

PROSPECTUS SUPPLEMENT
(To the Prospectus Dated November 20, 2024)

Up to \$7,730,973 Shares of Common Stock 352,176 Shares of Common Stock



ProPhase Labs, Inc.

This prospectus supplement relates to the issuance and sale of up to \$7,730,973 in shares of our common stock, par value \$0.0005 per share (the “Common Stock”), to Keystone Capital Partners, LLC (“Keystone”) from time to time, in one or more transactions in amounts, at prices, and on terms that will be determined at the time these securities are offered, pursuant to the common stock purchase agreement, dated as of January 29, 2025 (the “Purchase Agreement”), that we have entered into with Keystone, whereby Keystone has committed to purchase up to \$7,730,973 of our Common Stock (the “Purchase Shares”), and we have agreed to issue to Keystone 352,176 shares of our Common Stock as commitment shares (the “Commitment Shares”).

This prospectus supplement and the accompanying prospectus also cover the resale of these shares by Keystone to the public. See “Description of Transactions and Securities Offered” for a description of the Purchase Agreement and additional information regarding Keystone. Keystone is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended, or the Securities Act.

The purchase price for the Purchase Shares will be based upon formulas set forth in the Purchase Agreement depending on the type of Purchase Notice we submit to Keystone from time to time. We will pay the expenses incurred in connection with the issuance of the shares of our Common Stock, including expenses incurred by Keystone up to \$25,000. See “Description of Transactions and Securities Offered.”

Our common stock is traded on The Nasdaq Capital Market under the symbol “PRPH”. On January 28, 2025, the last reported sale price of our common stock on the Nasdaq Capital Market was \$0.46 per share.

As of January 28, 2025, the aggregate market value of our public float, calculated according to General Instructions I.B.6. of Form S-3, is approximately \$23,666,244.80, based on 29,874,029 shares of common stock outstanding as of January 28, 2025, of which 26,893,460 shares of our common stock are held by non-affiliates. We have not offered any securities pursuant to General Instruction I.B.6. of Form S-3 during the prior 12 calendar month period that ends on, and includes, the date of this prospectus. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell our common stock in a public primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75,000,000.

Investing in our securities involves a high degree of risk. Please read “Risk Factors” beginning on page S-6 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or determined if this prospectus supplement or the accompanying prospectus are truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is January 30, 2025

TABLE OF CONTENTS

	Page
PROSPECTUS SUPPLEMENT	
About this Prospectus Supplement	S-i
Prospectus Supplement Summary	S-1
The Offering	S-5
Risk Factors	S-6
Cautionary Note Regarding Forward-Looking Statements	S-10
Use of Proceeds	S-11
Description of Transaction and Securities Offered	S-12
Plan of Distribution	S-18
Legal Matters	S-20
Experts	S-20
Where You Can Find More Information	S-20
Information Incorporated by Reference	S-20

PROSPECTUS

About this Prospectus	i
Prospectus Summary	1
Risk Factors	4
Cautionary Note Regarding Forward-Looking Statements	4
Use of Proceeds	5
Description of Capital Stock	5
Description of Warrants	7
Description of Units	8
Plan of Distribution	9

Legal Matters	11
Experts	11
Where You Can Find More Information	11
Incorporation of Information By Reference	12

You should rely only on the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus supplement entitled “Information Incorporated by Reference” and “Where You Can Find More Information.”

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus form part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”), using a “shelf” registration process. This document contains two parts. The first part consists of this prospectus supplement, which provides you with specific information about this offering. The second part, the accompanying prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer only to the “prospectus,” we are referring to both parts combined. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference herein or therein, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference herein and therein.

Unless the context otherwise requires, all references to the terms “we,” “us,” “our,” and the “company” throughout this prospectus supplement mean ProPhase Labs, Inc. and its subsidiaries.

All references in this prospectus supplement to our financial statements include, unless the context indicates otherwise, the related notes.

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

S-i

PROSPECTUS SUPPLEMENT SUMMARY

The following summary of our business highlights some of the information contained elsewhere in or incorporated by reference into this prospectus supplement. Because this is only a summary, however, it does not contain all of the information that may be important to you. You should carefully read this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference, which are described under “Information Incorporated by Reference” and “Where You Can Find More Information” in this prospectus supplement. You should also carefully consider the matters discussed in the section entitled “Risk Factors” in this prospectus supplement, in the accompanying prospectus and in other periodic reports incorporated herein by reference.

Overview

We are a growth oriented and diversified next generation biotech, genomics and diagnostics company that develops and commercializes novel drugs, dietary supplements, and compounds.

We offer whole genome sequencing and related services through our wholly-owned subsidiary, DNA Complete, Inc. (“DNA Complete”).

Our wholly owned subsidiary, ProPhase BioPharma, Inc. (“PBIO”) is focused on the licensing, development and commercialization of novel drugs, dietary supplements, and compounds. We also develop and market dietary supplements under the TK Supplements® brand.

Previously we offered a broad array of COVID-19 related clinical diagnostic and testing services including polymerase chain reaction (“PCR”) testing for COVID-19 and Influenza A and B as well as rapid antigen testing for COVID-19 through our wholly-owned subsidiary, ProPhase Diagnostics, Inc. (“ProPhase Diagnostics”). ProPhase Diagnostics’ two CLIA- (Clinical Laboratory Improvement Amendments) certified laboratories are located in Old Bridge, New Jersey and Garden City, New York, respectively.

S-1

BE-Smart Esophageal Pre-Cancer Diagnostics Screening Test

We own the worldwide exclusive rights to the BE-Smart Esophageal Pre-Cancer diagnostics screening test and related intellectual property assets. The BE-Smart test is aimed at early detection of esophageal cancer. It remains under development but has already been tested by an independent test lab, mProbe, Inc. (“mProbe”), on over 200 human samples. Although further clinical tests are required, the available initial data demonstrates promising potential for early detection of esophageal cancer risk. mProbe, Inc., a precision health and medicine company utilizing clinical proteomics in the oncology space in conjunction with Dr. Christopher Hartley of the prestigious Mayo Clinic, has been utilizing a small sample of tissue collected during endoscopies to help us confirm and optimize the BE-Smart Test. The initial data appears to demonstrate accuracy and reproducibility as well as identification of potential biomarkers for therapeutic drug discovery to treat esophageal cancer. We are continuing to study and develop the BE-Smart test.

In March 2023, we announced a collaboration with mProbe and Dr. Christopher Hartley of Mayo Clinic for the continued development of our BE-Smart Esophageal Pre-Cancer diagnostic screening test. Currently, we plan to commercialize the BE-Smart test as a Laboratory Developed Test (“LDT”). However, on April 29, 2024, United States Food

and Drug Administration (“FDA”) released a final rule that classified LDTs as in vitro diagnostics that are regulated by FDA as medical devices under the federal Food, Drug, and Cosmetic Act. Under this approach, FDA proposed to phase out its general enforcement discretion approach for LDTs under a four-year period subject to certain continuing enforcement discretion policies. The final rule was published on May 6, 2024, and in the absence of a successful legal challenge, will become effective after a year, after which medical device regulatory requirements such as medical device reporting, registration and listing, quality system regulation requirements, and premarket authorization requirements, among others, will become applicable eventually. We plan to comply with such requirements, including that of premarket authorization, in partnership with Forward Healthcare Consultants (“FHC”), as described below, if the final rule is not modified or rescinded.

In August 2024, we announced a collaboration with FHC to assist in the approval and commercialization of BE-Smart. The experts at FHC will assist with securing market access by focusing on clinical validation and commercialization planning, to include coverage, pricing, and coding. Additionally, FHC will bring its vast relationships with physician networks to drive commercialization success. FHC has already completed the first two phases of its plan for advancing towards commercialization. This plan includes publishing a peer reviewed paper as well as a comprehensive dossier on the BE-Smart test. In addition, we have initiated certain discussions in coordination with FHC with respect to a potential strategic partnership or sale for the BE-Smart test.

According to the National Institute of Health Chapter 24: Indications and Outcomes of Gastrointestinal Endoscopy, over 20 million endoscopies are performed every year in the United States; approximately seven million of these procedures are done on patients with higher risk for contracting Esophageal Adeno Carcinoma. Two million of these patients have Barrett’s Esophagus, which is a condition in which the flat pink lining of the swallowing tube that connects the mouth to the stomach (esophagus) becomes damaged by acid reflux, which causes the lining to thicken and become red. In patients with Barrett’s Esophagus, one in two hundred will develop esophageal adenocarcinoma. Esophageal cancer is highly lethal and deemed as the sixth cause of cancer death worldwide according to Cancer State Facts, with the overall five-year survival rate less than 20%. We estimate that the reimbursement rate for the test will range between \$1,000 to \$2,000 per test, giving it a total potential addressable market of \$7 billion to \$14 billion dollars per year.

The BE-Smart test is being developed to provide health care providers and patients with data to help determine treatment options, including whether patients not believed to be at risk for esophageal cancer should continue to be monitored or, alternatively, to provide patients who might otherwise have been undiagnosed early treatment before esophageal cells become cancerous. The goal of widespread adoption of the BE-Smart test would allow health care providers to initiate potentially lifesaving early treatment processes such as an ablation procedure to remove the precancerous cells. This diagnostic test, once fully validated, could also significantly reduce unnecessary endoscopies as well as offer peace of mind to patients who are suffering with Barrett’s syndrome who are at greater risk of esophageal cancer.

DNA Complete

DNA Complete focuses on genomics testing technologies, a comprehensive method for analyzing entire genomes, including the genes and chromosomes in deoxyribonucleic acid (“DNA”). The data obtained from genomic sequencing may help to identify inherited disorders and tendencies, predict disease risk, identify expected drug response, and characterize genetic mutations, including those that drive cancer progression. We currently offer DNA Complete’s whole genome sequencing products direct-to-consumers online with plans to sell in food, drug and mass (“FDM”) retail stores and to provide testing for universities conducting genomic research. DNA Complete offers three tiers of DNA testing, Essential, Pro, and Elite, which differ in the amount of DNA analyzed (1x whole genome sequencing (“WGS”), 30x WGS, and 100x WGS, respectively), the level of accuracy, the number of reports per month that consumers would receive, and the total of personalized health reports included (more than 175 reports, more than 250 reports, and more than 350 reports, respectively). The DNA Complete tests include the first year of membership. The DNA Complete platform offers both ancestry and personalized health reports covering a number of health dispositions, such as longevity, mental health, cancer, and more. In addition, DNA Complete offers subscription services to ensure ongoing customer engagement by providing regular updates and new insights. DNA Complete sequences specimens at Nebula, a wholly owned subsidiary of ours, as well as at other laboratories.

DNA Complete also offers DNA Expand, a platform that allows consumers to upload their DNA data from previous DNA tests obtained from other service providers to discover 50x more data points derived from over 35 million genetic variants, and to obtain in-depth health and wellness reports that are based on the latest scientific discoveries. DNA Expand’s database was created from WGS tests that were obtained from 130 countries and are equivalent to roughly 150 million ancestry single nucleotide polymorphisms based tests.

S-2

ProPhase BioPharma

We formed PBIO in June 2022 to assist in the licensing, development and commercialization of novel drugs, dietary supplements and compounds. Licensed compounds under development currently include Equivir (a dietary supplement candidate) and Equivir G (prescription drug (“Rx”) candidate), and two broad-based candidates. We also own the exclusive rights to the BE-Smart Esophageal Pre-Cancer Diagnostic Screening test, which is in development as described above, and related intellectual property (“IP”) assets.

Equivir (dietary supplement candidate) and Equivir G (Rx candidate)

We have exclusive worldwide rights to develop and commercialize Equivir (a dietary supplement candidate) and Equivir G (a Rx drug candidate) pursuant to a license agreement with Global BioLife, Inc. (“Global BioLife”), a wholly-owned subsidiary of DSS, Inc.

