



**PREDICTIVE ONCOLOGY INC.**

**3,837,280 Shares of Common Stock**

We are offering 3,837,280 shares of our common stock, par value \$0.01 per share, pursuant to this prospectus supplement and the accompanying prospectus, directly to institutional investors.

In a concurrent private placement, we are also selling to such investors unregistered warrants (the “Warrants”) to purchase up to an aggregate of 3,837,280 shares of our common stock at an exercise price of \$0.70 per share. The Warrants will become exercisable six months from the date of issuance and will have a term of five and one-half years following the date of issuance. The Warrants and the shares of our common stock issuable upon the exercise of the Warrants (the “Warrant Shares”) are being offered pursuant to the exemptions provided in Section 4(a)(2) under the Securities Act of 1933, as amended (the “Securities Act”) and Regulation D promulgated thereunder, and are not being offered pursuant to this prospectus supplement and the accompanying prospectus. There is no established public trading market for the Warrants and we do not expect a market to develop. In addition, we do not intend to list the Warrants on The Nasdaq Capital Market, any other national securities exchange or any other nationally recognized trading system.

We have engaged H.C. Wainwright & Co., LLC, or the placement agent, as our exclusive placement agent in connection with this offering. The placement agent has no obligation to buy any shares of common stock from us or to arrange for the purchase or sale of any specific number or dollar amount of securities. We have agreed to pay the placement agent the fees set forth in the table below, which assumes that we sell all of the securities we are offering.

Our common stock is listed on The Nasdaq Capital Market under the symbol “POAI.” The last reported sale price of our common stock on The Nasdaq Capital Market on May 13, 2022, was \$0.69 per share.

In a concurrent registered direct offering, on May 16, 2022, the Company entered into a securities purchase agreement with several institutional and accredited investors pursuant to which the Company agreed to issue and sell an aggregate of 8,162,720 shares of its common stock, at a purchase price of \$0.60 per share. These shares are being offered and sold pursuant to a separate prospectus supplement dated May 16, 2022.

As of the date of this prospectus supplement, the aggregate market value of our outstanding shares of common stock held by non-affiliates, or our public float, was \$45,384,469.17 based on a total of 66,159,663 outstanding shares of common stock, of which 65,774,593 shares of common stock were held by non-affiliates, and a price of \$0.69 per share, which was the last reported sale price of our common stock on May 13, 2022. Pursuant to General Instruction I.B.6. of Form S-3, in no event will we sell securities, registered on the registration statement, of which this prospectus supplement is a part, in a public primary offering with a value exceeding more than one-third of the aggregate market value of our common stock in any 12 calendar month period so long as the aggregate market value of our outstanding common stock held by non-affiliates remains below \$75 million. Following the sale of shares in this offering and the concurrent registered direct offering, we will have sold securities with an aggregate market value of \$7.2 million pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to and including the date of this prospectus supplement.

**Investing in our securities involves a high degree of risk. See “Risk Factors” beginning on page S-5 of this prospectus supplement and page 7 of the accompanying prospectus for a discussion of information that should be considered in connection with an investment in our common stock.**

	PER SHARE	TOTAL
Offering price	\$ 0.60	\$ 2,302,368.00
Placement agent fees <sup>(1)</sup>	\$ 0.051	\$ 195,701.28
Proceeds to us, before expenses	\$ 0.549	\$ 2,106,666.72

- (1) We will pay the placement agent a cash fee equal to 7.5% and a management fee equal to 1.0% of the aggregate gross proceeds to us from the sale of the shares in the offering. In addition, we have agreed to pay the placement agent for certain expenses and to issue to the placement agent or its designees warrants to purchase a number of shares of common stock equal to 7.5% of the aggregate number of shares of common stock sold in this offering. See “Plan of Distribution” beginning on page S-8 of this prospectus supplement for more information regarding the placement agent’s compensation.

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

Delivery of the shares of common stock offered hereby is expected to take place on or about May 18, 2022, subject to satisfaction of certain closing conditions.

**H.C. Wainwright & Co.**

**The date of this prospectus supplement is May 16, 2022**

---

## TABLE OF CONTENTS

### Prospectus Supplement

<a href="#">About this Prospectus Supplement</a>	<a href="#">i</a>
<a href="#">Prospectus Supplement Summary</a>	<a href="#">S-1</a>
<a href="#">The Offering</a>	<a href="#">S-2</a>
<a href="#">Risk Factors</a>	<a href="#">S-4</a>
<a href="#">Special Note Regarding Forward-Looking Statements</a>	<a href="#">S-6</a>
<a href="#">Use of Proceeds</a>	<a href="#">S-6</a>
<a href="#">Dilution</a>	<a href="#">S-6</a>
<a href="#">Private Placement of Warrants</a>	<a href="#">S-7</a>
<a href="#">Plan of Distribution</a>	<a href="#">S-8</a>
<a href="#">Legal Matters</a>	<a href="#">S-9</a>
<a href="#">Experts</a>	<a href="#">S-9</a>
<a href="#">Where You Can Find More Information</a>	<a href="#">S-9</a>

### Prospectus

<a href="#">About this Prospectus</a>	<a href="#">i</a>
<a href="#">The Company</a>	<a href="#">1</a>
<a href="#">Risk Factors</a>	<a href="#">7</a>
<a href="#">Cautionary Note Regarding Forward Looking Statements</a>	<a href="#">7</a>
<a href="#">Use of Proceeds</a>	<a href="#">8</a>
<a href="#">Description of Capital Stock</a>	<a href="#">9</a>
<a href="#">Plan of Distribution</a>	<a href="#">23</a>
<a href="#">Legal Matters</a>	<a href="#">25</a>
<a href="#">Experts</a>	<a href="#">25</a>
<a href="#">Where You Can Find More Information</a>	<a href="#">26</a>
<a href="#">Incorporation of Certain Documents by Reference</a>	<a href="#">27</a>

You should rely only on the information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus that we have authorized for use in connection with this offering. We have not, and the placement agent has 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, and the placement agent is 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 appearing in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus 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, and the documents incorporated by reference in this prospectus supplement and the accompanying 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 “Where You Can Find More Information” and “Information Incorporated by Reference.”

---

## ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of securities and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus dated May 5, 2021, including the documents incorporated by reference therein, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission, or SEC, before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date – for example, a document incorporated by reference in the accompanying prospectus – the statement in the document having the later date modifies or supersedes the earlier statement.

Unless the context requires otherwise or unless otherwise indicated, all references to “Predictive Oncology,” “the Company,” “we,” “our,” or “us,” or similar references refer collectively to Predictive Oncology Inc.

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

## PROSPECTUS SUPPLEMENT SUMMARY

This summary contains basic information about us. You should read the entire prospectus carefully, especially the risks of investing in our securities discussed under “Risk Factors.” Some of the statements contained in this prospectus supplement, including statements under this summary and “Risk Factors” are forward-looking statements and may involve a number of risks and uncertainties. We note that our actual results and future events may differ significantly based upon a number of factors. You should not put undue reliance on the forward-looking statements in this document, which speak only as of the date on the cover of this prospectus. For a more complete understanding of the Company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference in this prospectus supplement and the accompanying prospectus

### The Company

Predictive Oncology (NASDAQ: POAI) operates through four segments (Skyline, Helomics, zPREDICTA and Soluble), which covers five subsidiaries: Helomics, TumorGenesis, Skyline Medical, zPREDICTA and Soluble Biotech.

