations or otherwise in accordance with their terms at the time of the Closing Date) or to extend the term of such documents, agreements or securities, (iii) the issuance by the Company of any securities of the Company under any equity compensation plan of the Company for services rendered to the Company; or (iv) the issuance of any securities of the Company in connection with a merger, joint venture, licensing arrangement or any other similar non-capital raising transaction, 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, provided that in each of (ii) through (iv) above, the securities shall be restricted from sale during the entire Lock-Up Period.

SECTION 7. PLACEMENT AGENT INFORMATION. The Company agrees that any information or advice rendered by the Placement Agent in connection with this engagement is for the confidential use of the Company only in their evaluation of the Placement and, except as otherwise required by law, the Company will not disclose or otherwise refer to the advice or information in any manner without each of the Placement Agent's prior written consent.

SECTION 8. NO FIDUCIARY RELATIONSHIP. This Agreement does not create, and shall not be construed as creating rights enforceable by any person or entity not a party hereto, except those entitled hereto by virtue of the indemnification provisions hereof. The Company acknowledges and agrees that the Placement Agent are not and shall not be construed as a fiduciary of the Company and shall have no duties or liabilities to the equity holders or the creditors of the Company or any other person by virtue of this Agreement or the retention of the Placement Agent hereunder, all of which are hereby expressly waived.

SECTION 9. CLOSING. The obligations of the Placement Agent, and the closing of the sale of the Placement Agent Securities hereunder are subject to the accuracy, when made and on the Closing Date, of the representations and warranties on the part of the Company contained herein and in the Purchase Agreement, to the performance by the Company of its obligations hereunder, and to each of the following additional terms and conditions, except as otherwise disclosed to and acknowledged and waived by the Placement Agent:

A. All corporate proceedings and other legal matters incident to the authorization, form, execution, delivery and validity of each of this Agreement, the Placement Agent Securities, and all other legal matters relating to this Agreement and the transactions contemplated hereby with respect to the Placement Agent Securities shall be reasonably satisfactory in all material respects to the Placement Agent.

B. The Placement Agent shall have received from outside counsel to the Company such counsel's written opinion with respect to the Placement Agent Securities, addressed to the Placement Agent and the Purchasers and dated as of the Closing Date, in form and substance reasonably satisfactory to the Placement Agent.

C. On the date hereof, the Placement Agent has received a "comfort" letter from [Marcum LLP], or such other independent PCAOB registered public accounting firm of the Company, addressed to the Placement Agent, dated as of the date hereof and in form and substance satisfactory to the Placement Agent and the Placement Agent's counsel (the "**Initial Comfort Letter**").

D. On the Closing Date, the Placement Agent has received a “bring-down” letter from [Marcum LLP], or such other independent registered public accounting firm of the Company, dated as of the Closing Date and in form and substance satisfactory to the Placement Agent and the Placement Agent’s counsel, reaffirming the statements made in the Initial Comfort Letter and updating the procedures described in the Initial Comfort Letter to a specified date not more than three days prior to the Closing Date.

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E. The Placement Agent has received customary certificates of the Company’s executive officers (the “**Officer’s Certificate**”) as to the accuracy of the representations and warranties contained in the Purchase Agreement, and a certificate of the Company’s secretary (the “**Secretary’s Certificate**”) certifying (i) that the Company’s organizational documents are true and complete, have not been modified and are in full force and effect; and (ii) that the resolutions of the Company’s Board of Directors relating to the Placement are in full force and effect and have not been modified. Each of the Officer’s Certificate and Secretary’s Certificate must be dated as of the Closing Date, and all documents referenced in the Secretary’s Certificate must be attached thereto.

F. The Common Stock shall be registered under the Exchange Act and, as of the Closing Date, the Placement Agent Securities shall be listed and admitted and authorized for trading on the Trading Market or other applicable U.S. national exchange and satisfactory evidence of such action shall have been provided to the Placement Agent. The Company shall have taken no action designed to, or likely to have the effect of terminating the registration of the Common Stock under the Exchange Act or removing or suspending from trading the Common Stock from the Trading Market or other applicable U.S. national exchange, nor has the Company received any information suggesting that the Commission or the Trading Market or other U.S. applicable national exchange is contemplating terminating such registration or listing.

G. No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental agency or body which would, as of the Closing Date, prevent the issuance or sale of the Placement Agent Securities or materially and adversely affect or potentially and adversely affect the business or operations of the Company; and no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued as of the Closing Date which would prevent the issuance or sale of the Placement Agent Securities or materially and adversely affect or potentially and adversely affect the business or operations of the Company.

H. The Company shall have entered into a Purchase Agreement with each of the Purchasers of the Placement Agent Securities and such agreements shall be in full force and effect and shall contain representations, warranties and covenants of the Company as agreed upon between the Company and the Purchasers.

I. FINRA shall have raised no objection to the fairness and reasonableness of the terms and arrangements of this Agreement. In addition, the Company shall, if requested by the Placement Agent, make or authorize Placement Agent’s counsel to make on the Company’s behalf, any filing with the FINRA Corporate Financing Department pursuant to FINRA Rule 5110, if applicable, with respect to the Placement and pay all filing fees required in connection therewith.

J. The Company is an “experienced issuer” as such term is defined in FINRA Rule 5110 and FINRA shall have raised no objection to the fairness and reasonableness of the terms and arrangements of this Agreement.

If any of the conditions specified in this Section 8 shall not have been fulfilled when and as required by this Agreement, all obligations of the Placement Agent hereunder may be cancelled by the Placement Agent at, or at any time prior to, the Closing Date. Notice of such cancellation shall be given to the Company in writing or orally. Any such oral notice shall be confirmed promptly thereafter in writing.

SECTION 10. GOVERNING LAW. This Agreement will be governed by, and construed in accordance with, the laws of the State of New York applicable to agreements made and to be performed entirely in such State. This Agreement may not be assigned by either party without the prior written consent of the other party. This Agreement shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns. Any right to trial by jury with respect to any dispute arising under this Agreement or any transaction or conduct in connection herewith is waived. Any dispute arising under this Agreement may be brought into the courts of the State of New York or into the Federal Court located in New York, New York and, by execution and delivery of this Agreement, the Company hereby accepts for itself and in respect of its property, generally and unconditionally, the jurisdiction of aforesaid courts. Each party hereto hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by delivering a copy thereof via 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 manner permitted by law. If either party shall commence an action or proceeding to enforce any provisions of this Agreement, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorney’s fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

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SECTION 11. ENTIRE AGREEMENT/MISCELLANEOUS. This Agreement embodies the entire agreement and understanding between the parties hereto, and supersedes all prior agreements and understandings, relating to the subject matter hereof. If any provision of this Agreement is determined to be invalid or unenforceable in any respect, such determination will not affect such provision in any other respect or any other provision of this Agreement, which will remain in full force and effect. This Agreement may not be amended or otherwise modified or waived except by an instrument in writing signed by the Placement Agent and the Company. The representations, warranties, agreements and covenants contained herein shall survive the Closing Date of the Placement and delivery of the Placement Agent Securities. 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 the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or a .pdf format 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.

