

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

AMENDMENT NO. 1
TO
FORM S-1
REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

180 Life Sciences Corp.
(Exact name of registrant as specified in its charter)

Delaware	2834	90-1890354
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

3000 El Camino Real, Bldg. 4, Suite 200
Palo Alto, CA 94306
(650) 507-0669

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

Blair Jordan
Interim Chief Executive Officer
180 Life Sciences Corp.
3000 El Camino Real, Bldg. 4, Suite 200
Palo Alto, CA 94306
(650) 507-0669

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 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.

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

SUBJECT TO COMPLETION, DATED SEPTEMBER 12, 2024

PRELIMINARY PROSPECTUS

Up to 3,296,703 Shares of Common Stock
Pre-Funded Warrants to Purchase up to 3,296,703 Shares of Common Stock

**Common Warrants to Purchase up to 3,296,703 Shares of Common Stock
Up to 3,296,703 Shares of Common Stock Underlying the Pre-Funded Warrants
Up to 3,296,703 Shares of Common Stock Underlying the Common Warrants**



We are offering up to 3,296,703 shares of common stock, par value \$0.0001 per share (the “Common Stock”), together with common warrants (the “Common Warrants”) to purchase up to 3,296,703 shares of Common Stock. Each share of our Common Stock, or pre-funded warrant (the “Pre-Funded Warrant”) in lieu thereof, is being sold together with a Common Warrant to purchase up to 3,296,703 shares of our Common Stock. The shares of Common Stock and Common Warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering.

We have assumed a public offering price of \$1.82 per share, the last reported sales price of our Common Stock on The Nasdaq Capital Market (“Nasdaq”) on September 10, 2024. The Common Warrants have an assumed initial exercise price of \$1.82 per share (assuming an exercise price equal to the reported sales price of our Common Stock on Nasdaq on September 10, 2024, which was \$1.82 per share) and will have a five-year term. The actual public offering price will be determined between us, A.G.P./Alliance Global Partners (whom we refer to herein as the “Placement Agent” or “A.G.P.”) and the investors in the offering and may be at a discount to the current market price of our Common Stock. Therefore, the assumed public offering price used throughout this prospectus may not be indicative of the final offering price. Each Common Warrant will be exercisable beginning on the effective date of stockholder approval of the issuance of the shares upon exercise of the common warrants (the “Warrant Stockholder Approval”), provided however, if the Pricing Conditions (as defined below) are met, the Warrant Stockholder Approval will not be required and the common warrant will be exercisable six months after issuance (the “Initial Exercise Date”). As used herein “Pricing Conditions” means that the combined public offering price per share of Common Stock and accompanying Common Warrants is such that the Warrant Stockholder Approval is not required under the rules of Nasdaq because either (i) the offering is an at-the-market offering under Nasdaq rules and such price equals or exceeds the sum of (a) the applicable “Minimum Price” per share under Nasdaq Rule 5635(d) plus (b) \$0.125 per whole share of common stock underlying the common warrants or (ii) the offering is a discounted offering where the pricing and discount (including attributing a value of \$0.125 per whole share underlying the common warrants) meet the pricing requirements under Nasdaq’s rules.

We are also offering Pre-Funded Warrants to purchase up to 3,296,703 shares of Common Stock to those purchasers whose purchase of shares of Common Stock in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding Common Stock immediately following the consummation of this offering, in lieu of shares of Common Stock that would result in beneficial ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding Common Stock. Each Pre-Funded Warrant is exercisable for one share of our Common Stock and has an exercise price of \$0.0001 per share. Each Pre-Funded Warrant is being offered together with the Common Warrants. The Pre-Funded Warrants and Common Warrants are immediately separable and will be issued separately in this offering but must be purchased together in this offering. For each Pre-Funded Warrant that we sell, the number of shares of Common Stock we are offering will be reduced on a one-for-one basis.

Pursuant to this prospectus, we are also offering the shares of Common Stock issuable upon the exercise of Pre-Funded Warrants and Common Warrants offered hereby. These securities are being sold in this offering to certain purchasers under a securities purchase agreement dated _____, 2024 between us and the purchasers.

The shares of our Common Stock, Pre-Funded Warrants and Common Warrants being offered will be sold in a single closing. The shares issuable upon exercise of the Pre-Funded Warrants or Common Warrants will be issued upon the exercise thereof. Because there is no minimum number of securities or minimum aggregate amount of proceeds for this offering to close, we may sell fewer than all of the securities offered hereby, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to pursue the business goals outlined in this prospectus. Because there is no escrow account and there is no minimum offering amount, investors could be in a position where they have invested in our company, but we are unable to fulfill our objectives due to a lack of interest in this offering. Also, any proceeds from the sale of securities offered by us will be available for our immediate use, despite uncertainty about whether we would be able to use such funds to effectively implement our business plan. The offering of the shares of our Common Stock, Pre-Funded Warrants and Common Warrants will terminate no later than November 14, 2024; however, the shares of our Common Stock underlying the Pre-Funded Warrants and the Common Warrants will be offered on a continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the “Securities Act”).

Our Common Stock is listed on Nasdaq under the symbol “ATNF”. On September 11, 2024, the closing sale price of our Common Stock was \$1.79 per share. There is no established public trading market for the Pre-Funded Warrants and the Common Warrants, and we do not expect a market 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 apply for a listing of the Pre-Funded Warrants or the Common Warrants on any national securities exchange or other nationally recognized trading system.

The Company is currently evaluating all options to monetize its existing assets, in addition to exploring other strategic alternatives to maximize value for its stockholders. Potential strategic alternatives that are being explored and evaluated by the Company as part of this process include, but are not limited to, an acquisition, merger, reverse merger, other business combination, sale of assets, licensing or other strategic transactions involving the Company. To date, the board of directors of the Company (the “Board of Directors” or the “Board”) has had discussions with several parties regarding potential transactions, but has not made a final determination regarding which type of transaction or which transaction to pursue as of the date of this prospectus.

INVESTING IN OUR SECURITIES INVOLVES SUBSTANTIAL RISKS. SEE THE SECTION TITLED “RISK FACTORS” BEGINNING ON PAGE 10 OF THIS PROSPECTUS TO READ ABOUT FACTORS YOU SHOULD CONSIDER BEFORE BUYING OUR SECURITIES.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

We have engaged the Placement Agent in connection with the securities offered by this prospectus. 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 but has agreed to use its reasonable best efforts to sell the securities offered by this prospectus. We have agreed to pay the Placement Agent a fee based on the aggregate proceeds raised in this offering as set forth in the table below:

	Per Share and Common Warrant	Per Pre-Funded Warrant and Common Warrant	Total
Public offering price	\$	\$	\$
Placement Agent fees ⁽¹⁾	\$	\$	\$
Proceeds, before expenses, to us ⁽²⁾	\$	\$	\$

- (1) We have agreed to pay the Placement Agent a cash placement commission equal to 7% of the aggregate proceeds from this offering. We have also agreed to reimburse the Placement Agent for certain expenses incurred in connection with this offering. See “*Plan of Distribution*” beginning on page 31 for additional information regarding the compensation to be paid to the Placement Agent.
- (2) The amount of the offering proceeds to us presented in this table does not give effect to any exercise of the Pre-Funded Warrants or Common Warrants being issued in this offering.

Delivery of the securities being offered pursuant to this prospectus is expected to be made on or about , 2024, subject to the satisfaction of certain closing conditions.

Sole Placement Agent

A.G.P.

The date of this prospectus is , 2024.

TABLE OF CONTENTS

About This Prospectus	iii
Cautionary Note Regarding Forward-Looking Statements	iv
Prospectus Summary	1
Risk Factors	10
Use of Proceeds	25
Capitalization	27
Dilution	28
Dividend Policy	30
Plan of Distribution	31
Description of Capital Stock	34
Description of Securities We Are Offering	37
Legal Matters	40
Experts	40
Incorporation by Reference	41
Where You Can Find More Information	42

Our logo and some of our trademarks and tradenames are used in this prospectus. This prospectus also includes trademarks, tradenames and service marks that are the property of others. Solely for convenience, trademarks, tradenames and service marks referred to in this prospectus may appear without the ®, ™ and SM symbols. References to our trademarks, tradenames and service marks are not intended to indicate in any way that we will not assert to the fullest extent under applicable law our rights or the rights of the applicable licensors if any, nor that respective owners to other intellectual property rights will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend the use or display of other companies’ trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

The market data and certain other statistical information used throughout this prospectus are based on independent industry publications, reports by market research firms or other independent sources that we believe to be reliable sources; however, we have not commissioned any of the market or survey data that is presented in this prospectus. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosures contained in this prospectus, and we believe these industry publications and third-party research, surveys and studies are reliable, provided that we have not commissioned any such information. While we are not aware of any misstatements regarding any third-party information presented in this prospectus, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under the section entitled “*Risk Factors*” of this prospectus. These and other factors could cause our future performance to differ materially from our assumptions and estimates. Some market and other data included herein, as well as the data of competitors as they relate to 180 Life Sciences Corp., is also based on our good faith estimates.

Unless the context requires otherwise, references to the “Company,” “we,” “us,” “our,” and “180 Life Sciences Corp.” refer specifically to 180 Life Sciences Corp. and its consolidated subsidiaries. References to “KBL” refer to the Company prior to the November 6, 2020 Business Combination.

In addition, unless the context otherwise requires and for the purposes of this prospectus only:

- “Exchange Act” refers to the Securities Exchange Act of 1934, as amended;
- “£” or “GBP” refers to British pounds sterling;
- “SEC” or the “Commission” refers to the United States Securities and Exchange Commission; and
- “Securities Act” refers to the Securities Act of 1933, as amended.

Effective on December 19, 2022 at 12:01 a.m. Eastern Time, we effected a 1-for-20 reverse stock split of our then outstanding Common Stock, with any fractional shares rounded up to the nearest whole share. Effective on February 28, 2024 at 12:01 a.m. Eastern Time, we effected a 1-for 19 reverse stock split of our then outstanding Common Stock with any fractional shares rounded up to the nearest whole share.

In connection with the reverse splits discussed above (the “Reverse Stock Splits”), all outstanding options, warrants, and other securities entitling their holders to purchase or otherwise receive shares of Common Stock were adjusted, as required by the terms of each security. The number of shares available to be awarded under the Company’s equity incentive plans were also appropriately adjusted. Following the Reverse Stock Splits, the par value of the Common Stock remained unchanged at \$0.0001 par value per share. The Reverse Stock Splits did not change the authorized number of shares of Common Stock or preferred stock.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-1 that we filed with the SEC to register the securities offered hereby under the Securities Act. We may also file a prospectus supplement or post-effective amendment to the registration statement of which this prospectus forms a part that may contain material information relating to these offerings. The prospectus supplement or post-effective amendment may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or post-effective amendment, you should rely on the prospectus supplement or post-effective amendment, as applicable. Before purchasing any securities, you should carefully read this prospectus, any post-effective amendment, and any applicable prospectus supplement, together with the additional information described under the heading “*Where You Can Find More Information*” and the information incorporated by reference herein, as discussed under the heading “*Incorporation by Reference*”.

Neither we, nor the Placement Agent, have authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus, any post-effective amendment, or any applicable prospectus supplement prepared by or on behalf of us or to which we have referred you. We and the Placement Agent take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the Placement Agent will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, any post-effective amendment and any applicable prospectus supplement to this prospectus is accurate only as of the date on its respective cover. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus contains, and any post-effective amendment or any prospectus supplement may contain, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included in this prospectus, any post-effective amendment or any prospectus supplement may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “*Risk Factors*” contained in this prospectus, any post-effective amendment and the applicable prospectus supplement. Accordingly, investors should not place undue reliance on this information.

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

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements under federal securities laws, including within the meaning of the Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by the following words: “*anticipate*,” “*believe*,” “*continue*,” “*could*,” “*estimate*,” “*expect*,” “*intend*,” “*may*,” “*ongoing*,” “*plan*,” “*potential*,” “*predict*,” “*project*,” “*should*,” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. Forward-looking statements are not 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 the statements are made and involve known and unknown risks, uncertainties and other factors that may cause our results, levels of activity, performance or achievements to be materially different from the information expressed or implied by the forward-looking statements in this prospectus.

In particular, forward-looking statements include, but are not limited to, any statements that are not statements of current or historical facts, such as statements relating to our expectations for the clinical and preclinical development, manufacturing, regulatory approval, and commercialization of our product candidates, the accuracy of our estimates regarding expenses, future revenues and capital requirements, our ability to execute our plans to develop and market new drug products and the timing and costs of these development programs, and estimates of the sufficiency of our existing capital resources combined with future anticipated cash flows to finance our operating requirements.

Such statements are based on management’s current expectations, but actual results may differ materially due to various factors, including, but not limited to:

- The need for additional funding, including that our current cash on hand is expected to last us until only November 2024, our ability to raise funding in the future, the terms of such funding, and dilution caused thereby;
- expectations for the clinical and preclinical development, manufacturing, regulatory approval, and commercialization of our product candidates;
- the uncertainties associated with the clinical development and regulatory approval of the Company’s drug candidates, including potential delays in the enrollment and completion of clinical trials, issues raised by the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMA) and the U.K. Medicines and Healthcare products Regulatory Agency (MHRA);
- regulatory developments in the United States and foreign countries;
- our success in retaining or recruiting, or changes required in, our officers, key employees or directors;
- current negative operating cash flows and our potential ability to obtain additional financing to advance our business and the terms of any further financing, which may be highly dilutive and may include onerous terms;
- the continued impact of the COVID-19 pandemic on our business operations and our research and development initiatives;

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- the accuracy of our estimates regarding expenses, future revenues and capital requirements;

- the Company’s reliance on third parties to conduct its clinical trials, enroll patients, and manufacture its preclinical and clinical drug supplies, the ability to come to mutually agreeable terms with such third parties and partners, and the terms of such agreements;
- the terms of the Company’s current licensing agreements, and the termination rights associated therewith;
- estimates of patient populations for the Company’s planned products;
- unexpected adverse side effects or inadequate therapeutic efficacy of drug candidates that could limit approval and/or commercialization, or that could result in recalls or product liability claims;
- the Company’s ability to fully comply with numerous federal, state and local laws and regulatory requirements, as well as rules and regulations outside the United States, that apply to its product development activities;
- challenges and uncertainties inherent in product research and development, including the uncertainty of clinical success and of obtaining regulatory approvals; and uncertainty of commercial success;
- the ability of the Company to execute its plans to develop and market new drug products and the timing and costs of these development programs;
- changing rates of inflation and interest rates, and economic downturns, including potential recessions, as well as macroeconomic, geopolitical, health and industry trends, pandemics, acts of war (including the ongoing Ukraine/Russian conflict, and Israel/Hamas conflict) and other large-scale crises;
- estimates of the sufficiency of our existing capital resources combined with future anticipated cash flows to finance our operating requirements;
- the review and evaluation of strategic transactions and their impact on shareholder value; the process by which the Company engages in evaluation of strategic transactions; the outcome of potential future strategic transactions and the terms thereof;
- our ability to maintain our listing of our Common Stock and public warrants on the Nasdaq Capital Market, including our current non-compliance with Nasdaq’s continued listing rules; and
- other risks and uncertainties, including those described under “Risk Factors”, below.

Any forward-looking statements in this prospectus reflect our current views with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. All forward-looking statements included herein speak only as of the date of this prospectus. All subsequent written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by the cautionary statements above. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

PROSPECTUS SUMMARY

The following summary highlights selected information contained elsewhere in this prospectus and/or incorporated by reference herein, and does not contain all of the information that you should consider in making your investment decision. Before investing in our securities, you should carefully read this entire prospectus and the information incorporated by reference herein.

Our Company

We are a clinical stage biotechnology company headquartered in Palo Alto, California, focused on the development of therapeutics for unmet medical needs in chronic pain, inflammation and fibrosis by employing innovative research, and, where appropriate, combination therapy.

We have three different product development platforms that are focused on different diseases or medical conditions, and that target different factors, molecules or proteins, as follows:

- fibrosis and anti-tumor necrosis factor (“TNF”);
- drugs which are derivatives of cannabidiol (“CBD”) or cannabigerol (“CBG”) analogues (“SCAs”); and
- alpha 7 nicotinic acetylcholine receptor (“α7nAChR”).

Due to restrictions in the Company’s resources, the Company has slowed down research and development activities significantly in the SCA platform and the anti-TNF platform, and the Company has not made progress in the α7nAChR platform and has suspended further research and development activity in this program in the meantime.

The Company is currently evaluating all options to monetize its existing assets, in addition to exploring other strategic alternatives to maximize value for its stockholders. Potential strategic alternatives that are being explored and evaluated by the Company as part of this process include, but are not limited to, an acquisition, merger, reverse merger, other business combination, sale of assets, licensing or other strategic transactions involving the Company. To date, the Board of Directors has had discussions with several parties regarding potential transactions, but has not made a final determination regarding which type of transaction or which transaction to pursue as of the date of this prospectus.

Recent Developments

Declaratory Relief Action Against the Company by AmTrust International

On June 29, 2022, AmTrust International Underwriters DAC (“AmTrust”), which was the premerger directors’ and officers’ insurance policy underwriter for KBL, filed a declaratory relief action against the Company in the U.S. District Court for the Northern District of California (the “Declaratory Relief Action”) seeking declaration of AmTrust’s obligations under the directors’ and officers’ insurance policy. In the Declaratory Relief Action, AmTrust is claiming that as a result of the merger the Company is no longer the insured under the subject insurance policy, notwithstanding the fact that the fees which the Company seeks to recover from AmTrust relate to matters occurring prior to the merger.

On September 20, 2022, the Company filed its Answer and Counterclaims against AmTrust for bad faith breach of AmTrust's insurance coverage obligations to the Company under the subject directors' and officers' insurance policy, and seeking damages of at least \$2 million in compensatory damages, together with applicable punitive damages. In addition, the Company brought a Third-Party Complaint against its excess insurance carrier, Freedom Specialty Insurance Company ("Freedom") seeking declaratory relief that Freedom will also be required to honor its policy coverage as soon as the amount of AmTrust's insurance coverage obligations to the Company have been exhausted. On October 25, 2022, AmTrust filed its Answer to the Company's Counterclaims and, on October 27, 2022, Freedom filed its Answer to the Third-Party Complaint.

1

On November 22, 2022, the Company filed a Motion for Summary Adjudication against both AmTrust and Freedom. The Motion was fully briefed and a hearing was held on March 9, 2023. The standard to prevail on a Motion for Summary Adjudication in the Court is high to prevail and requires a judge to find that there are no disputed issues of fact so that they can rule on the issues as a matter of law. In this instance the judge found three major issues could be decided as a matter of law in the Company's favor and that one issue, the Change in Control exclusion, requires further discovery.

On April 21, 2023, the Court issued an Order Granting in Part and Denying in Part the Company's Motion for Partial Summary Judgment.

Specifically, the Court granted summary adjudication in favor of the Company on the following issues: (a) that the Company is, in fact, an insured under both the AmTrust and Freedom insurance policies; (b) that certain SEC subpoena related expenses for defendants Dr. Marlene Krauss, the Company's former Chief Executive Officer and Director, and George Hornig, the former Chairman of the Board, are within the basic scope of coverage under both the AmTrust and Freedom insurance policies; and (c) that the Insured vs. Insured exclusion relied upon by AmTrust and Freedom is not applicable to bar any such coverage.

The Court also found that there were issues of disputed facts as to the Change in Control exclusion contained within the policies, which therefore precluded the Court from granting the remainder of the Company's requests for summary adjudication as a matter of law. Accordingly, the Court, at that time, denied the Company's further requests for summary adjudication and deemed that for the time being, the Change in Control issue is to be determined at the time of trial, in order to find that the policies (i) provide coverage for the fees which the Company has advanced and will advance to Dr. Marlene Krauss and George Hornig; (ii) that AmTrust has breached the policy; (iii) that AmTrust must pay such expenses of the Company; and that, once the AmTrust policy has been exhausted, (iv) Freedom will be obligated to pay such expenses of the Company pursuant to its policy.

On August 4, 2023, the Court granted the Company's request to file a second motion for partial summary judgment in the case, this one being on the issue of whether AmTrust should be required to advance to the Company the defense costs being incurred by Dr. Marlene Krauss and George Hornig during the pendency of the case. The Motion for Partial Summary Judgment was fully briefed by the parties, and a hearing for such Motion was held on January 11, 2024. After the matter was taken under submission, on February 12, 2024, the Court granted the Company's Motion for Partial Summary Judgment against both AmTrust and Freedom, and ordered as follows: (a) AmTrust is obligated under its insurance policy with the Company to advance to the Company all defense costs in excess of the deductible that the Company has advanced, or will advance, to Dr. Krauss and Mr. Hornig in connection with certain SEC Subpoenas, and (b) upon exhaustion of the AmTrust insurance policy, Freedom is obligated to do the same pursuant to its excess liability insurance policy with the Company. This Order applies throughout the interim of the case, but does not constitute a final judgment, and both the Company and the two insurers retain their rights to contest all applicable issues at trial, which is scheduled for May 12, 2025. A final judgment following trial could potentially confirm these obligations of the insurers or, alternatively, reverse and require the Company to repay all or portions of such advance payments. There is no assurance at this time as to what the final judgment may entail.