TumorGenesis is the company’s arm for research and development for zPREDICTA, Soluble Biotech and Helomics. This subsidiary is also involved in media which aid cancer cells grow outside the body of patients and preserve their proteomic and RNA/DNA signatures. Helomics Holding Corporation is involved in applying artificial intelligence (“AI”) in the company’s precision medicine business, to offer AI-driven predictive models of tumor drug response to enhance clinical results for patients and to aid diagnostic, biotech and pharmaceutical industries in the new personalized diagnostics and drugs development. Skyline Medical Inc. (“Skyline Medical”) markets the STREAMWAY System, a fully automated wall-mounted system, which is utilized to dispose of an unlimited quantity of suction fluid offering continuous performance for medical practitioners while effectively eradicating healthcare professional’s exposure to potentially infectious liquids gathered during surgical and other medical operations. Soluble Biotech Inc. is involved in research focused on protein production, stability studies and solubility improvements. zPREDICTA, Inc. carries out tumor-specific research using vitro models for oncology and drug development.

### Recent Developments

#### *Concurrent Registered Direct Offering*

In a concurrent registered direct offering, or the second offering, on May 16, 2022, the Company entered into a securities purchase agreement with several institutional and accredited investors pursuant to which the Company agreed to issue and sell an aggregate of 8,162,720 shares of its common stock, at a purchase price of \$0.60 per share. The shares of common stock are being offered and sold in the second offering pursuant to a separate prospectus supplement dated May 16, 2022. The Company also entered into a warrant amendment agreement (the “Warrant Amendment Agreement”) with each of the purchasers in the second offering. Under the Warrant Amendment Agreement, the Company agreed to amend certain existing warrants to purchase up to 16,325,435 shares of common stock that were previously issued in 2020 and 2021 to the purchasers in the second offering, with exercise prices ranging from \$1.00 to \$2.00 per share (the “Existing Warrants”), in consideration for their purchase of approximately \$4.9 million of common stock in the second offering, to (i) lower the exercise price of the Existing Warrants to \$0.70 per share, (ii) provide that the Existing Warrants, as amended, will not be exercisable until six months following the closing date of the Second Offering, and (iii) extend the original expiration date of the Existing Warrant by five and one-half years following the close of the Second Offering. Each Warrant Amendment Agreement is subject to the consummation of the second offering and each purchaser’s satisfaction of its purchase commitment. H.C. Wainwright & Co., LLC is also acting as our exclusive placement agent in connection with this second offering and will receive, among other compensation items, a cash fee equal to 7.5% and a management fee equal to 1.0% of the aggregate gross proceeds to us from the sale of the shares in the second offering, and will be issued warrants to purchase a number of shares of common stock equal to 7.5% of the aggregate number of shares of common stock sold in the second offering.

#### *Nasdaq Deficiency Notice*

On May 13, 2022, the Company received a letter from the Listing Qualifications Department (the “Staff”) of The Nasdaq Stock Market LLC (“Nasdaq”) indicating that the bid price for the Company’s common stock had closed below \$1.00 per share for 30 consecutive business days, and that the Company is therefore not in compliance with the minimum bid price requirement for continued listing on The Nasdaq Capital Market under Nasdaq Marketplace Rule 5550(a)(2) (the “Minimum Bid Price Requirement”). The notification has no immediate effect on the listing of the Company’s common stock. The Company has a period of 180 calendar days, or until November 9, 2022, to regain compliance with the Minimum Bid Price Requirement. If at any time before November 9, 2022 the bid price of the Company’s common stock closes at or above \$1.00 per share for a minimum of 10 consecutive business days, Nasdaq will provide written notification that the Company has achieved compliance with the Minimum Bid Price Requirement.

The letter also disclosed that in the event the Company does not regain compliance with the Minimum Bid Price Requirement by November 9, 2022, the Company may be eligible for additional time. To qualify for additional time, the Company would be required to meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for The Nasdaq Capital Market, with the exception of the bid price requirement, and would need to provide written notice of its intention to cure the deficiency during the second compliance period, by effecting a reverse stock split, if necessary. However, if it appears to the Staff that the Company will not be able to cure the deficiency, or if the Company is otherwise not eligible, the Staff would notify the Company that its securities would be subject to delisting. In the event of such notification, the Company may appeal the Staff’s determination to delist its securities, but there can be no assurance the Staff would grant the Company’s request for continued listing.

### Corporate Information

We were originally incorporated on April 23, 2002 in Minnesota as BioDrain Medical, Inc. Effective August 6, 2013, BioDrain Medical, Inc. changed its name to Skyline Medical Inc. Pursuant to an Agreement and Plan of Merger effective December 16, 2013, Skyline Medical Inc. merged with and into a Delaware corporation with the same name that was its wholly-owned subsidiary, with such Delaware corporation as the surviving corporation of the merger. On August 31, 2015, Skyline Medical Inc. completed a successful offering and concurrent uplisting to The Nasdaq Capital Market. On February 1, 2018, Skyline Medical Inc. filed with the Secretary of State of Delaware a Certificate of Amendment to the Certificate of Incorporation to change its corporate name from Skyline Medical Inc. to “Precision Therapeutics Inc.” On June 10, 2019, Precision Therapeutics Inc. filed with the Secretary of State of Delaware a Certificate of Amendment to the Certificate of Incorporation to change its corporate name from Precision Therapeutics Inc. to “Predictive Oncology Inc.” Because of this change, the Company’s common stock traded under the new ticker symbol “POAI,” effective June 13, 2019. Skyline Medical remains as a division of Predictive and principally manufactures the STREAMWAY System.

Our address is 2915 Commers Drive, Suite 900, Eagan, Minnesota 55121. Our telephone number is (651) 389-4800, and our website address is <http://www.predictive-oncology.com>. The information contained on, or that can be accessed through, our website is not part of this prospectus supplement or the accompanying prospectus.

**Risk Factors**

Our business is subject to numerous risks. For a discussion of the risks you should consider before purchasing our securities, see “Risk Factors” beginning on page S-5 of this prospectus supplement.

## THE OFFERING

Offering Price	\$0.60 per share.
Common stock offered by us	3,837,280 shares.
Common stock to be outstanding immediately after this offering	69,996,943 shares.
Common stock offered by us in concurrent registered direct offering	8,162,720 shares.
Common stock to be outstanding immediately after this offering and the concurrent registered direct offering	78,159,663 shares.
Proceeds of offering	We estimate that the net proceeds from this offering, excluding the proceeds from the concurrent registered direct offering, will be approximately \$2,080,624, after deducting placement agent fees and estimated offering expenses.
Use of proceeds	We intend to use the net proceeds from this offering for working capital and general corporate purposes. See "Use of Proceeds" on page S-7 of this prospectus supplement.
Concurrent Private Placement of Warrants offered by us	In a concurrent private placement, we are also offering Warrants to purchase up to 3,837,280 shares of common stock. Each Warrant has an exercise price of \$0.70 per share, is exercisable six months following the closing date of this offering and will expire five years following the date of their initial exercisability. The Warrants are being offered pursuant to the exemptions provided in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder and, along with the Warrant Shares, have not been registered under the Act, or applicable state securities laws. Accordingly, the Warrants and the Warrant Shares may not be offered or sold except pursuant to an effective registration statement or an applicable exemption from the registration requirements of the Securities Act and such applicable state securities laws. See "Private Placement of Warrants."
Risk factors	An investment in our securities involves a high degree of risk. You should carefully consider the information under "Risk Factors" beginning on page S-5 of this prospectus supplement and on page 7 of the accompanying prospectus and the other information included or incorporated by reference in this prospectus supplement and accompanying prospectus, including the risks discussed under the heading "Risk Factors" in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021.
Listing	Our common stock is listed on The Nasdaq Capital Market under the symbol "POAI."