SECTION 12. 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 date of transmission, if such notice or communication is sent to the email address specified on the signature pages attached hereto prior to 6:30 p.m. (New York City time) on a business day, (b) the next business day after the date of transmission, if such notice or communication is sent to the email address on the signature pages attached hereto on a day that is not a business day or later than 6:30 p.m. (New York City time) on any business day, (c) the third business day following the date of mailing, if sent by U.S. internationally recognized air 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 hereto.

SECTION 13. PRESS ANNOUNCEMENTS. The Company agrees that the Placement Agent shall, on and after the Closing Date, have the right to reference the Placement and the Placement Agent’s role in connection therewith in the Placement Agent’s marketing materials and on its website and to place advertisements in financial and other newspapers and journals, in each case at its own expense.

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Please confirm that the foregoing correctly sets forth our agreement by signing and returning to the Placement Agents the enclosed copy of this Agreement.

Very truly yours,

A.G.P./ALLIANCE GLOBAL PARTNERS

By: _____
Name: Thomas Higgins
Title: Managing Director

Address for notice:

590 Madison Avenue, 28th Floor
New York, New York 10022
Attn: Thomas Higgins
Email: thiggins@allianceg.com

[Signature Page to Placement Agency Agreement.]

Accepted and Agreed to as of
the date first written above:

GREENLANE HOLDINGS, INC.

By: _____
Name: Craig Snyder
Title: Chief Executive Officer

Address for notice:

1095 Broken Sound Parkway, Suite 100
Boca Raton, FL
Attn: Chief Financial and Legal Officer
Email: lana.reeve@greenlane.com

[Signature Page to Placement Agency Agreement.]

COMMON STOCK PURCHASE WARRANT

Greenlane Holdings, Inc.

Warrant Shares: _____

Initial Exercise Date: June [●], 2023

Issue Date: June [●], 2023

THIS 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 June [●], 2023 the “Initial Exercise Date”) and on or prior to 5:00 p.m. (New York City time) on June [●], 2028 (the “Termination Date”) but not thereafter, to subscribe for and purchase from Greenlane Holdings, Inc., a Delaware corporation (the “Company”), up to _____ shares of Class A common stock, par value \$0.01 per share (the “Common Stock”) (as subject to adjustment hereunder, the “Warrant Shares”). 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. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Securities Purchase Agreement (the “Purchase Agreement”), dated June [●], 2023, among the Company and the purchasers signatory thereto.

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 as **Exhibit A** (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 number of 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, at which time, 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 purchasable hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder by the number of Warrant Shares equal to the applicable number of Warrant Shares purchased in connection with such partial exercise. **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) Trading 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. Notwithstanding anything to the contrary set forth herein, 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 only 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) 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. (“Bloomberg”) 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 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).

“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 (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 VWAP 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 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 Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Trading Day” means any day on which the Trading Market is open for trading, including any day on which the Trading Market is open for trading for a period of time less than the customary time.

“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 (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 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 Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

(d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted 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 the Warrant Shares, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares set forth in the Notice of Exercise to the address specified by the Holder in such 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 delivery of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the third Trading Day after the Warrant Share Delivery Date) 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 (the "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 9:00 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, or cause to be delivered, 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, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by such Warrant Share Delivery Date. **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 will be less than the amount stated on the face hereof.**

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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 Warrant Shares 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 shares of Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of Warrants 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 satisfactory to the Company with respect to 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 Warrant Shares upon exercise of the Warrant as required pursuant to the terms hereof.

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v. No Fractional Shares or Scrip. No fractional Warrant Shares or scrip representing fractional Warrant 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 and in lieu of the issuance of such fractional Warrant Share, either (i) pay cash in an amount equal to such fraction multiplied by the Exercise Price or (ii) round up to the next whole Warrant Share.

vi. Charges, Taxes and Expenses. The issuance and delivery 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, the Notice of Exercise shall be accompanied by the Assignment Form, attached hereto as **Exhibit B**, 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 and this Warrant shall be surrendered to the Company and, if any portion of this Warrant remains unexercised, a new Warrant in the form hereof shall be delivered to the assignee. 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.

(c) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise all or any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance upon exercise as set forth on the applicable Notice of Exercise, the Holder (together with (i) the Holder's Affiliates, (ii) any other Persons acting as a group together with the Holder or any of the Holder's Affiliates, and (iii) any other Persons whose beneficial ownership of the shares of Common Stock would or could be aggregated with the Holder's for the purposes of Section 13(d) (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 the Warrant Shares 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 Common Stock outstanding immediately after giving effect to the issuance of Warrant Shares 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 Common Stock outstanding immediately after giving effect to the issuance of Warrant Shares 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 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 Warrant Shares 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 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 remains 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) [RESERVED]

(c) 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 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 and of which the denominator shall be the number of shares of Common Stock outstanding immediately before 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, 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).

(d) 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).

(c) **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 (or any Subsidiary), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of the Company's 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 shares of Common Stock or more than 50% or more of the voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of shares of Common Stock or any compulsory share exchange pursuant to which the shares of Common Stock are 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 or more than 50% of the voting power of the common equity of the Company (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 thirty (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, as described below, an amount of consideration 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. The consideration paid to the Holder from the Company or any Successor Entity shall be the same type or form of consideration (and in the same proportion), valued 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; provided further, that if holders of Common Stock of the Company are not offered or paid any consideration in such Fundamental Transaction, such holders of Common Stock will be deemed to have received shares of the Successor Entity (which Successor Entity may be the Company following such Fundamental Transaction) in such 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 of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of (1) the 30 day volatility, (2) the 100 day volatility or (3) the 365 day volatility, each of clauses (1)-(3) as obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the public announcement of the applicable contemplated Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the highest VWAP during the period beginning on the Trading Day immediately preceding the public announcement of the applicable contemplated Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Trading Day of the Holder's request pursuant to this Section 3(c) and (D) a remaining option time equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date and (E) a zero cost of borrow. 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 and the other Transaction Documents in accordance with the provisions of this Section 3(e) pursuant to written agreements in form and substance reasonably satisfactory to the Holder 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 and the other Transaction Documents 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 and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Company herein.