Equivir is a blend of polyphenols, which are substances found in many nuts, vegetables and berries. The composition is projected to come in capsule form and be taken daily like a multivitamin. The composition is believed to support the human body’s immune function, and improve the quality of lives for users. We plan to commercialize Equivir as a dietary supplement, leveraging our distribution in over 40,000 FDM retail stores and online direct to consumers.

In March 2023, we commenced patient enrollment in a randomized, placebo-controlled clinical trial of Equivir to evaluate its effect in supporting immune system functions. Vedic Lifesciences, a leading clinical research organization, was contracted to run the multi-arm trial. Vedic produced interim results in February of 2024 which showed enough data to continue the trial to completion.

TK Supplements

Our TK Supplements® product line is dedicated to supporting better health, energy and sexual vitality. Each of our herbal supplements is researched to determine the optimum blend of ingredients to ensure our customers receive premium quality products. To achieve this, we formulate with the highest quality ingredients derived from nature and ingredients enhanced by science. Our TK Supplements® product line includes Legendz XL®, a sexual health formula product intended for men, and Triple Edge XL®, an energy and stamina support product.

Legendz XL® has distribution in Rite Aid, Walgreens, CVS, Walmart and other retailers, and via ecommerce.

In 2022, we restaged Triple Edge XL from a 56 ct to a 20 ct at CVS, making the retail price more in line with competition. The result was a double digit increase in consumer sales and a 40% expansion increase in the number of stores carrying the item between the restaging of the product in September 2022 and January 2023. In January 2024, Triple Edge XL was reviewed by CVS and, based on its 2022 and 2023 sales, CVS has determined to maintain authorization for its fiscal year ending December 31, 2024. We also presented Triple Edge XL 20 ct at Walgreens and other major pharmacies and we are waiting on final decisions on whether those pharmacies will agree to carry Triple Edge XL 20 ct. In the event all of the pharmacies at which we presented Triple Edge XL 20 ct accept the same of such product, we believe that such acceptances will increase demand for product inventory by over 100% in the 12-month period following all of the acceptances.

We also expect to launch our Equivir daily supplement that supports users' immune functions. The trial in India has been completed, and the final statistical analysis report is being compiled.

ProPhase Diagnostics

Our wholly-owned subsidiary, ProPhase Diagnostics, which was formed in October 2020, offered a broad array of COVID-19 related clinical diagnostic and testing services including PCR testing for COVID-19 and Influenza A and B as well as rapid antigen testing for COVID-19 at its two CLIA-certified laboratories, located in Old Bridge, New Jersey and Garden City, New York, respectively.

Recent Events

Sale of PMI and PREH

On January 16, 2025, we entered into a Stock Purchase Agreement (the "Stock Purchase Agreement") with JL Projects, Inc., a Delaware corporation ("JL Projects"), pursuant to which JL Projects purchased all of the right, title, and interest in and to all of the issued and outstanding shares of capital stock of our wholly-owned subsidiaries, Pharnaloz Manufacturing, Inc. ("PMI") and Pharnaloz Real Estate Holdings, Inc. ("PREH"). The transaction closed concurrently with the execution of the Stock Purchase Agreement on January 16, 2025.

PMI is in the business of developing, manufacturing, packaging, and warehousing of non-prescription drug and dietary supplement products, including organic and natural cough drops and lozenges, at a facility located at 500 North 15th Avenue, Lebanon, Pennsylvania 17046 (the "Facility"). PREH owned the Facility prior to the consummation of the sale contemplated by the Stock Purchase Agreement.

As part of the transaction, JL Projects provided approximately \$2 million in cash payments to the Company and extinguished approximately \$10 million of the Company's debt. Additionally, JL Projects assumed (i) the existing \$3.3 million mortgage on PMI's manufacturing facility, (ii) nearly \$2 million in capital leases, and (iii) approximately \$3 million in current and accrued payables, and paid down \$200,000 on an existing loan from affiliates of JL Projects. The transaction also resulted in the cancellation of approximately \$300,000 in accrued interest related to the retired debt. Furthermore, the Company avoided approximately \$3 million of upcoming capital expenditures that JL Projects will now be responsible for. The transaction also transferred over \$600,000 in employee annual overhead from the Company to PMI.

Term Note Agreement

On October 22, 2024, we entered into a term note agreement with an individual investor for cash proceeds of \$500,000 (the "Term Note"). The Term Note has an implicit interest rate of 15%. The Term Note has a term of 12 months and requires us to make interest only monthly payments in the amount of \$6,250 with a \$506,250 balloon payment at end of term. There are no warrants or convertible features associated with this note.

Change of the Company's Independent Registered Public Accounting Firm

On September 30, 2024, Morison Cogen LLP ("Morison"), our independent registered public accounting firm, decided to exit the PCAOB audit business. Based on this decision, the firm circulated a letter to the audit committee (the "Audit Committee") of our board of directors notifying them of such. The firm has therefore resigned as our independent registered public accounting firm, effective as of September 30, 2024.

S-3

On October 18, 2024, we engaged Fruci & Associates II, PLLC (the "New Accountant") as our new independent registered public accounting firm for the fiscal year ending December 31, 2024.

Resignation of a Director

On September 20, 2024, Eleanor McBrier notified our board of directors of her intention to resign as director of the Company, effective immediately. Ms. McBrier's resignation was not the result of any dispute or disagreement with us or the board of directors on any matter relating to the Company but because of a conflict with the policies of her existing employer. We expressed our gratitude to Ms. McBrier for her service and contributions during her time on the board of directors. In connection with Ms. McBrier's resignation, we have initiated a search for her replacement, with a focus on director candidates in the gastroenterology field and related sciences to assist us in the development of our BE-Smart esophageal cancer test.

Failure to Satisfy the Nasdaq Listing Rule

On September 23, 2024, we notified the Nasdaq Stock Market LLC ("Nasdaq") that we were not in compliance with the audit committee requirement under Nasdaq Listing Rule 5605(c)(2)(A) solely due to a vacancy on the Audit Committee of our board of directors resulting from Eleanor McBrier's resignation from the board of directors.

On September 26, 2024, we received a notice from Nasdaq indicating that we no longer comply with the audit committee requirements as set forth in Nasdaq Listing Rule 5605 and confirming our opportunity to regain compliance within the cure period provided in Nasdaq Listing Rule 5605(c)(4), which is the earlier of our next annual meeting of stockholders or September 20, 2025, or if the next annual stockholders' meeting is held before March 19, 2025, then we must evidence compliance no later than March 19, 2025. We are evaluating the membership of the Audit Committee and intends to regain compliance with Nasdaq Listing Rule 5605(c)(2)(A) prior to the expiration of the applicable cure period described above.

Notice of Delisting

On December 26, 2024, we received a letter from the Listing Qualifications Staff (the "Staff") of Nasdaq indicating that the bid price for the Company's common stock for the last 30 consecutive business days had closed below the minimum \$1.00 per share required for continued listing under Nasdaq Listing Rule 5550(a)(2).

Under Nasdaq Listing Rule 5810(c)(3)(A), we have been granted a 180 calendar day grace period, or until June 24, 2025, to regain compliance with the minimum bid price requirement. The continued listing standard will be met if we evidence a closing bid price of at least \$1.00 per share for a minimum of 10 consecutive business days during the 180 calendar day grace period. In order for Nasdaq to consider granting us additional time beyond June 24, 2025, we would be required, among other things, to meet the continued listing requirement for market value of publicly held shares as well as all other standards for initial listing on Nasdaq, with the exception of the minimum bid price requirement. In the event that we do not regain compliance with the \$1.00 bid price requirement by June 24, 2025, eligibility for Nasdaq's consideration of a second 180 day grace period would be determined on our compliance with the above referenced criteria on June 24, 2025.

We are diligently working to evidence compliance with the minimum bid price requirement for continued listing on Nasdaq; however, there can be no assurance that we will be able to regain compliance or that Nasdaq will grant us a further extension of time to regain compliance, if necessary. If we fail to regain compliance with the Nasdaq continued listing standards, our common stock will be subject to delisting from Nasdaq.

2024 Third Future Receipts Financing

On August 1, 2024, we entered into an agreement of sale of future receipts ("Third Future Receipts Financing Agreement") with RDM Capital Funding ("RDM") by which

RDM purchased from us our future accounts and contract rights arising from the sale of goods or rendition of services to our customers. The purchase price was \$500,000, which was paid to us on August 2, 2024, net of \$17,500 origination fee. We also incurred \$17,500 brokerage fee. The Third Future Receipts Financing Agreement requires 32 weekly payments of \$21,094 for a total repayment of \$675,000 over the term of the agreement.

2024 Second Future Receipts Financing

On June 27, 2024, we entered into an agreement of sale of future receipts (“Second Future Receipts Financing Agreement”) with Slate Advance (“Slate”) by which Slate purchased from us our future accounts and contract rights arising from the sale of goods or rendition of services to our customers. The purchase price was approximate \$1.5 million, which was paid to us on June 28, 2024, net of \$42,000 origination fee. We also incurred \$22,000 brokerage fee which was paid subsequently in July 2024. The Second Future Receipts Financing Agreement required 32 weekly payments of \$60,718 for a total repayment of approximately \$1.9 million over the term of the agreement.

During the three and six months ended June 30, 2024, the Company recognized \$9,000 interest expense from the amortization of debt discount using the effective interest rate method, respectively. As of June 30, 2024, the outstanding balance under the Second Future Receipts Financing Agreement was \$1.4 million, net of debt discount of \$548,000.

On November 5, 2024, we entered into an agreement with Slate (the “Amended Second Future Receipts Financing Agreement”) pursuant to which the original Second Future Receipts Financing Agreement was amended by increasing the receivables purchased amount to approximately \$2.1 million and the purchase price to approximately \$1.6 million, less the origination fees of \$35,000 and the outstanding balance of approximately \$1.0 million under the agreement, resulting in net proceeds to us of \$527,000. The Amended Second Future Receipts Financing Agreement shall be repaid by us in 24 weekly installments of \$89,000.

2024 Agreement of the Sale of Future Receipts

On February 14, 2024, we entered into an agreement of the sale of future receipts (“Future Receipts Financing Agreement”) with Libertas Funding, LLC pursuant to which we sold, in exchange for a purchase price of approximately \$2.5 million, all of our rights in 20% of our future receipts of approximately \$4.45 million until approximately \$2.96 million, plus fees, is delivered to Libertas Funding, LLC. As of June 30, 2024, the outstanding balance under the Future Receipts Financing Agreement was \$1.9 million, net of debt discount of \$210,000.

Corporate Information

We were initially organized in Nevada in July 1989. Effective June 18, 2015, we changed our state of incorporation from the State of Nevada to the State of Delaware. Our principal executive offices are located at 711 Stewart Ave, Suite 200, Garden City, NY 11530 and our telephone number is 215-345-0919.