On April 16, 2024, AmTrust paid the Company \$2.27 million in reimbursement of fees which the Company has advanced to Dr. Marlene Krauss and George Hornig, of which the Company received \$1.5 million after the payment of attorney's fees. On May 9, 2024, AmTrust paid the Company \$300,140 in reimbursement of fees which the Company had advanced to Dr. Marlene Krauss and George Hornig, and the Company has received \$200,093 after the payment of attorney's fees.

The Company, Freedom and Amtrust held a mediation conference on August 21, 2024, during which, the Company agreed to the terms of a settlement with Freedom, pursuant to which Freedom has agreed to pay \$125,000 to the Company, of which the Company expects to receive 2/3rds of such amount after the payment of legal fees, which funds have not been received by the Company to date.

Amtrust and the Company have commenced written discovery proceedings against each other and anticipate that depositions will also occur. The Company intends to continue to vigorously pursue this matter in order to establish the Company's entitlement to full and final payment by AmTrust of the subject advancement expenses of the Company. While the Company continues to believe it has a strong case against AmTrust, there can be no assurance that the Company will prevail in this action. The final outcome of the litigation is unknown at this time and such final outcome could be materially adverse to the Company.

2

Nasdaq Non-Compliance Issues

As previously disclosed, on November 15, 2023, the Listing Qualifications department (the "Staff") of The Nasdaq Stock Market LLC ("Nasdaq") notified us that we did not comply with the minimum \$2,500,000 stockholders' equity requirement for continued listing set forth in Nasdaq Listing Rule 5550(b) (the "Equity Rule").

Nasdaq provided the Company until January 2, 2024, to submit to Nasdaq a plan to regain compliance. We submitted the plan to regain compliance in a timely manner, and on January 11, 2024, Nasdaq advised the Company that it has determined to grant the Company an extension to regain compliance with the Equity Rule.

The terms of the extension were as follows: on or before May 13, 2024, the Company must have completed certain transactions described in greater detail in the compliance plan, contemplated to result in the Company increasing its stockholders' equity to more than \$2.5 million, and opt for one of the two following alternatives to evidence compliance with the Equity Rule: Alternative 1: The Company must have furnished to the SEC and Nasdaq a publicly available report (e.g., a Form 8-K) including: 1. A disclosure of the Staff's deficiency letter and the specific deficiency(ies) cited; 2. A description of the completed transaction or event that enabled the Company to satisfy the stockholders' equity requirement for continued listing; and 3. An affirmative statement that, as of the date of the report, the Company believed it had regained compliance with the stockholders' equity requirement based upon the specific transaction or event referenced in Step 2; or Alternative 2: the Company must furnish to the SEC and Nasdaq a publicly available report including: 1. Steps 1 & 2 set forth above; 2. a balance sheet no older than 60 days with pro forma adjustments for any significant transactions or event occurring on or before the report date; and 3. that the Company believes it satisfies the stockholders' equity requirement as of the report date. The pro forma balance sheet must have evidenced compliance with the stockholders' equity requirement.

Additionally, in either case the Company was required to disclose that Nasdaq will continue to monitor the Company's ongoing compliance with the stockholders' equity requirement and, if at the time of its next periodic report the Company does not evidence compliance, that it may be subject to delisting.

While the Company was able to undertake some of the transactions described in the compliance plan, it was unable to regain compliance with the Equity Rule prior to the end of the plan period (May 13, 2024). As a result, on May 14, 2024, the Company received a delist determination letter from the Staff advising the Company that the Staff had determined that the Company did not meet the terms of the extension. Specifically, the Company did not complete its proposed transactions and was unable to file a Current Report Form 8-K by the May 13, 2024 deadline previously required by the Staff, evidencing compliance with the Equity Rule. As a result, unless the Company

requests an appeal of the Staff's determination, trading of the Company's Common Stock will be suspended at the opening of business on May 23, 2024, and a Form 25-NSE will be filed with the SEC, which will remove the Company's Common Stock and public warrants from listing and registration on The Nasdaq Stock Market.

On May 17, 2024, the Company requested an appeal of the Staff's delisting determination, and on May 20, 2024, the Staff advised the Company that the delisting action referenced in the Staff's determination letter was stayed, pending the final written decision by the Hearings Panel.

The Company subsequently received notice that the Hearings Panel determined to grant the Company's request to continue its listing on Nasdaq, subject to the Company meeting certain conditions, including filing on or before July 31, 2024, a public disclosure describing the transactions undertaken by the Company to achieve compliance with Nasdaq's continued listing rules and demonstrate long-term compliance with the Equity Rule and providing an indication of its equity following those transactions. On July 22, 2024, the Panel granted the Company's request for additional time to achieve compliance with Nasdaq's continued listing rules and demonstrate long-term compliance with the Equity Rule. Specifically, the Hearings Panel has agreed to provide the Company until September 30, 2024 to regain compliance with the Equity Rule and to allow the continued listing of the Company's common stock and warrants on The Nasdaq Stock Market through such date, subject to the Company's compliance with the Equity Rule on or prior to such date.

3

There can be no assurance that the Company will be able to regain compliance with the applicable Nasdaq listing requirements or meet the requirements of the Hearing Panel. If the Company's Common Stock and public warrants are delisted, it could be more difficult to buy or sell the Company's Common Stock and public warrants or to obtain accurate quotations, and the price of the Company's Common Stock and public warrants could suffer a material decline. Delisting could also impair the Company's ability to raise capital and/or trigger defaults and penalties under outstanding agreements or securities of the Company.

The Company is continuing to work towards completing the necessary transactions in an effort to achieve compliance with the Equity Rule and is currently evaluating various courses of action to regain compliance with the Equity Rule. However, there can be no assurance that the Company will be able to complete the transactions necessary to regain compliance with the Equity Rule.

Separately, on May 14, 2024, the Staff provided us notice of our non-compliance with the audit committee requirements for continued listing on Nasdaq set forth in Listing Rule 5605(c)(2), which requires that listed companies maintain an audit committee of at least three independent directors. Nasdaq provided the Company a cure period in order to regain compliance as follows: until the earlier of the Company's next annual shareholders' meeting or May 7, 2025; or if the next annual shareholders' meeting is held before November 4, 2024, then the Company must evidence compliance no later than November 4, 2024. In the event the Company does not regain compliance by the applicable date above, Nasdaq rules require the Staff to provide written notification to the Company that its securities will be delisted. At that time, the Company may appeal the delisting determination to a Hearings Panel. The Company is currently seeking out qualified independent directors to serve on the Company's audit committee and expects to regain compliance with Listing Rule 5605(c)(2) in the near future.

Tyche Lawsuit Settlement and Dismissal

On June 30, 2024, the Company entered into a written Settlement Agreement with Tyche Capital LLC ("Tyche") and Ronald Bauer & Samantha Bauer to fully resolve the Company's lawsuits with Tyche and the Bauers. The Settlement Agreement has been fully signed, and the parties are currently engaged in performing its terms, which include, among other things, transfer to the Company of Tyche's shares of the Company's stock in escrow, and transfer to the Company of shares of the Company's stock held by Theseus Capital Ltd. and Astatine Capital Ltd. The Settlement Agreement resulted in the forgiveness of loans to the Company by the Bauer defendants, exoneration of the Company's \$50,000 bond in the Tyche action, complete mutual releases of all claims and counterclaims in both actions, and dismissal of both the Tyche action and the Bauer action in their entireties. As a result of forgiveness of loans payable to the Bauer defendants totaling \$81,720, and accrued interest of \$25,171, as well as release of the Company's \$50,000 bond, the Company recognized a gain of \$156,891 during the three months ended June 30, 2024, included in Gain on Settlement of Liabilities on the consolidated statement of operations and comprehensive income.

Subsequently in August 2024, the Company dismissed its lawsuit against Tyche in the Supreme Court of New York in the County of New York with prejudice.

Settlement of Consideration Payable

On July 19, 2024, the Company issued a total of 28,014 shares of common stock to two consultants in settlement of approximately \$96,000 of accounts payable in consideration for services rendered. The shares were issued under the Company's Second Amended and Restated 2022 Omnibus Incentive Plan.

Severance Agreement with Sir Marc Feldmann

Effective on September 5, 2024, the Company's wholly-owned subsidiary, Cannbiorex Pharma Ltd., a U.K. corporation ("Cannbiorex") and the Company, entered into a Separation and Release Agreement with Sir Marc Feldmann, the former Co-Executive Chairman of the Company, the former Chief Executive Officer of Cannbiorex, and the current director of Cannbiorex (the "Separation Agreement").

Under the Separation Agreement, the Company agreed to issue Sir Marc Feldmann 57,328 shares of common stock and options to purchase 20,000 shares of common stock with a term of two years and an exercise price of \$1.95 per share, the closing sales price of the Company's common stock on September 5, 2024, under the Company's Second Amended and Restated Omnibus Incentive Plan to satisfy amounts owed to Sir Marc Feldmann in consideration for services previously rendered to Cannbiorex. Under the Separation Agreement, Sir Feldmann provided a customary general release to Cannbiorex and the Company, the Company and Cannbiorex provided a release to Sir Marc Feldmann, subject to certain exceptions, and Sir Marc Feldmann also agreed to certain confidentiality, non-disclosure, non-solicitation, non-disparagement, and cooperation covenants in favor of the Company and Cannbiorex. The shares were issued on September 10, 2024.

4

Also effective on September 5, 2024, the Company entered into an Indemnification Agreement with Sir Feldmann to provide for indemnification to Sir Feldmann under Delaware law. Among other things, consistent with the Company's Bylaws, the Indemnification Agreement generally requires that the Company to (i) indemnify Sir Feldmann from and against all expenses and liabilities with respect to proceedings to which Sir Feldmann may be subject by reason of Sir Feldmann's service to the Company and its subsidiaries to the fullest extent authorized or permitted by Delaware law and (ii) advance all expenses incurred by Sir Feldmann in connection with the investigation, defense, settlement or appeal of any proceeding, and in connection with any proceeding to enforce Sir Feldmann's rights under the Indemnification Agreement.

Change in Chief Financial Officer

On September 10, 2024, Mr. Ozan Pamir, the Chief Financial Officer (Principal Financial/Accounting Officer) and Secretary of the Company tendered his resignation to the Board, effective September 30, 2024. Mr. Pamir's resignation was not the result of a disagreement with the Company on any matter relating to the Company's operations, policies or practices.

On September 11, 2024, the Board resolved to appoint Mr. Omar Jimenez, a current member of the Board of Directors of the Company, as Chief Financial Officer (Principal Financial/Accounting Officer) and Secretary, to fill the vacancy left by Mr. Pamir's departure, effective on September 30, 2024.

Effective upon his appointment as Chief Financial Officer (Principal Financial/Accounting Officer) and Secretary on September 30, 2024, Mr. Jimenez will step down as a member of the Company's Compensation Committee and Nominating and Corporate Governance Committee, and will also step down as a member of, and as Chairman of, the Audit Committee of the Board. The Company intends to add new independent members of the Board in the next few weeks, who will also serve as members of the Audit Committee, Nominating and Corporate Governance Committee and Compensation Committee.

Strategic Transactions

The Company is currently evaluating all options to monetize its existing assets, in addition to exploring other strategic alternatives to maximize value for its stockholders. Potential strategic alternatives that are being explored and evaluated by the Company as part of this process include, but are not limited to, an acquisition, merger, reverse merger, other business combination, sale of assets, licensing or other strategic transactions involving the Company. To date, the Board of Directors has had discussions with several parties regarding potential transactions, but has not made a final determination regarding which type of transaction or which transaction to pursue as of the date of this prospectus.

Need for Additional Funding

Our current cash balance is only expected to be sufficient to fund our planned business operations until approximately November 2024. If additional capital is not available, we may not be able to pursue our planned business operations, may be forced to change our planned business operations, or may take other actions that could adversely impact our stockholders, including seeking bankruptcy protection.

Summary Risk Factors

The following is a summary of select risks and uncertainties that could materially adversely affect us and our business, financial condition and results of operations. Before you invest in our Common Stock, you should carefully consider all the information in this prospectus, including matters set forth under the heading "Risk Factors," immediately following this prospectus summary. These risks include the following, among others:

Risks Relating to This Offering

- We are not in compliance with the continued listing standards of Nasdaq and Nasdaq has provided a delisting determination letter; we may not be able to comply with Nasdaq's continued listing standards in the future, and as a result our Common Stock and Public Warrants may be delisted from Nasdaq.
- Our current cash balance is only expected to be sufficient to fund our planned business operations until approximately November 2024. If additional capital is not available, we may not be able to pursue our planned business operations, may be forced to change our planned business operations, or may take other actions that could adversely impact our stockholders, including seeking bankruptcy protection.
- We may amend the terms of outstanding Common Warrants to purchase up to an aggregate of 954,118 shares of our Common Stock which currently have an exercise price of \$3.23 per share, to reduce the exercise price of such warrants to equal the exercise price of the Common Warrants sold in this offering, and to extend the term during which those warrants could remain exercisable to the term of the Common Warrants sold in this offering, respectively.
- You will experience immediate and substantial dilution in the net tangible book value per share of the Common Stock you purchase, and you may also experience future dilution as a result of future equity offerings.
- We will have broad discretion in the use of the net proceeds from this offering and may not use them effectively.
- This offering may cause the trading price of our Common Stock to decrease.
- There is no public market for the Pre-Funded Warrants and Common Warrants being offered in this offering, and the Pre-Funded Warrants and the Common Warrants are speculative in nature.
- The Common Warrants are not exercisable until Warrant Stockholder Approval, provided however, if the Pricing Conditions are met, the warrants will be exercisable upon issuance.
- If we do not maintain a current and effective prospectus relating to the Common Stock issuable upon exercise of the Pre-Funded Warrants and Common Warrants, holders will only be able to exercise such Pre-Funded Warrants and Common Warrants on a "cashless basis."
- 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.

Risks Relating to the Company and our Common Stock

We face risks and uncertainties related to our business, many of which are beyond our control. In particular, risks associated with our business include:

- We are a clinical stage biotechnology company that had no revenue for the three or six months ended June 30, 2024, and for the years ended December 31, 2023 and 2022, and do not anticipate generating revenue for the near future.
- Our need for additional financing, both near term and long term, to support our operations, our ability to raise such financing as needed, the terms of such financing, if available, potential significant dilution associated therewith, and covenants and restrictions we may need to comply with in connection with such funding.
- Potential future strategic alternatives, including, but not limited to a potential acquisition, merger, reverse merger, other business combination, sale of assets, licensing or other strategic transactions involving the Company, the effects thereof on the value of our securities, dilution caused thereby, and potential changes in our operations, management and Board of Directors in connection therewith.

- Our dependence on the success of our future product candidates, some of which may not receive regulatory approval or be successfully commercialized; problems in our manufacturing process for our new products and/or our failure to comply with manufacturing regulations, or unexpected increases in our manufacturing costs; problems with distribution of our products; and failure to adequately market our products.
- Our accounts payable are significant, and we do not currently have sufficient funds to pay such accounts payable, a large portion of which are past due.
- Risks from intense competition from companies with greater resources and experience than we have.
- Our ability to receive regulatory approvals for our product candidates, and the timeline and costs associated therewith, including the uncertainties associated with the clinical development and regulatory approval of our drug candidates, including potential delays in the enrollment and completion of clinical trials, issues raised by the U.S. The Food and Drug Administration (FDA) and The Medicines and Healthcare products Regulatory Agency (MHRA).
- Risks that our future product candidates, if approved by regulatory authorities, may be unable to achieve the expected market acceptance and, consequently, limit our ability to generate revenue from new products.
- The fact that the majority of our license agreements provide the licensors and/or counter-parties the right to use, own and/or exploit such licensed intellectual property.
- Liability from lawsuits (including product liability lawsuits, stockholder lawsuits and regulatory matters), including judgments, damages, fines and penalties and including the outcome of currently pending litigation, potential future government investigations, and other proceedings that may adversely affect our business and results of operations.
- Our ability to comply with existing and future rules and regulations, including federal, state and foreign healthcare laws and regulations and implementation of, or changes to, such healthcare laws and regulations.
- Our ability to adequately protect our future product candidates or our proprietary technology in the marketplace, claims and liability from third parties regarding our alleged infringement of their intellectual property.
- Differences in laws and regulations between countries and other jurisdictions and changes in laws or regulations, including, but not limited to tax laws and controlled substance laws, or a failure to comply with any laws and regulations.
- Failure of our information technology systems, including cybersecurity attacks or other data security incidents, that could significantly disrupt the operation of our business.
- The fact that we may acquire other companies which could divert our management's attention, result in additional dilution to our stockholders and otherwise disrupt our operations and harm our operating results and if we make any acquisitions, they may disrupt or have a negative impact on our business.
- The effect of changes in inflation and interest rates, and economic downturns, including potential recessions, as well as macroeconomic, geopolitical, health and industry trends, pandemics, acts of war (including the ongoing Ukraine/Russian and Hamas/Israel conflict) and other large-scale crises, as well as the potential implications of a Congressional impasse over the U.S. debt limit or possible future U.S. governmental shutdowns over budget disagreements.

Corporate Information

We were originally formed as KBL Merger Corp. IV, a blank check company organized under the laws of the State of Delaware on September 7, 2016, which consummated its initial public offering on June 7, 2017. On November 6, 2020, we consummated the Business Combination and, in connection therewith, changed our name to 180 Life Sciences Corp.

Our principal executive offices are located at 3000 El Camino Real, Bldg. 4, Suite 200, Palo Alto, California 94306, and our telephone number is (650) 507-0669. We maintain a website at www.180lifesciences.com. We have not incorporated by reference into this prospectus the information in, or that can be accessed through, our website, and you should not consider it to be a part of this prospectus.

THE OFFERING

Shares of Common Stock outstanding prior to this offering	1,026,930 shares of Common Stock as of September 12, 2024
Securities offered by us	Up to 3,296,703 shares of Common Stock in the aggregate represented by 3,296,703 3,296,703 shares of Common Stock, or Pre-Funded Warrants to purchase up to 3,296,703 shares of Common Stock, and Common Warrants to purchase up to 3,296,703 shares of Common Stock. Each share of Common Stock and Pre-Funded Warrant will be sold together with one Common Warrant.
Pre-Funded Warrants offered by us	We are offering to certain purchasers whose purchase of shares of 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 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 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 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 shares of Common Stock 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 shares of Common Stock we are offering will be decreased on a one-for-one basis. This offering also relates to the shares of Common Stock issuable upon exercise of any Pre-Funded Warrants sold in this offering.
Common Stock to be outstanding immediately after this offering	Up to 4,323,633 shares of Common Stock, assuming no sales of Pre-Funded Warrants which, if sold, would reduce the number of shares of Common Stock that we are offering on a one-for-one basis, and no exercise of Common Warrants.

Common Warrants

Each share of Common Stock will be sold together with one Common Warrant. Each Common Warrant has an exercise price per share equal to 100% of the public offering price of shares in this offering and expires on the fifth anniversary of the original issuance date. Each Common Warrant will be exercisable beginning on the effective date of the Warrant Stockholder Approval, provided however, if the Pricing Conditions are met, the Warrant Stockholder Approval will not be required and the Common Warrant will be exercisable on the Initial Exercise Date. Because we will issue a Common Warrant for each share of 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 Common Stock and Pre-Funded Warrants sold. This offering also relates to the shares of Common Warrants sold in this offering, and the shares of Common Stock issuable upon exercise of any Common Warrants sold in this offering.

Amendment to Outstanding Common Warrants

In connection with this offering, we may amend the terms of outstanding Common Warrants to purchase up to an aggregate of 954,118 shares of our Common Stock which currently have an exercise price of \$3.23 per share, of which Common Warrants to purchase 477,060 shares of our Common Stock were previously amended to have an exercise price of \$3.23 per share in November 2023, to reduce the exercise price of such warrants to equal the exercise price of the Common Warrants sold in this offering, and to extend the term during which those warrants could remain exercisable to the term of the Common Warrants sold in this offering, respectively. See “Description of Securities We Are Offering – Amendment to Outstanding Common Warrants” for more information on the shareholder approval requirements to effect such amendment.