(f) **Calculations.** All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share of Common Stock, 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.

(g) **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 declares a dividend (or any other distribution in whatever form) on the shares of Common Stock, (B) the Company declares a special nonrecurring cash dividend on or a redemption of the shares of Common Stock, (C) the Company authorizes the granting to all holders of the shares of 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 shareholders of the Company is required in connection with a Fundamental Transaction, or (E) the Company authorizes 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 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

(h) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market, the Company may at any time while this Warrant is outstanding, 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 in its sole discretion.

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 as **Exhibit B** 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. The 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 Trading Day, then such action may be taken or such right may be exercised on the next succeeding Trading Day.

(d) Authorized Shares. The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued shares of Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares underlying 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, and the Warrant Shares, delivered, 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 underlying this Warrant, 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 shares of Common Stock 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 shares of Common Stock 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) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Purchase Agreement.

(f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and if 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 or the Purchase Agreement, 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 notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Purchase Agreement.

(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 share of Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

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(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)

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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.

GREENLANE HOLDINGS, INC.

By: _____
Name:
Title:

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EXHIBIT A

NOTICE OF EXERCISE

TO: GREENLANE HOLDINGS, 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

“ if permitted 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 Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory

Title of Authorized Signature:

Date

EXHIBIT B

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

**PRE-FUNDED WARRANT
TO PURCHASE SHARES OF COMMON STOCK**

Greenlane Holdings, Inc.

Warrant Shares: _____

Initial Exercise Date: June [●], 2023

THIS PRE-FUNDED WARRANT TO PURCHASE SHARES OF COMMON STOCK (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 **Greenlane Holdings, Inc.**, a Delaware corporation (the “Company”), up to _____ shares of Class A common stock, par value \$0.01 per share (the “Common Stock”) (as subject to adjustment hereunder, the “Warrant Shares”). 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. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Securities Purchase Agreement (the “Purchase Agreement”), dated June [●], 2023, among the Company and the purchasers signatory thereto.

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 as **Exhibit A** (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 number of 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 purchasable hereunder and the Warrant has been exercised in full, at which time 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 purchasable hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder by the number of Warrant Shares equal to the applicable number of Warrant Shares purchased in connection with such partial exercise. 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) Trading Day of receipt of such notice. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise delivered on or prior to 9:00 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, or cause to be delivered, 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, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by such Warrant Share Delivery Date. **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 will 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 \$0.0001 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 \$0.0001 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, including in the event this Warrant shall not have been exercised prior to the Termination Date. The remaining unpaid exercise price per Warrant Share under this Warrant shall be \$0.0001, subject to adjustment hereunder (the “Exercise Price”).

(c) Cashless Exercise. Notwithstanding anything to the contrary set forth herein, 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 only 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) 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. (“Bloomberg”) 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 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, 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).

“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 (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 VWAP 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 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 Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Trading Day” means any day on which the Trading Market is open for trading, including any day on which the Trading Market is open for trading for a period of time less than the customary time.

“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 (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 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 Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

Notwithstanding anything herein to the contrary, on the Termination Date, this Warrant shall be automatically exercised via cashless exercise pursuant 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 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 the Warrant Shares, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares set forth in the Notice of Exercise to the address specified by the Holder in such 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 third Trading Day after the Warrant Share Delivery Date) 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 (the “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.

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. Except in connection with an exercise on the Initial Exercise Date, 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 Warrant Shares 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 shares of Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of Warrants 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 satisfactory to the Company with respect to 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 Warrant Shares upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional Warrant Shares or scrip representing fractional Warrant Shares shall be issued upon the exercise of this Warrant. As to any fraction of a Warrant Share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election and in lieu of the issuance of such fractional Warrant Share, either (i) pay cash in an amount equal to such fraction multiplied by the Exercise Price or (ii) round up to the next whole Warrant Share.

vi. Charges, Taxes and Expenses. The issuance and delivery 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, the Notice of Exercise shall be accompanied by the Assignment Form, attached hereto as **Exhibit B**, 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 and this Warrant shall be surrendered to the Company and, if any portion of this Warrant remains unexercised, a new Warrant in the form hereof shall be delivered to the assignee. 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.

(c) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise all or any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance upon exercise as set forth on the applicable Notice of Exercise, the Holder (together with (i) the Holder's Affiliates, (ii) any other Persons acting as a group together with the Holder or any of the Holder's Affiliates, and (iii) any other Persons whose beneficial ownership of the shares of Common Stock would or could be aggregated with the Holder's for the purposes of Section 13(d) (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 the Warrant Shares 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 Common Stock outstanding immediately after giving effect to the issuance of Warrant Shares 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 Common Stock outstanding immediately after giving effect to the issuance of Warrant Shares 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 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 Warrant Shares 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 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 remains 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) [RESERVED]

(c) 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 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).

(d) 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).

(c) 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 (or any Subsidiary), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of the Company's 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 shares of Common Stock or more than 50% or more of the voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of shares of Common Stock or any compulsory share exchange pursuant to which the shares of Common Stock are 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 or more than 50% of the voting power of the common equity of the Company (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 and the other Transaction Documents in accordance with the provisions of this Section 3(e) 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 and the other Transaction Documents 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 and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Company herein.

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(f) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share of Common Stock, 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.

(g) 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 declares a dividend (or any other distribution in whatever form) on the shares of Common Stock, (B) the Company declares a special nonrecurring cash dividend on or a redemption of the shares of Common Stock, (C) the Company authorizes the granting to all holders of the shares of 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 shareholders of the Company is required in connection with a Fundamental Transaction, or (E) the Company authorizes 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 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.

(h) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market, the Company may at any time while this Warrant is outstanding, 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 in its sole discretion.

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(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 as Exhibit B 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. The 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.

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(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 Trading Day, then such action may be taken or such right may be exercised on the next succeeding Trading Day.

(d) Authorized Shares. The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued shares of Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares underlying 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, and the Warrant Shares, delivered, 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 underlying this Warrant, 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 shares of Common Stock 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 shares of Common Stock 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) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Purchase Agreement.

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

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(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 or the Purchase Agreement, 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 notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Purchase Agreement.

(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 share of 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)

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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.

GREENLANE HOLDINGS, INC.