S-4

The Offering

Common stock offered by us	Up to \$7,730,973 of shares of Common Stock that we may sell to Keystone, from time to time at our sole discretion over the next twenty-four months in accordance with the Purchase Agreement; and 352,176 shares of Common Stock, which are being issued for no cash consideration as a fee for Keystone’ execution of the Purchase Agreement (the “Commitment Shares”). We will not receive any cash proceeds from the issuance of the Commitment Shares.
Common stock outstanding immediately prior to this offering	29,874,029 shares.
Common stock outstanding after this offering	47,023,481 shares of Common Stock, assuming the sale of 16,806,463 shares (which would be the full amount offered under this prospectus supplement at a price of \$0.46 per share, which was the closing price of our Common Stock on the Nasdaq Capital Market on January 28, 2025, and the Commitment Shares. The actual number of shares issued will vary depending on the sales prices in this offering, but will not, unless prior stockholder approval is obtained, be greater than 5,971,818 shares of common stock, which number of shares is equal to 19.99% of the shares of the common stock outstanding immediately prior to the execution of the Purchase Agreement (the “Exchange Cap”), unless we obtain stockholder approval to issue shares of common stock in excess of the Exchange Cap in accordance with applicable Nasdaq rules.
Use of proceeds:	We intend to use the proceeds from this offering for working capital and general corporate purposes, which may include capital expenditures, product development and commercialization expenditures, and acquisitions of companies, businesses, technologies and products within and outside the diagnostic services, genomics and consumer products industry; provided, however, that such use of proceeds shall include a commitment from us to use 30% of the net proceeds from any sale of Common Stock in this offering towards the redemption of any preferred stock issued by the Company during the period commencing on the date this prospectus supplement is filed and expiring on the date the Purchase Agreement is terminated pursuant to the terms of the Purchase Agreement (the “Investment Period”) in accordance with the terms of such preferred stock, at a premium of 20% of the greater of (i) the outstanding principal face value of such securities, including accrued and unpaid dividends and (ii) the intrinsic underlying value of such securities. See “Use of Proceeds” on page S-11 of this prospectus supplement.
Risk factors:	This investment involves a high degree of risk. See the information contained in or incorporated by reference under “Risk Factors” beginning on page S-6 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement.
Nasdaq Capital Market Symbol:	Our common stock is listed on The Nasdaq Capital Market under the symbol “PRPH.”

The number of shares of our common stock to be outstanding after this offering is based on 29,874,029 shares of common stock outstanding as of January 28, 2025 and excludes the following:

- 3,913,750 shares of common stock issuable upon the exercise of stock options outstanding under our equity compensation plans and inducement stock option awards, with a weighted-average exercise price of \$ 6.64 per share;
- 615,775 shares of common stock issuable upon the exercise of warrants with a weighted average exercise price of \$5.93 per share;
- 372,035 shares of common stock reserved for future issuance under our 2022 Equity Compensation Plan (the “2022 Plan”); and
- 300,000 shares of common stock reserved for future issuance under our 2022 Directors’ Equity Compensation Plan (the “2022 Directors’ Plan”).

Except as otherwise indicated herein, all information in this prospectus supplement assumes:

- no issuance of shares of common stock valued at \$2.0 million which are issuable to Stella Diagnostics Inc. (“Stella”) and Stella DX, LLC (“Stella DX” and, together with Stella, the “Stella Sellers”), pursuant to the Asset Purchase Agreement, dated December 15, 2022, by and between us and the Stella Sellers (the “Stella Purchase Agreement”), upon the Commercialization Event (as defined in the Stella Purchase Agreement).

RISK FACTORS

An investment in our shares of common stock involves a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risks discussed under the sections captioned “Risk Factors” contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as amended (the “Form 10-K”), any subsequently filed Quarterly Report on Form 10-Q and in other documents that we subsequently file with the SEC, all of which are incorporated by reference in this prospectus supplement and the accompanying prospectus in their entirety, together with other information in this prospectus supplement, the accompanying prospectus, the information and documents incorporated by reference herein and therein, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.

Risks Relating to this Offering and Ownership of Our Common Stock

It is not possible to predict the actual number of shares of our Common Stock, if any, we will sell under the Purchase Agreement, or the actual gross proceeds resulting from those sales or the dilution to you from those sales.

Pursuant to the Purchase Agreement, Keystone shall purchase from us up to \$7,730,973 of shares of our Common Stock. Sales of our Common Stock, if any, to Keystone under the Purchase Agreement will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Keystone all, some or none of the Common Stock that may be available for us to sell to Keystone pursuant to the Purchase Agreement. Accordingly, we cannot guarantee that we will be able to sell all of the \$7,730,973 of shares or how much in proceeds we may obtain under the Purchase Agreement. If we cannot sell securities pursuant to the Purchase Agreement, we may be required to utilize more costly and time-consuming means of accessing the capital markets, which could have a material adverse effect on our liquidity and cash position.

Because the purchase price per share of Common Stock to be paid by Keystone for the Common Stock that we may elect to sell to Keystone under the Purchase Agreement, if any, will fluctuate based on the market prices of our Common Stock at the time we make such election, it is not possible for us to predict, as of the date of this prospectus and prior to any such sales, the number of shares of Common Stock that we will sell to Keystone under the Purchase Agreement, the purchase price per share that Keystone will pay for shares of Common Stock purchased from us under the Purchase Agreement, or the aggregate gross proceeds that we will receive from those purchases by Keystone under the Purchase Agreement.

Keystone will pay less than the then-prevailing market price for our Common Stock, which could cause the price of our Common Stock to decline

The purchase price of our Common Stock to be sold to Keystone under the Purchase Agreement is derived from the market price of our Common Stock on Nasdaq. Shares to be sold to Keystone pursuant to the Purchase Agreement will be purchased at a discounted price.

For example, we may effect sales to Keystone pursuant to a Fixed Purchase Notice (as defined below) at a purchase price equal to the lesser of 90% of (i) the daily VWAP (as defined below) of the Common Stock for the five trading days immediately preceding the applicable Fixed Purchase Date (as defined below) and (ii) the lowest traded price of a share of Common Stock on the applicable Fixed Purchase Date during the full trading day on such applicable Purchase Date. See “The Committed Equity Financing” for more information.

As a result of this pricing structure, Keystone may sell the shares they receive immediately after receipt of such shares, which could cause the price of our Common Stock to decrease.

Investors who buy shares of Common Stock from Keystone at different times will likely pay different prices.

Pursuant to the Purchase Agreement, we have discretion, to vary the timing, price and number of shares of Common Stock we sell to Keystone. If and when we elect to sell shares of Common Stock to Keystone pursuant to the Purchase Agreement, after Keystone has acquired such shares, Keystone may resell all, some or none of such shares at any time or from time to time in its sole discretion and at different prices. As a result, investors who purchase shares from Keystone in this offering at different times will likely pay different prices for those shares, and so may experience different levels of dilution and in some cases substantial dilution and different outcomes in their investment results. Investors may experience a decline in the value of the shares they purchase from Keystone in this offering as a result of future sales made by us to Keystone at prices lower than the prices such investors paid for their shares in this offering. In addition, if we sell a substantial number of shares to Keystone under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangements with Keystone may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales.

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

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. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be lower than the price per share paid by investors in this offering.

We have a limited number of shares of Common Stock available for future issuance which could adversely affect our ability to raise capital or consummate strategic transactions.

We are currently authorized to issue \$7,730,973 shares of Common Stock under our Certificate of Incorporation. As of January 28, 2025 and prior to commencement of this offering, we had approximately 14,924,411 shares of Common Stock unreserved and available for issuance. Due to the limited number of authorized shares available for issuance and the decreased price of our Common Stock in recent months, we may not be able to raise additional equity capital or complete a merger or other business combination unless we increase the number of shares we are authorized to issue. We would need to seek stockholder approval to increase the number of our authorized shares of Common Stock, and we can provide no assurance that we would succeed in amending our Certificate of Incorporation to increase the number of shares of Common Stock we are authorized to issue which could negatively impact our business, prospects and results of operations.

Our shares of Common Stock could be delisted from the Nasdaq Capital Market which could result in, among other things, a decline in the price of our Common Stock and less liquidity for holders of shares of our Common Stock.

Our Common Stock is listed on the Nasdaq, which imposes, among other requirements, a minimum \$1.00 per share bid price requirement for continued inclusion on the Nasdaq pursuant to Nasdaq Listing Rule 5550(a)(2) (the “Bid Price Requirement”). The closing bid price for our Common Stock must remain at or above \$1.00 per share to comply with the Bid Price Requirement for continued listing. On December 26, 2024 we received a deficiency letter from the Staff of the Nasdaq notifying us that, for the preceding 30

consecutive trading days, the closing bid price for shares of our Common Stock was below \$1.00 per share and that we had failed to comply with the Bid Price Requirement.

In accordance with Nasdaq rules, we have been provided an initial period of 180 calendar days, or until June 24, 2025 (the “Compliance Date”), to regain compliance with the Bid Price Requirement. If, at any time before the Compliance Date, the closing bid price for shares of our Common Stock is at least \$1.00 for a minimum of 10 consecutive business days, the Staff will provide us written confirmation of compliance with the Bid Price Requirement. If we do not regain compliance with the Bid Price Requirement by the Compliance Date, we may be eligible for an additional 180 calendar day compliance period. To qualify, we would be required to meet the continued listing requirement for market value of publicly held shares and other initial listing standards for Nasdaq, with the exception of the Bid Price Requirement, and would need to provide written notice of our intention to cure the deficiency during the second 180 calendar day compliance period, by effecting a reverse stock split, if necessary. If we do not regain compliance with the Bid Price Requirement by the Compliance Date and are not eligible for the additional 180 calendar day compliance period at that time, the Staff will provide written notification to us that shares of our Common Stock will be subject to delisting. At that time, we may appeal the Staff’s delisting determination to a Nasdaq Hearing Panel. There can be no assurance that we will regain compliance with the Bid Price Requirement within any compliance period, we will be eligible for an additional 180 calendar day compliance period, any appeal to the Nasdaq Hearing Panel will be successful or that we will otherwise maintain compliance with any of the other Nasdaq listing requirements.

Delisting from the Nasdaq could make trading our Common Stock more difficult for investors, potentially leading to declines in our share price and liquidity. If our Common Stock is delisted by Nasdaq, our Common Stock may be eligible to trade on an over-the-counter quotation system, where an investor may find it more difficult to sell our stock or obtain accurate quotations as to the market value of our Common Stock. We cannot assure you that our Common Stock, if delisted from Nasdaq, will be listed on another national securities exchange or quoted on an over-the counter quotation system.

The terms of the Purchase Agreement limit the amount of shares of Common Stock we may issue to Keystone, which may have an adverse effect on our liquidity.

The Purchase Agreement includes restrictions on our ability to sell shares of our common stock to Keystone, including, subject to specified limitations, if a sale would cause Keystone and its affiliates to beneficially own more than 4.99% of our issued and outstanding common stock. Sales under the Purchase Agreement may also be limited by the Exchange Cap as discussed in the section of this prospectus supplement entitled “The Offering.” Accordingly, we cannot guarantee that we will be able to sell all \$7,730,973 of shares of common stock in this offering. If we cannot sell the full amount of the shares that Keystone has committed to purchase because of these limitations, we may be required to utilize more costly and time-consuming means of accessing the capital markets, which could materially adversely affect our liquidity and cash position.

S-7

If we sell shares of our Common Stock under the Purchase Agreement, our existing stockholders will experience immediate dilution and, as a result, our stock price may go down.

Pursuant to the Purchase Agreement, we have agreed to sell up to \$7,730,973 of shares of our common stock at our option and subject to certain limitations. For additional details on this financing arrangement, please refer to “Plan of Distribution” located elsewhere in this prospectus supplement. The sale of shares of our Common Stock pursuant to the Purchase Agreement will have a dilutive impact on our existing stockholders. Keystone may resell some or all of the shares we issue to it under the Purchase Agreement and such sales could cause the market price of our Common Stock to decline, which decline could be significant. We cannot predict the effect that future sales of our Common Stock or other equity-related securities would have on the market price of our Common Stock.

Future sales of a significant number of our shares of Common Stock in the public markets, or the perception that such sales could occur, could depress the market price of our shares of Common Stock or cause it to be highly volatile.

A substantial number of shares of Common Stock will be available for issuance under the Purchase Agreement, and we cannot predict if and when these shares of Common Stock will be resold in the public markets. We cannot predict the number of these shares that might be resold nor the effect that future sales of our shares of Common Stock would have on the market price of our shares of Common Stock. We may issue additional shares of Common Stock at a discount from the current trading price of our Common Stock. As a result, our stockholders would experience immediate dilution upon the issuance of any shares of our Common Stock at such discount or as a result of such adjustment. In addition, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt securities, preferred stock or Common Stock. Sales of a substantial number of our shares of Common Stock in the public markets, or the perception that such sales could occur, could depress the market price of our shares of Common Stock or cause it to be highly volatile and impair our ability to raise capital through the sale of additional equity securities.