8

Reasonable Best Efforts

We have agreed to issue and sell the securities offered hereby to the purchasers through the Placement Agent. The Placement Agent is not required to buy or sell any specific number or dollar amount of the securities offered hereby, but they will use their reasonable best efforts to solicit offers to purchase the securities offered by this prospectus. See the section entitled “Plan of Distribution” on page 31 of this prospectus.

Use of Proceeds

We estimate that the net proceeds from this offering will be approximately \$5.3 million, at an assumed public offering price of \$1.82 per share (assuming a public offering price equal to the last sale price of our Common Stock as reported by Nasdaq on September 10, 2024, which was \$1.82 per share), after deducting the placement agent fees and estimated offering expenses payable by us. We currently intend to use the net proceeds from the sale of our securities under this prospectus for research and development expenses, transaction costs to complete a strategic transaction involving the Company, legal expenses, and working capital, as described in the section of this prospectus entitled “Use of Proceeds” on page 25 of this prospectus.

Risk Factors

The purchase of our securities involves a high degree of risk. See “Risk Factors” beginning on page 10 and other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our securities.

Nasdaq symbol

Our Common Stock is listed on Nasdaq under the symbol “ATNF”. 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.

The number of shares of our Common Stock to be outstanding upon completion of this offering is based on 1,026,930 shares outstanding as of September 12, 2024, does not give effect to the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants and Common Warrants issued in this offering, and excludes, as of such date:

- 24,404 shares of Common Stock issuable upon the exercise of outstanding stock options;
- 6,527 additional shares of our Common Stock reserved for future issuance under our 2020 Omnibus Incentive Plan;
- 15,263 additional shares of our Common Stock reserved for future issuance under our 2022 Omnibus Incentive Plan; and
- (a) 15,132 shares of Common Stock issuable upon the exercise of outstanding public warrants exercisable at an exercise price of \$4,370.00 per share, (b) 662 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants exercisable at an exercise price of \$4,370.00 per share, (c) 6,748 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$1,900.00 per share, (d) 66 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,686.60 per share, (e) 168 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,006.40 per share, (f) 6,579 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,850.00 per share, and (g) 954,118 shares of Common Stock issuable upon the exercise of warrants to purchase 954,118 shares of Common Stock with an exercise price of \$3.23 per share.

Unless otherwise indicated, all share numbers in this prospectus, including shares of Common Stock and all securities convertible into, or exercisable for, shares of Common Stock, give effect to the Reverse Stock Splits.

9

RISK FACTORS

Investing in shares of our Common Stock involves a high degree of risk. Before making an investment decision, you should carefully consider and evaluate the risks described below and in the “Risk Factors” section in our most recent Annual Report on Form 10-K, as well as any updates to those risk factors in our subsequent Quarterly Reports on Form 10-Q, together with all of the other information appearing in or incorporated by reference into this prospectus, before deciding whether to purchase any of the Common Stock being offered. The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of shares of our Common Stock could decline due to any of these risks, and you may lose all or part of your investment. Please also read carefully the section entitled “Cautionary Note Regarding Forward-Looking Statements.” *The risk factors described below and incorporated by reference herein are not necessarily exhaustive and you are encouraged to perform your own investigation with respect to us and our business.*

Risks Related to This Offering

You will experience immediate and substantial dilution in the net tangible book value per share of the Common Stock you purchase. You may also experience future dilution as a result of future equity offerings.

The price per share, together with the number of shares of our 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 Common Stock. Our historical net tangible book value as of June 30, 2024 was approximately \$(2.0 million), or approximately \$(2.10) per share of our Common Stock. After giving effect to the shares of our Common Stock to be sold in this offering at the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, assuming the number of shares of Common Stock offered by us, as set forth on the cover page of this prospectus, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, our pro forma as-adjusted net tangible book value as of June 30, 2024 would have been approximately \$3.6 million, or approximately \$0.84 per share of our Common Stock. This represents an immediate increase in the net tangible book value of \$2.56 per share of our Common Stock to our existing stockholders and an immediate dilution in net tangible book value of approximately (\$0.98) per share of our Common Stock to new investors, representing the difference between the public offering price and our pro forma as-adjusted net tangible book value as of June 30, 2023, after giving effect to this offering, and the public offering price per share. Furthermore, if outstanding options or warrants are exercised, you could experience further dilution.

In addition, we have a number of stock options and warrants outstanding, and, in order to raise additional capital, we may in the future offer additional shares of our Common Stock or other securities convertible into or exchangeable for our Common Stock at prices that may not be the same as the price per share in this offering. In the event that the outstanding options or warrants are exercised or settled, or that we make additional issuances of Common Stock or other convertible or exchangeable securities, you could experience additional dilution. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders, including investors who purchase shares of Common Stock in this offering. The price per share at which we sell additional shares of our Common Stock or securities convertible into Common Stock in future transactions, may be higher or lower than the price per share in this offering. As a result, purchasers of the shares we sell, as well as our existing stockholders, will experience significant dilution if we sell at prices significantly below the price at which they invested. See the section entitled “*Dilution*” below for a more detailed illustration of the dilution you would incur if you participated in this offering.

10

Resales of our Common Stock in the public market during this offering by our stockholders may cause the market price of our Common Stock to fall.

Sales of a substantial number of shares of our Common Stock could occur at any time. The issuance of new shares of our Common Stock could result in resales of our Common Stock by our current stockholders concerned about the potential ownership dilution of their holdings. In turn, these resales could have the effect of depressing the market price for our Common Stock.

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

We currently intend to use the net proceeds from the offering of securities under this prospectus for research and development expenses, transaction costs to complete a strategic transaction involving the Company, legal expenses, and working capital, as described in the section of this prospectus entitled “*Use of Proceeds.*” We will have broad discretion in the application of the net proceeds in the category of general corporate purposes and investors will be relying on the judgment of our management regarding the application of the proceeds of this offering.

The precise amount and timing of the application of these proceeds, if any, will depend upon a number of factors, such as the timing and progress of efforts to complete a strategic transaction, our research and development efforts, our funding requirements and the availability and costs of other funds. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Depending on the outcome of our efforts and other unforeseen events, our plans and priorities may change and we may apply the net proceeds of this offering in different manners than we currently anticipate.

The failure by our management to apply these funds effectively could harm our business, financial condition and results of operations. Pending their use, we may invest the net proceeds from this offering in short-term, interest-bearing instruments. These investments may not yield a favorable return to our stockholders.

This offering may cause the trading price of our Common Stock to decrease.

The price per share, together with the number of shares of 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 Common Stock. This decrease may continue after the completion of this offering.

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

There is no established public trading market for the Pre-Funded Warrants and 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 and Common Warrants on any securities exchange or nationally recognized trading system. Without an active market, the liquidity of the Pre-Funded Warrants and Common Warrants will be limited.

Holders of our Pre-Funded Warrants and Common Warrants will have no rights as common stockholders until they acquire our Common Stock.

Until you acquire shares of Common Stock upon exercise of your Pre-Funded Warrants or the Common Warrants, you will have no rights with respect to the shares of Common Stock issuable upon exercise of your Common Warrants. Upon exercise of your Pre-Funded Warrants or the Common Warrants, you will be entitled to exercise the rights of a holder of shares only as to matters for which the record date occurs after the exercise date.

11

If we do not maintain a current and effective prospectus relating to the Common Stock issuable upon exercise of the Pre-Funded Warrants and Common Warrants, holders will only be able to exercise such Pre-Funded Warrants and Common Warrants on a “cashless basis.”

If we do not maintain a current and effective prospectus relating to the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants or the Common Warrants at the time that holders wish to exercise such warrants, they will only be able to exercise them on a “cashless basis,” and under no circumstances would we be required to make any cash payments or net cash settle such warrants to the holders. As a result, the number of shares of Common Stock that holders will receive upon exercise of the Pre-Funded Warrants or the Common Warrants will be fewer than it would have been had such holders exercised their Pre-Funded Warrants or the Common Warrants for cash. Under the terms of the Pre-Funded Warrants or the Common Warrants, we have agreed to use our reasonable best efforts to maintain a current and effective prospectus relating to the shares of Common Stock issuable upon exercise of such warrants until the expiration of such warrants. However, we cannot assure you that we will be able to do so. If we are unable to do so, the potential “upside” of the holder’s investment in our company may be reduced.

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

The Pre-Funded Warrants and Common Warrants offered hereby do not confer any rights of 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 Common Stock at a fixed price. Specifically, commencing on the date of issuance, holders of the Pre-Funded Warrants may acquire the Common Stock issuable upon exercise of such warrants at an exercise price of \$0.0001 per share and holders of the Common Warrants may acquire the Common Stock issuable upon exercise of such warrants at an exercise price per share equal to the public offering price of shares of Common Stock in this offering. Moreover, following this offering, the market value of the Pre-Funded Warrants and the Common Warrants is uncertain, and there can be no assurance that the

market value of the Pre-Funded Warrants or the Common Warrants will equal or exceed their public offering price.

The Common Warrants sold in this offering are not exercisable until Warrant Stockholder Approval, provided however, if the Pricing Conditions are met, the Common Warrants will be exercisable upon issuance.

The Common Warrants sold in this offering will have an exercise price of \$1.82 per share (assuming an exercise price equal to the reported sales price of our Common Stock on Nasdaq on September 10, 2024, which was \$1.82 per share) and will be exercisable beginning on the effective date of the Warrant Stockholder Approval, provided however, if the Pricing Conditions are met, the Common Warrants will be exercisable upon issuance (the “Initial Exercise Date”). The Common Warrants will expire on the five-year anniversary of the Initial Exercise Date.

While we intend to promptly seek Warrant Stockholder Approval, there is no guarantee that the Warrant Stockholder Approval will ever be obtained. If we are unable to obtain the Warrant Stockholder Approval, the Common Warrants may have no value.

The Common Warrants may not have any value.

Each Common Warrant has an exercise price per share equal to the public offering price of shares of Common Stock in this offering and expires on the fifth anniversary of its original issuance date. In the event the market price per share of Common Stock does not exceed the exercise price of the Common Warrants during the period when the Common Warrants are exercisable, the Common Warrants may not have any value.

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. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth herein. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to support our operations. 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 to complete such short-term operations. Such additional fundraises may not be available or available on terms acceptable to us.

12

The Placement Agent is offering the shares on a “reasonable best efforts” basis, and the Placement Agent is under no obligation to purchase any shares for its own account. The Placement Agent is not required to sell any specific number or dollar amount of shares of Common Stock in this offering but will use its reasonable best efforts to sell the securities offered in this prospectus. As a “reasonable best efforts” offering, there can be no assurance that the offering contemplated hereby will ultimately be consummated.

We may amend the terms of certain outstanding warrants in connection with this offering.

In connection with the offering pursuant to this prospectus, we may amend the terms of certain outstanding warrants to purchase up to 954,118 shares of our Common Stock which currently have an exercise price of \$3.23 per share, to reduce the exercise price of such prior warrants to: (i) equal the exercise price of the Common Warrants sold in this offering; and (ii) extend the term during which the Prior Warrants could remain exercisable to the term of the Common Warrants sold in this offering. The reduction in the exercise price will reduce the amount of funds we receive upon exercise of such warrants, in the event such prior warrants are exercised for cash, and may result in further dilution to existing stockholders.

Risks Related to Our Business Operations

Our business, financial condition and results of operations are subject to various risks and uncertainties, including those described below. This section discusses factors that, individually or in the aggregate, could cause our actual results to differ materially from expected and historical results. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. It is not possible to predict or identify all such factors. Consequently, the following description of Risk Factors is not a complete discussion of all potential risks or uncertainties applicable to our business.

Our current cash balance is only expected to be sufficient to fund our planned business operations until approximately November 2024. If additional capital is not available, we may not be able to pursue our planned business operations, may be forced to change our planned business operations, or may take other actions that could adversely impact our stockholders, including seeking bankruptcy protection.

We are a clinical stage biotechnology company that currently has no revenue. Thus, our business does not generate the cash necessary to finance our planned business operations. We will require significant additional capital to: (i) develop FDA and/or MHRA-approved products and commercialize such products; (ii) fund research and development activities relating to, and obtain regulatory approval for, our product candidates; (iii) protect our intellectual property; (iv) attract and retain highly-qualified personnel; (v) respond effectively to competitive pressures; and (vi) acquire complementary businesses or technologies.

Our future capital needs depend on many factors, including: (i) the scope, duration and expenditures associated with our research, development and commercialization efforts; (ii) continued scientific progress in our programs; (iii) the outcome of potential partnering or licensing transactions, if any; (iv) competing technological developments; (v) our proprietary patent position; and (vi) the regulatory approval process for our products.

We will need to raise substantial additional funds through public or private equity offerings, debt financings or strategic alliances and licensing arrangements to finance our planned business operations. We may not be able to obtain additional financing on terms favorable to us, if at all. General market conditions, rising interest rates and inflation, as well as global conflicts such as the ongoing conflict between Ukraine and Russia, and Israel and Hamas, may make it difficult for us to seek financing from the capital markets, and the terms of any financing may adversely affect the holdings or the rights of our stockholders. For example, if we raise additional funds by issuing equity securities, further dilution to our stockholders will result, which may substantially dilute the value of their investment. Any equity financing may also have the effect of reducing the conversion or exercise price of our outstanding convertible or exercisable securities, which could result in the issuance (or potential issuance) of a significant number of additional shares of our Common Stock. In addition, as a condition to providing additional funds to us, future investors may demand, and may be granted, rights superior to those of existing stockholders. Debt financing, if available, may involve restrictive covenants that could limit our flexibility to conduct future business activities and, in the event of insolvency, could be paid before holders of equity securities received any distribution of our assets. We may be required to relinquish rights to our technologies or product candidates, or grant licenses through alliance, joint venture or agreements on terms that are not favorable to us, in order to raise additional funds. Our current cash balance is only expected to be sufficient to fund our planned business operations until approximately November 2024. If adequate funds are not available, we may have to delay, reduce or eliminate one or more of our planned activities with respect to our business, or terminate our operations, or may be forced to seek bankruptcy protection. These actions would likely reduce the market price of our Common Stock.

13

We will need additional capital which may not be available on commercially acceptable terms, if at all, which raises questions about our ability to continue as a going concern.

As of June 30, 2024, we had an accumulated deficit of \$128,401,620 and a working capital deficit of \$1,668,637, and for the six months ended June 30, 2024, a net loss of \$1,057,963 and cash used in operating activities of \$306,247. As of December 31, 2023, we had an accumulated deficit of \$127,343,657 and a working capital deficit of \$1,422,710, and for the year ended December 31, 2023, a net loss of \$19,935,112 and cash used in operating activities for the year ended December 31, 2023, of \$10,922,223. As of September 12, 2024, we had cash on hand of approximately \$0.3 million, which we expect will last us until November 2024. The Consolidated Financial Statements incorporated by reference herein have been prepared assuming we will continue as a going concern. As we are not generating revenues, we need to raise a significant amount of capital in order to pay our debts and cover our operating costs. While we previously raised funds through the sale of equity in July 2022 (approximately \$6.5 million of gross proceeds), December 2022 (approximately \$6.0 million of gross proceeds), April 2023 (approximately \$3.0 million of gross proceeds), August 2023 (approximately \$3.0 million) and November 2023 (approximately \$0.8 million), there is no assurance that we will be able to raise additional needed capital or that such capital will be available under favorable terms.

We are subject to all the substantial risks inherent in the development of a new business enterprise within an extremely competitive industry. Due to the absence of a long-standing operating history and the emerging nature of the markets in which we compete, we anticipate operating losses until we can successfully implement our business strategy, which includes all associated revenue streams. We may never achieve profitable operations or generate significant revenues.

We currently have a monthly cash requirement spend of approximately \$250,000. We believe that in the aggregate, we will require significant additional capital funding to support and expand the research and development and marketing of our products, fund future clinical trials, repay debt obligations, provide capital expenditures for additional equipment and development costs, payment obligations, office space and systems for managing the business, and cover other operating costs until our planned revenue streams from products are fully-implemented and begin to offset our operating costs, if ever.

Since our inception, we have funded our operations with the proceeds from equity and debt financing. We have experienced liquidity issues due to, among other reasons, our limited ability to raise adequate capital on acceptable terms. We have historically relied upon the sale of equity and debt funding that is convertible into shares of our Common Stock to fund our operations and have devoted significant efforts to reduce that exposure. We anticipate that we will need to issue equity to fund our operations and fund our operating expenses for the foreseeable future. If we are unable to achieve operational profitability or we are not successful in securing other forms of financing, we will have to evaluate alternative actions to reduce our operating expenses and conserve cash.

These conditions raise substantial doubt about our ability to continue as a going concern. The Consolidated Financial Statements included herein have been prepared in accordance with accounting principles generally accepted in the United States on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. Accordingly, the Consolidated Financial Statements included herein do not include any adjustments relating to the recoverability of assets and classification of liabilities that might be necessary should we be unable to continue as a going concern. The Consolidated Financial Statements included herein also include a going concern footnote.

Additionally, wherever possible, the Board of Directors will attempt to use non-cash consideration to satisfy obligations. In many instances, we believe that the non-cash consideration will consist of restricted shares of our Common Stock, preferred stock or warrants to purchase shares of our Common Stock. The Board of Directors has authority, without action or vote of the stockholders, but subject to Nasdaq rules and regulations (which generally require stockholder approval for any transactions which would result in the issuance of more than 20% of our then outstanding shares of Common Stock or voting rights representing over 20% of our then outstanding shares of stock, subject to certain exceptions), to issue all or part of the authorized but unissued shares of Common Stock, preferred stock or warrants to purchase such shares of Common Stock. In addition, we may attempt to raise capital by selling shares of our Common Stock, possibly at a discount to market in the future. These actions will result in dilution of the ownership interests of existing stockholders, may further dilute Common Stock book value, and that dilution may be material. Such issuances may also serve to enhance existing management's ability to maintain control of us, because the shares may be issued to parties or entities committed to supporting existing management.

Our accounts payable are significant, and we do not currently have sufficient funds to pay such accounts payable, a large portion of which are past due.

We do not currently have adequate cash on hand, and do not expect to generate revenues, sufficient to pay down our significant accounts payable balance. A large portion of our accounts payable balance represents amounts which are past due. While we are actively working with creditors to attempt to satisfy amounts owed in shares of common stock, the issuance of which may cause dilution to existing stockholders, there can be no assurance that such creditors will agree to accept equity in lieu of cash. Such creditors may in the future exercise remedies, including suing the Company for nonpayment or attempting to force the Company into receivership. Creditor litigation may be costly and resource intensive, which could deplete our already limited available cash and/or force us to raise additional funding, which may be dilutive to existing stockholders or seek bankruptcy protection. In the event of a bankruptcy proceeding or insolvency, or restructuring of our capital structure, holders of the Company's common stock could suffer a total loss of their investment.

We will need to raise additional capital, which may not be available on favorable terms, if at all, causing dilution to our stockholders, restricting our operations or adversely affecting our ability to operate our business.

We may not be able to obtain additional financing on terms favorable to us, if at all, including as a result of macroeconomic conditions such as a severe or prolonged economic downturn. Disruption, uncertainty or volatility in the capital markets could increase our cost of capital or limit our ability to raise funds needed to operate our business. Disruptions could be caused by Federal Reserve policies and actions, currency concerns, inflation, economic downturn or uncertainty, monetary policies, failures of financial institutions, U.S. debt management concerns, and U.S. debt limit and budget disputes, including government shutdowns, European and worldwide sovereign debt concerns, other global or geopolitical events, or other factors. Current macroeconomic conditions have negatively impacted the U.S. banking sector, including for example, the recent closures and FDIC receiverships of Silicon Valley Bank and Signature Bank. Although we do not have any accounts at or business relationships with these banks, we may be negatively impacted by other disruptions to the U.S. banking system caused by these or similar developments.

We have significant and increasing liquidity needs and require additional funding.

Research and development, management and administrative expenses, including legal expenses, and cash used for operations will continue to be significant and may increase substantially in the future in connection with new research and development initiatives, clinical trials, continued product commercialization efforts and the launch of our future product candidates. We will need to raise additional capital to fund our operations, continue to conduct clinical trials to support potential regulatory approval of marketing applications, and to fund commercialization of our future product candidates.

The amount and timing of our future funding requirements will depend on many factors, including, but not limited to:

- the timing of FDA and/or MHRA approval, if any, and approvals in other international markets of our future product candidates, if at all;
- the timing and amount of revenue from sales of our products, or revenue from grants or other sources;
- the rate of progress and cost of our clinical trials and other product development programs;

- costs of establishing or outsourcing sales, marketing and distribution capabilities;
- costs and timing of any outsourced growing and commercial manufacturing supply arrangements for our future product candidates;
- costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights associated with our future product candidates;
- the effect of competing technological and market developments;
- personnel, facilities and equipment requirements; and
- the terms and timing of any additional collaborative, licensing, co-promotion or other arrangements that we may establish.