By: _____
Name: _____
Title: _____

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EXHIBIT A

NOTICE OF EXERCISE

TO: GREENLANE HOLDINGS, 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

.. if permitted 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 Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory

Title of Authorized Signatory:

Date

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EXHIBIT B

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

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2100 L STREET, NW
SUITE 900
WASHINGTON, D.C.
20037

TELEPHONE: 202.887.1500
FACSIMILE: 202.887.0763

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morrison & foerster llp

austin, beijing, berlin, boston,
brussels, denver, hong kong, london,
los angeles, new york, palo alto, san
diego, san francisco, shanghai,
singapore, tokyo, washington, d.c.

June 23, 2023

Board of Directors
Greenlane Holdings, Inc.
1095 Broken Sound Parkway, Suite 100
Boca Raton, Florida 33487

Re: Greenlane Holdings, Inc. - Proposed Sale of Class A Common Stock and Warrants to Purchase Shares of Class A Common Stock under Registration Statement on Form S-1 (File No. 333-269576)

Ladies and Gentlemen:

We have acted as counsel to Greenlane Holdings, Inc., a Delaware corporation (the "Company"), in connection with its registration statement on Form S-1, as amended (the "Registration Statement"), filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration under the Securities Act of the issuance of up to 5,025,125 units ("Units"), each consisting of (x) one share (each a "Share") and, collectively, the "Shares") of the Company's Class A common stock, par value \$0.01 per share (the "Class A common stock") or one pre-funded warrant (each a "Pre-Funded Warrant") and, collectively, the "Pre-Funded Warrants") and (y) two warrants to purchase one share of Class A common stock (each a "Standard Warrant") and collectively, the "Standard Warrants" and, together with the Pre-Funded Warrants, the "Warrants"), as specified in the Registration Statement (File No. 333-269576). The Shares are to be sold by the Company pursuant to the proposed form of Placement Agency Agreement by and between the Company and A.G.P./Alliance Global Partners filed as Exhibit 1.1 to the Registration Statement (the "Placement Agency Agreement") and the proposed form of Securities Purchase Agreement by and between the Company and the purchasers named therein filed as Exhibit 10.6 to the Registration Statement (the "Securities Purchase Agreement"). The Shares, the Warrants and the shares of Class A common stock issuable upon exercise of the Warrants (the "Warrant Shares") are sometimes referred to collectively herein as the "Securities."

As counsel for the Company, we have examined the Placement Agency Agreement, the Securities Purchase Agreement, the Registration Statement, the Company's Amended and Restated Certificate of Incorporation (the "Charter") and the Company's bylaws, as well as originals or copies, certified or otherwise identified to our satisfaction, of such other documents, corporate records, certificates of public officials and other instruments as we have deemed necessary for the purposes of rendering this opinion and we are familiar with the proceedings taken and proposed to be taken by the Company in connection with the authorization, issuance and sale of the Shares. In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity with the originals of all documents submitted to us as copies. We have further assumed that, upon the issuance of any of the Securities, the total number of shares of Class A common stock issued and outstanding will not exceed the total number of shares of Class A common stock that the Company is then authorized to issue under the Charter. This opinion letter is given, and all statements herein are made, in the context of the foregoing.



Board of Directors
Greenlane Holdings, Inc.
June 23, 2023
Page Two

This opinion letter is based as to matters of law solely on the Delaware General Corporation Law, as amended. We express no opinion herein as to any other laws, statutes, ordinances, rules, or regulations. As used herein, the term "Delaware General Corporation Law, as amended" includes the statutory provisions contained therein, all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws.

Based upon, subject to and limited by the foregoing, it is our opinion that:

(i) upon issuance, delivery and payment therefor in the manner contemplated by the Registration Statement, the Securities Purchase Agreement, and resolutions of the Board of Directors or a duly authorized committee thereof, the Units will constitute legal, valid and binding obligations of the Company;

(ii) upon issuance, delivery and payment therefor in the manner contemplated by the Registration Statement, the Securities Purchase Agreement, and resolutions of the Board of Directors or a duly authorized committee thereof, the Shares will be validly issued, fully paid and nonassessable;

(iii) upon exercise of the Warrants and the issuance, delivery and payment for the Warrant Shares in the manner contemplated by the Warrants, the Warrant Shares will be validly issued, fully paid and nonassessable; and

(iv) the Warrants included in the Units, when the Units are duly issued, delivered and paid for as contemplated in the Registration Statement and in accordance with their terms and the terms of the Securities Purchase Agreement, will constitute legal, valid and binding obligations of the Company.

Our opinions expressed herein are subject to the following qualifications and exceptions:

- a. The effect of bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws relating to or affecting the rights of creditors generally, including, without limitation, laws relating to fraudulent transfers or conveyances, preferences and equitable subordination.
- b. Limitations imposed by general principles of equity upon the availability of equitable remedies, and the effect of judicial decisions which have held that certain provisions are unenforceable where their enforcement would violate the implied covenant of good faith and fair dealing, or would be commercially unreasonable, or where their breach is not material.

MORRISON FOERSTER

Board of Directors
Greenlane Holdings, Inc.
June 23, 2023
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- c. We express no opinion as to the applicability of any regulatory statute, or rule or regulation of any regulatory agency, to the Company or the effect of any such statute, rule or regulation on the opinions expressed herein.
- d. We express no opinion as to compliance with applicable antifraud statutes, and rules or regulations of applicable foreign, state and federal laws concerning the issuance or sale of the Units, the Shares, the Warrants or the Warrant Shares.
- e. Our opinion is based upon current statutes, rules, regulations, cases and official interpretive opinions, and it covers certain items that are not directly or definitively addressed by such authorities.

This opinion is furnished to you in connection with the Registration Statement. No opinion may be implied or inferred beyond the opinion expressly stated. This opinion is given as of the date hereof, and we assume no obligation to advise you of any changes in applicable law or any facts or circumstances that come to our attention after the date hereof that may affect the opinion contained herein.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to our firm contained under the heading "Legal Matters" in the Registration Statement. In giving this consent, we do not admit that we are in the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated by the Commission.

Very truly yours,

/s/ Morrison & Foerster LLP

SECURITIES PURCHASE AGREEMENT

This SECURITIES PURCHASE AGREEMENT (this “Agreement”) is dated as of June [●], 2023, between Greenlane Holdings, 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 (as defined below), 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:

Section 1. 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 banking institutions in the State of New York are authorized or required by law to remain closed.

“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 at the Closing and (ii) the Company’s obligations to deliver the Securities, in each case, at the Closing 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 Class A common stock of the Company, par value \$0.01 per share.