Our stock price is and may continue to be volatile and you may not be able to resell our securities at or above the price you pay for such securities.

The market price for our Common Stock is volatile and may fluctuate significantly in response to a number of factors, many of which we cannot control, such as quarterly fluctuations in financial results, the timing and our ability to advance the development of our product candidates or changes in securities analysts’ recommendations, any of which could cause the price of our Common Stock to fluctuate substantially. Each of these factors, among others, could harm your investment in our securities and could result in your being unable to resell any of our securities that you purchase at a price equal to or above the price you paid.

In the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the issuer. If any of our stockholders were to bring such a lawsuit against us, we could incur substantial costs defending the lawsuit and the attention of our management would be diverted from the operation of our business.

As an investor, you may lose all of your investment.

Investing in our securities involves a high degree of risk. As an investor, you may never recoup all, or even part, of your investment and you may never realize any return on your investment. You must be prepared to lose all of your investment.

Management will have broad discretion as to the use of proceeds from this offering and may not use them effectively.

Our management will have broad discretion as to the application of the net proceeds from this offering and our stockholders will not have the opportunity as part of their investment decisions to assess whether the net proceeds are being used appropriately. You may not agree with our decisions, and our use of the proceeds may not yield any return on your investment. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our failure to apply the net proceeds of this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, in our investment of these net proceeds. You will not have the opportunity to influence our decisions on how to use our net proceeds from this offering.

S-8

Risks Related to Our Business Generally

FDA’s finalized regulations on laboratory-developed tests may impact our operations adversely, and we may not be able to comply with the requirements.

We market our genetic tests as laboratory-developed tests (“LDT”), and plan to also initially market our BE-Smart Esophageal Pre-Cancer as an LDT. Until recently, the FDA

has exercised enforcement discretion on LDTs that are marketed in the United States, provided that the LDTs can meet certain conditions that the FDA has outlined. However, on May 6, 2024, the FDA issued a final rule aimed at helping to ensure the safety and effectiveness of laboratory developed tests (LDTs). The rule amends the FDA's regulations to make explicit that in vitro diagnostic products ("IVD") are medical devices under the Federal Food, Drug, and Cosmetic Act (FD&C Act) including when the manufacturer of the IVD is a laboratory. Along with this amendment, the FDA is finalizing a policy under which the FDA will provide greater oversight of IVDs offered as LDTs through a phaseout of its general enforcement discretion approach for LDTs over the course of four years, as well as targeted enforcement discretion policies for certain categories of IVDs manufactured by laboratories. As a result of the final regulations, premarket review, clearance, or approvals may be required by FDA for the products that we are currently marketing or plan to market as LDTs. Our business and operations may be adversely affected because we may be required to cease sales of such products and be required to expend significant resources into collecting data from clinical trials, ensuring compliance with the applicable requirements for medical devices, and preparing and submitting premarket applications for the FDA's review. We may not be able to complete the required clinical trials to enable marketing of our tests due to resource constraints, or we may not be able to complete them in a timely manner. We also may not be able to comply with the associated regulatory requirements including those of premarket authorization, medical device reporting, quality system regulations, and others. In addition, even if we are able to comply with such requirements or complete the clinical trials in a timely manner, there is no guarantee that FDA will clear or approve our products. FDA may also determine that our tests are not safe or effective, and that they must be removed from the market. The FDA may bring enforcement actions against LDTs that are on the market by sending warning letters, untitled letters, it-has-come-to-our-attention letters, or through other actions such as seizure, recalls, civil monetary penalties, injunction, and import refusals and import alerts, among others. If we cannot obtain the required premarket review, clearance, or approval, we may be forced to stop the marketing of our products, which will impact our operations and financial conditions adversely.

Servicing our debt will require a significant amount of cash, and we may not have sufficient cash flow from our business to pay our debt.

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. We had, as of September 30, 2024, approximately (i) \$13.5 million in working capital, (ii) \$1.1 million in cash and cash equivalents, and (iii) \$17.2 million of outstanding indebtedness, net of discounts. Our business may not generate cash flow from operations in the future sufficient to service our debt obligations and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

Our projections of future performance may not be indicative of actual results

From time to time, we may provide statements to the marketplace in the form of press releases that contain projections related to our future performance. These include statements relating to our projected revenues, our projected collection of receivables, our estimates of future operating and financial results and our planned strategic initiatives including our potential discussions regarding strategic partnerships and M&A activity. Although this information reflects the good faith expectations and estimates of our management based on the information available at the time that such statements were made, there can be no assurance that our actual performance and results will not differ materially from those contained in these projections. Investors are cautioned not to place undue reliance on any projections that may be provided by us.

S-9

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement (including any documents incorporated by reference herein) contains statements with respect to us which constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and are intended to be covered by the "safe harbor" created by those sections. Forward-looking statements, which are based on certain assumptions and reflect our plans, estimates and beliefs, can generally be identified by the use of forward-looking terms such as "believes," "expects," "may," "will," "should," "could," "seek," "intends," "plans," "estimates," "anticipates" or other comparable terms. These forward-looking statements include, but are not limited to, statements concerning future events, our future financial performance, business strategy, product development strategy, and plans and objectives of management for future operations. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed in "Risk Factors" in this prospectus supplement and the documents incorporated by reference herein.

We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in company expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

You should read this prospectus supplement, the accompanying prospectus, and the documents that we incorporate by reference herein and therein and have filed as exhibits to the registration statement of which this prospectus supplement is part, completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this prospectus supplement is accurate as of the date on the cover of this prospectus supplement only. Our business, financial condition, results of operations and prospects may change. We may not update these forward-looking statements, even though our situation may change in the future, unless we have obligations under the federal securities laws to update and disclose material developments related to previously disclosed information. We qualify all of the information presented in this prospectus supplement, and particularly our forward-looking statements, by these cautionary statements.

S-10

USE OF PROCEEDS

The proceeds (if any) from this offering will vary depending on the number of shares that we offer and the offering price per share. We may receive gross proceeds of up to \$7,730,973 over the term of the Purchase Agreement. We may sell fewer than all of the shares offered by this prospectus supplement, in which case our net offering proceeds will be less, and we may raise less than the maximum \$7,730,973 in gross offering proceeds permitted by this prospectus supplement.

We intend to use the net proceeds from this offering for working capital and general corporate purposes, which may include capital expenditures, product development and commercialization expenditures, and acquisitions of companies, businesses, technologies and products within and outside the diagnostic services, genomics and consumer products industry; provided, however, that such use of proceeds shall include a commitment from us to use 30% of the net proceeds from any sale of Common Stock in this offering towards the redemption of any preferred stock issued by the Company during the Investment Period in accordance with the terms of such preferred stock, at a premium of 20% of the greater of (i) the outstanding principal face value of such securities, including accrued and unpaid dividends and (ii) the intrinsic underlying value of such securities.

Pending our use of the net proceeds from this offering, we intend to maintain the net proceeds as cash deposits or cash management instruments, such as U.S. government securities or money market mutual funds.

S-11

DESCRIPTION OF TRANSACTIONS AND SECURITIES OFFERED

General

On January 29, 2025, we entered into the Purchase Agreement with Keystone, pursuant to which Keystone has agreed to purchase from us, at our direction from time to time, in our sole discretion, from and after the date of this prospectus supplement, shares of our Common Stock having a total maximum aggregate purchase price to Keystone of \$7,730,973 (subject to certain limitations contained in the Purchase Agreement), upon the terms and subject to the conditions contained in the Purchase Agreement. Terms not defined in this section have the meanings given to them in the Purchase Agreement.

Pursuant to the terms of the Purchase Agreement, on the date of this prospectus, we are issuing 352,176 Commitment Shares to Keystone on the date of this prospectus supplement as an initial fee for its commitment to purchase shares of our Common Stock under the Purchase Agreement.

We may, from time to time and at our sole discretion, direct Keystone to purchase shares of our Common Stock upon the satisfaction of certain conditions set forth in the Purchase Agreement at a purchase price per share based on the market price of our Common Stock at the time of sale as computed under the Purchase Agreement. We will control the timing and amount of any sales of our Common Stock to Keystone, and Keystone has no right to require us to sell any shares to it under the Purchase Agreement. Keystone may not assign or transfer its rights and obligations under the Purchase Agreement.

The Purchase Agreement prohibits us from directing Keystone to purchase any shares of our Common Stock if those shares of our Common Stock, when aggregated with all other shares of our Common Stock then beneficially owned by Keystone and its affiliates, would result in Keystone having beneficial ownership, at any single point in time, of more than 4.99% of the outstanding shares of our Common Stock, as calculated pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended, and Rule 13d-3 thereunder (the “Beneficial Ownership Limitation”) and the Exchange Cap.

We have agreed to reimburse Keystone for the reasonable legal fees and disbursements of its counsel in an amount not to exceed \$25,000.

Purchase of Shares under the Purchase Agreement

Fixed Purchases

Under the Purchase Agreement, subject to certain conditions, we may direct Keystone on any date (the “Purchase Date”) to purchase (a “Fixed Purchase”) a specified amount of Common Stock, provided that Keystone’s maximum purchase commitment under any single Fixed Purchase may not exceed the lesser of \$100,000 or 100,000 shares of Common Stock.

The purchase price per share for each such Fixed Purchase will be equal to 90% of the lesser of:

- the daily volume weighted average price of our Common Stock on the Nasdaq, as reported by Bloomberg Financial LP using the AQR function for the five Trading Days immediately preceding the applicable Fixed Purchase Date for such Fixed Purchase; and
- the lowest traded price of a share of our Common Stock on the applicable Fixed Purchase Date for such Fixed Purchase during the full Trading Day on the Nasdaq following such applicable Purchase Date.

S-12

VWAP Purchase

In addition to Fixed Purchases, we also have the right to direct Keystone, on any Purchase Date on which we have properly submitted to Keystone a notice for the maximum amount of shares we are then permitted to sell in a Fixed Purchase, to purchase (a “VWAP Purchase”) an additional amount of our Common Stock on the immediately following trading day (the “VWAP Purchase Date”), of up to the lesser of:

- 300% of the number of shares to be purchased pursuant to the corresponding Fixed Purchase; and
- 30% of the aggregate shares of our Common Stock traded during the trading day, beginning at the commencement of regular trading on the VWAP Purchase Date and ending at the close of regular trading on such VWAP Purchase Date, or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed prior to the close of regular trading on the applicable VWAP Purchase Date, ending at such earlier time that any one of such thresholds is crossed (the “VWAP Purchase Period”).

The purchase price per share for each such VWAP Purchase will be equal to 90% of the lesser of:

- the volume-weighted average price (VWAP) of our Common Stock during the applicable VWAP Purchase Period on the applicable VWAP Purchase Date; and
- the closing sale price of our Common Stock on the applicable VWAP Purchase Date.

Additional VWAP Purchases

We also have the right to direct Keystone, prior to 1:00 p.m., Eastern time, on any VWAP Purchase Date for which the applicable VWAP Purchase Period has ended, to purchase additional shares of our Common Stock in another VWAP Purchase (an “Additional VWAP Purchase”) on the same trading day (the “Additional VWAP Purchase Date”), of up to the lesser of:

- 300% of the number of shares purchased pursuant to the applicable corresponding Fixed Purchase; and
- 30% of the trading volume in our Common Stock on the Nasdaq during the applicable VWAP Purchase Period on the applicable VWAP Purchase Date.