The number of shares of our common stock to be outstanding immediately after this offering is based on 66,159,663 shares of common stock outstanding as of May 13, 2022, which excludes:

- 3,837,280 shares of our common stock issuable upon the exercise of the Warrants to be issued to the investors in the private placement concurrent with this offering at an exercise price of \$0.70 per share;
- 900,000 shares of our common stock issuable upon the exercise of the warrants to be issued to the placement agent or its designees as compensation in connection with this offering and the concurrent registered direct offering at an exercise price of \$0.75 per share;
- 8,162,720 shares of our common stock to be issued and sold by us in the concurrent registered direct offering;
- 1,030,579 shares of our common stock issuable upon the exercise of stock options outstanding as of May 13, 2022, having a weighted average exercise price of \$4.51 per share;
- 915,408 shares of our common stock reserved for future issuance under our Amended and Restated 2012 Stock Incentive Plan;
- up to 516,666 shares of our common stock issuable upon the vesting and settlement of restricted stock units outstanding; and
- 31,661,245 shares of our common stock issuable upon the exercise of common stock purchase warrants outstanding as of May 13, 2022, having a weighted-average exercise price of \$1.63 per share (before adjustment under the Warrant Amendment Agreement).

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise of the outstanding stock options or warrants or settlement of the restricted stock units described above.



## RISK FACTORS

*An investment in our common stock involves a number of risks. Before deciding to invest in our common stock, you should carefully consider the risks described below and discussed under the section captioned “Risk Factors” contained in our Annual Report on Form 10-K for the year ended December 31, 2021, as updated by subsequent filings under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which are incorporated by reference in this prospectus supplement and the accompanying prospectus, together with the other information in this prospectus supplement and the accompanying prospectus, the information and documents incorporated by reference herein and therein, and in any prospectus supplement that we have authorized for use in connection with an offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. The risks described below, and in the documents referenced above, are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business.*

### **Risks Related to this Offering**

***Management will have broad discretion over the use of the net proceeds from the sale of shares by us and may apply such net proceeds in ways that do not improve our operating results or increase the value of your investment.***

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the net proceeds in ways that do not improve our results of operations or enhance the value of our common stock. You will be relying on the judgment of our management regarding the application of the proceeds of this offering. Our failure to apply these funds effectively could have a material adverse effect on our business and cause the price of our common stock to decline.

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

In order to raise additional capital, we may in the future offer additional shares of 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. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders, including investors who purchase securities in this offering. The price per share at which we sell additional shares of our common stock or securities convertible into common stock in future transactions may be higher or lower than the price per share in this offering.

***You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.***

Because the price per share being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the sale of 3,837,280 shares in this offering at the offering price of \$0.60 per share, and after deducting placement agent fees and estimated offering expenses payable by us, and assuming no exercise of the Warrants offered in the private placement concurrent with this offering, and based on a net tangible book value of our common stock of \$0.40 per share as of March 31, 2022, if you purchase our common stock in this offering, you will suffer immediate and substantial dilution of \$0.19 per share in the net tangible book value of common stock. Taking into account the sale and issuance of 8,162,720 shares of common stock in the concurrent registered direct offering, the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering and the concurrent registered direct offering would be \$0.42 per share, and the dilution in pro forma as adjusted net tangible book value per share to investors in this offering would be \$0.18 per share based on the offering price of \$0.60 per share. See the section entitled “Dilution” below for a more detailed discussion of the dilution you will incur if you participate in this offering.

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

Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. A substantial majority of the outstanding shares of our common stock are, and the shares of common stock sold in this offering upon issuance will be, freely tradable without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act. Upon completion of this offering, and taking into account the sale and issuance of 8,162,720 shares of common stock in the concurrent registered direct offering, based on our shares outstanding as of May 13, 2022, we will have 78,159,663 shares of common stock outstanding, substantially all of which shares which may be resold into the public market immediately without restriction, unless owned or purchased by our “affiliates” as that term is defined in Rule 144 under the Securities Act. As of May 13, 2022, there were approximately 1,547,245 shares subject to outstanding options and restricted stock unit awards or that are otherwise issuable under our equity compensation plans, all of which shares we have registered or will register under the Securities Act on a registration statement on Form S-8. The registered shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates, to the extent applicable. As of May 13, 2022, we had outstanding warrants exercisable for 31,661,245 shares at a weighted average exercise price of \$1.63 per share (before adjustment under the Warrant Amendment Agreement). Substantially all of the shares of our common stock underlying such warrants will, upon issuance, be freely tradeable without restriction or further registration under the Securities Act.

***Our common stock could be delisted from The Nasdaq Capital Market, which delisting could hinder your ability to obtain accurate quotations on the price of our common stock or dispose of our common stock in the secondary market.***

On May 13, 2022, we received a letter from the Listing Qualifications Department (the “Staff”) of The Nasdaq Stock Market LLC (“Nasdaq”) indicating that the bid price for our common stock had closed below \$1.00 per share for 30 consecutive business days, and that we are therefore not in compliance with the minimum bid price requirement for continued listing on The Nasdaq Capital Market under Nasdaq Marketplace Rule 5550(a)(2) (the “Minimum Bid Price Requirement”). The notification has no immediate effect on the listing of our common stock.

We have a period of 180 calendar days, or until November 9, 2022, to regain compliance with the Minimum Bid Price Requirement. If at any time before November 9, 2022 the bid price of our common stock closes at or above \$1.00 per share for a minimum of 10 consecutive business days, Nasdaq will provide written notification that we have achieved compliance with the Minimum Bid Price Requirement.

The letter also disclosed that in the event we do not regain compliance with the Minimum Bid Price Requirement by November 9, 2022, we may be eligible for additional time. To qualify for additional time, we would be required to meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for The Nasdaq Capital Market, with the exception of the bid price requirement, and would need to provide written notice of its intention to cure the deficiency during the second compliance period, by effecting a reverse stock split, if necessary. However, if it appears to the Staff that we will not be able to cure the deficiency, or if we are otherwise not eligible, the Staff would notify us that our securities would be subject to delisting. In the event of such notification, we may appeal the Staff's determination to delist our securities, but there can be no assurance the Staff would grant our request for continued listing.

In the event our common stock is delisted from The NASDAQ Capital Market and we are also unable to maintain listing on another alternate exchange, trading in our common stock could thereafter be conducted in FINRA's OTC Bulletin Board or in the over-the-counter markets in the so-called pink sheets. In such event, the liquidity of our common stock would likely be impaired, not only in the number of shares which could be bought and sold, but also through delays in the timing of the transactions, and there would likely be a reduction in our coverage by security analysts and the news media, thereby resulting in lower prices for our common stock than might otherwise prevail.