“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 Warrants” means, collectively, the common warrants delivered to the Purchasers at Closing in accordance with Section 2.2(a) hereof, which Common Warrants shall be exercisable immediately upon issuance of such Common Warrants and may be exercised during a period of five (5) years commencing from their issuance, in the form of Exhibit A attached hereto.

“Company Counsel” means Morrison & Foerster LLP.

“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.

“DVP” shall have the meaning ascribed to such term in Section 2.1(v).

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

“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, restricted share units or options to employees, consultants, officers, or directors of the Company pursuant to any share or option plan in existence as of the date hereof, provided that such issuances to consultants are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights; (b) securities issued upon the exercise or exchange of or conversion of any Securities issued hereunder and/or other securities issuable pursuant to existing agreements, exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of this Agreement, 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 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 during the prohibition period in Section 4.10(a) herein, 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 (for avoidance of doubt, securities issued to a venture arm of a strategic investor shall be deemed an “Exempt Issuance”); (d) issuances of shares of Common Stock to consultants or vendors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights; and (e) issuances of shares of Common Stock to existing holders of the Company’s securities in compliance with the terms of agreements entered into with, or instruments issued to, such holders, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights (other than shares of Common Stock issuable to holders of the Company’s outstanding warrants

upon the exercise of such warrants, as registered under the Registration Statement on Form S-1 (File No. 333-267782), 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..

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

“GAAP” means generally accepted accounting principles in the United States.

“General Disclosure Package” means the Preliminary Prospectus.

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

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

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“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

“Lock-Up Agreement” means the Lock-Up Agreement, dated as of the date hereof, by and among the Company and the directors, officers and 5% stockholders of the Company, in the form of Exhibit C attached hereto.

“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(m).

“Per Share Purchase Price” equals \$[●], subject to adjustment for reverse and forward share splits, share dividends, share combinations and other similar transactions of shares of Common Stock that occur between the date hereof and the Closing Date.

“Per Pre-Funded Warrant Purchase Price” equals \$0.0001, subject to adjustment for reverse and forward share splits, share dividends, share combinations and other similar transactions relating to shares of Common Stock that occur after the date of this Agreement.

“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.

“Placement Agent” means A.G.P./Alliance Global Partners.

“Placement Agent Counsel” means Thompson Hine LLP with offices located at 300 Madison Avenue, 27th Floor, New York, New York 10017-6232.

“Pre-Funded Warrants” means, collectively, the warrants delivered to the Purchasers at Closing in accordance with Section 2.2(a) hereof, which Pre-Funded Warrants shall be exercisable immediately upon issuance and shall expire when exercised in full, in the form of Exhibit B attached hereto.

“Pre-Notice” shall have the meaning ascribed to such term in Section 4.16(b).

“Preliminary Prospectus” means the preliminary prospectus included in the Registration Statement at the time the Registration Statement is declared effective..

“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 pursuant to 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 the Commission on Form S-1 (File No. 333-269576), as amended, which registers the sale of the Securities and includes any Rule 462(b) Registration Statement.

“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.

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“Rule 462(b) Registration Statement” means any registration statement prepared by the Company registering additional Securities, which was filed with the Commission on or prior to the date hereof and became automatically effective pursuant to Rule 462(b) promulgated by the Commission pursuant to the Securities Act.

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

“Securities” means 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 and issuable to each Purchaser 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 aggregate amount to be paid for shares of Common Stock, and Pre-Funded Warrants, purchased hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Subscription Amount,” in United States dollars and in immediately available funds.

“Subsidiary” means any subsidiary of the Company as set forth in the Exhibit 21 to the Company’s Annual Report on Form 10-K for the year ended December 31, 2021 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 shares of Common Stock are 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, the Lock-Up Agreements and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Variable Rate Transaction” shall have the meaning ascribed to such term in Section 4.10(b).

“Warrants” means, collectively, the Common Warrants and the Pre-Funded Warrants.

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

Section 2. PURCHASE AND SALE

2.1 Closing. On the Closing Date, upon the terms and subject to the conditions set forth herein, the Company agrees to sell, and the Purchasers, severally and not jointly, agree to purchase, (i) the number of shares of Common Stock set forth under the heading “Subscription Amount” on the Purchaser’s signature page hereto, at the Per Share Purchase Price, and (ii) Common Warrants exercisable for shares of Common Stock as calculated 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 shares of Common Stock, such Purchaser may elect to purchase Pre-Funded Warrants in such manner to result in the full Subscription Amount being paid by such Purchaser to the Company. The “Beneficial Ownership Limitation” shall be 4.99% (or, at the election of the Purchaser, 9.99%) of the number of shares of Common Stock, in each case, outstanding immediately after giving effect to the issuance of the Securities on the Closing Date.

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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 (“DVP”) settlement with the Company or its designees. The Company shall deliver to each Purchaser its respective Shares and 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 at the Closing. Upon satisfaction of the covenants and conditions set forth in Sections 2.2 and 2.3, the Closing shall occur remotely via the exchange of documents and signatures or such other location as the parties shall mutually agree. Unless otherwise directed by the Placement Agent, settlement of the Shares shall occur via DVP (i.e., on the Closing Date, the Company shall issue the Shares registered in the Purchasers’ names and addresses and released by the Depository 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, if at any time on or after the time of execution of this Agreement by the Company and an applicable Purchaser through, and including the time immediately prior to the Closing (the “Pre-Settlement Period”), such Purchaser sells to any Person all, or any portion, of any Securities to be issued hereunder to such Purchaser at the Closing (collectively, the “Pre-Settlement Shares”), such Person shall, automatically hereunder (without any additional required actions by such Purchaser or the Company), be deemed to be a Purchaser under this Agreement unconditionally bound to purchase, and the Company shall be deemed unconditionally bound to sell, such Pre-Settlement Shares to such Person at the Closing; provided, that the Company shall not be required to deliver any Pre-Settlement Shares to such Purchaser prior to the Company’s receipt of the Subscription Amount for such Pre-Settlement Shares hereunder; and provided, further, that the Company hereby acknowledges and agrees that the foregoing shall not constitute a representation or covenant by such Purchaser as to whether or not such Purchaser will elect to sell any Pre-Settlement Shares during the Pre-Settlement Period. The decision to sell any shares of Common Stock by such Purchaser shall solely be made at the time such Purchaser elects to effect any such sale, if any. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise (as defined in the Prefunded Warrants) delivered on or prior to 9:00 a.m. (New York City time) on the Closing Date, which may be delivered at any time after the time of execution of the 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) 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) the Company’s wire instructions, on Company letterhead and executed by the Company’s Chief Executive Officer or Chief Financial Officer;