We may, in our sole discretion, submit multiple Additional VWAP Purchase Notices to Keystone on a single Additional VWAP Purchase Date, provided that (i) such Additional VWAP Purchase Notice is received by Keystone prior to 2:00 p.m., Eastern time, on such Additional VWAP Purchase Date and (ii) all prior Fixed Purchases, VWAP Purchases and Additional VWAP Purchases (collectively, “Purchases”) (including those that have occurred earlier on the same trading day) have been completed, and all of the Purchase Shares to be purchased thereunder have theretofore been properly delivered to Keystone in accordance with the Purchase Agreement.

The purchase price per share for each such Additional VWAP Purchase will be equal to 90% of the lesser of:

- the lowest traded price of the Common Stock on the applicable VWAP Purchase Date; and

S-13

- the VWAP during the applicable VWAP Purchase Period.

In the case of any Purchases, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute the purchase price.

Other than as described above, there are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our Common Stock to Keystone.

Conditions to Commencement and for Delivery of Purchase Notices

The Company's ability to deliver Purchase Notices to Keystone under the Purchase Agreement are subject to the satisfaction, both at the time of Commencement and at the time of delivery by the Company of any Purchase Notice to Keystone, of certain conditions, including the following:

- the accuracy in all material respects of the representations and warranties of the Company included in the Purchase Agreement;
- the accuracy in all material respects of the representations and warranties of Keystone included in the Purchase Agreement;
- the Company having performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Purchase Agreement to be performed, satisfied or complied with by the Company;
- the registration statement to which this prospectus supplement relates remains effective under the Securities Act, and Keystone being able to utilize this prospectus supplement to resell all of the shares of common stock included in this prospectus supplement;
- none of the following events shall have occurred and be continuing: a) the SEC or any other federal or state governmental authority requested receipt for any additional information relating to this prospectus supplement, or the prospectus or any prospectus supplement, or for any amendment of or supplement to this prospectus supplement, the prospectus or any prospectus supplement, b) the SEC or any other federal or state government authority issued any stop order suspending the effectiveness of the registration statement to which this prospectus supplement relates or prohibiting or suspending the use of this prospectus supplement, or c) the occurrence of any event, condition, or fact that renders statements in this prospectus supplement, any post-effective amendment, any registration statement or post-effective amendment, or the prospectus materially untrue or misleading;
- this prospectus supplement, in final form, shall have been filed with the SEC under Rule 424(b) under the Securities Act within the applicable time period under Rule 424(b), and all reports, schedules, registrations, forms, statements, information and other documents required to have been filed by the Company with the SEC pursuant to the reporting requirements of the Exchange Act shall have been filed with the SEC;
- trading in the common stock shall not have been suspended by the SEC or the trading market, trading in securities generally on the Nasdaq shall not have been suspended or limited;
- the Company shall have complied in all material respects with all applicable federal, state and local governmental laws, rules, regulations and ordinances in connection with the execution, delivery and performance of the Purchase Agreement and the other Transaction Documents;

S-14

- the absence of any statute, regulation, order, decree, writ, ruling or injunction by any court or governmental authority of competent jurisdiction which prohibits the consummation of or that would materially modify or delay any of the transactions contemplated by the Purchase Agreement;
- the absence of any action, suit or proceeding before any arbitrator or any court or governmental authority seeking to restrain, prevent or change the transactions contemplated by the Purchase Agreement, or seeking material damages in connection with such transactions;
- the shares of common stock issued pursuant to a Purchase Notice have been duly authorized by all necessary action of the Company and are issued to Keystone as DWAC shares;
- all of the shares of common stock that have been and may be issued pursuant to the Purchase Agreement shall have been approved for listing or quotation on the Nasdaq Capital Market, subject only to notice of issuance;
- no condition, occurrence, state of facts or event constituting a Material Adverse Effect shall have occurred and be continuing;
- no Person shall have commenced a proceeding against the Company pursuant to or within the meaning of any Bankruptcy Law;
- the Company shall have timely delivered all Commitment Shares to Keystone as DWAC shares;
- the Company shall have delivered the Irrevocable Transfer Agent Instructions and Notice of Effectiveness.
- the Company shall have reserved out of its authorized and unissued Common Stock, 5,500,000 shares of Common Stock solely for the purpose of effecting Fixed Purchases, VWAP Purchases, and Additional VWAP Purchases;
- the receipt by Keystone of the opinions, bring-down opinions and negative assurances from outside counsel to the Company in the forms mutually agreed to by the Company and Keystone prior to the date of the Purchase Agreement; and
- the receipt by Keystone of the closing certificate from the Company.

Termination of the Purchase Agreement

Unless earlier terminated as provided in the Purchase Agreement, the Purchase Agreement will terminate automatically on the earliest to occur of:

- expiration of the Registration Statement pursuant to Rule 415(a)(5) of the Securities Act;
- the date on which Keystone shall have purchased an aggregate of \$7,730,973 of shares of common stock pursuant to the Purchase Agreement;
- the date on which the common stock shall have failed to be listed or quoted on the Nasdaq Capital Market or any other Eligible Market;
- the 30th trading day next following the date on which the Company commences a voluntary bankruptcy case or any third party commences a bankruptcy proceeding against the Company; and

S-15

- the date on which a custodian is appointed for the Company in a bankruptcy proceeding for all or substantially all of its property or the Company makes a general assignment for the benefit of its creditors.

The Purchase Agreement may be terminated by the mutual written consent of the parties, effective as of the date of such mutual written consent unless otherwise provided in such written consent. In addition, we have the right to terminate the Purchase Agreement at any time after Commencement, at no cost or penalty, effective upon one trading day's prior written notice to Keystone, provided we have issued all Commitment Shares to Keystone, paid all required fees and amounts to Keystone (the "Investor Expense Reimbursement"), and prior to issuing any press release or making any public statement or announcement with respect to termination, have consulted with Keystone and obtained Keystone's consent to the form and substance of such press release or disclosure.

Keystone may terminate the Purchase Agreement effective upon three trading days' prior written notice to us if:

- any condition, occurrence, state of facts or event constituting a "Material Adverse Effect" (as defined in the Purchase Agreement) has occurred and is continuing;
- a "Fundamental Transaction" (as defined in the Purchase Agreement) shall have occurred;
- this prospectus supplement and any New Registration Statement is not filed by the applicable Filing Deadline therefor or declared effective by the SEC by the applicable Effectiveness Deadline therefor;
- While the Registration Statement, or any post-effective amendment thereto, is required to be maintained effective and Keystone holds any Registrable Securities, the effectiveness of the registration statement to which this prospectus supplement relates, or any post-effective amendment thereto, lapses for any reason (including, without limitation, the issuance of a stop order by the SEC) or the registration statement or any post-effective amendment thereto, the prospectus contained therein, or any prospectus supplement otherwise becomes unavailable to Keystone for the resale of all of the securities included therein, and such lapse or unavailability continues for a period of 20 consecutive trading days;
- trading in our common stock on the Nasdaq Capital Market (or if our common stock is then listed on an Eligible Market, trading in our common stock on such Eligible Market) shall have been suspended and such suspension continues for a period of three consecutive trading days; or
- we are in material breach or default of the Purchase Agreement, and, if such breach or default is capable of being cured, such breach or default is not cured within 10 trading days after notice of such breach or default is delivered to us.

Notwithstanding the foregoing, no termination of the Purchase Agreement by any party shall (i) become effective prior to the first trading day immediately following a settlement date related to any pending Purchase Notice that has not been fully settled in accordance with the terms and conditions of the Purchase Agreement, and no termination of the Purchase Agreement may limit, alter, modify, change or otherwise affect any of the parties' rights or obligations under the Purchase Agreement with respect to any pending Purchase Notice, and the parties will fully perform their respective obligations with respect to any such pending Purchase Notice under this Agreement, provided all of the conditions thereto have been satisfied (or where legally permissible, waived); (ii) affect the Investor Expense Reimbursement; or (iii) affect any Commitment Shares previously issued or delivered.

Other Transactions

There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement other than a prohibition (with certain limited exceptions) on entering into a dilutive securities transaction during certain periods when we are selling common stock to Keystone under the Purchase Agreement.

S-16

No Short-Selling by Keystone

Keystone has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling of our Common Stock during any time prior to the termination of the Purchase Agreement.

Effect of Performance of the Purchase Agreement on our Stockholders

All shares registered in this offering that may be issued and sold by us to Keystone under the Purchase Agreement are expected to be freely tradable. The sale by Keystone of a significant amount of shares registered in this offering at any given time could cause the market price of our Common Stock to decline and to be highly volatile. Sales of our Common Stock to Keystone, if any, will depend upon market conditions and other factors to be determined by us, in our sole discretion. We may ultimately decide to sell to Keystone all, some or none of the additional shares of our Common Stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Keystone, after Keystone has acquired the shares, Keystone may resell all, some or none of those shares at any time or from time to time in its discretion. Therefore, sales to Keystone by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our Common Stock.

In addition, if we sell a substantial number of shares to Keystone under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangement with Keystone may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any additional sales of our shares to Keystone and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, to direct Keystone to purchase up to \$7,730,973 of our Common Stock, exclusive of the Commitment Shares being issued to Keystone on the date of the prospectus supplement. The Purchase Agreement prohibits us from issuing or selling to Keystone under the Purchase Agreement shares of our Common Stock if those shares, when aggregated with all other shares of our Common Stock then beneficially owned by Keystone, would exceed the Beneficial Ownership Limitation or the Exchange Cap.

Assumed Average Purchase Price Per Share	Number of Registered Shares to be Issued if Full Purchase (1)	Percentage of Outstanding Shares After Giving Effect to the Issuance to Keystone (2)	Gross Proceeds from the Sale of Shares to Keystone Under the Purchase Agreement
\$0.46 (3)	16,806,463	56%	\$ 7,730,973
\$0.50	15,461,946	51%	\$ 7,730,973
\$0.75	10,307,964	34%	\$ 7,730,973
\$1.00	7,730,973	26%	\$ 7,730,973

(1) Includes the total number of Purchase Shares that we would have sold under the Purchase Agreement at the corresponding assumed average purchase price set forth in the first column, up to the aggregate purchase price of \$7,730,973, if available, without regard for the Beneficial Ownership Limitation or Exchange Cap, and excludes the Commitment Shares. However, the issuance of shares under the Purchase Agreement is currently limited by the number of authorized but unissued shares available. Unless and until we increase the number of authorized shares or take other corporate actions to address this limitation, we may not be able to sell the full amount of shares contemplated

under the Purchase Agreement.

(2) The denominator is based on 29,874,029 shares outstanding as of January 28, 2025, adjusted to include the issuance of (i) 352,176 Commitment Shares being issued to Keystone as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement and (ii) the number of shares set forth in the adjacent column that we would have sold to Keystone, assuming the average purchase price in the first column. The numerator is based on the number of shares issuable under the Purchase Agreement (that are the subject of this offering) at the corresponding assumed average purchase price set forth in the first column.

(3) The closing sale price of our common stock on January 28, 2025.

Common Stock

The description of our Common Stock is incorporated by reference to Exhibit 4.3 to our annual report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on March 26, 2020.

S-17

PLAN OF DISTRIBUTION

Keystone and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of its securities covered hereby on the principal trading market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. Keystone may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with Keystone to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

Keystone may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by Keystone may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from Keystone (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with Financial Industry Regulatory Authority ("FINRA") Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

Keystone Capital Partners, LLC is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

S-18

Keystone Capital Partners, LLC has represented to us that at no time prior to the date of the ELOC Purchase Agreement has it or its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any short sale (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of our common stock or any hedging transaction, which establishes a net short position with respect to our common stock. Keystone Capital Partners, LLC has agreed that during the term of the ELOC Purchase Agreement, neither Keystone Capital Partners, LLC nor any of its agents, representatives or affiliates will enter into or effect, directly or indirectly, any of the foregoing transactions.

Keystone and any broker-dealers or agents that are involved in selling the securities may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Keystone has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the securities. The Company has agreed to indemnify Keystone against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We have advised Keystone that it is required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes Keystone, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the securities offered by this prospectus.