***Our stock price has been, and could continue to be, volatile.***

There has been significant volatility in the market price and trading volume of equity securities, which may be unrelated to the financial performance of the companies issuing the securities. These broad market fluctuations could negatively affect the market price of our stock. The market price and volume of our common stock could fluctuate, and in the past has fluctuated, more dramatically than the stock market in general. During the 12 months ended May 13, 2022, the market price of our common stock has ranged from a high of \$1.64 per share to a low of \$0.60 per share. You may not be able to resell your shares at or above the price you paid for them due to fluctuations in the market price of our stock.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements made in this prospectus and the accompanying prospectus supplement are “forward-looking statements” that indicate certain risks and uncertainties related to the Company, many of which are beyond the Company’s control. The Company’s actual results could differ materially and adversely from those anticipated in such forward-looking statements as a result of certain factors, including those set forth below and elsewhere in this report. Important factors that may cause actual results to differ from projections include:

- Our capital needs to accomplish our goals, including any further financing, which may be highly dilutive and may include onerous terms;
- Risks related to recent and future acquisitions, including the possibility of further impairment of goodwill and risks related to the benefits and costs of acquisition;
- Risks related to our partnerships with other companies, including the need to negotiate the definitive agreements; possible failure to realize anticipated benefits of these partnerships; and costs of providing funding to our partner companies, which may never be repaid or provide anticipated returns;
- Risk that we will be unable to protect our intellectual property or claims that we are infringing on others’ intellectual property;
- The impact of competition;
- Acquisition and maintenance of any necessary regulatory clearances applicable to applications of our technology;
- Inability to attract or retain qualified senior management personnel, including sales and marketing personnel;
- Risk that we never become profitable if our product and services are not accepted by potential customers;
- Possible impact of government regulation and scrutiny;
- Unexpected costs and operating deficits, and lower than expected sales and revenues, if any;
- Adverse results of any legal proceedings;
- The volatility of our operating results and financial condition,
- Management of growth;
- Risk that our business and operations will continue to be materially and adversely affected by the COVID-19 pandemic, which has impacted a significant supplier; has resulted in delayed production and less efficiency; and has impacted on our sales efforts, accounts receivable, and terms demanded by suppliers; and may impact financing transactions; and
- Other specific risks that may be alluded to in this prospectus or documents incorporated herein.

In some cases, you can identify forward-looking statements by terms such as “may”, “will”, “should”, “could”, “would”, “expects”, “plans”, “anticipates”, “believes”, “estimates”, “projects”, “predicts”, “potential” and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail under the heading “Risk Factors” beginning on page S-5 of this prospectus supplement and in our SEC filings. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus supplement, the accompanying prospectus, and the documents we have filed with the SEC that are incorporated by reference completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

Information regarding market and industry statistics contained in this prospectus supplement and the accompanying prospectus is included based on information available to the Company that it believes is accurate. It is generally based on academic and other publications that are not produced for purposes of securities offerings or economic analysis. The Company has not reviewed or included data from all sources, and the Company cannot assure potential investors of the accuracy or completeness of the data included in this prospectus supplement and the accompanying prospectus. Forecasts and other forward-looking information obtained from these sources are subject to the same qualifications and the additional uncertainties accompanying any estimates of future market size, revenue and market acceptance of products and services. The Company has no obligation to update forward-looking information to reflect actual results or changes in assumptions or other factors that could affect those statements.

## USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of shares of common stock in this offering will be approximately \$2,080,624, after deducting the placement agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Warrants issued in the concurrent private placement and the warrants to be issued to the placement agent as compensation.

As part of a concurrent registered direct offering, certain institutional and accredited investors have entered into a securities purchase agreement to purchase an aggregate of 8,162,720 shares of our common stock from us at the same purchase price per share as investors who participate in this offering. We estimate that the net proceeds from the concurrent registered direct offering will be approximately \$4,426,426, after deducting the placement agent fees and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering and the concurrent registered direct offering for working capital and general corporate purposes.

As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering. Accordingly, we will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the proceeds of this offering.

## DILUTION

Our net tangible book value as of March 31, 2022 was approximately \$26,429,267, or \$0.40 per share, based on 65,906,465 shares of common stock outstanding as of March 31, 2022. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of March 31, 2022. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.



After giving effect to the sale in this offering of 3,837,280 shares of common stock at the offering price of \$0.60 per share, and after deducting the placement agent fees and estimated offering expenses payable by us, our adjusted net tangible book value as of March 31, 2022 would have been approximately \$28,509,891, or \$0.41 per share. This represents an immediate increase in net tangible book value of \$0.01 per share to existing stockholders and immediate dilution in net tangible book value of \$0.19 per share to investors purchasing our common stock in this offering at the offering price.

The following table illustrates this dilution on a per share basis:

Offering price per share		\$	0.60
Net tangible book value per share as of March 31, 2022	\$	0.40	
Increase in net tangible book value per share attributable to this offering	\$	0.01	
As adjusted net tangible book value per share as of March 31, 2022, after this offering		\$	0.41
Dilution in net tangible book value per share to investors in this offering		\$	0.19

Taking into account the sale and issuance of 8,162,720 shares of common stock in the concurrent registered direct offering, the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering and the concurrent registered direct offering would be \$0.42 per share, and the dilution in pro forma as adjusted net tangible book value per share to investors in this offering would be \$0.18 per share.

The foregoing tables are based on 65,906,465 shares of common stock outstanding as of March 31, 2022 and exclude as of such date:

- 3,837,280 shares of our common stock issuable upon the exercise of the Warrants to be issued to the investors in the private placement concurrent with this offering at an exercise price of \$0.70 per share;
- 900,000 shares of our common stock issuable upon the exercise of the warrants to be issued to the placement agent or its designees as compensation in connection with this offering and the concurrent registered direct offering at an exercise price of \$0.75 per share;
- 8,162,720 shares of our common stock to be issued and sold by us in the concurrent registered direct offering;
- 1,030,579 shares of our common stock issuable upon the exercise of stock options outstanding as of March 31, 2022, having a weighted average exercise price of \$4.51 per share;
- 516,666 shares of our common stock issuable upon the vesting and settlement of restricted stock units outstanding as of March 31, 2022;
- 915,408 shares of our common stock reserved for future issuance under to our Amended and Restated 2012 Stock Incentive Plan; and
- 31,661,245 shares of our common stock issuable upon the exercise of common stock purchase warrants outstanding as of March 31, 2022, having a weighted-average exercise price of \$1.63 per share (before adjustment under the Warrant Amendment Agreement).

To the extent options, warrants, or other convertible securities outstanding as of March 31, 2022 have been or may be exercised or converted, or other shares have been issued, there may be further dilution to investors.