While we expect to fund our future capital requirements from a number of sources, including the proceeds from further public and/or private offerings, we cannot assure you that any of these funding sources will be available to us on favorable terms, or at all. Further, even if we can raise funds from all of the above sources, the amounts raised may not be sufficient to meet our future capital requirements.

We depend on our key personnel and our ability to attract and retain employees.

Our future growth and success depend on our ability to recruit, retain, manage and motivate our employees. We are highly dependent on our current management, including our Interim Chief Executive Officer, Blair Jordan and our Chief Financial Officer, Ozan Pamir. The inability to hire or retain experienced management personnel could adversely affect our ability to execute our business plan and harm our operating results. Due to the specialized scientific and managerial nature of our business, we rely heavily on our ability to attract and retain qualified scientific, technical and managerial personnel. The competition for qualified personnel in the biotechnological field is intense and we may be unable to continue to attract and retain qualified personnel necessary for the development of our business or to recruit suitable replacement personnel.

Our industry and the broader U.S. economy have experienced higher than expected inflationary pressures during 2022 and 2023, related to continued supply chain disruptions, labor shortages and geopolitical instability. Should these conditions persist, our business, future results of operations and cash flows could be materially and adversely affected.

During 2022 and the early part of 2023, there were significant increases in the costs of certain materials, products and shipping costs, as a result of availability constraints, supply chain disruption, increased demand, labor shortages associated with a fully employed U.S. labor force, high inflation and other factors. Supply and demand fundamentals have been further aggravated by disruptions in global energy supply caused by multiple geopolitical events, including the ongoing conflict between Russia and Ukraine, and Israel and Hamas, which threatens to spread to other Middle Eastern countries. Service, materials and shipping costs have also increased accordingly with general supply chain and inflation issues seen throughout the U.S. leading to increased operating costs. Supply chain constraints and inflationary pressures have in the past and may in the future, adversely impact our operating costs and may negatively impact our future product costs, consulting costs and expenses which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our License Agreements with the University of Oxford and other licensors may be terminated in certain circumstances without our consent.

All of our License Agreements with the University of Oxford and other licensors remain subject to various conditions and covenants, and provide for certain termination rights to the licensors. Those agreements typically allow termination by the licensor for our failure to pay amounts due timely, our failure to cure a material breach under the terms of the applicable license agreement, and our insolvency. As a result, if we are deemed insolvent, or in the event we seek bankruptcy protection, the licensors of our license agreements may terminate their license agreements with us. In the event such license agreements are terminated, we could lose the right to develop all of our platforms and technologies, may lose any investments made towards developing such platforms and technologies, and may be left without any intellectual property, product pathways, or development opportunities. Such terminations may result in the value of our securities declining in value or becoming worthless, the need for us to change our business plan, and may result in the Company seeking bankruptcy protection.

We owe a significant amount of money to the University of Oxford, which funds we do not have. The university may take action against us to enforce their rights to payment in the future, which could have a material adverse effect on us and our operations.

Due to recent financial constraints, the Company has been unable to timely pay amounts due to the University of Oxford (“Oxford”), the licensor of the majority of the Company’s licenses and patents and the Company’s research partner. Oxford alleges that an aggregate of approximately \$1.3 million is owed from the Company and one of its subsidiaries to Oxford under the terms of licenses and agreements with Oxford and related parties. The Company is currently in ongoing discussions with Oxford to reduce that amount and enter into a payment plan with regards to the amounts owed; however, no definitive terms or extensions have been agreed to date. Oxford has also notified the Company that it is not willing to discuss any new projects or arrangements until all outstanding invoices have been paid or a payment plan has been agreed to; has engaged a law firm to seek the collection of the amounts owed, together with interest; and has threatened legal proceedings against us. While we are hopeful that we can come to mutually agreeable terms regarding a settlement, payment plan, and/or extension, with Oxford, we may not have sufficient funds to pay amounts due to Oxford in the near term, if at all, and Oxford may take action against us, including filing legal proceedings against us seeking amounts due and interest, attempting to terminate their relationship with us, and/or filing a wind-up petition against one of the Company’s subsidiaries in the U.K. If Oxford were to take legal action against us or terminate their relationship with us, we may be forced to scale back our business plan and/or seek bankruptcy protection. We may be subject to litigation and damages for our failure to pay amounts due to Oxford, and may be forced to pay interest and penalties, which funds we do not currently have. We plan to seek to raise funding in the future to support our operations, and to pay amounts due to Oxford, through a combination of equity offerings, debt financing or other capital sources, including potentially collaborations, licenses and other similar arrangements, which may not be available on favorable terms, if at all. The sale of additional equity or debt securities, if accomplished, may result in dilution to our then stockholders. Additionally, in December 2023, we engaged A.G.P. as financial advisor to explore and evaluate strategic alternatives to enhance shareholder value. Potential strategic alternatives that are being explored and evaluated by the Company as part of this process include, but are not limited to, an acquisition, merger, reverse merger, other business combination, sale of assets, licensing or other strategic transactions involving the Company. The Company does not intend to discuss or disclose further developments during this process unless and until its Board of Directors has approved a specific action or otherwise determined that further disclosure is appropriate. There is no assurance that the strategic review process will result in the approval or completion of any specific transaction or outcome. To date, the Board of Directors has had discussions with several parties regarding potential transactions, but has not made a final determination regarding which type of transaction or which transaction to pursue as of the date of this prospectus.

We may enter into strategic transactions in the future which may result in a material change in our operations and/or a change of control.

In November 2023, we engaged A.G.P. as financial advisor to explore and evaluate strategic alternatives to enhance shareholder value. Potential strategic alternatives that are being explored and evaluated by the Company as part of this process include, but are not limited to, an acquisition, merger, reverse merger, other business combination, sale of assets, licensing or other strategic transactions involving the Company. The Company does not intend to discuss or disclose further developments during this process unless and until its Board of Directors has approved a specific action or otherwise determined that further disclosure is appropriate. There is no assurance that the strategic

review process will result in the approval or completion of any specific transaction or outcome.

The Board of Directors and management team are committed to acting in the best interests of the Company, its stockholders and its stakeholders. There is no deadline or definitive timetable set for completion of the strategic alternatives review process and there can be no assurance that this process will result in the Company pursuing a transaction or any other strategic outcome. To date, the Board of Directors has had discussions with several parties regarding potential transactions, but has not made a final determination regarding which type of transaction or which transaction to pursue as of the date of this prospectus.

As a result of the above, in the future, we may enter into transactions with parties seeking to merge and/or acquire us and/or our operations. While we have not entered into any agreements or understandings with any such parties to date, in the event that we do enter into such a transaction or transactions in the future, new shares of Common Stock or preferred stock could be issued resulting in substantial dilution to our then current stockholders and/or a change of control. As a result, our new majority stockholders may change the composition of our Board of Directors and may replace our current management. Any future transaction may also result in a change in our business focus. We have not entered into any agreements relating to any strategic transaction involving the Company as of the date of this Report and may not enter into such agreements in the future. Any future strategic transaction involving the Company or its operations may have a material effect on our operations, cash flows, results of operations, prospects, plan of operations, the listing of our Common Stock on Nasdaq, our officers, directors and majority stockholder(s), and the value of our securities.

We may not receive any further amount under our pre-merger directors' and officers' insurance policy in connection with certain litigation matters.

On June 29, 2022, AmTrust International Underwriters DAC ("AmTrust"), which was the premerger directors' and officers' insurance policy underwriter for KBL, filed a declaratory relief action against us in the U.S. District Court for the Northern District of California (the "Declaratory Relief Action") seeking declaration of AmTrust's obligations under the directors' and officers' insurance policy. In the Declaratory Relief Action, AmTrust is claiming that as a result of the merger, we are no longer the insured under the subject insurance policy, notwithstanding the fact that the fees which we seek to recover from AmTrust relate to matters occurring prior to the merger. The parties filed various answers and the Company filed counterclaims against AmTrust between September 2022 and November 2022, when the Company filed a Motion for Summary Adjudication against both AmTrust and Freedom. The Motion was fully briefed and a hearing was held on March 9, 2023. The standard to prevail on a Motion for Summary Adjudication in the Court is high to prevail and requires a judge to find that there are no disputed issues of fact so that they can rule on the issues as a matter of law. In this instance the judge found three major issues could be decided as a matter of law in the Company's favor and that one issue, the Change in Control exclusion, requires further discovery.

On April 21, 2023, the Court issued an Order Granting in Part and Denying in Part the Company's Motion for Partial Summary Judgment. Specifically, the Court granted summary adjudication in favor of the Company on the following issues: (a) that the Company is, in fact, an insured under both the AmTrust and Freedom insurance policies; (b) that certain SEC subpoena related expenses for defendants Dr. Marlene Krauss, the Company's former Chief Executive Officer and Director, and George Hornig, the former Chairman of the Board, are within the basic scope of coverage under both the AmTrust and Freedom insurance policies; and (c) that the Insured vs. Insured exclusion relied upon by AmTrust and Freedom is not applicable to bar any such coverage.

The Court also found that there were issues of disputed facts as to the Change in Control exclusion contained within the policies, which therefore precluded the Court from granting the remainder of the Company's requests for summary adjudication as a matter of law. Accordingly, the Court, at this time, denied the Company's further requests for summary adjudication and deemed that for the time being, the Change in Control issue is to be determined at the time of trial, in order to find that the policies provide (i) coverage for the fees which the Company has advanced and will advance to Dr. Marlene Krauss and George Hornig; (ii) that AmTrust has breached the policy; (iii) that AmTrust must pay such expenses of the Company; and that, once the AmTrust policy has been exhausted, (iv) that Freedom will be obligated to pay such expenses of the Company pursuant to its policy.

On August 4, 2023, the Court granted the Company's request to file a second motion for partial summary judgment in this case, this one being on the issue of whether AmTrust should be required to advance to the Company the defense costs being incurred by Dr. Marlene Krauss and George Hornig during the pendency of the case. The Company filed such Motion for Partial Summary Judgment, and it has now been fully briefed by the parties. The hearing for such motion was held on January 11, 2024. After the matter was taken under submission, on February 12, 2024, the Court granted the Company's Motion for Partial Summary Judgment against both AmTrust and Freedom, and ordered as follows: (a) AmTrust is obligated under its insurance policy with the Company to advance to the Company all defense costs in excess of the deductible that the Company has advanced, or will advance, to Dr. Krauss and Mr. Hornig in connection with certain SEC Subpoenas, and (b) upon exhaustion of the AmTrust insurance policy, Freedom is obligated to do the same pursuant to its excess liability insurance policy with the Company. This Order applies throughout the interim of the case, but does not constitute a final judgment, and both the Company and the two insurers retain their rights to contest all applicable issues at trial, which is scheduled for May 12, 2025. A final judgment following trial could potentially confirm these obligations of the insurers or, alternatively, reverse and require the Company to repay all or portions of such advance payments. There is no assurance at this time as to what the final judgment may entail.

On April 16, 2024, AmTrust paid the Company \$2.27 million in reimbursement of fees which the Company has advanced to Dr. Marlene Krauss and George Hornig, of which the Company received \$1.5 million after the payment of attorney's fees. On May 9, 2024, AmTrust paid the Company \$300,140 in reimbursement of fees which the Company had advanced to Dr. Marlene Krauss and George Hornig, of which the Company has received \$200,093 after the payment of attorney's fees.

The Company, Freedom and Amtrust held a mediation conference on August 21, 2024, during which, the Company agreed to the terms of a settlement with Freedom, pursuant to which Freedom has agreed to pay \$125,000 to the Company, of which the Company expects to receive 2/3rds of such amount after the payment of legal fees, which funds have not been received by the Company to date.

Amtrust and the Company have commenced written discovery proceedings against each other and anticipate that depositions will also occur. The Company intends to continue to vigorously pursue this matter in order to establish the Company's entitlement to full and final payment by AmTrust of the subject advancement expenses of the Company. While the Company continues to believe it has a strong case against AmTrust, there can be no assurance that the Company will prevail in this action. The final outcome of the litigation is unknown at this time and such final outcome could be materially adverse to the Company.

If we make any acquisitions, they may disrupt or have a negative impact on our business.

If we make acquisitions in the future, funding permitting, which may not be available on favorable terms, if at all, we could have difficulty integrating the acquired company's assets, personnel and operations with our own. We do not anticipate that any acquisitions or mergers we may enter into in the future would result in a change of control of the Company. In addition, the key personnel of the acquired business may not be willing to work for us. We cannot predict the effect expansion may have on our core business. Regardless of whether we are successful in making an acquisition, the negotiations could disrupt our ongoing business, distract our management and employees and increase our expenses. In addition to the risks described above, acquisitions are accompanied by a number of inherent risks, including, without limitation, the following:

- the difficulty of integrating acquired products, services or operations;
- the potential disruption of the ongoing businesses and distraction of our management and the management of acquired companies;
- difficulties in maintaining uniform standards, controls, procedures and policies;
- the potential impairment of relationships with employees and customers as a result of any integration of new management personnel;

- the potential inability or failure to achieve additional sales and enhance our customer base through cross-marketing of the products to new and existing customers;
- the effect of any government regulations which relate to the business acquired;

- potential unknown liabilities associated with acquired businesses or product lines, or the need to spend significant amounts to retool, reposition or modify the marketing and sales of acquired products or operations, or the defense of any litigation, whether or not successful, resulting from actions of the acquired company prior to our acquisition; and
- potential expenses under the labor, environmental and other laws of various jurisdictions.

Our business could be severely impaired if and to the extent that we are unable to succeed in addressing any of these risks or other problems encountered in connection with an acquisition, many of which cannot be presently identified. These risks and problems could disrupt our ongoing business, distract our management and employees, increase our expenses and adversely affect our results of operations.

Claims, litigation, government investigations, and other proceedings may adversely affect our business and results of operations.

We are currently subject to, and expect to continue to be regularly subject to, actual and threatened claims, litigation, reviews, investigations, and other proceedings. In addition, we have filed lawsuits against certain parties for matters we discovered which related to KBL, prior to the November 6, 2020, business combination. Any of these types of proceedings may have an adverse effect on us because of legal costs, disruption of our operations, diversion of management resources, negative publicity, and other factors. The outcomes of these matters are inherently unpredictable and subject to significant uncertainties. Determining legal reserves and possible losses from such matters involves judgment and may not reflect the full range of uncertainties and unpredictable outcomes. Until the final resolution of such matters, we may be exposed to losses in excess of the amount recorded, and such amounts could be material. Should any of our estimates and assumptions change or prove to have been incorrect, it could have a material effect on our business, consolidated financial position, results of operations, or cash flows. In addition, it is possible that a resolution of one or more such proceedings, including as a result of a settlement, could require us to make substantial future payments, prevent us from offering certain products or services, require us to change our business practices in a manner materially adverse to our business, requiring development of non-infringing or otherwise altered products or technologies, damaging our reputation, or otherwise having a material effect on our operations.

Risks Relating to our Common Stock

The market price of our Common Stock has been extremely volatile and may continue to be volatile due to numerous circumstances beyond our control.

The market price of our Common Stock has fluctuated, and may continue to fluctuate, widely, due to many factors, some of which may be beyond our control. These factors include, without limitation:

- “short squeezes”;
- comments by securities analysts or other third parties, including blogs, articles, message boards and social and other media;
- large stockholders exiting their position in our securities or an increase or decrease in the short interest in our securities;
- actual or anticipated fluctuations in our financial and operating results;
- changes in foreign currency exchange rates;
- the commencement, enrollment or results of our planned or future clinical trials of our product candidates or those of our competitors;
- the success of competitive drugs or therapies;
- regulatory or legal developments in the U.S. and other countries;

- the success of competitive products or technologies;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to our product candidates or clinical development programs;
- litigation matters, including amounts which may or may not be recoverable pursuant to our officer and director insurance policies, regulatory actions affecting the Company and the outcome thereof;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- our inability to obtain or delays in obtaining adequate drug supply for any approved drug or inability to do so at acceptable prices;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems, including coverage and adequate reimbursement for any approved drug;

- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, political, and market conditions and overall fluctuations in the financial markets in the U.S. and abroad; and
- investors' general perception of us and our business.

Stock markets in general and our stock price in particular have recently experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies and our company. For example, during 2022, the closing sales prices of our Common Stock ranged from a post-split adjusted high of \$1,482.04 per share to a low of \$23.56 per share, during fiscal 2023, the closing sales prices of our Common Stock ranged from a high of \$100.70 per share to a low of \$3.21 per share and during fiscal 2024 (through the date of this prospectus), the closing sales prices of our Common Stock ranged from a post-split adjusted high of \$5.70 per share to a low of \$1.46 per share. During this time, we do not believe that we have experienced any material changes in our financial condition or results of operations that would explain such price volatility or trading volume; however, we have sold equity which was dilutive to existing stockholders. These broad market fluctuations may adversely affect the trading price of our securities. Additionally, these and other external factors have caused and may continue to cause the market price and demand for our Common Stock to fluctuate substantially, which may limit or prevent our stockholders from readily selling their shares of our Common Stock and may otherwise negatively affect the liquidity of our Common Stock.

Information available in public media that is published by third parties, including blogs, articles, message boards and social and other media may include statements not attributable to us and may not be reliable or accurate.

We are aware of a large volume of information being disseminated by third parties relating to our operations, including in blogs, message boards and social and other media. Such information as reported by third parties may not be accurate, may lead to significant volatility in our securities and may ultimately result in our Common Stock or other securities declining in value.

The exercise of our outstanding options and warrants, and the sale of Common Stock upon exercise thereof, may adversely affect the trading price of our securities.

As of the date of this prospectus we have (i) outstanding stock options to purchase an aggregate of 24,404 shares of Common Stock at a weighted average exercise price of \$103.02 per share; and (ii) outstanding warrants to purchase 983,473 shares of Common Stock at a weighted average exercise price of \$105.93 per share. For the life of the options and warrants, the holders have the opportunity to profit from a rise in the market price of our Common Stock without assuming the risk of ownership. The issuance of shares upon the exercise of outstanding securities will also dilute the ownership interests of our existing stockholders.

The availability of these shares for public resale, as well as any actual resales of these shares, could adversely affect the trading price of our Common Stock. We cannot predict the size of future issuances of our Common Stock pursuant to the exercise of outstanding options or warrants or conversion of other securities, or the effect, if any, that future issuances and sales of shares of our Common Stock may have on the market price of our Common Stock. Sales or distributions of substantial amounts of our Common Stock (including shares issued in connection with an acquisition), or the perception that such sales could occur, may cause the market price of our Common Stock to decline.

In addition, the Common Stock issuable upon exercise/conversion of outstanding convertible securities may represent overhang that may also adversely affect the market price of our Common Stock. Overhang occurs when there is a greater supply of a company's stock in the market than there is demand for that stock. When this happens the price of our stock will decrease, and any additional shares which stockholders attempt to sell in the market will only further decrease the share price. If the share volume of our Common Stock cannot absorb shares sold by holders of our outstanding convertible securities, then the value of our Common Stock will likely decrease.

Our outstanding public warrants are significantly out of the money.

Each Public Warrant entitles the holder to purchase one-seven hundred sixtieth of one share of Common Stock at an exercise price of \$5.75 per 1/760th of one share (\$4,370.00 per whole share), subject to adjustment. No fractional shares will be issued upon exercise of the Public Warrants. The Public Warrants became exercisable 12 months from the closing of the IPO and expire five years after the completion of the Business Combination (November 6, 2025). The Public Warrants are significantly out of the money and because no fractional shares will be issued upon exercise of the Public Warrants, the Public Warrants are only exercisable in multiples of 760. As a result, the Public Warrants may not have any significant value. Additionally, warrant holders not holding at least 760 Public Warrants or who hold Public Warrants which would be exercisable for a fractional share of Common Stock, must sell any warrants to obtain value from the fractional interest. As a result, the trading of the Public Warrants may be limited or sporadic, and such Public Warrants may not have any significant value. Any holder of Public Warrants holding less than 760 Public Warrants or a number of Public Warrants not evenly divisible by 760 will not receive any Common Stock upon the exercise of Public Warrants, as no fractional shares of Common Stock are issuable upon exercise thereof.

A significant number of our shares are eligible for sale and their sale or potential sale may depress the market price of our Common Stock and cause significant dilution to existing stockholders.