S-19

The validity of the shares of common stock offered hereby and other legal matters related to this offering will be passed upon by Reed Smith LLP, New York, New York. Keystone is being represented by Pryor Cashman LLP, New York, New York.

EXPERTS

The consolidated balance sheets of ProPhase Labs, Inc. and Subsidiaries as of December 31, 2023 and 2022, and the related consolidated statements of operations and other comprehensive income (loss), stockholders' equity, and cash flows for each of the years then ended have been audited by Morison Cogen LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference, which reports express an unqualified opinion on the financial statements. Such financial statements have been incorporated herein by reference in reliance on the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement is part of a registration statement on Form S-3 that we filed with the SEC under the Securities Act and does not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus supplement to any of our contracts, agreements or other documents, the reference may not be complete, and you should refer to the exhibits that are a part of the registration statement of which this prospectus supplement is a part, or the exhibits to the reports or other documents incorporated by reference in this prospectus supplement for a copy of such contract, agreement or other document.

Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and special reports, 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> or on our website at <http://www.prophaselabs.com>.

The website addresses referenced herein are not intended to function as hyperlinks, and the information contained in our website and in the SEC's website is not incorporated by reference into this prospectus supplement and should not be considered to be part of this prospectus supplement.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement the information contained in other documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. Any statement contained in any document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded, for purposes of this prospectus supplement, to the extent that a statement contained in or omitted from this prospectus supplement, or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement. This prospectus supplement incorporates by reference our documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until all of the securities are sold:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, filed with the SEC on March 29, 2024, as amended by [Form 10-K/A](#) filed with the SEC on April 29, 2024;
- Our Quarterly Reports on Form 10-Q for the quarter ended [March 31, 2024](#), [June 30, 2024](#) and [September 30, 2024](#) filed with the SEC on May 10, 2024, August 14, 2024 and November 13, 2024, respectively;
- Our Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on May 15, 2024;
- Our Current Reports on Form 8-K filed with the SEC on [January 4, 2024](#) (excluding Item 7.01 thereto; as amended by Form 8-K/A filed with the SEC on [May 9, 2024](#)), [April 18, 2024](#), [June 21, 2024](#), [August 21, 2024](#) (as amended by Form 8-K/A filed with the SEC on [August 22, 2024](#)), [September 26, 2024](#), [October 4, 2024](#), [October 18, 2024](#), [November 7, 2024](#), [November 13, 2024](#), [December 27, 2024](#), and [January 23, 2025](#); and
- the description of the Company's common stock contained in [Exhibit 4.3](#) to our annual report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on March 26, 2020, including any amendment or report filed for the purpose of updating such description.

Notwithstanding the foregoing, we are not incorporating any document or portion thereof or information deemed to have been furnished and not filed in accordance with SEC rules.

Documents incorporated by reference are available from us, without charge. You may obtain documents incorporated by reference in this prospectus supplement by requesting them in writing or by telephone at the following address:

ProPhase Labs, Inc.
711 Stewart Ave., Suite 200
Garden City, NY 11530
Attn: Corporate Secretary
Phone: (215) 345-0919

S-20

PROSPECTUS

PROPHASE LABS, INC.

\$291,612,849

COMMON STOCK
PREFERRED STOCK
WARRANTS
UNITS

This prospectus will allow us to issue, from time to time at prices and on terms to be determined at or prior to the time of the offering, up to \$291,612,849 in aggregate principal amount of our common stock, preferred stock, warrants and/or units in one or more offerings. We may offer these securities separately or together in units.

This prospectus describes the general terms of the securities we may offer and the general manner in which these securities will be offered. We will provide you with the specific terms of any offering in one or more supplements to this prospectus. The prospectus supplements will specify the securities being offered and also the specific manner in which the securities will be offered and may also supplement, update or amend information contained in this document. You should read this prospectus and any prospectus supplement, as well as any documents incorporated by reference into this prospectus or any prospectus supplement, carefully before you invest.

Our securities may be sold directly by us to you, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution" in this prospectus and in the applicable prospectus supplement. If any underwriters or agents

are involved in the sale of our securities with respect to which this prospectus is being delivered, the names of such underwriters or agents and any applicable fees, commissions or discounts and over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds that we expect to receive from such sale will also be set forth in a prospectus supplement.

Our common stock is listed on the Nasdaq Capital Market, under the symbol “PRPH.” On November 11, 2024, the last reported sale price of our common stock on the Nasdaq Capital Market was \$0.74 per share. As of November 12, 2024, the aggregate market value of our public float, calculated according to General Instructions I.B.6 of Form S-3, is \$54,949,800, based on 23,874,029 shares of common stock outstanding as of November 12, 2024, of which 20,893,460 shares of our common stock are held by non-affiliates. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the prior 12 calendar month period that ends on, and includes, the date of this prospectus. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell our common stock in a public primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75,000,000.

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks that we have described on page 4 of this prospectus under the caption “Risk Factors.” We may include specific risk factors in supplements to this prospectus under the caption “Risk Factors.” This prospectus may not be used to sell our securities unless accompanied by a prospectus supplement.

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

The date of this prospectus is _____, 2024

TABLE OF CONTENTS

	<u>Page</u>
ABOUT THIS PROSPECTUS	i
PROSPECTUS SUMMARY	1
RISK FACTORS	4
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS	4
USE OF PROCEEDS	5
DESCRIPTION OF CAPITAL STOCK	5
DESCRIPTION OF WARRANTS	7
DESCRIPTION OF UNITS	8
PLAN OF DISTRIBUTION	9
LEGAL MATTERS	11
EXPERTS	11
WHERE YOU CAN FIND MORE INFORMATION	11
INCORPORATION OF INFORMATION BY REFERENCE	12

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”), utilizing a “shelf” registration process. Under this shelf registration process, we may offer shares of our common stock, preferred stock and/or warrants, either individually or in units, in one or more offerings, with a total value of up to \$291,612,849. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering.

This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. The prospectus supplement may also add, update or change information contained or incorporated by reference in this prospectus. However, no prospectus supplement will offer a security that is not registered and described in this prospectus at the time of its effectiveness. This prospectus, together with the applicable prospectus supplements and the documents incorporated by reference into this prospectus, includes all material information relating to the offering of securities under this prospectus. You should carefully read this prospectus, the applicable prospectus supplement, the information and documents incorporated herein by reference and the additional information under the heading “Where You Can Find More Information” before making an investment decision.

You should rely only on the information we have provided or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained or incorporated by reference in this prospectus. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus or any prospectus supplement is accurate only as of the date on the front of the document and that any information we have incorporated herein by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

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

This prospectus may not be used to consummate sales of our securities, unless it is accompanied by a prospectus supplement. To the extent there are inconsistencies

Unless the context otherwise requires, “ProPhase,” “the Company,” “we,” “us,” “our” and similar terms refer to ProPhase Labs, Inc.

PROSPECTUS SUMMARY

The following is a summary of what we believe to be the most important aspects of our business and the offering of our securities under this prospectus. We urge you to read this entire prospectus, including the more detailed consolidated financial statements, notes to the consolidated financial statements and other information incorporated by reference from our other filings with the SEC or included in any applicable prospectus supplement. Investing in our securities involves risks. Therefore, carefully consider the risk factors set forth in any prospectus supplements and in our most recent annual and quarterly filings with the SEC, as well as other information in this prospectus and any prospectus supplements and the documents incorporated by reference herein or therein, before purchasing our securities. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities.

The Company

We are a growth oriented and diversified next generation biotech, genomics and diagnostics company that develops and commercializes novel drugs, dietary supplements, and compounds, and contract manufacturing.

Our wholly-owned subsidiary, Pharmedix Manufacturing, Inc. (“PMI”), is a full-service contract manufacturer and private label developer of a broad range of non-GMO, organic and natural-based cough drops and lozenges and over-the-counter (“OTC”) drug and dietary supplement products.

We offer whole genome sequencing and related services through our wholly-owned subsidiary, DNA Complete, Inc. (“DNA Complete”). DNA Complete sequences specimens at Nebula Genomics, Inc. (“Nebula”), a wholly-owned subsidiary of ours, as well as at other laboratories.

Our wholly owned subsidiary, ProPhase BioPharma, Inc. (“PPIO”) is focused on the licensing, development and commercialization of novel drugs, dietary supplements, and compounds. We also develop and market dietary supplements under the TK Supplements® brand.

Previously we offered a broad array of COVID-19 related clinical diagnostic and testing services including polymerase chain reaction (“PCR”) testing for COVID-19 and Influenza A and B as well as rapid antigen testing for COVID-19 through our wholly-owned subsidiary, ProPhase Diagnostics, Inc. (“ProPhase Diagnostics”). ProPhase Diagnostics’ two CLIA- (Clinical Laboratory Improvement Amendments) certified laboratories are located in Old Bridge, New Jersey and Garden City, New York, respectively.

Pharmedix Contract Manufacturing

PMI is a full-service contract manufacturer and private label developer of a broad range of non-GMO, organic and natural-based cough drops and lozenges and OTC drug and dietary supplement products. PMI provides product development, pre-commercialization services, production, warehousing and distribution services for its customers. Our manufacturing facility, which is located in Lebanon, Pennsylvania, is registered with the United States Food and Drug Administration (“FDA”) and is certified organic and kosher.

As part of the sale of our former Cold-EEZE® business in March 2017, PMI entered into a manufacturing agreement with Mylan Consumer Healthcare Inc. and Mylan Inc. (collectively, “Mylan”) to supply various Cold-EEZE® lozenge products to Mylan following the sale for a period of five years with annual renewal options. Pursuant to the terms of the manufacturing agreement, PMI agreed to manufacture certain products for Mylan, as described in the manufacturing agreement, at prices that reflect current market conditions for such products and include an agreed upon mark-up on our costs. On May 1, 2021, the manufacturing agreement was assigned by Mylan to Meda Consumer Healthcare, Inc. (“Meda”) in connection with Meda’s acquisitions of certain assets from Mylan, including the Cold-EEZE® brand and product line. Meda is currently within Vespyr Brands and the manufacturing agreement is expected to be renewed by the end of the year 2024.

In February 2023, we acquired new equipment and doubled the capacity for pouch packaging, to meet the growing demand for our products and services. PMI also acquired new automation equipment that is expected to double its capacity in the second half of 2024. PMI is also planning for expansion of its lozenge manufacturing business and is projected to add a second line that should be operational by the beginning of the second quarter of 2025. PMI added multiple new customers throughout 2024, including the signing of two top-tier lozenge brands, which we expect to add approximately \$5 million in annualized revenues. PMI continues to negotiate with additional customers in both cough and cold and functional, non-seasonal lozenge products. The goal remains to balance production with seasonal cough and cold lozenges and more functional products that are not seasonal in nature.

In the third quarter of 2024, we engaged ThinkEquity LLC as an advisor to pursue strategic alternatives for PMI, including the potential sale of PMI.

BE-Smart Esophageal Pre-Cancer Diagnostics Screening Test

We own the worldwide exclusive rights to the BE-Smart Esophageal Pre-Cancer diagnostics screening test and related intellectual property assets. The BE-Smart test is aimed at early detection of esophageal cancer. It remains under development but has already been tested by an independent test lab, mProbe, Inc. (“mProbe”), on over 200 human samples. Although further clinical tests are required, the available initial data demonstrates promising potential for early detection of esophageal cancer risk. mProbe, Inc., a precision health and medicine company utilizing clinical proteomics in the oncology space in conjunction with Dr. Christopher Hartley of the prestigious Mayo Clinic, has been utilizing a small sample of tissue collected during endoscopies to help us confirm and optimize the BE-Smart Test. The initial data appears to demonstrate accuracy and reproducibility as well as identification of potential biomarkers for therapeutic drug discovery to treat esophageal cancer. We are continuing to study and develop the BE-Smart test.