(iii) subject to the provision of Section 2.1 that settlement of the Shares shall occur via DVP, 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 shares of Common Stock equal to the portion of such Purchaser’s Subscription Amount divided by the Per Share Purchase Price, registered in the name of such Purchaser;

(iv) for each Purchaser of Pre-Funded Warrants pursuant to Section 2.1, an originally signed Pre-Funded Warrant registered in the name of such Purchaser to purchase up to a number of shares of Common Stock equal to the portion of such Purchaser’s Subscription Amount applicable to Pre-Funded Warrants divided by the sum of the Per Pre-Funded Warrant Purchase Price, subject to adjustment therein;

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- (v) the Preliminary Prospectus and the Prospectus (which may be delivered in accordance with Rule 172 under the Securities Act);
 - (vi) an originally signed 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 of Common Stock or Pre-Funded Warrants, as applicable, with an exercise price equal to \$[●] per share, subject to adjustment therein;
 - (vii) the duly executed Lock-Up Agreements; and
 - (viii) a legal opinion of Company Counsel, in form reasonably acceptable to the Placement Agent and the Purchasers.
- (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 with respect to the Securities purchased by such Purchaser, which shall be made available for DVP settlement with the Company or its designees.

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 any 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, nor shall a banking moratorium have been declared either by the United States or New York State authorities nor shall there have occurred after the date of this Agreement 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.

Section 3. 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. The Company owns, directly or indirectly, all of the capital shares or other equity interests of each Subsidiary, free and clear of any Liens, except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, and all of the issued and outstanding shares of capital shares 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.
- (b) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing, and, if applicable under the laws of the jurisdiction in which they are formed, 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 memorandum of association, articles of association, certificate or articles of incorporation, bylaws, operating agreement, 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) 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, a committee of 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

(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 memorandum of association, articles of association, certificate or articles of incorporation, bylaws, operating agreement, 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) notices and/or application(s) to and approvals by each applicable Trading Market for the listing of the applicable Securities for trading thereon in the time and manner required thereby, and (iv) filings required by the Financial Industry Regulatory Authority ("FINRA") (collectively, the "Required Approvals").

(f) Issuance of the Securities; Registration. The Shares and Warrant Shares are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and non-assessable, free and clear of all Liens imposed by the Company. The Warrants are duly authorized and binding obligations of the Company under the law of the jurisdiction governing the Warrants, and, when issued in accordance with this Agreement, will be duly and validly issued, and free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized share capital 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 [●], 2023, 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 Preliminary Prospectus or the Prospectus with the Commission pursuant to Rule 424(b). At the time the Registration Statement and any amendments thereto became effective as determined under the Securities Act, 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 Prospectus and any amendments or supplements thereto, at the time the Preliminary Prospectus, the Prospectus 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), which Schedule 3.1(g) shall also include the number of shares of Common Stock owned beneficially, and of record, by Affiliates of the Company as of the date hereof. The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of employee stock options under the Company's stock 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 set forth on Schedule 3.1(g), and as a result of the purchase and sale of the Securities, 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 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. The issuance and sale of the Securities will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. 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 share appreciation rights or "phantom share" plans or agreements or any similar plan or agreement. All of the outstanding shares of the Company are duly authorized, validly issued, fully paid and non-assessable, have been issued in compliance with all federal and state securities laws where applicable, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. Except for the Required Approvals, 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 share capital 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 one year preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such materials) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Preliminary 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 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. Except as set forth on Schedule 3.1(i), since the date of the latest financial statements filed by the Company with the SEC, the General Disclosure Package and the Prospectus, (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 strategic acquisitions 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 of its shares and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company equity incentive 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 one (1) Trading Day prior to the date that this representation is made.

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(j) Litigation. 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"). None of the Actions set forth on Schedule 3.1(j), (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents, the Shares or the Warrant Shares, 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, which could result in a Material Adverse Effect. 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 applicable 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 of (i), (ii) and (iii) as could not have or reasonably be expected to result in a Material Adverse Effect.

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(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 Registration Statement, the General Disclosure Package and the Prospectus, except where the failure to possess such certificates, authorizations or 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. 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 in all material respects.

(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 Registration Statement, the General Disclosure Package and the Prospectus 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 except as would not reasonably be expected to have a Material Adverse Effect. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the Registration Statement, the General Disclosure Package or the Prospectus, 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 in an amount deemed commercially reasonable. 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.

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(r) Transactions with Affiliates and Employees. Except as set forth in 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, shareholder, 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 or a Subsidiary and (iii) other employee benefits, including share option agreements under any share option plan of the Company.

(s) Sarbanes-Oxley: Internal Accounting Controls. The Company and the Subsidiaries are in material 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 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 Form 10-Q under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed Form 10-Q 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. Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, 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) 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 for fees payable to the Placement Agent, 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 (for the avoidance of doubt, the foregoing shall not include any fees and/or commissions owed to the Depository). Other than for Persons engaged by any Purchaser, if any, 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.

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(v) Registration Rights. No Person has any right to cause the Company to effect the registration under the Securities Act of any securities of the Company or any Subsidiary.

(w) Listing and Maintenance Requirements. The shares of Common Stock are 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. Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, the Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock are or have 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 shares of Common Stock are 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 articles of incorporation 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. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company confirms that it has not 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 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 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 believes, to its best knowledge, 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 integrated with prior offerings by the Company for purposes of any applicable stockholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

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(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. Neither the Company nor any Subsidiary is in default with respect to any Indebtedness.

(bb) Tax Compliance. 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 federal, state and local income and all foreign 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, fines or penalties that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its financial statements provision reasonably adequate for the payment of all material tax liability of which has not been finally determined and 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 as set forth in the Prospectus. 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, 2022.

(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.

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(ff) Acknowledgment Regarding Purchaser's Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding (except for Sections 3.2(f) and 4.12 hereof), 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 counter-parties in "derivative" transactions to which any such Purchaser is a party, directly or indirectly, presently may have a "short" position in the shares of 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, 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 shares of Common Stock, (ii) sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the shares of Common Stock, 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 Placement Agent in connection with the placement of the shares of Common Stock.

(hh) Stock Option Plans. Each stock option granted by the Company under the Company's equity incentive plans was granted (i) in accordance with the terms of such 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.

(ii) Cybersecurity. Except as would not, individually or in the aggregate, have a Material Adverse Effect, (i) the Company and the Subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of the Company's or any Subsidiary's information technology and computer systems, networks, hardware, software, data (including the data of its respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of it), equipment or technology (collectively, "IT Systems and Data") and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification; (ii) the Company and the Subsidiaries have implemented and maintained commercially reasonable safeguards to maintain and protect its material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and Data; and (iii) the Company and the Subsidiaries have implemented backup and disaster recovery technology consistent with commercially reasonable industry standards and practices.