Sales of a significant number of shares of our Common Stock in the public market could harm the market price of our Common Stock. Most of our Common Stock is available for immediate resale in the public market, including (a) options to purchase 24,404 shares of Common Stock with a weighted average exercise price of \$103.02 per share; and (b) warrants to purchase 987,473 shares of Common Stock with a weighted average exercise price of \$105.93 per share. If a significant number of shares were sold, such sales would increase the supply of our Common Stock, thereby potentially causing a decrease in its price. The exercise of outstanding convertible securities will also cause significant dilution to existing stockholders and will likely cause the per-share value of our Common Stock to decline, possibly significantly. Some or all of our shares of Common Stock may be offered from time to time in the open market pursuant to effective registration statements and/or compliance with Rule 144, which sales could have a depressive effect on the market for our shares of Common Stock. Subject to certain restrictions, a person who has held restricted shares for a period of six months may generally sell Common Stock into the market. The sale of a significant portion of such shares when such shares are eligible for public sale may cause the value of our Common Stock to decline in value.

There may not be sufficient liquidity in the market for our securities in order for investors to sell their shares. The market price of our Common Stock may continue to be volatile.

The market price of our Common Stock will likely continue to be highly volatile. Some of the factors that may materially affect the market price of our Common Stock are beyond our control, such as conditions or trends in the industry in which we operate or sales of our Common Stock. This situation is attributable to a number of factors, including the fact that we are a small company which is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that generate or influence sales volume, and that even if we came to the attention of such persons, they tend to be risk-averse and would be reluctant to follow an unproven company such as ours or purchase or recommend the purchase of our shares until such time as we became more seasoned and viable.

As a consequence, there may be periods of several days or more when trading activity in our shares is minimal or non-existent, as compared to a mature issuer which has a large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. It is possible that a broader or more active public trading market for our Common Stock will not develop or be sustained, or that trading levels will not continue. These factors may materially adversely affect the market price of our Common Stock, regardless of our performance. In addition, the public stock markets have experienced extreme price and trading volume volatility. This volatility has significantly affected the market prices of securities of many companies for reasons frequently unrelated to the operating performance of the specific companies. These broad market fluctuations may adversely affect the market price of our Common Stock.

We face significant penalties and damages in the event registration statements we have previously filed to register certain securities sold in our prior offerings are subsequently suspended or terminated.

Pursuant to certain prior private offerings of securities, we entered into registration rights agreements which required us to file certain registration statements to register the resale of the privately sold shares and certain securities issuable upon exercise/conversion thereof, and to maintain the effectiveness of such registration statements for certain periods of time. To date, all such required registration statements have been declared effective by the SEC. However, in the event the registration statements are subsequently suspended or terminated, or we otherwise fail to meet certain requirements set forth in the registration rights agreements, we could be required to pay significant penalties which could adversely affect our cash flow and cause the value of our securities to decline in value.

We are not in compliance with the continued listing standards of Nasdaq and Nasdaq has provided a delisting determination letter; we may not be able to comply with Nasdaq's continued listing standards in the future, and as a result our Common Stock and Public Warrants may be delisted from Nasdaq.

Our Common Stock and Public Warrants trade on Nasdaq under the symbols "ATNF" and "ATNFW," respectively. Notwithstanding such listing, there can be no assurance any broker will be interested in trading our securities. Therefore, it may be difficult to sell our securities publicly. There is also no guarantee that we will be able to maintain our listings on Nasdaq for any period of time by perpetually satisfying Nasdaq's continued listing requirements.

We have previously been out of compliance with Nasdaq's continued listing requirements due to our failure to maintain a minimum bid price of at least \$1.00 per share for our Common Stock, which failure was remedied in March 2024.

Also, on October 11, 2023, the Company received written notice from Nasdaq notifying the Company that it was not in compliance with the shareholder approval requirements set forth in Nasdaq Listing Rule 5635(d), which require prior shareholder approval for transactions, other than public offerings, involving the issuance of 20% or more of the pre-transaction shares outstanding at less than the applicable Minimum Price (as defined in Listing Rule 5635(d)(1)(A)), which non-compliance we remedied in December 2023.

Additionally, on November 15, 2023, the Company received a letter from Nasdaq notifying the Company that it was not in compliance with the minimum stockholders' equity requirement for continued listing on the Nasdaq Capital Market. Nasdaq Listing Rule 5550(b)(1) (the "Equity Rule") requires companies listed on the Nasdaq Capital Market to maintain stockholders' equity of at least \$2,500,000. In the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, the Company reported a stockholders' deficit of (\$149,327), which is below the minimum stockholders' equity required for continued listing pursuant to the Equity Rule. Additionally, the Company does not meet the alternative Nasdaq continued listing standards under Nasdaq Listing Rules and did not meet the minimum stockholders' equity requirement as of December 31, 2023, March 31, 2024 or June 30, 2024.

Nasdaq provided the Company until January 2, 2024 to submit to Nasdaq a plan to regain compliance. We submitted the plan to regain compliance in a timely manner, and on January 11, 2024, Nasdaq advised the Company that it has determined to grant the Company an extension to regain compliance with the Equity Rule.

The terms of the extension were as follows: on or before May 13, 2024, the Company must have completed certain transactions described in greater detail in the compliance plan, contemplated to result in the Company increasing its stockholders' equity to more than \$2.5 million, and opt for one of the two following alternatives to evidence compliance with the Equity Rule: Alternative 1: The Company must have furnished to the SEC and Nasdaq a publicly available report (e.g., a Form 8-K) including: 1. A disclosure of the Staff's deficiency letter and the specific deficiency(ies) cited; 2. A description of the completed transaction or event that enabled the Company to satisfy the stockholders' equity requirement for continued listing; and 3. An affirmative statement that, as of the date of the report, the Company believed it had regained compliance with the stockholders' equity requirement based upon the specific transaction or event referenced in Step 2; or Alternative 2: The Company must furnish to the SEC and Nasdaq a publicly available report including: 1. Steps 1 & 2 set forth above; 2. A balance sheet no older than 60 days with pro forma adjustments for any significant transactions or event occurring on or before the report date; and 3. That the Company believes it satisfies the stockholders' equity requirement as of the report date. The pro forma balance sheet must have evidenced compliance with the stockholders' equity requirement.

Additionally, in either case the Company was required to disclose that Nasdaq will continue to monitor the Company's ongoing compliance with the stockholders' equity requirement and, if at the time of its next periodic report the Company does not evidence compliance, that it may be subject to delisting.

While the Company was able to undertake some of the transactions described in the compliance plan, it was unable to regain compliance with the Equity Rule prior to the end of the plan period (May 13, 2024). As a result, on May 14, 2024, the Company received a delist determination letter from the Listing Qualifications department of The Nasdaq Stock Market LLC (the "Staff") advising the Company that the Staff had determined that the Company did not meet the terms of the extension. Specifically, the Company did not complete its proposed transactions and was unable to file a Current Report Form 8-K by the May 13, 2024 deadline previously required by the Staff, evidencing compliance with the Equity Rule. On May 17, 2024, the Company requested an appeal of the Staff's delisting determination, and on May 20, 2024, the Staff advised the Company that the delisting action referenced in the Staff's determination letter had been stayed, pending a final written decision by the Nasdaq Hearings Panel ("Panel"). On July 2, 2024, the Company received notice that the Panel had determined to grant the Company's request to continue its listing on The Nasdaq Stock Market, subject to the Company meeting certain conditions, including filing on or before July 31, 2024, a public disclosure describing the transactions undertaken by the Company to achieve compliance with Nasdaq's continued listing rules and demonstrate long-term compliance with the Equity Rule and providing an indication of its equity following those transactions. On July 22, 2024, the Panel granted the Company's request for additional time to achieve compliance with Nasdaq's continued listing rules and demonstrate long-term compliance with the Equity Rule. Specifically, the Hearings Panel has agreed to provide the Company until September 30, 2024 to regain compliance with the Equity Rule and to allow the continued listing of the Company's common stock and warrants on The Nasdaq Stock Market through such date, subject to the Company's compliance with the Equity Rule on or prior to such date.

Notwithstanding the foregoing, there can be no assurance that the Company will be able to meet the deadlines or conditions imposed by the Panel, or regain compliance with all applicable requirements for continued listing. Additionally, the Nasdaq Listing and Hearing Review Council may, on its own motion, determine to review any Hearing Panel decision within 45 calendar days after issuance of the written decision. If the Listing Council determines to review the Hearing Panel's decision, it may affirm, modify, reverse, dismiss or remand the decision to the Panel.

The Company is continuing to work towards completing the necessary transactions in an effort to achieve compliance with the Equity Rule and is currently evaluating various courses of action to regain compliance with the Equity Rule. However, there can be no assurance that the Company will be able to complete the transactions necessary

to regain compliance with the Equity Rule.

Separately, on May 14, 2024, the Staff provided us notice of our non-compliance with the audit committee requirements for continued listing on Nasdaq set forth in Listing Rule 5605(c)(2), which requires that listed companies maintain an audit committee of at least three independent directors. Nasdaq provided the Company a cure period in order to regain compliance as follows: until the earlier of the Company's next annual shareholders' meeting or May 7, 2025; or if the next annual shareholders' meeting is held before November 4, 2024, then the Company must evidence compliance no later than November 4, 2024. In the event the Company does not regain compliance by the applicable date above, Nasdaq rules require the Staff to provide written notification to the Company that its securities will be delisted. At that time, the Company may appeal the delisting determination to a Hearings Panel. The Company is currently seeking out qualified independent directors to serve on the Company's audit committee and expects to regain compliance with Listing Rule 5605(c)(2) in the near future.

Among the conditions required for continued listing on The Nasdaq Capital Market, Nasdaq requires us to maintain at least \$2.5 million in stockholders' equity or \$500,000 in net income over the prior two years or two of the prior three years. As of September 30, 2023, December 31, 2023, March 31, 2024, and June 30, 2024, our stockholders' equity was below \$2.5 million and we did not otherwise meet the net income requirements described above, and as such, we are not currently in compliance with Nasdaq's continued listing standards relating to minimum stockholders' equity. If we fail to timely remedy our compliance with such applicable requirement, our common stock and Public Warrants may be delisted.

Our failure to meet Nasdaq's continued listing requirements for the reasons above, or any other reason, may result in our securities being delisted from Nasdaq.

Additional conditions required for continued listing on Nasdaq include requiring that we have a majority of independent directors, a two-person compensation committee and a three-member audit committee (each consisting of all independent directors), which three-person audit committee requirement we do not currently meet. As a result, our common stock and Public Warrants may be delisted from Nasdaq.

Even if we demonstrate compliance with the requirements of Nasdaq, we will have to continue to meet other objective and subjective listing requirements to continue to be listed on The Nasdaq Capital Market. Delisting from The Nasdaq Capital Market could make trading our common stock and Public Warrants more difficult for investors, potentially leading to declines in our share price and liquidity. Without a Nasdaq Capital Market listing, stockholders may have a difficult time getting a quote for the sale or purchase of our common stock and Public Warrants, the sale or purchase of our common stock and Public Warrants would likely be made more difficult, and the trading volume and liquidity of our common stock and Public Warrants could decline. Delisting from The Nasdaq Capital Market could also result in negative publicity and could also make it more difficult for us to raise additional capital. The absence of such a listing may adversely affect the acceptance of our common stock as currency or the value accorded by other parties. Further, if we are delisted, we would also incur additional costs under state blue sky laws in connection with any sales of our securities. These requirements could severely limit the market liquidity of our common stock and Public Warrants and the ability of our stockholders and warrant holders to sell our common stock and Public Warrants in the secondary market. If our common stock and Public Warrants are delisted by Nasdaq, our common stock and Public Warrants may be eligible to trade on an over-the-counter quotation system, such as the OTCQB Market or the OTC Pink market, where an investor may find it more difficult to sell our common stock and Public Warrants or obtain accurate quotations as to the market value of our common stock and Public Warrants. In the event our common stock and Public Warrants are delisted from The Nasdaq Capital Market, we may not be able to list our common stock on another national securities exchange or obtain quotation on an over-the-counter quotation system.

Stockholders may be diluted significantly through our efforts to obtain financing and satisfy obligations through the issuance of additional shares of our Common Stock.

Wherever possible, our Board will attempt to use non-cash consideration to satisfy obligations. In many instances, we believe that the non-cash consideration will consist of restricted shares of our Common Stock or where shares are to be issued to our officers, directors and applicable consultants. Our Board of Directors has authority, without action or vote of the stockholders, but subject to Nasdaq rules and regulations (which generally require stockholder approval for any transactions which would result in the issuance of more than 20% of our then outstanding shares of Common Stock or voting rights representing over 20% of our then outstanding shares of stock, subject to certain exceptions), to issue all or part of the authorized but unissued shares of Common Stock. In addition, we may attempt to raise capital by selling shares of our Common Stock, possibly at a discount to market. These actions will result in dilution of the ownership interests of existing stockholders, which may further dilute Common Stock book value, and that dilution may be material. Such issuances may also serve to enhance existing management's ability to maintain control of the Company because the shares may be issued to parties or entities committed to supporting existing management.

USE OF PROCEEDS

We estimate the net proceeds to us from this offering, based on the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, will be approximately \$5.4 million, assuming the number of shares of Common Stock offered by us, as set forth on the cover page of this prospectus, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, and after deducting the placement agent fees and estimated offering expenses payable to us.

However, because this is a best efforts offering and there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, the placement agent fees and net proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth on the cover page of this prospectus, and we may not sell any or all of the securities we are offering. As a result, we may receive significantly less in net proceeds. We may not sell all or any of the securities offered pursuant to this prospectus; and, as a result, we may receive significantly less in net proceeds in this offering.

The following table presents our estimated net proceeds if 100%, 75%, 50% or 25% of the securities in this offering are sold.

	100%	% of Gross Proceeds	75%	% of Gross Proceeds	50%	% of Gross Proceeds	25%	% of Gross Proceeds
Gross Proceeds from Offering	\$ 6,000,000	100%	\$ 4,500,000	100%	\$ 3,000,000	100%	\$ 1,500,000	100%
Offering Expenses								
Placement Agent Commission	\$ 420,000	7.0%	\$ 315,000	7.0%	\$ 210,000	7.0%	\$ 105,000	7.0%
Placement Agent Fees and Expenses	\$ 90,000	1.5%	\$ 90,000	2.0%	\$ 90,000	3.0%	\$ 90,000	6.0%
Other Offering Expenses	\$ 100,000	1.7%	\$ 100,000	2.2%	\$ 100,000	3.3%	\$ 100,000	6.7%
Total	\$ 610,000	10.2%	\$ 505,000	11.2%	\$ 400,000	13.3%	\$ 295,000	19.7%
Net Proceeds	\$ 5,390,000	89.8%	\$ 3,995,000	88.8%	\$ 2,600,000	86.7%	\$ 1,205,000	80.3%
Operational Expenses								
Research and Development Expenses	\$ 538,345	9%	\$ 538,345	12.0%	\$ 538,345	17.9%	\$ 538,345	35.9%
Transaction Costs to Complete a Strategic Transaction ⁽¹⁾	\$ 420,000	7%	\$ 420,000	9.3%	\$ 420,000	14.0%	\$ 420,000	28.0%
Legal Expenses	\$ 240,000	4%	\$ 240,000	5.3%	\$ 240,000	8.0%	\$ 240,000	16.0%

Working Capital	\$ 4,191,655	70%	\$ 2,796,655	62.1%	\$ 1,401,655	46.7%	\$ 6,655	0.4%
Total	\$ 6,000,000	100%	\$ 4,500,000	100.0%	\$ 3,000,000	100.0%	\$ 1,500,000	100.0%

(1) A “Strategic Transaction” may include an acquisition, merger, reverse merger, other business combination, sale of assets, licensing or other strategic transaction.

We do not expect any material changes to the use of proceeds discussed above if all the securities registered herein are not sold, provided that any increase or decrease in net proceeds compared to the totals above are expected to increase/decrease working capital proportionately.

The Common Warrants issued in this offering will be exercisable commencing on the date that Warrant Stockholder Approval is obtained, if at all, provided, however, that, if the Pricing Conditions are satisfied, then the Common Warrants will be immediately exercisable. There is no guarantee that the Warrant Stockholder Approval will ever be obtained. In the event that we are unable to obtain Warrant Stockholder Approval, the Common Warrants will not be exercisable and we will not receive any proceeds in connection with the exercise of the Common Warrants, provided, however, that, if the Pricing Conditions are satisfied, then the Common Warrants will be immediately exercisable.

25

If all of the Common Warrants issued in this offering were to be exercised in cash at an assumed exercise price of \$1.82 per share of Common Stock (assuming an exercise price equal to the reported sales price of our Common Stock on Nasdaq on September 10, 2024, which was \$1.82 per share), we would receive additional proceeds of approximately \$6 million. We cannot predict when or if these Common Warrants will be exercised. It is possible that these Common Warrants may expire and may never be exercised. Additionally, the Common Warrants contain a cashless exercise provision that permit exercise of Common Warrants on a cashless basis at any time where there is no effective registration statement under the Securities Act of 1933, as amended, covering the issuance of the underlying shares.

We have based the estimates in the above table on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. The net proceeds from this offering are not expected to be sufficient to fund advancement of any of our drug candidates through regulatory approval. We will need to raise substantial additional funds to complete development and commercialization of our drug candidates which development or commercialization may not be successful.

We intend to use the net proceeds from the offering of securities under this prospectus for research and development expenses, transaction costs to complete a Strategic Transaction, legal expenses, working capital and other general corporate purposes. We may need substantial additional capital in the future, which could cause dilution to our existing stockholders, or restrict our operations, and if additional capital is not available, we may have to delay, reduce or cease operations. See “*Risk Factors*.”

Our expected use of net proceeds from this offering represents our current intentions based upon our present plans and business condition. The amounts and timing of our actual use of net proceeds will vary depending on numerous factors, including our ability to obtain additional financing, the relative success and cost of clinical and regulatory development programs and the amount and timing of product revenue, if any. In addition, we might decide to postpone or not pursue certain activities if, among other factors, the net proceeds from this offering and our other sources of cash are less than expected. As a result, management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds. Pending the uses described above, we intend to invest the net proceeds in interest-bearing investment-grade securities or deposits.

Each \$0.25 increase or decrease in the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, would increase or decrease, as applicable, the net proceeds to us from this offering by approximately \$0.77 million, assuming the number of shares of Common Stock offered by us, as set forth on the cover page of this prospectus, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, and after deducting placement agent fees and estimated offering expenses payable by us. Similarly, each increase or decrease of 500,000 in the number of shares of Common Stock offered by us would increase or decrease, as applicable, the net proceeds to us from this offering by approximately \$0.85 million, assuming the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, and after deducting placement agent fees and estimated offering expenses payable by us. We do not expect that a change in the public offering price or the number of shares by these amounts would have a material effect on our uses of the proceeds from this offering, although it may accelerate the time at which we will need to seek additional capital.

26

CAPITALIZATION

The following table sets forth our capitalization as of June 30, 2024 on:

- an actual basis;
- a pro forma basis to reflect the settlement of \$218,000 of accrued compensation through the issuance of 85,340 shares of common stock in July and September 2024 (the “Compensation Issuances”), and
- on a pro forma, as adjusted basis to reflect the Compensation Issuances, and the issuance and sale of Common Stock in this offering, after deducting placement agent fees and estimated offering expenses payable by us. The as-adjusted basis assumes no Pre-Funded Warrants are sold in this offering and excludes the proceeds, if any, from the exercise of any Common Warrants issued in this offering.

You should read this table in conjunction with the section of this prospectus entitled “*Use of Proceeds*” and “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*” and our Consolidated Financial Statements and the related notes thereto incorporated by reference into this prospectus.

<i>In Thousands</i>	As of June 30, 2024		
	Actual	Pro Forma	Pro Forma As-adjusted
Cash	\$ 1,146	\$ 1,146	\$ 6,536
Total debt	442	442	442
Stockholders’ Equity			
Class C Preferred Stock; 1 share authorized, issued and outstanding	—	—	—
Class K Preferred Stock; 1 share authorized, issued and outstanding	—	—	—
Common Stock, \$0.0001 par value; 100,000,000 shares authorized; 941,590, 1,026,930, and 4,323,633 shares issued and outstanding at June 30, 2024, on an actual, pro forma and pro forma, as adjusted basis, respectively	—	—	—
Additional paid-in capital	130,899	130,899	136,289
Accumulated other comprehensive (loss) income	(2,916)	(2,916)	(2,916)

Accumulated deficit	(128,402)	(128,402)	(128,402)
Total stockholders' equity (deficit)	(419)	(419)	4,971
Total capitalization	\$ 23	\$ 23	\$ 5,413

A \$0.25 increase or decrease in the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, would increase or decrease each of our pro forma as-adjusted cash, total stockholders' equity and total capitalization by approximately \$0.77 million, assuming the number of shares of Common Stock offered by us, as set forth on the cover page of this prospectus, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, and after deducting placement agent fees and estimated offering expenses payable by us. Similarly, each increase or decrease of 500,000 in the number of shares of Common Stock offered by us would increase or decrease each of our as-adjusted cash, total stockholders' equity and total capitalization by approximately \$0.85 million, assuming the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, and after deducting placement agent fees and estimated offering expenses payable by us.