In March 2023, we announced a collaboration with mProbe and Dr. Christopher Hartley of Mayo Clinic for the continued development of our BE-Smart Esophageal Pre-Cancer diagnostic screening test. Currently, we plan to commercialize the BE-Smart test as a Laboratory Developed Test (“LDT”). However, on April 29, 2024, FDA released a final rule that classified LDTs as in vitro diagnostics that are regulated by FDA as medical devices under the federal Food, Drug, and Cosmetic Act. Under this approach, FDA proposed to phase out its general enforcement discretion approach for LDTs under a four-year period subject to certain continuing enforcement discretion policies. The final rule was published on May 6, 2024, and in the absence of a successful legal challenge, will become effective after a year, after which medical device regulatory requirements such as medical device reporting, registration and listing, quality system regulation requirements, and premarket authorization requirements, among others, will become applicable eventually. We plan to comply with such requirements, including that of premarket authorization, in partnership with Forward Healthcare Consultants (“FHC”), as described below, if the final rule is not modified or rescinded.

In August 2024, we announced a collaboration with FHC to assist in the approval and commercialization of BE-Smart. The experts at FHC will assist with securing

market access by focusing on clinical validation and commercialization planning, to include coverage, pricing, and coding. Additionally, FHC will bring its vast relationships with physician networks to drive commercialization success. FHC has already completed the first two phases of its plan for advancing towards commercialization. This plan includes publishing a peer reviewed paper as well as a comprehensive dossier on the BE-Smart test. In addition, we have initiated certain discussions in coordination with FHC with respect to a potential strategic partnership or sale for the BE-Smart test.

According to the National Institute of Health Chapter 24: Indications and Outcomes of Gastrointestinal Endoscopy, over 20 million endoscopies are performed every year in the United States; approximately seven million of these procedures are done on patients with higher risk for contracting Esophageal Adeno Carcinoma. Two million of these patients have Barrett's Esophagus, which is a condition in which the flat pink lining of the swallowing tube that connects the mouth to the stomach (esophagus) becomes damaged by acid reflux, which causes the lining to thicken and become red. In patients with Barrett's Esophagus, one in two hundred will develop esophageal adenocarcinoma. Esophageal cancer is highly lethal and deemed as the sixth cause of cancer death worldwide according to Cancer State Facts, with the overall five-year survival rate less than 20%. We estimate that the reimbursement rate for the test will range between \$1,000 to \$2,000 per test, giving it a total potential addressable market of \$7 billion to \$14 billion dollars per year.

The BE-Smart test is being developed to provide health care providers and patients with data to help determine treatment options, including whether patients not believed to be at risk for esophageal cancer should continue to be monitored or, alternatively, to provide patients who might otherwise have been undiagnosed early treatment before esophageal cells become cancerous. The goal of widespread adoption of the BE-Smart test would allow health care providers to initiate potentially lifesaving early treatment processes such as an ablation procedure to remove the precancerous cells. This diagnostic test, once fully validated, could also significantly reduce unnecessary endoscopies as well as offer peace of mind to patients who are suffering with Barrett's syndrome who are at greater risk of esophageal cancer.

DNA Complete

DNA Complete focuses on genomics testing technologies, a comprehensive method for analyzing entire genomes, including the genes and chromosomes in deoxyribonucleic acid ("DNA"). The data obtained from genomic sequencing may help to identify inherited disorders and tendencies, predict disease risk, identify expected drug response, and characterize genetic mutations, including those that drive cancer progression. We currently offer DNA Complete's whole genome sequencing products direct-to-consumers online with plans to sell in food, drug and mass ("FDM") retail stores and to provide testing for universities conducting genomic research. DNA Complete offers three tiers of DNA testing, Essential, Pro, and Elite, which differ in the amount of DNA analyzed (1x whole genome sequencing ("WGS"), 30x WGS, and 100x WGS, respectively), the level of accuracy, the number of reports per month that consumers would receive, and the total of personalized health reports included (more than 175 reports, more than 250 reports, and more than 350 reports, respectively). The DNA Complete tests include the first year of membership. The DNA Complete platform offers both ancestry and personalized health reports covering a number of health dispositions, such as longevity, mental health, cancer, and more. In addition, DNA Complete offers subscription services to ensure ongoing customer engagement by providing regular updates and new insights. DNA Complete sequences specimens at Nebula, a wholly owned subsidiary of ours, as well as at other laboratories.

DNA Complete also offers DNA Expand, a platform that allows consumers to upload their DNA data from previous DNA tests obtained from other service providers to discover 50x more data points derived from over 35 million genetic variants, and to obtain in-depth health and wellness reports that are based on the latest scientific discoveries. DNA Expand's database was created from WGS tests that were obtained from 130 countries and are equivalent to roughly 150 million ancestry single nucleotide polymorphisms based tests.

ProPhase BioPharma

We formed PBIO in June 2022 to assist in the licensing, development and commercialization of novel drugs, dietary supplements and compounds. Licensed compounds under development currently include Equivir (a dietary supplement candidate) and Equivir G (prescription drug ("Rx") candidate), and two broad-based candidates. We also own the exclusive rights to the BE-Smart Esophageal Pre-Cancer Diagnostic Screening test, which is in development as described above, and related intellectual property assets.

Equivir (dietary supplement candidate) and Equivir G (Rx candidate)

We have exclusive worldwide rights to develop and commercialize Equivir (a dietary supplement candidate) and Equivir G (a Rx drug candidate) pursuant to a license agreement with Global BioLife, Inc. ("Global BioLife"), a wholly-owned subsidiary of DSS, Inc.

Equivir is a blend of polyphenols, which are substances found in many nuts, vegetables and berries. The composition is projected to come in capsule form and be taken daily like a multivitamin. The composition is believed to support the human body's immune function, and improve the quality of lives for users. We plan to commercialize Equivir as a dietary supplement, leveraging our distribution in over 40,000 FDM retail stores and online direct to consumers.

In March 2023, we commenced patient enrollment in a randomized, placebo-controlled clinical trial of Equivir to evaluate its effect in supporting immune system functions. Vedic Lifesciences, a leading clinical research organization, was contracted to run the multi-arm trial. Vedic produced interim results in February of 2024 which showed enough data to continue the trial to completion.

TK Supplements

Our TK Supplements® product line is dedicated to supporting better health, energy and sexual vitality. Each of our herbal supplements is researched to determine the optimum blend of ingredients to ensure our customers receive premium quality products. To achieve this, we formulate with the highest quality ingredients derived from nature and ingredients enhanced by science. Our TK Supplements® product line includes Legendz XL®, a sexual health formula product intended for men, and Triple Edge XL®, an energy and stamina support product.

Legendz XL® has distribution in Rite Aid, Walgreens, CVS, Walmart and other retailers, and via ecommerce.

In 2022, we restaged Triple Edge XL from a 56 ct to a 20 ct at CVS, making the retail price more in line with competition. The result was a double digit increase in consumer sales and a 40% expansion increase in the number of stores carrying the item between the restaging of the product in September 2022 and January 2023. In January 2024, Triple Edge XL was reviewed by CVS and, based on its 2022 and 2023 sales, CVS has determined to maintain authorization for its fiscal year ending December 31, 2024. We also presented Triple Edge XL 20 ct at Walgreens and other major pharmacies and we are waiting on final decisions on whether those pharmacies will agree to carry Triple Edge XL 20 ct. In the event all of the pharmacies at which we presented Triple Edge XL 20 ct accept the same of such product, we believe that such acceptances will increase demand for product inventory by over 100% in the 12-month period following all of the acceptances.

We also expect to launch our Equivir daily supplement that supports users' immune functions. We are currently awaiting the final results of the trials conducted in India and completed at the end of the second quarter of 2024.

ProPhase Diagnostics

Our wholly-owned subsidiary, ProPhase Diagnostics, which was formed in October 2020, offered a broad array of COVID-19 related clinical diagnostic and testing services including PCR testing for COVID-19 and Influenza A and B as well as rapid antigen testing for COVID-19 at its two CLIA-certified laboratories, located in Old

Corporate Information

We were initially organized in Nevada in July 1989. Effective June 18, 2015, we changed our state of incorporation from the State of Nevada to the State of Delaware. Our principal executive offices are located at 711 Stewart Avenue, Suite 200, Garden City, New York 11530 and our telephone number is 215-345-0919.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks referenced below and described in the documents incorporated by reference in this prospectus and any prospectus supplement, as well as other information we include or incorporate by reference into this prospectus and any applicable prospectus supplement, before making an investment decision. Our business, financial condition or results of operations could be materially adversely affected by the materialization of any of these risks. The trading price of our securities could decline due to the materialization of any of these risks, and you may lose all or part of your investment. This prospectus and the documents incorporated herein by reference also contain forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described in our period reports filed with the SEC, which are incorporated by reference in this prospectus.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, may contain forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

Forward-looking statements in this prospectus and any accompanying prospectus supplement give our current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historical or current facts. You can find many (but not all) of these statements by looking for words such as "approximates," "believes," "hopes," "expects," "anticipates," "estimates," "projects," "intends," "plans," "would," "should," "could," "may" or other similar expressions in this prospectus and any prospectus supplement. In particular, forward-looking statements include statements relating to future actions, prospective products and applications, customers, technologies, future performance or future financial results. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our present expectations or projections. Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to:

- our ability to generate net positive revenue;
- our ability to manage our growth successfully and to compete effectively;
- our ability to implement our growth strategies;
- potential disruptions to our supply chain, increases in the price of testing supplies, equipment and raw materials need for our businesses, or the adulteration of key testing materials and raw materials needed for our businesses;
- potential product liability claims;
- our ability to secure additional capital, when needed to support our businesses;
- our dependence on key personnel and our ability to attract, retain and motivate our key employees;
- our ability to substitute revenues from our lab diagnostic services or tests with new business segments;
- our ability to collect payment and reduce our accounts receivable for the diagnostic tests we delivered and to comply with complex billing requirements;
- our ability to successfully offer, perform and generate revenues from our personal genomics business;
- our ability to navigate privacy concerns and existing and new privacy regulations relating to our personal genomics business;
- potential disruptions in our ability to manufacture our products and those of others;
- our ability to meet the demands of our manufacturing business;
- seasonal fluctuations in demand for the products and services we provide;
- risks related to the initiation, cost, timing, progress and results of current and future research and development programs, preclinical studies and clinical trials and our ability to obtain and maintain regulatory approvals;
- our ability to successfully develop and commercialize our existing products and any new products;
- our ability to protect our proprietary rights;
- our ability to comply with complex regulatory requirements applicable to our businesses;
- our dependence on third parties to provide services critical to our businesses;
- our ability to remediate material weaknesses in our internal controls over financial reporting; and
- general and global economic conditions, including rising inflation, interest rates, and political conflicts.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. The forward-looking statements are based upon management's beliefs and assumptions and are made as of the date of this prospectus. We undertake no obligation to publicly update or revise any forward-looking statements included in this prospectus to conform such statements to actual results or changes in our expectations, except as otherwise required by law. You should not place undue reliance on these forward-looking statements.

USE OF PROCEEDS

We cannot assure you that we will receive any proceeds in connection with securities that may be offered pursuant to this prospectus. Unless otherwise indicated in the applicable prospectus supplement, we intend to use any net proceeds from the sale of securities under this prospectus for our operations and for other general corporate purposes, including, but not limited to, our internal research and development programs, general working capital and possible future acquisitions. We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds, if any, we receive in connection with securities offered pursuant to this prospectus for any purpose. Pending application of the net proceeds as described above, we may initially invest the net proceeds in short-term, investment-grade, interest-bearing securities or apply them to the reduction of short-term indebtedness.