(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) 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, suit 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.

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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).

(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.

(f) Certain Transactions and Confidentiality. Other than consummating the transactions contemplated hereunder, such Purchaser has not, nor has any Person acting on behalf of or pursuant to any understanding with such Purchaser, directly or indirectly executed any purchases or sales, including Short Sales, of the securities of the Company during the period commencing as of the time that such Purchaser first received a term sheet (written or oral) from the Company or any other Person representing the Company setting forth the material terms, which terms include definitive pricing terms, of the transactions contemplated hereunder and ending immediately prior to the execution hereof. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser's assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement. Other than to other Persons party to this Agreement or to such Purchaser's representatives, including, without limitation, its officers, directors, partners, legal and other advisors, employees, agents and Affiliates, such Purchaser has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). 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 order to effect Short Sales or similar transactions in the future.

(g) No Voting Agreements. The Purchaser is not a party to any agreement or arrangement, whether written or oral, between the Purchaser and any other Purchaser and any of the Company's stockholders as of the date hereof, regulating the management of the Company, the stockholders' rights in the Company, the transfer of shares in the Company, including any voting agreements, stockholder agreements or any other similar agreement even if its title is different or has any other relations or agreements with any of the Company's stockholders, directors or officers.

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(h) Independent Advice. Each Purchaser understands that nothing in this Agreement or any other materials presented by or on behalf of the Company to the Purchaser in connection with the purchase of the Securities constitutes legal, tax or investment advice.

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, except as set forth in this Agreement, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

Section 4.
OTHER AGREEMENTS OF THE PARTIES

4.1 Legends. The shares of Common Stock, the Warrants, and the Warrant Shares shall be issued free of legends. If at any time following the date hereof the Registration

Statement is not effective or is not otherwise available for the sale of the shares of Common Stock, the Warrants or 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 of the Shares, the Warrants or 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 Shares, the Warrants or 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 of the Warrant Shares effective during the term of the Warrants.

4.2 Furnishing of Information; Public Information. Until the earliest of the time that (i) no Purchaser owns Securities, or (ii) the Common Warrants have expired, the Company covenants to maintain the registration of the Common Stock under Section 12(b) or 12(g) of the Exchange Act and 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 the Exchange Act, even if the Company is not then subject to the reporting requirements of the Exchange Act, except in the event that the Company consummates (in each case on or after the date as of which the Purchasers may sell all of their Securities without restriction or limitation pursuant to Rule 144): (a) any transaction or series of related transactions as a result of which any Person (together with its Affiliates) acquires then outstanding securities of the Company representing more than fifty percent (50%) of the voting control of the Company; (b) a merger or reorganization of the Company with one or more other entities in which the Company is not the surviving entity; or (c) a sale of all or substantially all of the assets of the Company, where the consummation of such transaction results in the Company no longer being 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 integrated 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. 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 connection with the transactions contemplated by the Transaction Documents. 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 Stockholder 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. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, which shall be disclosed pursuant to Section 4.4, 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 the Company believes constitutes material non-public information, unless prior thereto such Purchaser shall have entered into a written agreement with the Company regarding the confidentiality and use of such information. 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 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, and 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. The Company shall use the net proceeds from the sale of the Securities hereunder for working capital purposes and general corporate procedures, including the purchase of any pending or future acquisitions, 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 or repayment of obligations outstanding as of the date of this Agreement consistent with prior practices), (b) for the redemption of any shares of Common Stock or Common Stock Equivalents, (c) for the settlement of any outstanding litigation or (d) in violation of FCPA or OFAC regulations or similar applicable 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 (including a Purchaser Party's status as an investor), or any of them or their respective Affiliates, by the Company or any stockholder of the Company who is not an Affiliate of such Purchaser Party, arising out of or relating to any of the transactions contemplated by the Transaction Documents. For the avoidance of doubt, the indemnification provided herein is intended to, and shall also cover, direct claims brought by the Company against the Purchaser Parties; provided, however, that such indemnification shall not cover any loss, claim, damage or liability to the extent it is finally judicially determined to be attributable to any Purchaser Party's breach of any of the representations, warranties, covenants or agreements made by such Purchaser Party in any Transaction Document or any conduct by a 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, except with respect to direct claims brought by the Company, 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 to the applicable Purchaser Party (which may be internal 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 for any settlement by a Purchaser Party effected without the Company's prior written consent, which shall not be unreasonably withheld or delayed. In addition, if any Purchaser Party takes actions to collect amounts due under any Transaction Documents or to enforce the provisions of any Transaction Documents, then the Company shall pay the costs incurred by such Purchaser Party for such collection, enforcement or action, including, but not limited to, attorneys' fees and disbursements. The indemnification and other payment obligations required by this Section 4.8 shall be made by periodic payments of the amount thereof during the course of the investigation, defense, collection, enforcement or action, as and when bills are received or are incurred; provided, that if any Purchaser Party is finally judicially determined not to be entitled to indemnification or payment under this Section 4.8, such Purchaser Party shall promptly reimburse the Company for any payments that are advanced under this sentence. 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 Listing of Shares. The Company hereby agrees to use commercially reasonable best efforts to maintain the listing or quotation of the shares of Common Stock on each Trading Market on which each is currently listed, and concurrently with the Closing, the Company shall apply to list or quote all of the shares of Common Stock on such Trading Markets and promptly secure the listing of all of the shares of Common Stock on such Trading Markets. 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 of Common Stock and Warrant Shares, and will take such other action as is necessary to cause all of the shares of Common Stock 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 the Common Stock on a Trading Market and will comply in all material respects with the Company's reporting, filing and other obligations under the bylaws or rules of the Trading Market. The Company agrees to use commercially reasonable efforts to maintain the eligibility of the 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.

4.10 Subsequent Equity Sales.

(a) From the date hereof until ninety (90) days after the Closing Date, neither the Company nor any Subsidiary shall (i) issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents or (ii) file any registration statement or amendment or supplement thereto, other than the Prospectus Supplement or filing a registration statement on Form S-8 in connection with any employee benefit plan.

(b) From the date hereof until the six (6) month 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 shares 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 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 shares of Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit or an "at-the-market offering", whereby the Company may issue securities at a future determined price regardless of whether shares pursuant to such agreement have actually been issued and regardless of whether such agreement is subsequently canceled. 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 4.10 shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance.