The above discussion and table are based on 941,590 shares of our Common Stock outstanding as of June 30, 2024. The number of shares outstanding as of June 30, 2024 excludes, as of such date:

- 12,954 shares of Common Stock issuable upon the exercise of outstanding stock options;
- 1,924 additional shares of our Common Stock reserved for future issuance under our 2020 Omnibus Incentive Plan;
- 115,867 additional shares of our Common Stock reserved for future issuance under our 2022 Omnibus Incentive Plan; and
- (a) 15,132 shares of Common Stock issuable upon the exercise of outstanding public warrants exercisable at an exercise price of \$4,370.00 per share, (b) 662 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants exercisable at an exercise price of \$4,370.00 per share, (c) 6,748 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$1,900.00 per share, (d) 66 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,686.60 per share, (e) 168 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,006.40 per share, (f) 6,579 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,850.00 per share, and (g) 954,118 shares of Common Stock issuable upon the exercise of warrants to purchase 954,118 shares of Common Stock with an exercise price of \$3.23 per share.

27

DILUTION

If you purchase our Common Stock (or equivalent) in this offering, your interest will be diluted to the extent of the difference between the public offering price per share and the net tangible book value per share of our Common Stock after this offering. We calculate net tangible book value per share by dividing our net tangible assets (tangible assets less total liabilities) by the number of shares of our Common Stock issued and outstanding as of June 30, 2024, as adjusted as discussed below.

Our net tangible book value as of June 30, 2024 was (\$2 million), or approximately (\$2.10) per share and our pro forma net tangible book value, after taking into account the Compensation Issuances was (\$1.8 million), or (\$1.72) per share of common stock.

After giving effect to the shares of our Common Stock to be sold in this offering at the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, assuming the number of shares of Common Stock offered by us, as set forth on the cover page of this prospectus, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, our pro forma as-adjusted net tangible book value as of June 30, 2024 would have been approximately \$3.6 million, or approximately \$0.84 per share of our Common Stock. This represents an immediate increase in the net tangible book value of \$2.56 per share of our Common Stock to our existing stockholders and an immediate dilution in net tangible book value of approximately (\$0.98) per share of our Common Stock to new investors. The following table illustrates this per share dilution:

Assumed offering price per share of our Common Stock	\$ 1.82
Net tangible book value per share as of June 30, 2024	\$ (2.10)
Increase in net tangible book value per share of our Common Stock attributable to the Compensation Issuances	\$ 0.38
Increase in net tangible book value per share of our Common Stock attributable to this offering	\$ 2.56
Pro forma, as adjusted net tangible book value per share of our Common Stock as of June 30, 2024, after giving effect to the Compensation Issuances and this offering	\$ 0.84
Dilution per share to new investors purchasing shares of our Common Stock in this offering	\$ (0.98)

28

The dilution information discussed above is illustrative only and may change based on the actual public offering price and other terms of this offering. Each \$0.25 increase in the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, would increase our pro forma as-adjusted net tangible book value per share after this offering by \$0.18 per share and increase the dilution to new investors purchasing shares in this offering by \$0.07 per share and each \$0.25 decrease in the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, would decrease our pro forma as-adjusted net tangible book value per share after this offering by \$0.18 per share and decrease the dilution to new investors purchasing shares in this offering by \$0.07 per share, in each case assuming the number of shares of Common Stock offered by us, as set forth on the cover page of this prospectus, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, and after deducting placement agent fees and estimated offering expenses payable by us. Similarly, an increase of 500,000 in the number of shares of Common Stock offered by us would increase the pro forma as-adjusted net tangible book value after this offering by \$0.09 per share and decrease the dilution per share to new investors participating in this offering by \$0.09 per share, and a decrease of 500,000 shares of Common Stock offered by us would decrease the pro forma as-adjusted net tangible book value by \$0.11 per share, and increase the dilution per share to new investors in this offering by \$0.11 per share, in each case assuming the assumed public offering price of \$1.82 per share, which is the last reported sales price of our Common Stock on Nasdaq on September 10, 2024, remains the same, assuming no sale of any Pre-Funded Warrants and no exercise of the Common Warrants issued in connection with this offering, and after deducting placement agent fees and estimated offering expenses payable by us.

The above discussion and table are based on 941,590 shares of our Common Stock outstanding as of June 30, 2024. The number of shares outstanding as of June 30, 2024, excludes, as of such date:

- 12,954 shares of Common Stock issuable upon the exercise of outstanding stock options;
- 1,924 additional shares of our Common Stock reserved for future issuance under our 2020 Omnibus Incentive Plan;

- 115,867 additional shares of our Common Stock reserved for future issuance under our 2022 Omnibus Incentive Plan; and
- (a) 15,132 shares of Common Stock issuable upon the exercise of outstanding public warrants exercisable at an exercise price of \$4,370.00 per share, (b) 662 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants exercisable at an exercise price of \$4,370.00 per share, (c) 6,748 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$1,900.00 per share, (d) 66 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,686.60 per share, (e) 168 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,006.40 per share, (f) 6,579 shares of Common Stock issuable upon the exercise of certain outstanding private placement warrants at an exercise price of \$2,850.00 per share, and (g) 954,118 shares of Common Stock issuable upon the exercise of warrants to purchase 954,118 shares of Common Stock with an exercise price of \$3.23 per share.

Except as otherwise indicated, all information in this prospectus assumes no exercise or forfeiture of the outstanding options or warrants after June 30, 2024, including, for the avoidance of doubt, any Common Warrants but not the Pre-Funded Warrants, which are assumed will be exercised for purposes of the above dilution calculation.

29

DIVIDEND POLICY

We have never paid or declared any cash dividends on our Common Stock and do not anticipate paying cash dividends in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the operation of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our Board. Accordingly, investors must rely on sales of their Common Stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

30

PLAN OF DISTRIBUTION

A.G.P. has agreed to act as our exclusive placement agent in connection with this offering subject to the terms and conditions of the placement agent agreement dated _____, 2024. 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 has agreed to use its reasonable best efforts to arrange for the sale of all of the securities offered hereby. Therefore, we may not sell the entire amount of securities offered pursuant to this prospectus. We will enter into a securities purchase agreement directly with certain 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 enter into a securities purchase agreement directly with the 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 such investor funds for the purchase of the securities offered pursuant to this prospectus. We expect to deliver the securities being offered pursuant to this prospectus on or about _____, 2024.

We have agreed to indemnify the Placement Agent 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

We have engaged the Placement Agent as our exclusive placement agent in connection with this offering. 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 a fee based on the aggregate proceeds as set forth in the table below:

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

(1) We have agreed to pay the Placement Agent a cash placement commission equal to 7% of the aggregate proceeds from this offering. We have also agreed to reimburse the Placement Agent for certain expenses incurred in connection with this offering.

(2) The amount of the offering proceeds to us presented in this table does not give effect to any exercise of the Pre-Funded Warrants or Common Warrants being issued in this offering.

We have also agreed to reimburse the Placement Agent at closing for legal and other out-of-pocket expenses incurred by them in connection with this offering in an aggregate amount up to \$65,000, as well as non-accountable expenses which shall not exceed \$25,000, including, but not limited to, IPREO software related expenses, background check(s), marketing related expenses (i.e., roadshow, travel, et al.) and any other expenses incurred by the Placement Agent in connection with this offering. We estimate the total expenses payable by us for this offering, excluding the placement agent fees and expenses, will be approximately \$100,000.

31

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 shares 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.

We have also agreed to pay the Placement Agent a tail fee equal to the cash compensation payable pursuant to the terms of this offering, if any investor, who was contacted by the Placement Agent, or who contacted the Placement Agent, during the term of its engagement, provides us with capital in any public or private offering or other financing or capital-raising transaction of any kind, during the six month period following the expiration or termination of the Placement Agent agreement.

Listing

Our Common Stock is listed on Nasdaq under the trading symbol “ATNF.” We do not intend to list the Pre-Funded Warrants or the Common Warrants on any securities exchange or nationally recognized trading system.

Lock-Up Agreements

Our directors and executive officers have agreed to enter into lock-up agreements. Under these agreements, these individuals have agreed, subject to specified exceptions, not to sell or transfer any shares of Common Stock or securities convertible into, or exchangeable or exercisable for, our shares of Common Stock during a period ending 90 days after the completion of this offering, without first obtaining the written consent of the investors. Specifically, these individuals have agreed, in part, not to:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open “put equivalent position” within the meaning of Rule 16a-1(h) under the Securities Exchange Act of 1934, as amended;
- 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 shares of Common Stock, 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, or to enter into any transaction, swap, hedge; or
- other arrangement relating to any of our securities.

Notwithstanding these limitations, these shares of Common Stock may be transferred under limited circumstances, including, without limitation, by gift, will or intestate succession.

In addition, we have agreed that, subject to certain exceptions, (i) we will not conduct any issuances of our Common Stock for a period of 90 days following closing of this offering and that (ii) we will not enter into a variable rate transaction for a period of 6 months following the closing of this offering.

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 have a lending relationship with us, they 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 Common Stock offered hereby. Any such short positions could adversely affect future trading prices of the 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.

On July 17, 2022, we sold an aggregate of (i) 9,211 shares of Common Stock (ii) pre-funded warrants to purchase up to 6,927 shares of Common Stock and (iii) warrants to purchase up to 16,138 shares of Common Stock, in a registered direct offering to a certain accredited investor. A.G.P. acted as a placement agent for the offering. In connection with the offering, we paid A.G.P. approximately \$530,000 for commissions and expense reimbursement.

On December 22, 2022, we sold an aggregate of (i) 11,316 shares of Common Stock (ii) pre-funded warrants to purchase up to 78,910 shares of Common Stock and (iii) warrants to purchase up to 135,339 shares of Common Stock, in a registered direct offering to a certain accredited investor. A.G.P. acted as a placement agent for the offering. In connection with the offering, we paid A.G.P. approximately \$360,000 for commissions and expense reimbursement.

On April 10, 2023, we sold an aggregate of (i) 21,053 shares of Common Stock and pre-funded warrants to purchase up to 61,615 shares of Common Stock in a registered direct offering and (ii) warrants to purchase up to 82,668 shares of Common Stock in a concurrent private placement, to a certain accredited investor. A.G.P. acted as a placement agent for the offering. In connection with the offering, we paid A.G.P. approximately \$180,000 for commissions and expense reimbursement.

On August 14, 2023, we sold an aggregate of (i) 35,102 shares of Common Stock (“August 2023 Shares”) and pre-funded warrants to purchase up to 207,814 shares of Common Stock (“August 2023 Pre-Funded Warrants”) in a registered direct offering and (ii) warrants to purchase up to 242,915 shares of Common Stock in a concurrent private placement, pursuant to a Securities Purchase Agreement (the “August 2023 SPA”), to a certain accredited investor. A.G.P. acted as a placement agent for the offering. In connection with the offering, we paid A.G.P. approximately \$295,000 for commissions and expense reimbursement.

On November 28, 2023, the Company entered into Amendment No. 1 to the August 2023 SPA with the purchaser in the August 2023 offering (the “November 2023 SPA Amendment”), pursuant to which (i) the purchaser agreed to pay an additional \$830,769.30 in connection with the repricing of the August 2023 Shares and August 2023 Pre-Funded Warrants, (ii) the Company agreed to issue to the purchaser (x) pre-funded warrants to purchase up to 257,204 shares of Common Stock, with an exercise price of \$0.0019 per share, and (y) warrants to purchase up to 477,058 shares of Common Stock, with an exercise price of \$3.23 per share, and (iii) the Company and the purchaser agreed to enter into a Warrant Amendment Agreement. In connection with the offering, we agreed to pay A.G.P. approximately \$59,850 for expense reimbursements, which amount has been accrued.

In November 2023, we engaged A.G.P. as financial advisor to explore and evaluate strategic alternatives to enhance shareholder value. Potential strategic alternatives that are being explored and evaluated by the Company as part of this process include, but are not limited to, an acquisition, merger, reverse merger, other business combination, sale of assets, licensing or other strategic transactions involving the Company. The Company does not intend to discuss or disclose further developments during this process unless and until its Board of Directors has approved a specific action or otherwise determined that further disclosure is appropriate. There is no assurance that the strategic review process will result in the approval or completion of any specific transaction or outcome. The agreement originally called for a transaction fee to be payable to A.G.P. in the amount of 3.0% of the transaction value of any completed transaction, subject to a minimum of \$1,000,000, required us to grant A.G.P. warrants to purchase 3% of the aggregate number of shares sold in the transaction or any offering in connection therewith, with a five and a half year term (exercisable after six months), and an exercise price equal to 110% of the closing price on the day immediately prior to the closing date and to reimburse up to \$75,000 of A.G.P.'s out-of-pocket expenses. However, on September 6, 2024, our agreement with A.G.P. was revised to provide that instead of the fees discussed above, in the event a transaction with a value greater than \$2.5 million is completed with an introduction made by A.G.P., we will pay A.G.P. a transaction fee equal to 3% of the transaction value, subject to a minimum of \$100,000, along with warrants to purchase 3% of the aggregate number of shares sold or issued in the transaction, with a term of 2.5 years, first exercisable six months following the closing, and an exercise price equal to 110% of the closing price of the Company's common stock on the closing date. In the event a financing closes with a party not introduced to us by A.G.P., we are required to pay A.G.P. a fee of \$100,000 under certain circumstances. We also provided A.G.P. a right of first refusal to provide us any fairness opinion requested in connection with a transaction, subject to a fee of \$200,000. We also agreed to reimburse up to \$75,000 of A.G.P.'s expenses in connection with the agreement.

DESCRIPTION OF CAPITAL STOCK

Authorized Capital Stock

The following summary of the material terms of our capital stock is not intended to be a complete summary of the rights and preferences of such securities. We urge you to read our Certificate of Incorporation, as amended in its entirety for a complete description of the rights and preferences of our securities.

As of the date of this prospectus, we have 100,000,000 authorized shares of Common Stock, \$0.0001 par value per share and 5,000,000 shares of preferred stock, \$0.0001 par value per share, of which 1,000,000 shares have been designated as Series A Convertible Preferred Stock (of which none are outstanding), of which one share of preferred stock has been designated as a Class C Special Voting Share, of which none are outstanding, and one share of preferred stock has been designated as a Class K Special Voting Share, of which none are outstanding.

As the date of this prospectus, there were 1,026,930 shares of Common Stock outstanding held by 122 holders of record, and no shares of preferred stock issued or outstanding.

Common Stock

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of our Common Stock possess all voting power for the election of our directors and all other matters requiring stockholder action and will at all times vote together as one class on all matters submitted to a vote of our stockholders. Holders of Common Stock are entitled to one vote per share on matters to be voted on by stockholders and do not have the right to cumulate votes in the election of directors.

Holders of Common Stock will be entitled to receive dividends and other distributions, if any, in amounts declared from time to time by our Board of Directors in its discretion out of funds legally available therefor and shall share equally on a per share basis in these dividends and distributions.

In the event of our voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of the Common Stock will be entitled to receive an equal amount per share of all of our assets of whatever kind available for distribution to stockholders, after the rights of the holders of the preferred stock, if any, have been satisfied.

Our stockholders have no preemptive or other subscription rights and there are no sinking fund or redemption provisions applicable to our Common Stock.

Our Board of Directors is divided into two classes, with only one class of directors being elected in each year and each class generally serving a two-year term.

Preferred Stock

Our Certificate of Incorporation provides that shares of preferred stock may be issued from time to time in one or more series. Our Board of Directors will be authorized to fix the voting rights, if any, designations, powers, preferences, the relative, participating, optional or other special rights and any qualifications, limitations and restrictions thereof, applicable to the shares of each series. Our Board of Directors will be able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of the Common Stock and could have anti-takeover effects. The ability of our Board of Directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control of the Company or the removal of existing management.

Stock Exchange Listing

Our Common Stock is currently listed on Nasdaq under the symbol "ATNF".

Stock Exchange Listing

The transfer agent and registrar for our Common Stock is Continental Stock Transfer & Trust Company.

Certain Anti-Takeover Provisions of Delaware Law and our Certificate of Incorporation and Bylaws

We are subject to the provisions of Section 203 of the Delaware General Corporation Law (the "DGCL") regulating corporate takeovers. This statute prevents certain Delaware corporations, under certain circumstances, from engaging in a "business combination" with:

- a stockholder who owns 15% or more of our outstanding voting stock (otherwise known as an "interested stockholder");
- an affiliate of an interested stockholder; or
- an associate of an interested stockholder, for three years following the date that the stockholder became an interested stockholder.

A “business combination” includes a merger or sale of more than 10% of our assets. However, the above provisions of Section 203 do not apply if:

- our Board of Directors approves the transaction that made the stockholder an “interested stockholder,” prior to the date of the transaction;
- after the completion of the transaction that resulted in the stockholder becoming an interested stockholder, that stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, other than statutorily excluded shares of Common Stock; or

- on or subsequent to the date of the transaction, the business combination is approved by our Board of Directors and authorized at a meeting of our stockholders, and not by written consent, by an affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

Our Certificate of Incorporation provides that our Board of Directors be classified into two classes of directors. As a result, in most circumstances, a person can gain control of our Board of Directors only by successfully engaging in a proxy contest at two or more annual meetings.

Our authorized but unissued Common Stock and preferred stock are available for future issuances without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved Common Stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Securities Eligible for Future Sale

Rule 144

Pursuant to Rule 144, a person who has beneficially owned restricted shares of our Common Stock or warrants for at least six months would be entitled to sell their securities provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale and (ii) we are subject to the Exchange Act periodic reporting requirements for at least three months before the sale and have filed all required reports under Section 13 or 15(d) of the Exchange Act during the 12 months (or such shorter period as we were required to file reports) preceding the sale.

Persons who have beneficially owned restricted shares of our Common Stock or warrants for at least six months but who are our affiliates at the time of, or at any time during the three months preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of:

- 1% of the total number of shares of Common Stock then outstanding; or
- the average weekly reported trading volume of the Common Stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales by our affiliates under Rule 144 are also limited by manner of sale provisions and notice requirements and to the availability of current public information about us.

Restrictions on the Use of Rule 144 by Shell Companies or Former Shell Companies

Rule 144 is not available for the resale of securities initially issued by shell companies (other than business combination related shell companies) or issuers that have been at any time previously a shell company. However, Rule 144 also includes an important exception to this prohibition if the following conditions are met:

- the issuer of the securities that was formerly a shell company has ceased to be a shell company;
- the issuer of the securities is subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act;
- the issuer of the securities has filed all Exchange Act reports and material required to be filed, as applicable, during the preceding 12 months (or such shorter period that the issuer was required to file such reports and materials), other than Form 8-K reports; and
- at least one year has elapsed from the time that the issuer filed current Form 10 type information with the SEC reflecting its status as an entity that is not a shell company.

DESCRIPTION OF SECURITIES WE ARE OFFERING

Common Stock

The material terms and provisions of our Common Stock are described in the section titled, “*Description of Capital Stock*” in this prospectus.

Pre-Funded Warrants

The following summary of certain terms and provisions of Pre-Funded Warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Pre-Funded Warrant, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Pre-Funded Warrant for a complete description of the terms and conditions of the Pre-Funded Warrants.

Duration and Exercise Price

Each Pre-Funded Warrant offered hereby will have an assumed initial exercise price of \$0.0001 per share. 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 of Common Stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our Common Stock and the exercise price, as described in the Pre-Funded Warrant.

Exercisability

The Pre-Funded Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering a duly executed exercise notice accompanied by payment

in full for the number of purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the Pre-Funded Warrant to the extent that the holder would own more than 4.99% of the outstanding Common Stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's Pre-Funded Warrants up to 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrants. No fractional shares of Common Stock will be issued in connection with the exercise of a Pre-Funded Warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price.

Cashless Exercise

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 elect instead to receive upon such exercise (either in whole or in part) the net number of shares of Common Stock determined according to a formula set forth in the Pre-Funded Warrants.

Fundamental Transactions

In the event of a fundamental transaction, as described in the Pre-Funded Warrants and generally including any reorganization, recapitalization or reclassification of our Common Stock pursuant to which the shares of Common Stock are converted or exchanged for other securities, cash, or property, 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 pursuant to which we are not the surviving entity, the acquisition of more than 50% of our outstanding voting securities, 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. In addition, the holders of the Pre-Funded Warrants have the right to require us or a successor entity to redeem the Pre-Funded Warrant for the cash paid in the fundamental transaction in the amount of the Black Scholes value of the unexercised portion of the Pre-Funded Warrant on the date of the consummation of the fundamental transaction.

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 together with the appropriate instruments of transfer.