#### PRIVATE PLACEMENT OF WARRANTS

In a concurrent private placement, we are selling to each of the investors in this offering Warrants to purchase up to an aggregate of 3,837,280 shares of common stock, representing 100% of the shares of our common stock that may be purchased in this offering. The Warrants are exercisable at an exercise price of \$0.70 per share, will become exercisable six months following the date of issuance and will expire five and one-half years from the date of issuance. A holder of Warrants will have the right to exercise the Warrants on a “cashless” basis if there is no effective registration statement registering the resale of the Warrant Shares. Subject to limited exceptions, a holder of Warrants will not have the right to exercise any portion of its Warrants if the holder, together with its affiliates, would beneficially own in excess of 4.99% (or 9.99% at the election of the holder prior to the date of issuance) of the number of shares of our common stock outstanding immediately after giving effect to such exercise, provided that the holder may increase or decrease the beneficial ownership limitation up to 9.99%. Any increase in the beneficial ownership limitation shall not be effective until 61 days following notice of such change to us.

If a fundamental transaction occurs, the holder will have the right to require us to repurchase its Warrant for cash in an amount equal to the value of the remaining unexercised portion of the Warrant based on the Black Scholes option pricing formula. However, if the fundamental transaction is not within our control, including not approved by our board of directors, then the holder will only be entitled to receive the same type or form of consideration (and in the same proportion), at the value per share of common stock in the fundamental transaction for each Warrant Share underlying the unexercised portion of the Warrant, that is being offered and paid to the holders of our common stock in connection with the fundamental transaction.

Under the securities purchase agreement, we have agreed to file a registration statement with the SEC providing for the resale of the Warrant Shares issuable upon exercise of the Warrants and to use commercially reasonable efforts to cause such registration to become effective as soon as practicable following the closing date of the offering.

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

The Warrants and the Warrant Shares are being offered pursuant to the exemptions provided in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder, and are not being offered pursuant to this prospectus supplement and the accompanying prospectus.

There is no established public trading market for the Warrants and we do not expect a market to develop. In addition, we do not intend to list the Warrants on the Nasdaq Capital Market, any other national securities exchange or any other nationally recognized trading system.

## PLAN OF DISTRIBUTION

Pursuant to an engagement letter agreement dated May 9, 2022, we engaged H.C. Wainwright & Co., LLC to act as our exclusive placement agent in connection with the offering pursuant to this prospectus supplement and accompanying prospectus.

The placement agent is not purchasing or selling any shares of our common stock offered by this prospectus supplement, nor is it required to arrange for the purchase and sale of any specific number or dollar amount of the shares of common stock, other than to use its “reasonable best efforts” to arrange for the sale of such shares by us. Therefore, we may not sell all of the shares of our common stock being offered. The terms of this offering were subject to market conditions and negotiations between us, the placement agent and prospective investors. The placement agent will have no authority to bind us by virtue of the engagement letter. We have entered into securities purchase agreements directly with certain institutional and accredited investors who have agreed to purchase shares of our common stock in this offering. We will only sell to investors who have entered into securities purchase agreements.

We expect to deliver the shares of common stock being offered pursuant to this prospectus supplement on or about May 18, 2022, subject to satisfaction of certain closing conditions.

We have agreed to indemnify the placement agent and specified other persons against certain liabilities relating to or arising out of the placement agent's activities and to contribute to payments that the placement agent may be required to make in respect of such liabilities.

### Fees and Expenses

We have agreed to pay the placement agent (i) a total cash fee equal to 7.5% of the gross proceeds of this offering and the concurrent registered direct offering, (ii) a management fee equal to 1.0% of the gross proceeds of this offering and the concurrent registered direct offering, (iii) \$65,000 for non-accountable expenses for this offering and the concurrent registered direct offering, and (iv) \$15,950 for clearing fees for this offering and the concurrent registered direct offering. We estimate the total expenses payable by us for this offering will be approximately \$692,950, which amount includes the placement agent's fees and expenses and legal and other miscellaneous expenses.

### Placement Agent Warrants

We have also agreed to issue to the placement agent or its designees, at the closing of this offering, warrants to purchase a number of our shares equal to an aggregate of 7.5% of the shares of our common stock sold in this offering and the concurrent registered direct offering (or up to an aggregate of 900,000 shares of our common stock). Such warrants will have substantially the same terms as the Warrants being sold and issued in the concurrent private placement, except that the placement agent's warrants will have an exercise price equal to \$0.75 per share, which is 125% of the offering price of per share set forth on the cover of this prospectus supplement, and will expire five years after the date of issuance.

### Right of First Refusal

We have granted the placement agent, subject to certain exceptions, a right of first refusal for a period of twelve months following the closing of this offering to act as our exclusive underwriter or placement agent for any further capital raising transactions undertaken by us or any of our subsidiaries.

### Tail Financing Payments

We have also agreed to pay the placement agent, subject to certain exceptions, a tail fee equal to the cash and warrant compensation in this offering, if any investor, who was contacted and brought over-the-wall by the placement agent during the term of its engagement or introduced to us by the placement agent during the term of its engagement, provides us with capital in any public or private offering or other financing or capital raising transaction during a period of twelve months following the expiration or termination of the engagement letter.

### Warrant Fee

Upon any exercise of the Warrants issued in the concurrent private placement for cash, we have agreed to pay the placement agent a cash fee equal to 7.5% of the aggregate gross proceeds from the exercise of the Warrants.

### Lock-up Agreement

We have agreed with the investors, subject to certain exceptions, not to issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of common stock or their equivalents for a period of 60 days following the closing date of this offering. In addition, subject to certain exceptions, we have agreed to not issue any securities that are subject to a price reset based on the trading prices of our common stock or upon a specified or contingent event in the future, or enter into any agreement to issue securities at a future determined price for a period of one year following the closing date of this offering.

### Regulation M

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

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



## **Other Relationships**

From time to time, the placement agent may provide in the future various advisory, investment and commercial banking and other services to us in the ordinary course of business, for which they have received and may continue to receive customary fees and commissions. Wainwright acts as our sales agent in connection with our at-the-market program, for which it has received, and may in the future receive, compensation. Wainwright also acted as our exclusive placement agent for our private offering of common stock and warrants in March 2020, our four previous registered direct offerings consummated in January 2021, February 2021 and June 2021, and a private placement of shares of our common stock and warrants consummated in February 2021 for which it received compensation. However, except as disclosed in this prospectus, we have no present arrangements with the placement agent for any further services.

## **LEGAL MATTERS**

The validity of the issuance of the securities offered hereby will be passed upon by our counsel, Maslon LLP, Minneapolis, Minnesota.

## **EXPERTS**

The 2021 and 2020 consolidated financial statements incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2021 have been audited by Baker Tilly US, LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. The 2021 and 2020 consolidated financial statements have been so incorporated in reliance upon the reports of Baker Tilly US, LLP given upon their authority as experts in accounting and auditing.

## **WHERE YOU CAN FIND MORE INFORMATION**

We file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act, of which this prospectus supplement forms a part, 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 we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Reports filed with the SEC pursuant to the Exchange Act, including proxy statements, annual and quarterly reports, and other reports filed by the Company are available on the SEC's internet site at <http://www.sec.gov> and the Company's website at <http://www.predictive-oncology.com>. Information on any Predictive website, any subsection, page, or other subdivision of any Predictive website, or any website linked to by content on any Predictive website, is not part of this prospectus and you should not rely on that information unless that information is also in this prospectus or incorporated by reference in this prospectus.