4.11 Equal Treatment of Purchasers. No consideration (including any modification of the Transaction Documents) shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of the Transaction Documents unless the same consideration is also offered to all of the parties to the Transaction Documents. 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 the shares of Common Stock or otherwise.

4.12 Certain Transactions and Confidentiality. Each Purchaser, severally and not jointly with the other Purchasers, covenants that neither it nor any Affiliate acting on its behalf or pursuant to any understanding with it will execute any purchases or sales, including Short Sales of any of the Company's securities during the period commencing with the execution of this Agreement and ending at such time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4. Each Purchaser, severally and not jointly with the other Purchasers, covenants that until such time as the transactions contemplated by this Agreement are publicly disclosed by the Company pursuant to the initial press release as described in Section 4.4, such Purchaser will maintain the confidentiality of the existence and terms of this transaction. Notwithstanding the foregoing, and notwithstanding anything contained in this Agreement to the contrary, the Company expressly acknowledges and agrees that (i) no Purchaser makes any representation, warranty or covenant hereby that it will not engage in effecting transactions in any securities of the Company after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4, (ii) no Purchaser shall be restricted or prohibited from effecting any transactions in any securities of the Company in accordance with applicable securities laws from and after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4 and (iii) no Purchaser shall have any duty of confidentiality or duty not to trade in the securities of the Company to the Company or its Subsidiaries after the issuance of the initial press release as described in Section 4.4. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser's assets, the covenant set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement.

4.13 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. The Company shall honor exercises of the Warrants and shall deliver shares of Common Stock and/or Warrant Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

4.14 Reservations of Shares. 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 of Common Stock pursuant to this Agreement and Warrant Shares pursuant to any exercise of the Warrants.

4.15 Lock-Up Agreements. The Company shall not amend, modify, waive or terminate any provision of any of the Lock-Up Agreements without the prior written consent of the Placement Agent, except to extend the term of the lock-up period, and shall enforce the provisions of each Lock-Up Agreement in accordance with its terms. If any party to a Lock-Up Agreement breaches any provision of a Lock-Up Agreement, the Company shall promptly use its best efforts to seek specific performance of the terms of such Lock-Up Agreement.

Section 5.
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 Depository 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 Preliminary 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.

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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 the Purchasers who purchased at least 50.1% in interest of the sum of (i) the Shares and (ii) the Pre-Funded Warrant Shares initially issuable upon exercise of the Pre-Funded 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 at least 50.1% in interest 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 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 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 either party shall commence an action, suit 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, suit or proceeding shall be reimbursed by the other 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 for the applicable statute of limitations.

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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 was 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.

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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 the Placement Agent Counsel, the legal counsel of the Placement Agent. Placement Agent Counsel 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 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.

5.19 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.

5.20 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 relating to shares of 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]

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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.

GREENLANE HOLDINGS, INC.

By: _____
Name: Craig Snyder
Title: Chief Executive Officer

Address for Notice:
1095 Broken Sound Parkway, Suite 100
Boca Raton, FL 33487
Email: craig@greenlane.com

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

Morrison & Foerster LLP
2100 L Street, NW
Washington, D.C. 20037
Attn: Justin R. Salon
Email: JustinSalon@mof.com

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.

SIGNATURE PAGES FOR PURCHASERS FOLLOW]

[PURCHASER SIGNATURE PAGES TO 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 Warrant Shares to the Purchaser (if not same address for notice):

DWAC for Common Stock:

Subscription Amount: \$ _____

Shares of Common Stock: _____

Shares of Common Stock underlying the Pre-Funded Warrants: _____

Warrant Shares underlying the Common Warrants: _____

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 on 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]

Exhibit A

Form of Common Warrant

(See Attached)

Exhibit B

Form of Pre-Funded Warrant

(See Attached)

Exhibit C

Form of Lock-Up Agreement

(See Attached)

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of Greenlane Holdings, Inc. on Form S-1, Amendment No. 2 (File No. 333-269576) of our report dated March 31, 2023, with respect to our audits of the consolidated financial statements of Greenlane Holdings, Inc. as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021 appearing in the Annual Report on Form 10-K of Greenlane Holdings, Inc. for the year ended December 31, 2022. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

Our report on the consolidated financial statements refers to a change in the method of accounting for outbound shipping and handling costs.

/s/ Marcum LLP

Marcum LLP
Costa Mesa, CA
June 23, 2023

Calculation of Filing Fee Tables

Form S-1

(Form Type)

Greenlane Holdings, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

Security Type	Security Class Title ⁽¹⁾	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price ⁽²⁾	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
Newly Registered Securities											
Fees to Be Paid	Equity	Class A common stock, par value \$0.01 per share ("Class A common stock") ⁽³⁾	Rule 457(o)	—	—	\$ 10,000,000	0.00011020	\$ 1,102.00 ⁽⁴⁾			
	Other	Pre-Funded Warrants to purchase Class A common stock ⁽³⁾⁽⁵⁾	Rule 457(g)	—	—	—	—	—			
	Other	Common Warrants to purchase Class A common stock ⁽⁵⁾	Rule 457(g)	—	—	—	—	—			
Fees Previously Paid	—	—	—	—	—	—	—	—			
Carry Forward Securities											
Carry Forward Securities	—	—	—	—	—	—	—	—	—	—	—
	Total Offering Amounts				\$ 10,000,000		\$ 1,102.00				
	Total Fees Previously Paid						1,102.00				
	Total Fee Offsets						—				
	Net Fee Due						\$ 0.00				

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), there are also being registered such additional securities that may be issued because of events such as recapitalizations, stock dividends, stock splits and reverse stock splits, and similar transactions.
- (2) Estimated solely for the purpose of determining the amount of the registration fee in accordance with Rule 457(o) under the Securities Act.
- (3) The proposed maximum aggregate offering price of the shares of Class A common stock proposed to be sold in the offering will be reduced on a dollar-for-dollar basis based on the aggregate offering price of the Pre-Funded Warrants offered and sold in the offering (plus the aggregate exercise price of the shares of Class A common stock issuable upon exercise of the Pre-Funded Warrants), and as such the proposed aggregate maximum offering price of the shares of Class A common stock and Pre-Funded Warrants (including shares of Class A common stock issuable upon exercise of the Pre-Funded Warrants), if any, is \$10,000,000.
- (4) Calculated pursuant to Rule 457(o) under the Securities Act based on an estimate of the proposed maximum aggregate offering price.
- (5) No fee due pursuant to Rule 457(g) under the Securities Act.