Exchange Listing

We do not intend to list the Pre-Funded Warrants on any securities exchange or nationally recognized trading system.

Rights as a Stockholder

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

Warrant Agent

The Pre-Funded Warrants will be issued in registered form under a warrant agent agreement between Continental Stock Transfer & Trust Company, as warrant agent, and us. The Pre-Funded Warrants shall initially be represented only by one or more global warrants deposited with the warrant agent, as custodian on behalf of The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

Common Warrants

The following summary of certain terms and provisions of the Common Warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Common Warrants, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Common Warrant for a complete description of the terms and conditions of the Common Warrants.

Duration and Exercise Price

Each Common Warrant offered has an assumed initial exercise price of \$1.82 per share (assuming an exercise price equal to the reported sales price of our Common Stock on Nasdaq on September 10, 2024, which was \$1.82 per share). The Common Warrants will be exercisable beginning on the effective date of the Warrant Stockholder Approval, provided however, if the Pricing Conditions are met, the Warrant Stockholder Approval will not be required and the Common Warrants will be exercisable on the Initial Exercise Date. The Common Warrants will expire on the fifth anniversary of the date on which the Common Warrants become exercisable. The exercise price and number of shares of Common Stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our Common Stock and the exercise price, as described in the Common Warrant. Common Warrants will be issued separately from the Common Stock and Pre-Funded Warrants and may be transferred separately immediately thereafter. For each share of Common Stock (or Pre-Funded Warrant, as applicable) purchased in this offering, one Common Warrant will be issued. Each whole Common Warrant is exercisable for one share of Common Stock.

We intend to promptly, and in no event later than 110 days after the consummation of this offering, seek stockholder approval for the issuance of shares of common stock issuable upon exercise of the Common Warrants but we cannot assure you that such stockholder approval will be obtained, provided, however, that, if and only if the Pricing Conditions are met, then we will not seek Warrant Stockholder Approval. We have agreed with the investors in this offering that, if we do not obtain stockholder approval for the issuance of the shares of common stock upon exercise of the Common Warrants at the first stockholder meeting for such purpose after this offering, we will call a stockholder meeting every 110 days thereafter until the earlier of the date we obtain such approval or the Common Warrants are no longer outstanding, provided, however, that, if and only if the Pricing Conditions are met, then we will not seek Warrant Stockholder Approval.

Exercisability

The Common Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering a duly executed exercise notice accompanied by payment in full for the number of purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the Common Warrant to the extent that the holder would own more than 4.99% of the outstanding Common Stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's Common Warrants up to 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Common Warrants. No fractional shares of Common Stock will be issued in connection with the exercise of a Common Warrant. In lieu of fractional shares, we

will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price.

Cashless Exercise

If, at the time a holder exercises its Common Warrants, a registration statement registering the issuance of the shares of Common Stock underlying the Common Warrants under the Securities Act is not then effective or available, 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 elect instead to receive upon such exercise (either in whole or in part) the net number of shares of Common Stock determined according to a formula set forth in the 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 Common Stock pursuant to which the shares of Common Stock are converted or exchanged for other securities, cash, or property, 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 pursuant to which we are not the surviving entity, the acquisition of more than 50% of our outstanding voting securities, 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. In addition, the holders of the Common Warrants have the right to require us or a successor entity to redeem the Common Warrant for the cash paid in the fundamental transaction in the amount of the Black Scholes value of the unexercised portion of the Common Warrant on the date of the consummation of the fundamental transaction.

Transferability

Subject to applicable laws, a Common Warrant may be transferred at the option of the holder upon surrender of the Common Warrant together with the appropriate instruments of transfer.

Exchange Listing

We do not intend to list the Common Warrants on any securities exchange or nationally recognized trading system.

Right as a Stockholder

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

Warrant Agent

The Common Warrants will be issued in registered form under a warrant agent agreement between Continental Stock Transfer & Trust Company, as warrant agent, and us. The Common Warrants shall initially be represented only by one or more global warrants deposited with the warrant agent, as custodian on behalf of The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

Amendment to Outstanding Common Warrants

In connection with the offering pursuant to this prospectus, we may amend the terms of certain outstanding warrants (the "Prior Warrants") to purchase up to 954,118 shares of Common Stock to reduce the exercise price of such Prior Warrants to: (i) equal the exercise price of the Common Warrants sold in this offering; and (ii) extend the term during which the Prior Warrants could remain exercisable to the term of the Common Warrants sold in this offering.

LEGAL MATTERS

Certain legal matters relating to the validity of the shares of Common Stock offered by this prospectus will be passed upon for us by The Loev Law Firm, PC, Bellaire, Texas. David M. Loev, the President and sole owner of The Loev Law Firm, PC, beneficially owns less than 1% of the outstanding shares of our Common Stock.

The Placement Agent is being represented in connection with this offering by Sullivan & Worcester LLP, New York, New York.

EXPERTS

The consolidated financial statements of 180 Life Sciences Corp. and its subsidiaries as of December 31, 2023 and 2022 and for each of the two years in the period ended December 31, 2023, incorporated by reference in this prospectus, have been so incorporated by reference in reliance on the report, which includes an explanatory paragraph as to 180 Life Sciences Corp.'s ability to continue as a going concern, of Marcum LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus the information in other documents that we file with it. This means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information in documents that we file later with the SEC will automatically update and supersede information contained in documents filed earlier with the SEC or contained in this prospectus. We incorporate by reference in this prospectus the documents listed below and any future filings that we may make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act prior to the termination of the offering under this prospectus; provided, however, that we are not incorporating, in each case, any documents or information deemed to have been furnished and not filed in accordance with SEC rules:

- (a) The Company's Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on [March 25, 2024](#), as amended by Amendment No. 1 thereto filed with the SEC on [April 29, 2024](#) (File No. 001-38105) (as amended, the "Annual Report");
- (b) The Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, filed with the SEC on [May 15, 2024](#) (File No. 001-38105) and the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2024, filed with the SEC on [August 12, 2024](#) (File No. 001-38105);

(c) The Company's Current Reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on [January 16, 2024](#), [January 17, 2024](#), [January 29, 2024](#), [February 16, 2024](#), [February 20, 2024](#), [February 26, 2024](#), [February 28, 2024](#), [February 29, 2024](#), [March 1, 2024](#), [March 8, 2024](#), [March 11, 2024](#), [March 14, 2024](#), [April 19, 2024](#), [May 9, 2024](#), [May 15, 2024](#), [May 21, 2024](#), [July 2, 2024](#), [July 23, 2024](#), [July 30, 2024](#), [September 9, 2024](#), and [September 12, 2024](#) (File No. 001-38105); and

(d) The description of the Company's Common Stock contained in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on March 31, 2023, as [Exhibit 4.6](#) (File No. 001-38105), including any amendment or report filed for the purpose of updating such description.

Additionally, all documents filed by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after (i) the date of the initial filing of this registration statement and prior to effectiveness of the registration statement, and (ii) the date of this prospectus and before the termination or completion of any offering hereunder, shall be deemed to be incorporated by reference into this prospectus from the respective dates of filing of such documents, except that we do not incorporate any document or portion of a document that is "furnished" to the SEC, but not deemed "filed."

We will provide, without charge, to each person to whom a copy of this prospectus is delivered, including any beneficial owner, upon the written or oral request of such person, a copy of any or all of the documents incorporated by reference herein, including exhibits. Requests should be directed to: Attention: Corporate Secretary, 3000 El Camino Real, Bldg. 4, Suite 200, Palo Alto, California 94306, telephone (650) 507-0669. The documents incorporated by reference may be accessed on the "Investors"—"SEC Filings"—"All SEC Filings" page of our website at www.180lifesciences.com. We do not incorporate the information on our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus or any supplement to this prospectus).

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.

41

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available, free of charge, on our website at www.180lifesciences.com. Our website is not a part of this prospectus and is not incorporated by reference in this prospectus.

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

42

Up to 3,296,703 Shares of Common Stock
Pre-Funded Warrants to Purchase up to 3,296,703 Shares of Common Stock
Common Warrants to Purchase up to 3,296,703 Shares of Common Stock
Up to 3,296,703 Shares of Common Stock Underlying the Pre-Funded Warrants
Up to 3,296,703 Shares of Common Stock Underlying the Common Warrants



PROSPECTUS

Sole Placement Agent

A.G.P.

, 2024

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the sale of the Common Stock being registered. All the amounts shown are estimates except the SEC registration fee and the Financial Industry Regulatory Authority, or FINRA, filing fee.

SEC registration fee	\$	1,771
FINRA filing fee		*
Legal fees and expenses		*
Accounting fees and expenses		*
Miscellaneous fees and expenses		*
Total	\$	*

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

Section 145 of the DGCL authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act.

Our Certificate of Incorporation provides for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the DGCL, and our bylaws provide for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the DGCL.

In addition, we have entered into indemnification agreements with directors, officers and some employees containing provisions that are in some respects broader than the specific indemnification provisions contained in the DGCL. The indemnification agreements will require us, among other things, to indemnify our directors against certain liabilities that may arise by reason of their status or service as directors and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified.

II-1

Item 15. Recent Sales of Unregistered Securities.

On April 5, 2023, we entered into a placement agent agreement with A.G.P. On April 5, 2023, in connection with the placement agent agreement with A.G.P. we also entered into a securities purchase agreement pursuant to which we issued and sold, in a private placement, warrants to purchase up to 82,668 shares of our Common Stock at a purchase price per share (and accompanying warrant) of \$36.29 in the concurrent private placement (together with a registered direct offering)(the "April 2023 Offering"). The April 2023 Offering closed on April 10, 2023. The net proceeds to us from the offering was approximately \$2.7 million, after deducting placement agent fees and expenses and estimated offering expenses payable by us. We issued the warrants to purchase up to 82,668 shares of our Common Stock without registration under the Securities Act, based on the exemption from registration afforded by Section 4(a)(2) thereof and/or Rule 506(b) of Regulation D promulgated thereunder.

On November 28, 2023, the Company entered into Amendment No. 1 to a securities purchase agreement, dated as of August 9, 2023 (the "August 2023 SPA") with a certain institutional investor (the "Purchaser")(the "December 2023 SPA Amendment"), pursuant to which (i) the Purchaser agreed to pay an additional \$830,769.30 in connection with the repricing of 35,102 shares of Common Stock and pre-funded warrants to purchase up to 207,814 shares of Common Stock, (ii) the Company agreed to issue to the Purchaser (x) pre-funded warrants to purchase up to 257,205 shares of Common Stock, with an exercise price of \$0.0019 per share (the "December 2023 Pre-Funded Warrants"), and (y) warrants to purchase up to 477,058 shares of Common Stock, with an exercise price of \$3.23 per share (the "December 2023 Common Warrants" and, together with the December 2023 Pre-Funded Warrants, the "December 2023 Warrants"), and (iii) the Company and the Purchaser agreed to enter into a warrant amendment agreement with the Purchaser, dated November 28, 2023 (the "Warrant Amendment Agreement"), whereby the Company agreed to amend the following outstanding warrants held by the Purchaser: (i) common stock warrants to purchase up to an aggregate of 135,339 shares of common stock (the "December 2022 Common Warrants"), previously amended in January 2023, April 2023 and August 2023; (ii) common stock warrants to purchase up to an aggregate of 16,138 shares of common stock (the "July 2022 Common Warrants"), previously amended in April 2023 and August 2023; (iii) common stock warrants to purchase up to an aggregate of 242,915 shares of common stock (the "August 2023 Common Warrants"), previously issued on August 14, 2023; and (iv) common stock warrants to purchase up to an aggregate of 82,668 shares of common stock (the "April 2023 Common Warrants") (collectively (i) through (iv), the "Existing Common Warrants"). Pursuant to the Warrant Amendment Agreement, the Existing Common Warrants were amended (the "Warrant Amendment"), to not be exercisable until the Company obtained stockholder approval for the issuance of certain shares of common stock ("Stockholder Approval"), which was received on February 16, 2024, and to be exercisable until the fifth (5th) anniversary of the Stockholder Approval on February 16, 2029, and so that they will have an exercise price of \$3.23 per share.

The warrants and the warrant shares have not been registered under the Securities Act, and were instead offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act.

II-2

On February 21, 2024, February 28, 2024, March 6, 2024 and March 7, 2024, the holder of pre-funded warrants to purchase shares of Common Stock of the Company (i.e., the December 2023 Pre-Funded Warrants) at an exercise price of \$0.0019 per share, exercised warrants to purchase 58,520, 64,684, 72,000 and 62,000 shares of Common Stock, respectively, for \$111.19, \$122.90, \$136.80 and \$117.80 of cash, respectively, and was issued 58,520, 64,684, 72,000 and 62,000 shares of Common Stock upon exercise thereof, respectively. The exercise of the warrants was exempt from registration pursuant to Section 4(a)(2) of the Securities Act.

On March 12, 2024, a holder of Class K Special Voting Shares converted such shares into 14 shares of Common Stock of the Company in a transaction exempt from registration pursuant to Section 3(a)(9) of the Securities Act. As a result of such conversion, there are no longer any Class K Special Voting Shares.

Item 16. Exhibits.

No.	Description
1.1	Placement Agent Agreement, dated April 5, 2023, between 180 Life Sciences Corp. and A.G.P./Alliance Global Partners (filed as Exhibit 1.1 to the registrant's Current Report on Form 8-K filed on April 10, 2023 and incorporated by reference herein).
1.2	Placement Agency Agreement, dated August 9, 2023, by and between 180 Life Sciences Corp. and A.G.P./Alliance Global Partners. (filed as Exhibit 1.1 to the registrant's Current Report on Form 8-K filed on August 15, 2023 and incorporated by reference herein).
1.3**	Form of Placement Agency Agreement
3.1	Second Amended and Restated Certificate of Incorporation (filed as Exhibit 3.1 to the registrant's Current Report on Form 8-K filed on November 12, 2020 and incorporated by reference herein).
3.2	Certificate of Amendment of Second Amended and Restated Certificate of Incorporation, filed with the Secretary of State of Delaware on December 15, 2022 (filed as Exhibit 3.1 to the registrant's Current Report on Form 8-K filed on December 16, 2022 and incorporated by reference herein).
3.3	Certificate of Amendment of Second Amended and Restated Certificate of Incorporation of 180 Life Sciences Corp., filed with the Secretary of State of Delaware on February 26, 2024 (Filed as Exhibit 3.1 To the Current Report on Form 8-K filed by the registrant on February 28, 2024, and incorporated by reference herein).
3.4	Second Amended and Restated Bylaws of 180 Life Sciences Corp., effective as of September 4, 2023 (filed as Exhibit 3.1 to the registrant's Current Report on Form 8-K filed on September 7, 2023 and incorporated by reference herein).
4.1	Specimen Common Stock Certificate (filed as Exhibit 4.2 to the registrant's Registration Statement Form S-1 filed on April 26, 2017 and incorporated herein by reference).

- 4.2 [Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934, as amended \(filed as Exhibit 4.6 to the registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the Commission on March 31, 2023 and incorporated herein by reference\).](#)
- 4.3 [Form of July Common Warrant \(filed as Exhibit 4.2 to the registrant's Current Report on Form 8-K filed on July 19, 2022 and incorporated by reference herein\).](#)
- 4.4 [Form of December Common Warrant \(filed as Exhibit 4.2 to the registrant's Current Report on Form 8-K filed on December 22, 2022 and incorporated by reference herein\).](#)
- 4.5 [Amendment No. 1 to the December 2022 Common Warrants, dated January 12, 2023, by and between 180 Life Sciences Corp. and the Selling Stockholder \(filed as Exhibit 4.1 to the registrant's Current Report on Form 8-K filed on January 12, 2023 and incorporated by reference herein\).](#)
- 4.6 [Amendment No. 1 to the Warrants, dated April 5, 2023, by and between 180 Life Sciences Corp. and the Selling Stockholder. \(filed as Exhibit 10.11 to the registrant's Quarterly Report on Form 10-Q filed on May 15, 2023 and incorporated by reference herein\).](#)
- 4.7 [Form of April Common Warrant \(filed as Exhibit 4.2 to the registrant's Current Report on Form 8-K filed on April 10, 2023 and incorporated by reference herein\).](#)
- 4.8 [Warrant Agent Agreement for Pre-Funded Warrants and Common Warrants, dated August 14, 2023, by and between 180 Life Sciences Corp. and Continental Stock Transfer & Trust Company. \(filed as Exhibit 4.1 to the registrant's Current Report on Form 8-K filed on August 15, 2023 and incorporated by reference herein\).](#)

II-3

- 4.9 [Warrant Amendment Agreement, dated August 9, 2023, by and between the Company and Armistice Capital Master Fund Ltd. \(filed as Exhibit 4.4 to the registrant's Current Report on Form 8-K filed on August 15, 2023 and incorporated by reference herein\).](#)
- 4.10 [Form of Warrant Agent Agreement for December 2023 Pre-Funded Warrants and Common Warrants \(filed as Exhibit 4.1 to the registrant's Current Report on Form 8-K filed on November 29, 2023 and incorporated by reference herein\).](#)
- 4.11 [Form of December 2023 Pre-Funded Warrant \(included as Annex A to Exhibit 4.10\) \(filed as Exhibit 4.2 to the registrant's Current Report on Form 8-K filed on November 29, 2023 and incorporated by reference herein\).](#)
- 4.12 [Form of December 2023 Common Warrant \(included as Annex B to Exhibit 4.10\) \(filed as Exhibit 4.3 to the registrant's Current Report on Form 8-K filed on November 29, 2023 and incorporated by reference herein\).](#)
- 4.13 [Warrant Amendment Agreement, dated November 28, 2023, by and between the Company and the Purchaser \(filed as Exhibit 4.4 to the registrant's Current Report on Form 8-K filed on November 29, 2023 and incorporated by reference herein\).](#)
- 4.14** [Form of Pre-Funded Warrant](#)
- 4.15** [Form of Common Warrant](#)
- 5.1** [Opinion of The Loev Law Firm, PC](#)
- 10.1 [Registration Rights Agreement among the registrant and certain securityholders \(filed as Exhibit 10.3 to the registrant's Current Report on Form 8-K filed on June 7, 2017 and incorporated by reference herein\).](#)
- 10.2 [Form of Indemnity Agreement \(filed as Exhibit 10.8 to the registrant's Registration Statement Form S-1 filed on April 26, 2017 and incorporated by reference herein\).](#)
- 10.3 [Form of Guarantee and Commitment Agreement \(filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on July 26, 2019 and incorporated herein by reference\).](#)
- 10.4# [180 Life Sciences Corp. 2020 Omnibus Incentive Plan \(filed as Exhibit 10.3 to the registrant's Current Report on Form 8-K filed on November 12, 2020 and incorporated by reference herein\).](#)
- 10.5# [Form of Stock Option Agreement \(Independent Directors August 2021 Grants\) \(filed as Exhibit 10.9 to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2021 filed on August 16, 2021 and incorporated herein by reference\).](#)
- 10.6# [Form of Stock Option Agreement 180 Life Sciences Corp. 2020 Omnibus Incentive Plan \(filed as Exhibit 4.2 to the registrant's Form S-8 filed on September 30, 2021 and incorporated by reference herein\).](#)
- 10.7# [Form of Restricted Stock Grant Agreement and Stock Option Agreement 180 Life Sciences Corp. 2020 Omnibus Incentive Plan \(filed as Exhibit 4.3 to the registrant's Form S-8 filed on September 30, 2021 and incorporated by reference herein\).](#)
- 10.8 [Promissory Note, dated March 15, 2019 issued to KBL IV Sponsor LLC \(filed as Exhibit 10.13 to the registrant's Registration Statement Form S-4 filed on November 12, 2019 and incorporated by reference herein\).](#)
- 10.9 [Registration Rights Agreement, dated June 12, 2020, by and among the Company and the parties signatory thereto \(filed as Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on July 2, 2020 and incorporated herein by reference\).](#)
- 10.10 [Registration Rights Agreement, dated September 8, 2020, by and among the Company and the parties signatory thereto \(filed as Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on September 14, 2020 and incorporated herein by reference\).](#)
- 10.11 [Amended and Restated Promissory Note, dated September 8, 2020, issued to KBL IV Sponsor LLC \(filed as Exhibit 10.24 to the registrant's Registration Statement on Form S-1 filed on October 19, 2020 and incorporated by reference herein\).](#)
- 10.12# [Employment Agreement, dated July 1, 2020, by and between 180 Life Corp. \(f/k/a 180 Life Sciences Corp.\) and James N. Woody, M.D., Ph.D. \(filed as Exhibit 10.4 to the registrant's Current Report on Form 8-K filed on November 12, 2020 and incorporated by reference herein\).](#)