## IMPORTANT INFORMATION INCORPORATED BY REFERENCE

We are allowed to incorporate by reference information contained in documents that we file with the SEC. This means that we can disclose important information to you by referring you to those documents and that the information in this prospectus is not complete and you should read the information incorporated by reference for more detail. We incorporate by reference in two ways. First, we list certain documents that we have already filed with the SEC. The information in these documents is considered part of this prospectus. Second, the information in documents that we file in the future will update and supersede the current information in, and incorporated by reference in, this prospectus.

We incorporate by reference the documents listed below and any future filings we will make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than information furnished in Current Reports on Form 8-K filed under Item 2.02 or 7.01 of such form unless such form expressly provides to the contrary):

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 filed on March 31, 2022;
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 filed on May 12, 2022;
- Our Current Reports on Form 8-K filed on January 4, 2022, February 18, 2022, March 31, 2022, May 12, 2022, and May 13, 2022;
- Our Current Report on Form 8-K/A filed on February 10, 2022; and
- The description of the Company's common stock under the caption "Description of Predictive Capital Stock – Common Stock" in the Company's Amendment No 2 to Registration Statement on Form S-4 as filed with the SEC on January 24, 2019, as amended by the description filed as Exhibit 4.14 to the Company's Annual Report on Form 10-K on March 31, 2022.

We will provide to each person, including any beneficial owner, to whom a prospectus supplement is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus supplement but not delivered with this prospectus supplement. You may request a copy of this information at no cost, by writing or telephoning us at the following address or telephone number:

Predictive Oncology Inc.  
Attention: Corporate Secretary  
2915 Commers Drive, Suite 900  
Eagan, Minnesota 55121  
(651) 389-4800



**PREDICTIVE ONCOLOGY INC.**

**\$250,000,000**

**Common Stock Preferred Stock  
Warrants to Purchase Common Stock or Preferred Stock  
Debt Securities  
Units**

We may offer from time to time securities described in this prospectus separately or together in any combination. We may offer and sell such securities in one or more offerings with a total aggregate principal amount or initial purchase price not to exceed \$250.0 million. These securities may be convertible into or exchangeable for our other securities. This prospectus provides a general description of these securities. We will provide you with specific information about the offering and terms of these securities in supplements to this prospectus. The prospectus supplement may also add to, update, supplement or clarify information contained in this prospectus. This prospectus may not be used to offer or sell securities unless accompanied by a prospectus supplement.

**You should carefully read this prospectus and any applicable prospectus supplement, together with any documents incorporated by reference, before you invest in our securities.**

We may offer and sell these securities on a continuous or delayed basis, at prices and on terms to be determined at the time of any particular offering, directly to purchasers, through agents, dealers or underwriters as designated from time to time, or through a combination of these methods. See “Plan of Distribution.” The prospectus supplement for each offering will describe in detail the plan of distribution for that offering and will set forth the names of underwriters, dealers or agents, if any, involved in the offering and any applicable discounts or commissions payable to them. Net proceeds from the sale of the securities also will be set forth in the applicable prospectus supplement.

The aggregate market value of our outstanding common stock held by non-affiliates, or “public float,” is \$83,091,267, which was calculated based on 49,813,784 shares of outstanding common stock as of April 23, 2021, of which 2,197,012 shares were held by affiliates, and a per share price of \$1.745, which represents the average of the last bid and ask prices of our common stock on March 11, 2021.

**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 beginning on page 7 of this prospectus under the caption “Risk Factors” and in the documents incorporated by reference into this prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved 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 May 5, 2021**

---

## Table of Contents

	<b><u>Page</u></b>
<a href="#"><u>About this Prospectus</u></a>	<a href="#"><u>i</u></a>
<a href="#"><u>The Company</u></a>	<a href="#"><u>1</u></a>
<a href="#"><u>Risk Factors</u></a>	<a href="#"><u>7</u></a>
<a href="#"><u>Cautionary Note Regarding Forward Looking Statements</u></a>	<a href="#"><u>7</u></a>
<a href="#"><u>Use of Proceeds</u></a>	<a href="#"><u>8</u></a>
<a href="#"><u>Description of Capital Stock</u></a>	<a href="#"><u>9</u></a>
<a href="#"><u>Plan of Distribution</u></a>	<a href="#"><u>23</u></a>
<a href="#"><u>Legal Matters</u></a>	<a href="#"><u>25</u></a>
<a href="#"><u>Experts</u></a>	<a href="#"><u>25</u></a>
<a href="#"><u>Where You Can Find More Information</u></a>	<a href="#"><u>26</u></a>
<a href="#"><u>Incorporation of Certain Documents by Reference</u></a>	<a href="#"><u>27</u></a>

---

## ABOUT THIS PROSPECTUS

This prospectus is part of a “shelf” registration statement on Form S-3 that we filed with the Securities and Exchange Commission, referred to as the “SEC,” under the Securities Act of 1933, as amended, referred to as the “Securities Act.” Under this shelf registration statement, we are registering the securities described in this prospectus with a total aggregate principal amount or initial purchase price not to exceed \$250.0 million. We may, from time to time, offer and sell such securities, or any combination of such securities, in one or more offerings.

This prospectus provides you with a general description of the securities we may offer. Each time we offer or sell securities, we will provide you with a prospectus supplement containing specific information about the terms of that offering. The prospectus supplement may also add to, update, supplement or clarify information contained or incorporated by reference, as applicable, in this prospectus. If there is any inconsistency between the information in this prospectus and the information in the prospectus supplement, you should rely on the information in the prospectus supplement. 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 concerning us and the securities, you should read the entire registration statement and the additional information described under “Documents Incorporated by Reference” below.

Unless the context otherwise requires, references in this prospectus to “Predictive,” the “Company,” “we,” “us,” and “our” refer to Predictive Oncology Inc.

**You should rely only on the information contained or incorporated by reference, as applicable, in this prospectus, any prospectus supplement, or other offering materials related to an offering of securities described in this prospectus. We have not authorized anyone to provide you with different or additional information. If anyone provides you with different or additional information, you should not rely on it.**

**You should not assume that the information contained or incorporated by reference, as applicable, in this prospectus, any prospectus supplement, or other offering materials related to an offering of securities described in this prospectus is accurate as of any date other than the date of that document. Neither the delivery of this prospectus, any prospectus supplement or other offering materials related to an offering of securities described in this prospectus, nor any distribution of securities pursuant to this prospectus, any such prospectus supplement, or other offering materials shall, under any circumstances, create any implication that there has been no change in the information set forth or incorporated by reference, as applicable, in this prospectus, any such prospectus supplement or other offering materials since the date of each such document. Our business, financial condition, results of operations and prospects may have changed since those dates.**

**This prospectus does not constitute, and any prospectus supplement or other offering materials related to an offering of securities described in this prospectus will not constitute, an offer to sell, or a solicitation of an offer to purchase, the offered securities in any jurisdiction to or from any person to whom or from whom it is unlawful to make such offer or solicitation in such jurisdiction.**

## THE COMPANY

*This summary contains basic information about us. You should read the entire prospectus carefully, especially the risks of investing in our securities discussed under “Risk Factors.” Some of the statements contained in this prospectus supplement, including statements under this summary and “Risk Factors” are forward-looking statements and may involve a number of risks and uncertainties. We note that our actual results and future events may differ significantly based upon a number of factors. You should not put undue reliance on the forward-looking statements in this document, which speak only as of the date on the cover of this prospectus. References to “we,” “our,” “us,” the “Company,” or “Predictive” refer to Predictive Oncology Inc., a Delaware corporation.*

### Business Overview

Predictive Oncology Inc. (NASDAQ: POAI) operates in three primary business areas: first, application of artificial intelligence (“AI”) in our precision medicine business, to provide AI-driven predictive models of tumor drug response to improve clinical outcomes for patients and to assist pharmaceutical, diagnostic, and biotech industries in the development of new personalized drugs and diagnostics; second, production of the United States Food and Drug Administration (“FDA”)-cleared STREAMWAY® System for automated, direct-to-drain medical fluid disposal and associated products, and third, contract services and research focused on solubility improvements, stability studies, and protein production.