DESCRIPTION OF CAPITAL STOCK

General

Our authorized capital stock consists of 51,000,000 shares, all with a par value of \$0.0005 per share, 50,000,000 of which are designated as common stock and 1,000,000 of which are designated as preferred stock.

The following description of our capital stock and certain provisions of our Certificate of Incorporation and our Amended and Restated Bylaws ("Bylaws"), are summaries and are qualified by reference to our Certificate of Incorporation and our Bylaws.

As of November 12, 2024, we had 23,874,029 shares of our common stock outstanding and zero shares of preferred stock outstanding. As of November 12, 2024, we also had outstanding options to acquire 3,913,750 shares of our common stock, having a weighted-average exercise price of \$6.64 per share, and warrants to purchase 376,000 shares of our common stock, having a weighted-average exercise price of \$9.13 per share.

Common Stock

The holders of our common stock are entitled to one vote per share on all matters to be voted upon by the stockholders, except on matters relating solely to terms of preferred stock. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock will be entitled to receive ratably such dividends, if any, as may be declared from time to time by the board of directors out of funds legally available therefor. In the event of our liquidation, dissolution or winding up, the holders of our common stock will be entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding. The holders of our common stock will have no preemptive or conversion rights or other subscription rights. There will be no redemption or sinking fund provisions applicable to our common stock.

Preferred Stock

Pursuant to the terms of our Certificate of Incorporation, our board of directors has the authority to issue preferred stock in one or more series and to fix the number of shares constituting such series and the designation of such series, the voting powers, if any, of the shares of such series, and the preferences and relative participating, optional or other special rights, if any, and any qualifications, limitations or restrictions thereof, of the shares of such series, without further vote or action by the stockholders. Although we have no present plans to issue any shares of preferred stock, the issuance of shares of preferred stock, could decrease the amount of earnings and assets available for distribution to the holders of common stock, could adversely affect the rights and powers, including voting rights, of the common stock, and could have the effect of delaying, deterring or preventing a change of control of us or an unsolicited acquisition proposal.

5

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

The provisions of Delaware law and our Certificate of Incorporation and Bylaws, could discourage or make it more difficult to accomplish a proxy contest or other change in our management or the acquisition of control by a holder of a substantial amount of our voting stock. It is possible that these provisions could make it more difficult to accomplish, or could deter, transactions that stockholders may otherwise consider to be in their best interests or in our best interests. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by the board of directors and to discourage certain types of transactions that may involve an actual or threatened change of our control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. Such provisions also may have the effect of preventing changes in our management.

Delaware Statutory Business Combinations Provision. We are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law (the “DGCL”). Section 203 prohibits a publicly-held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. For purposes of Section 203, a “business combination” is defined broadly to include a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder, and, subject to certain exceptions, an “interested stockholder” is a person who, together with his or her affiliates and associates, owns, or within three years prior, did own, 15% or more of the corporation’s voting stock.

Blank-Check Preferred Stock. Our board of directors is authorized to issue, without stockholder approval, preferred stock, the rights of which will be determined at the discretion of the board of directors and that, if issued, could operate as a “poison pill” to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that our board of directors does not approve.

Special Meetings of Stockholders. Special meetings of the stockholders may be called at any time only by the Chairman of the board of directors or the board of directors, subject to the rights of the holders of any series of preferred stock then outstanding.

No Written Consent of Stockholders. Our Bylaws provide that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting.

Advance Notice Provisions for Stockholder Proposals and Stockholder Nominations of Directors. Our Bylaws provide that, for nominations to the board of directors or for other business to be properly brought by a stockholder before a meeting of stockholders, the stockholder must first have given timely notice of the proposal in writing to our Secretary. For an annual meeting, a stockholder’s notice generally must be delivered not less than 90 days or more than 120 days prior to the anniversary of the previous year’s annual meeting.

Election and Removal of Directors. Except as may otherwise be provided by the DGCL, any director or the entire board of directors may be removed, with or without cause, at an annual meeting or a special meeting called for that purpose, by the affirmative vote of the holders of a majority of the shares then entitled to vote at an election of directors. Vacancies on our board of directors resulting from the removal of directors and newly created directorships resulting from any increase in the number of directors may be filled solely by the affirmative vote of a majority of the remaining directors then in office. This system of electing and removing directors may discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of our directors. Our Certificate of Incorporation and Bylaws do not provide for cumulative voting in the election of directors.

Exclusive Jurisdiction. Our Bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of us, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our director, officer or other employee to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL, the Certificate of Incorporation or the Bylaws, or (iv) any action asserting a claim against us governed by the internal affairs doctrine.”

6

Indemnification

Our Certificate Of Incorporation and Bylaws provide that we shall indemnify, to the fullest extent permitted by the DGCL, as the same may be amended or supplemented from time to time, any and all of our past, present and future directors and officers, and any other persons to which the DGCL permits us provide indemnification, from and against any and all costs, expenses (including attorneys’ fees), damages, judgments, penalties, fines, punitive damages, excise taxes assessed with respect to an employee benefit plan and amounts paid in settlement in connection with any action, suit or proceeding in which the director or officer may be involved as a party or otherwise, by reason of the fact that such person was serving as our director, officer, employee or agent, including service with respect to an employee benefit plan. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling our company pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Equiniti Trust Company LLC.

Stock Market Listing

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

DESCRIPTION OF WARRANTS

General

We may issue warrants to purchase shares of our common stock and/or preferred stock. We may offer warrants separately or together with one or more additional warrants, common stock, or preferred stock, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the certificates relating to the rights of the series of certificates and will not assume any obligation or relationship of agency or trust for or with any holders of rights certificates or beneficial owners of rights. The following description sets forth certain general terms and provisions of the rights to which any prospectus supplement may relate. The particular terms of the warrant to which any prospectus supplement may relate and the extent, if any, to which the general provisions may apply to the rights so offered will be described in the applicable prospectus supplement. To the extent that any particular terms of the warrant, warrant agreement or warrant certificates described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superseded by that prospectus supplement. We encourage you to read the applicable warrant agreement and warrant certificate for additional information before you decide whether to purchase any of our rights.

We will provide in a prospectus supplement the following terms of the warrants being issued:

- the specific designation and aggregate number of, and the price at which we will issue, the warrants;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- the designation, amount and terms of the securities purchasable upon exercise of the warrants;
- if applicable, the exercise price for shares of our common stock and the number of shares of common stock to be received upon exercise of the warrants;
- if applicable, the exercise price for shares of our preferred stock, the number of shares of preferred stock to be received upon exercise, and a description of that series of our preferred stock;

7

- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the warrants will be issued in fully registered form or bearer form, in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;
- any applicable material U.S. federal income tax consequences;
- the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- if applicable, the date from and after which the warrants and the common stock and/or preferred stock will be separately transferable;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- the anti-dilution provisions of the warrants, if any;
- any redemption or call provisions;
- whether the warrants may be sold separately or with other securities as parts of units; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Warrant Agent

The warrant agent for any warrants we offer will be set forth in the applicable prospectus supplement.

DESCRIPTION OF UNITS

The following description, together with the additional information that we include in any applicable prospectus supplements summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below.

We will incorporate by reference from reports that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we may offer under this prospectus, and the complete unit agreement and any supplemental agreements that contain the terms of the units.

8

General

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

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

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;
- the applicable United States federal income tax considerations relating to the units; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those set forth in any prospectus supplement or as described under “Description of Capital Stock” and “Description of Warrants” will apply to each unit, as applicable, and to any common stock, preferred stock or warrant included in each unit, as applicable.

Unit Agent

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

Issuance in Series

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

Enforceability of Rights by Holders of Units

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

PLAN OF DISTRIBUTION

General Plan of Distribution

We may offer securities under this prospectus from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities (1) through underwriters or dealers, (2) through agents, (3) in “at the market offerings” within the meaning of Rule 415(a)(4) of the Securities Act, (4) directly to one or more purchasers, or (5) through a combination of such methods. We may distribute the securities from time to time in one or more transactions at:

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

We may directly solicit offers to purchase the securities being offered by this prospectus. We may also designate agents to solicit offers to purchase the securities from time to time. We will name in a prospectus supplement any underwriter or agent involved in the offer or sale of the securities.

If we utilize a dealer in the sale of the securities being offered by this prospectus, we will sell the securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If we utilize an underwriter in the sale of the securities being offered by this prospectus, we will execute an underwriting agreement with the underwriter at the time of sale, and we will provide the name of any underwriter in the prospectus supplement which the underwriter will use to make re-sales of the securities to the public. In connection with the sale of the securities, we, or the purchasers of the securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and the underwriter may compensate those dealers in the form of discounts, concessions or commissions. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

With respect to underwritten public offerings, negotiated transactions and block trades, we will provide in the applicable prospectus supplement information regarding any compensation we pay to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof.

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

- the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and
- if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and other persons acting as our agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Shares of our common stock sold pursuant to the registration statement of which this prospectus is a part will be authorized for listing and trading on the Nasdaq Capital Market. The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, on the Nasdaq Capital Market or any securities market or other securities exchange of the securities covered by the prospectus supplement. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

In order to facilitate the offering of the securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than we sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing the applicable security in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if the securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

We may engage in at the market offerings into an existing trading market in accordance with Rule 415(a)(4) under the Securities Act. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

In compliance with the guidelines of the Financial Industry Regulatory Authority, Inc. (“FINRA”), the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

The underwriters, dealers and agents may engage in other transactions with us, or perform other services for us, in the ordinary course of their business.

LEGAL MATTERS

Reed Smith LLP, New York, New York, will pass upon the validity of the issuance of the securities to be offered by this prospectus.

EXPERTS

The consolidated balance sheets of ProPhase Labs, Inc. and Subsidiaries as of December 31, 2023 and 2022, and the related consolidated statements of operations and other comprehensive income (loss), statements of changes in stockholders’ equity, and cash flows for the year ended December 31, 2023 and 2022, and the related notes, have been audited by Morison Cogen LLP, independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements have been incorporated herein by reference in reliance on the report of such firm given upon its authority as expert in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities we are offering under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities offered under this prospectus, we refer you to the registration statement and the exhibits filed as a part of the registration statement. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC, including ProPhase Labs, Inc. The SEC’s Internet site can be found at www.sec.gov. We maintain a website at www.prophaselabs.com. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this prospectus, and you should not consider it part of this prospectus.

INCORPORATION OF INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. This prospectus omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement and any prospectus supplement filed hereafter, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed above in “Where You Can Find More Information.” The documents we are incorporating by reference are:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as filed on [March 29, 2024](#) and amended on [April 29, 2024](#);
- our Definitive Proxy Statement on DEF 14A as filed with the SEC on [May 15, 2024](#);
- our Quarterly Reports on Form 10-Q for the fiscal quarters ended [March 31, 2024](#) and [June 30, 2024](#);
- our Current Reports on Form 8-K filed on [January 4, 2024](#), [April 18, 2024](#), [May 9, 2024](#), [June 21, 2024](#), [August 21, 2024](#) as amended on Form 8-K/A on [August 22, 2024](#), [September 26, 2024](#), [October 4, 2024](#), [October 18, 2024](#); and

- the description of the our common stock filed as [Exhibit 4.3](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

In addition, all documents that we file pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items, unless such Form 8-K expressly provides to the contrary), subsequent to the filing of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing of such documents, except as to any document or portion of any document that is deemed furnished and not filed.

Pursuant to Rule 412 under the Securities Act, any statement contained in the documents incorporated or deemed to be incorporated by reference in this Registration Statement shall be deemed to be modified, superseded or replaced for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference in this Registration Statement modifies, supersedes or replaces such statement. Any such statement so modified, superseded or replaced shall not be deemed, except as so modified, superseded or replaced, to constitute a part of this Registration Statement.

Up to \$7,730,973 Shares of Common Stock
352,176 Shares of Common Stock



PROSPECTUS SUPPLEMENT

January 30, 2025