II-4

- 10.13# [First Amendment to Employment Agreement by and between 180 Life Corp. \(f/k/a 180 Life Sciences Corp.\) and James N. Woody, M.D., Ph.D. \(filed as Exhibit 10.5 to the registrant's Current Report on Form 8-K filed on November 12, 2020 and incorporated herein by reference\).](#)
- 10.14 [Amendment Agreement dated November 25, 2020 \(filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on November 27, 2020 and incorporated herein by reference\).](#)
- 10.15 [Registration Rights Agreement dated as of February 23, 2021 by and between 180 Life Sciences Corp. and the purchasers signatory thereto \(filed as Exhibit 10.4 to the registrant's Current Report on Form 8-K filed on February 24, 2021 and incorporated herein by reference\).](#)
- 10.16# [Form of Lock-Up Agreement between 180 Life Sciences Corp. and its directors and executive officers \(filed as Exhibit 10.5 to the registrant's Current Report on Form 8-K filed on February 24, 2021 and incorporated herein by reference\).](#)
- 10.17# [Consultancy Agreement dated February 22, 2021, by and between 180 Life Sciences Corp. and Prof. Jagdeep Nanchahal \(filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on March 3, 2021 and incorporated herein by reference\).](#)
- 10.18# [Amended and Restated Employment Agreement dated February 25, 2021 and effective November 6, 2020, by and between 180 Life Sciences Corp. and James N. Woody \(filed as Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on March 3, 2021 and incorporated herein by reference\).](#)
- 10.19# [James N. Woody — Stock Option Agreement effective February 26, 2021 \(filed as Exhibit 10.3 to the registrant's Current Report on Form 8-K filed on March 3, 2021 and incorporated herein by reference\).](#)
- 10.20# [Employment Agreement dated February 24, 2021, and effective November 6, 2020, by and between 180 Life Sciences Corp. and Ozan Pamir and Amendment and Correction Thereto dated March 1, 2021 \(filed as Exhibit 10.4 to the registrant's Current Report on Form 8-K filed on March 3, 2021 and incorporated herein by reference\).](#)

10.21#	Ozan Pamir — Stock Option Agreement effective February 26, 2021 (filed as Exhibit 10.5 to the registrant’s Current Report on Form 8-K filed on March 3, 2021 and incorporated herein by reference).
10.22#	First Amendment to Consultancy Agreement dated March 31, 2021, by and between 180 Life Sciences Corp. and Prof. Jagdeep Nanchahal (filed as Exhibit 10.2 to the registrant’s Current Report on Form 8-K filed on April 2, 2021 and incorporated herein by reference).
10.23	Settlement and Mutual Release Agreement dated May 4, 2021 by and between 180 Life Sciences Corp. and EarlyBirdCapital, Inc. (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on May 7, 2021 and incorporated herein by reference).
10.24#	Second Amendment to Employment Agreement dated May 27, 2021, and effective November 6, 2020, by and between 180 Life Sciences Corp. Katexco Pharmaceuticals Corp. and Ozan Pamir (filed as Exhibit 10.2 to the registrant’s Current Report on Form 8-K filed on May 27, 2021 and incorporated herein by reference).
10.25#	Form of Director Nominee Offer Letter (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on May 27, 2021 and incorporated herein by reference).
10.26#	Employment Agreement dated August 21, 2019 between the registrant and Jonathan Rothbard (filed as Exhibit 10.44 to the registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2020 filed on July 9, 2021 and incorporated herein by reference).
10.27	Mutual Release and Settlement Agreement dated as of July 31, 2021 among Alpha Capital Anstalt and the registrant (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on August 2, 2021 and incorporated herein by reference).
10.28	Registration Rights Agreement dated as of August 23, 2021 by and between 180 Life Sciences Corp. and the purchasers signatory thereto (filed as Exhibit 10.3 to the registrant’s Current Report on Form 8-K filed on August 24, 2021 and incorporated herein by reference).
10.29	Form of Lock-Up Agreement between the 180 Life Sciences Corp. and its directors and executive officers (filed as Exhibit 10.4 to the registrant’s Current Report on Form 8-K filed on August 24, 2021 and incorporated herein by reference).
10.30£	Settlement and Mutual Release Agreement dated September 17, 2021, by and between 180 Life Sciences Corp. and Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on September 20, 2021 and incorporated herein by reference).

10.31	Debt Conversion Agreement dated September 30, 2021, by and between 180 Life Sciences Corp. and Dr. Lawrence Steinman and Sir Marc Feldmann (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on October 5, 2021 and incorporated by reference herein).
10.32#	Consulting Agreement dated November 17, 2021, by and between 180 Life Sciences Corp. and Lawrence Steinman, M.D. (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on November 18, 2021 and incorporated by reference herein).
10.33#	First Amendment to Amended and Restated Employment Agreement dated April 27, 2022, between 180 Life Sciences Corp. and James N. Woody, M.D., Ph.D. (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on April 28, 2022 and incorporated by reference herein).
10.34#	First Amendment to Employment Agreement dated April 27, 2022, between 180 Life Sciences Corp. and Jonathan Rothbard, Ph.D. (filed as Exhibit 10.3 to the registrant’s Current Report on Form 8-K filed on April 28, 2022 and incorporated by reference herein).
10.35#	First Amendment to Employment Agreement dated April 27, 2022, between Cannbiorex Pharma Ltd. and Sir Marc Feldmann, Ph.D. (filed as Exhibit 10.4 to the registrant’s Current Report on Form 8-K filed on April 28, 2022 and incorporated by reference herein).
10.36#	First Amendment to Consulting Agreement dated April 27, 2022, between 180 Life Sciences Corp. and Lawrence Steinman, M.D. (filed as Exhibit 10.5 to the registrant’s Current Report on Form 8-K filed on April 28, 2022 and incorporated by reference herein).
10.37#	Second Amendment to Consulting Agreement dated April 27, 2022, between Cannbiorex Pharma Ltd. and Prof. Jagdeep Nanchahal (filed as Exhibit 10.6 to the registrant’s Current Report on Form 8-K filed on April 28, 2022 and incorporated by reference herein).
10.38#	Second Amendment to Employment Agreement dated May 26, 2022 and effective as of June 1, 2022, between 180 Life Sciences Corp. and James N. Woody, M.D., Ph.D. (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on May 26, 2022 and incorporated by reference herein).
10.39#	Second Amendment to Employment Agreement dated May 26, 2022 and effective as of June 1, 2022, between 180 Life Sciences Corp. and Jonathan Rothbard, Ph.D. (filed as Exhibit 10.3 to the registrant’s Current Report on Form 8-K filed on May 26, 2022 and incorporated by reference herein).
10.40#	Second Amendment to Consulting Agreement dated May 26, 2022 and effective as of June 1, 2022, between 180 Life Sciences Corp. and Lawrence Steinman, M.D. (filed as Exhibit 10.4 to the registrant’s Current Report on Form 8-K filed on May 26, 2022 and incorporated by reference herein).
10.41#	180 Life Sciences Corp. 2022 Omnibus Incentive Plan (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on June 14, 2022 and incorporated by reference herein).
10.42£	Securities Purchase Agreement dated July 17, 2022, by and between 180 Life Sciences Corp. and the Purchaser (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on July 19, 2022 and incorporated by reference herein).
10.43	Warrant Agent Agreement for the July 2022 Common Warrants, dated July 29, 2022, by and between 180 Life Sciences Corp. and Continental Stock Transfer & Trust Company (filed as Exhibit 10.43 to the registrant’s Registration Statement on Form S-1 filed on May 5, 2023 and incorporated by reference herein).
10.44	Form of Lock-Up Agreement (July 2022 Offering) (filed as Exhibit 10.2 to the registrant’s Current Report on Form 8-K filed on July 19, 2022 and incorporated by reference herein).
10.45£	Securities Purchase Agreement dated December 20, 2022, by and between 180 Life Sciences Corp. and the Purchaser (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on December 22, 2022 and incorporated by reference herein).
10.46	Warrant Agent Agreement for the December 2022 Common Warrants, dated December 22, 2022, by and between 180 Life Sciences Corp. and Continental Stock Transfer & Trust Company (filed as Exhibit 10.3 to the registrant’s Current Report on Form 8-K filed on December 22, 2022 and incorporated by reference herein).
10.47	Form of Lock-Up Agreement (December 2022 Offering) (filed as Exhibit 10.4 to the registrant’s Current Report on Form 8-K filed on December 22, 2022 and incorporated by reference herein).

10.48#	Third Amendment to Consulting Agreement dated December 28, 2022, between 180 Life Sciences Corp., Cannbiorex Pharma Ltd. and Prof. Jagdeep Nanchahal (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on December 29, 2022 and incorporated by reference herein).
10.49#	Amendment to the Warrant Agent Agreement, dated January 13, 2023, by and between 180 Life Sciences Corp. and Continental Stock Transfer & Trust Company (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on January 18, 2023 and incorporated by reference herein).
10.50#	Separation and Release Agreement, dated January 18, 2023, by and between 180 Life Sciences Corp. and Quan Vu (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on January 20, 2023 and incorporated by reference herein).
10.51#	First Amendment to Separation and Release Agreement, dated March 29, 2023, by and between 180 Life Sciences Corp. and Quan Vu (filed as Exhibit 10.59 to the registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the Commission on March 31, 2023 and incorporated herein by reference).
10.52£	Securities Purchase Agreement dated April 10, 2023, by and between 180 Life Sciences Corp. and the Purchaser (filed as Exhibit 10.1 to the registrant’s Current Report on Form 8-K filed on April 10, 2023 and incorporated by reference herein).
10.53	Warrant Agent Agreement for the April 2023 Common Warrants, dated April 10, 2023 by and between 180 Life Sciences Corp. and Continental Stock Transfer & Trust Company (filed as Exhibit 10.3 to the registrant’s Current Report on Form 8-K filed on April 10, 2023 and incorporated by reference herein).

10.54	Form of Lock-Up Agreement (April 2023 Offering) (filed as Exhibit 10.4 to the registrant's Current Report on Form 8-K filed on April 10, 2023 and incorporated by reference herein).
10.55#	Third Amendment to Employment Agreement dated April 27, 2023 and effective as of January 1, 2023, between 180 Life Sciences Corp. and James N. Woody, M.D., Ph.D. (filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on April 28, 2023 and incorporated by reference herein).
10.56#	Third Amendment to Employment Agreement dated April 27, 2023 and effective as of January 1, 2023, between 180 Life Sciences Corp. and Ozan Pamir (filed as Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on April 28, 2023 and incorporated by reference herein).
10.57#	Third Amendment to Employment Agreement dated April 27, 2023 and effective as of January 1, 2023, between 180 Life Sciences Corp. and Jonathan Rothbard, Ph.D. (filed as Exhibit 10.3 to the registrant's Current Report on Form 8-K filed on April 28, 2023 and incorporated by reference herein).
10.58#	Amended and Corrected Third Amendment to Employment Agreement dated May 9, 2023, between 180 Life Sciences Corp. and Ozan Pamir (filed as Exhibit 10.12 to the registrant's Current Report on Form 8-K filed on May 15, 2023 and incorporated by reference herein).
10.59#	First Amended and Restated 180 Life Sciences Corp. 2022 Omnibus Incentive Plan (filed as Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on July 10, 2023 and incorporated by reference herein).
10.60£	Securities Purchase Agreement dated August 9, 2023, by and between 180 Life Sciences Corp. and the Institutional Investor. (filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on August 15, 2023 and incorporated by reference herein).
10.61	Form of Lock-Up Agreement (incorporated by reference to Exhibit 10.56 to the Company's Registration Statement on Form S-1 (File No. 333-272749) filed on June 16, 2023).
10.62#	Form of Stock Option Agreement (First Amended and Restated 2022 Omnibus Incentive Plan) (filed as Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on September 7, 2023 and incorporated by reference herein).
10.63	Termination Letter (Oxford License) September 22, 2023 (filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on September 28, 2023 and incorporated by reference herein).
10.64£	Amendment No. 1 to the Securities Purchase Agreement, dated November 28, 2023, by and between 180 Life Sciences Corp. and the Purchaser (filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on November 29, 2023 and incorporated by reference herein).

II-7

10.65#	Fourth Amendment to Employment Agreement dated January 10, 2024 and effective as of January 1, 2024, between 180 Life Sciences Corp. and James N. Woody, M.D., Ph.D. (filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on January 17, 2024 and incorporated by reference herein).
10.66#	Fourth Amendment to Employment Agreement dated January 10, 2024 and effective as of January 1, 2024, between 180 Life Sciences Corp. and Jonathan Rothbard, Ph.D. (filed as Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on January 17, 2024 and incorporated by reference herein).
10.67#	Third Amendment to Consulting Agreement dated January 10, 2024 and effective as of January 1, 2024, between 180 Life Sciences Corp. and Lawrence Steinman, M.D. (filed as Exhibit 10.3 to the registrant's Current Report on Form 8-K filed on January 17, 2024 and incorporated by reference herein).
10.68#	Second Amendment to Consulting Agreement dated January 10, 2024 and effective as of January 1, 2024, between Cannbiorex Pharma Ltd. and Sir Marc Feldmann (filed as Exhibit 10.4 to the registrant's Current Report on Form 8-K filed on January 17, 2024 and incorporated by reference herein).
10.69#	Offer Letter between 180 Life Science Corp. and Blair Jordan (director) dated February 24, 2024 and effective February 28, 2024 (filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on February 29, 2024 and incorporated by reference herein).
10.70#	Offer Letter between 180 Life Science Corp. and Omar Jimenez (director) dated March 4, 2024 and effective March 7, 2024 (filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on March 11, 2024 and incorporated by reference herein).
10.71#	Offer Letter between 180 Life Science Corp. and Ryan L. Smith (director) dated March 5, 2024 and effective March 7, 2024 (filed as Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on March 11, 2024 and incorporated by reference herein).
10.72#	Second Amended and Restated 180 Life Sciences Corp. 2022 Omnibus Incentive Plan (filed as Exhibit 10.2 to the Current Report on Form 8-K filed on February 16, 2024, and incorporated herein by reference)
10.73#	Separation and Release Agreement dated May 7, 2024, by and between 180 Life Sciences Corp. and Dr. James N. Woody (filed as Exhibit 10.1 to the Current Report on Form 8-K filed on May 6, 2024, and incorporated herein by reference)
10.74#	Separation and Release Agreement dated May 7, 2024, by and between 180 Life Sciences Corp. and Dr. Jonathan Rothbard (filed as Exhibit 10.2 to the Current Report on Form 8-K filed on May 6, 2024, and incorporated herein by reference)
10.75#	Consulting Agreement dated May 7, 2024, by and between 180 Life Sciences Corp. and Dr. Jonathan Rothbard (filed as Exhibit 10.3 to the Current Report on Form 8-K filed on May 6, 2024, and incorporated herein by reference)
10.76#	Fourth Amendment to Consulting Agreement dated May 7, 2024, by and between 180 Life Sciences Corp. and Dr. Lawrence Steinman (filed as Exhibit 10.4 to the Current Report on Form 8-K filed on May 6, 2024, and incorporated herein by reference)
10.77#	Executive Consulting Agreement dated May 7, 2024, by and between 180 Life Sciences Corp., Blair Jordan and Blair Jordan Strategy and Finance Consulting Inc. (filed as Exhibit 10.5 to the Current Report on Form 8-K filed on May 6, 2024, and incorporated herein by reference)
10.78	Separation and Release Agreement dated September 5, 2024 and First Amendment to Separation and Release Agreement dated September 5, 2024, by and between Cannbiorex Pharma Ltd., 180 Life Sciences Corp. and Sir Marc Feldmann (filed as Exhibit 10.1 to the Current Report on Form 8-K filed on September 9, 2024, and incorporated herein by reference)
10.79	Indemnity Agreement dated September 3, 2024 and effective September 5, 2024, between 180 Life Sciences Corp. and Sir Marc Feldmann (filed as Exhibit 10.2 to the Current Report on Form 8-K filed on September 9, 2024, and incorporated herein by reference)
10.80**	Form of Securities Purchase Agreement
10.81**	Form of Lock-Up Agreement
10.82**	Form of Warrant Agent Agreement for Pre-Funded Warrants
10.83**	Form of Warrant Agent Agreement for Common Warrants
21.1	List of Subsidiaries (filed as Exhibit 21.1 to the registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the Commission on March 31, 2023 and incorporated herein by reference).
23.1*	Consent of Marcum LLP, independent registered public accounting firm.
23.2**	Consent of The Loev Law Firm, PC (included in Exhibit 5.1).
24.1*	Power of Attorney (included on signature page of this Registration Statement).
107*	Filing Fee Table

* Filed herewith.

** To be filed by amendment.

Management contract or compensatory plans or arrangements.

£ Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K.

(b) Financial Statement Schedules

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

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;

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

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

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(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 Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, 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 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; and

II-9

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

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

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

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

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

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

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

(d) The undersigned registrant hereby undertakes that:

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

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

II-10

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Palo Alto, State of California, on September 12, 2024.

180 LIFE SCIENCES CORP.

By: /s/ Blair Jordan
Name: Blair Jordan
Title: Interim Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that the persons whose signature appears below constitute and appoint Blair Jordan and Ozan Pamir, and each of them, as true and lawful attorneys-in-fact and agents, with full powers of substitution and resubstitution, for them and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the SEC, and generally to do all such things in their names and behalf in their capacities as officers and directors to enable 180 Life Sciences Corp. to comply with the provisions of the Securities Act of 1933 and all requirements of the SEC, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
<u>/s/ Blair Jordan</u> Blair Jordan	Interim Chief Executive Officer and Director (Principal Executive Officer)	September 12, 2024
<u>/s/ Ozan Pamir</u> Ozan Pamir	Chief Financial Officer (Principal Financial and Accounting Officer)	September 12, 2024
<u>/s/ Lawrence Steinman</u> Lawrence Steinman	Director	September 12, 2024
<u>/s/ Omar Jimenez</u> Omar Jimenez	Director	September 12, 2024
<u>/s/ Ryan Smith</u> Ryan Smith	Director	September 12, 2024

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of 180 Life Sciences Corp. (the "Company") on Amendment No. 1 to Form S-1 (File No. 333-280912) of our report dated March 22, 2024, which includes an explanatory paragraph as to the Company's ability to continue as going concern, with respect to our audits of the consolidated financial statements of 180 Life Sciences Corp. as of December 31, 2023 and 2022 and for each of the two years in the period ended December 31, 2023 appearing in the Annual Report on Form 10-K of 180 Life Sciences Corp. for the year ended December 31, 2023. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

We were dismissed as auditors on April 17, 2024 and, accordingly, we have not performed any audit or review procedures with respect to any financial statements appearing in such Prospectus for the periods after the date of our dismissal.

/s/ Marcum LLP

Marcum LLP
San Francisco, CA
September 12, 2024

Calculation of Filing Fee Table

Form S-1
(Form Type)180 Life Sciences Corp.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Share	Maximum Aggregate Offering Price ⁽¹⁾	Fee Rate	Amount of Registration Fee
Equity	Common stock, par value \$0.001 per share ⁽²⁾	457(o)	-	-	\$ 6,000,000	\$ 0.00014760	\$ 885.60
Equity	Pre-Funded Warrants to purchase shares of common stock ⁽³⁾	457(g)	-	-	-	-	_(4)
Equity	Common Stock underlying the Pre-Funded Warrants ⁽²⁾⁽³⁾	457(o)	-	-	⁽³⁾	\$ 0.00014760	_(3)
Equity	Warrants to purchase shares of common stock	457(g)	-	-	-	-	_(4)
Equity	Common Stock underlying the Warrants to purchase Common Stock ⁽²⁾	457(o)	-	-	\$ 6,000,000	\$ 0.00014760	\$ 885.60
Total Offering Amounts					\$ 12,000,000		\$ 1,771.20
Total Fees Previously Paid							\$ 738.00 ⁽⁵⁾
Total Fee Offsets							\$ -
Net Fee Due							\$ 1,033.20

- (1) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act of 1933 (the "Securities Act").
- (2) Pursuant to Rule 416 under the Securities Act, the securities registered hereby also include an indeterminate number of additional securities as may from time to time become issuable by reason of stock splits, stock dividends, recapitalizations, or other similar transactions.
- (3) The proposed maximum aggregate offering price of the common stock will be reduced on a dollar-for-dollar basis based on the offering price of any pre-funded warrants issued in the offering, and the proposed maximum aggregate offering price of the pre-funded warrants to be issued in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any common stock issued in the offering. Accordingly, the proposed maximum aggregate offering price of the common stock and pre-funded warrants (including the common stock issuable upon exercise of the pre-funded warrants), if any, is \$6,000,000.
- (4) No separate registration fee is payable pursuant to Rule 457(g) under the Securities Act.
- (5) Paid in connection with the filing of the original Form S-1 Registration Statement on July 19, 2024.