We have three reportable segments: Helomics, Soluble and Skyline Medical. The Helomics division consists of clinical testing and contract research. Our Soluble division is a provider of soluble and stable formulations for proteins, and our TumorGenesis subsidiary specializes in media that help cancer cells grow and retain their DNA/RNA and proteomic signatures providing researchers with a tool to expand and study cancer cell types found in tumors of the blood and organ systems of all mammals, including humans. Our Skyline Medical segment consists of the STREAMWAY System product sales. Going forward, we have determined that we will focus our resources on the Helomics division and our primary mission of applying AI to precision medicine and drug discovery.

### Precision Medicine Business

Our precision medicine business, conducted in our Helomics division, is committed to improving the effectiveness of cancer therapy using our proprietary, multi-omic tumor profiling platform, one-of-a-kind database of historical tumor data, and the power of AI to build predictive models of tumor drug response.

Helomics’ mission is to improve clinical outcomes for patients by partnering with pharmaceutical, diagnostic, and academic organizations to bring innovative clinical products and technologies to the marketplace. Our Patient-centric Drug Discovery using Active Learning asset (PeDAL™) is a unique technology that combines our proprietary, clinically validated patient tumor cell line assay (TruTumor™), a vast knowledgebase of proprietary and public data together (TumorSpace™) with active learning - the active learning allowing the efficient exploration of compound drug responses against a large diverse patient “space”. PeDAL offers researchers the opportunity to efficiently and cost-effectively bring patient diversity much earlier in the drug discovery process. PeDAL works by iterative cycles of active-learning powered Learn-Predict-Test (L-P-T) to guide the testing of patient-specific compound responses using the TruTumor assay and patient cell lines to build a comprehensive predictive model of patient responses to compounds. This predictive model can then be used to rank compounds by the fraction of patients of certain profiles that respond as well as the set of compounds that provide the best coverage across patients. PeDAL will be used in fee-for-service projects with pharmaceutical companies.

### Contract Research Organization (CRO) and AI-Driven Business

We believe leveraging our unique, historical database of the drug responses of over 150,000 patient tumors to build AI and data-driven multi-omic predictive models of tumor drug response and outcome will provide actionable insights critical to both new drug development and individualizing patient treatment. Our large knowledgebase of tumor drug response and other data, together with proven AI, has created a unique capability for oncology drug discovery that allows for the highly efficient screening of drug responses from thousands of diverse, well-characterized patient primary tumor cell lines. This novel disruptive patient-centric approach is ideally suited to the early part of drug discovery (especially hit-to-lead, lead optimization, and pre-clinical), resulting in better prioritization of compounds and better coverage of patient diversity. This will dramatically improve the chances of successfully translating discoveries, resulting in lowered costs, shortened timelines, and most importantly enhanced “speed-to-patient” for new therapies.

Our CRO services business applies PeDAL to address a range of needs from discovery through clinical and translational research, to clinical trials and diagnostic development and validation as noted below:

#### **Research**

- Biomarker discovery
- Drug discovery
- Drug-repurposing

#### **Development**

- Patient enrichment & selection for trials
- Clinical trial optimization
- Adaptive trials

#### **Clinical Decision Support**

- Patient stratification
- Treatment selection

We believe this market segment has significant growth potential and we believe we are differentiated from traditional CRO's and other precision medicine and AI companies through these unique assets:

- clinically validated TruTumor platform;
- TumorSpace model of over 150,000 tumor cases;
- experienced AI team and AI platform; and
- the ability to access outcome data going back over ten years for over 120,000 of the tumor cases in our database.

#### *Industry and Market Background and Analysis – Precision Medicine Business*

Precision medicine is an emerging approach for disease treatment and prevention that considers individual variability in genes, disease, environment, and lifestyle for each case to develop effective therapies. This approach allows doctors and researchers to predict more accurately which treatment, dose, and therapeutic regimen could provide the best possible outcome.

The global precision medicine market is estimated to reach \$278.6 billion by 2030, up from \$43.6 billion in 2016. (Source: BIS Research's "Global Precision Medicine Market to Reach \$278.6 Billion by 2030", December 2030).

Precision medicine, precisely targeting drugs based on the genomic profile of the patient, has become the aspiration for cancer therapy. Over the past several decades, researchers have identified molecular patterns that are useful in defining the prognosis of a given cancer, determining the appropriate treatments, and designing targeted treatments to address specific molecular alterations. The objective of precision medicine as directed towards cancer therapy is to develop treatments tailored to the genetic changes in each person's cancer, intended to improve the effectiveness of the therapeutic regimen and minimize the treatment's effects on healthy cells. However, for a majority of patients the reality is that while many mutations in the patient's tumor can be identified most are not actionable with current protocols, due to a lack of research regarding which mutations in a tumor confer a sensitivity to a particular drug. As a result, the impact of targeted therapies is low, and uptake in clinical practice is inconsistent.

There is now a growing realization that genomics alone will not be enough to achieve the promise of personalized therapeutics, especially for cancer. A multi-omic approach (e.g., assessing the genome, transcriptome, epigenome, proteome, responseome, and microbiome) provides researchers and clinicians the comprehensive information necessary for new drug development and individualized therapy. Comparatively, the multi-omic approach provides a three-dimensional, 360-degree view of the cancer, while genomics alone is just a flat, one-dimensional view. However, multi-omic data is difficult to access quickly as it is both costly and time consuming to initiate prospective data collection, and few comprehensive, multi-omic datasets exist, especially specific to cancer. Our TumorSpace database addresses this need.

### *Clinical Testing*

Via our Helomics subsidiary, we offer a group of clinically relevant, cancer-related tumor profiling and biomarker tests for gynecological cancers that determine how likely the patient is to respond to various types of chemotherapy and which therapies might be indicated by relevant tumor biomarkers.

Clinical testing is comprised of Tumor Drug Response Testing (formerly ChemoFx) and Genomic Profiling (formerly BioSpeciFx) tests. The Tumor Drug Response Testing determines how a patient's tumor specimen responds to a panel of various chemotherapy drugs, while the Genomic Profiling evaluates the expression of a specific genes, or biomarkers, in the patient's tumor. Our proprietary TruTumor tumor platform provides us with the ability to work with actual live tumor cells to study the unique biology of the patient's tumor in order to understand how the patient responds to treatment.

Tumor Drug Response Testing is a fresh tissue platform that uses the patient's own live tumor cells to help physicians identify effective treatment options for each gynecologic cancer patient. Testing involves obtaining tumor tissue during biopsy or surgery which is then sent to our Clinical Laboratory Improvement Amendments ("CLIA") certified laboratory using a special collection kit.

Genomic Profiling offers a select group of clinically relevant protein expression and genetic mutation tests associated with drug response and disease prognosis. Physicians can select biomarkers for testing from carefully chosen panels of relevant tests, intuitively organized by cancer pathway and tumor type. Results for these tests are presented in a clear, easy to understand format, including summaries of the clinical relevance of each marker.

### *Business Strategy for Precision Medicine Business*

We are a data and AI-driven discovery services company that provides AI-driven predictive models of tumor drug response to improve clinical outcomes for patients by leveraging our two primary unique assets:

- TruTumor - a clinically validated tumor-profiling platform that can generate drug response profiles and other multi-omic data. Over \$200 million has been invested in this platform and was clinically validated in ovarian cancer.
- TumorSpace model contains data on the drug response profiles across 131 cancer types over 10+ years of clinical testing.

Over 38,000 of the more than 150,000 clinically validated cases in our TumorSpace database are specific to ovarian cancer. The data in TumorSpace is highly differentiated, having both drug response data, biomarkers and access to historical outcome data from those patient samples. We intend to generate additional data (genomics and transcriptomics) from these tumor samples to deliver a multi-omic approach to the pharmaceutical industry.

Through our Helomics subsidiary, we will utilize both this historical data and the TumorSpace platform to build AI-driven predictive models of tumor drug response and outcome through our CancerQuest 2020 ("CCQ2020") initiative, which is still ongoing. Once validated, we will commercialize these AI-driven predictive models in revenue generating service projects with pharmaceutical, biotech, and diagnostic companies.

A key part of our commercialization strategy for the CCQ2020 initiative is the understanding that our AI-driven models of tumor drug response serves a key unmet need of pharmaceutical, diagnostic, and biotech industries for actionable multi-omic insights on cancer. In collaboration with these companies, using the predictive models, we will accelerate the search for more individualized and effective cancer treatments, through revenue generating projects in biomarker discovery, drug screening, drug repurposing, and clinical trials.

Our commercial strategy has identified a portfolio of revenue generating project types that leverage the predictive models, our AI expertise, PeDAL tumor profiling, and CLIA laboratory to provide custom solutions utilizing our full array of assets and expertise.

The CCQ2020 initiative will focus initially on ovarian cancer, which is where we have the most expertise, samples, data, and access to outcomes. However, we intend to expand the initiative to include cancers of the lung, breast, colon, and prostate, and will actively seek partners to assist in that effort.

Within the clinical sector, we will utilize these predictive models (once validated) for new clinical decision support tools for individualizing therapy for patients with cancer. These clinical decision support tools are a longer revenue horizon than the research projects with pharmaceutical companies but, importantly, will provide a steady stream of additional data generation to refine the predictive models for both clinical and research applications.

### **Soluble Biotech**

Our subsidiary, Soluble Biotech Inc. (“Soluble”), focuses on contract services and research focused on solubility improvements, stability studies, and protein production and operates the assets of Soluble Therapeutics and BioDtech, which the Company acquired in May 2020. Specifically, Soluble provides optimized FDA-approved formulations for vaccines, antibodies, and other protein therapeutics in a faster and lower cost basis to its customers. In addition, Soluble enables protein degradation studies, which is a new and, based on current projections, potentially substantial line of business for the Company.

The primary assets of Soluble are our automated High Throughput Self-Interaction Chromatography (HSC™). HSC is a self-contained, automated system that conducts high-throughput, self-interaction chromatography screens on FDA approved excipients for protein formulations. Our technology measures second virial coefficient (B22 value) of protein-protein interactions to identify excipients that promote protein solubility in solutions. The data generated from HSC screens are analyzed by a proprietary predictive algorithm to identify the optimal combination(s) of buffers, pH, and excipients, resulting in increased solubility and physical stability of proteins. Several of our clients have seen ten-fold and hundred-fold increases in their protein’s solubility while maintaining physical stability. For biopharmaceutical clients this means faster development times and quicker progression of molecules into the clinic. For academic collaborators, this means further progression of biochemical and biology studies necessary to advance fundamental research in areas of unmet medical need.

In addition, Soluble provides comprehensive protein stability analysis. Analysis via time-dependent shelf-life studies and forced degradation studies designed to quickly determine which of the FDA approved additives that will improve the solubility and stability of proteins in solutions. Services include pre-formulation development, formulation stability assessment, and biophysical characterization which evaluate variables including pH, temperature, humidity, light, oxidizing agents, and mechanical stress to determine the most promising additives, formulation of B22 values and confirmation on conformation stability. We provide clients with a list of the most promising additives from a set of over 40 different additives that can increase the solubility and stability of protein formulations.

Soluble also offers protein solubility kits that allow rapid identification of soluble formulations. We provide four different kits to fulfill customer solubility requirements. The kits are in 96-well format and provide the tools and methods to compare relative solubility across 88 common formulations (with 8 controls). Soluble kits utilize a simple mix and spin protocol that quickly evaluates aggregation behavior as a function of pH, salt, and additives costing significantly less than if manually determined. In addition, we provide innovative technologies for bacterial detection and removal in therapeutic proteins that continue to be a significant issue in the pharmaceutical field.



## **TumorGenesis**

Our subsidiary, TumorGenesis, is pursuing a new rapid approach to growing tumors in the laboratory, which essentially “fools” the cancer cells into thinking they are still growing inside the patient. We have also announced a proposed joint venture with GLG Pharma focused on using their combined technologies to bring personalized medicines and testing to ovarian and breast cancer patients, especially those who present with ascites fluid (over one-third of patients).

## **Skyline Medical – The STREAMWAY System**

Sold through our subsidiary, Skyline Medical, Inc (“Skyline Medical”), the STREAMWAY System virtually eliminates staff exposure to blood, irrigation fluid and other potentially infectious fluids found in the healthcare environment. Antiquated manual fluid handling methods that require hand carrying and emptying filled fluid canisters present both an exposure risk and potential liability. Skyline Medical’s STREAMWAY System fully automates the collection, measurement, and disposal of waste fluids and is designed to: 1) reduce overhead costs to hospitals and surgical centers; 2) improve compliance with the Occupational Safety and Health Administration (“OSHA”) and other regulatory agency safety guidelines; 3) improve efficiency in the operating room and radiology and endoscopy departments, thereby leading to greater profitability; and 4) provide greater environmental stewardship by helping to eliminate the approximately 50 million potentially disease-infected canisters that go into landfills each year in the United States.

Skyline Medical operated with reduced personnel and associated operating costs in 2020. By streamlining our production, the Company maximized efficiency attaining similar revenue to 2019. Throughout the year we continued to receive indications of interest from several parties for the possible acquisition of the Skyline division, as well as other partnership initiatives. We continue to operate the Skyline Medical business by continually improving our strategic opportunities, while focusing our resources on our precision medicine business.

### *Industry and Market Background and Analysis - Infectious and Bio-hazardous Waste Management*

There has long been recognition of the collective potential for ill effects to healthcare workers from exposure to infectious/bio-hazardous materials. Federal and state regulatory agencies have issued mandatory guidelines for the control of such materials, and in particular, bloodborne pathogens. OSHA’s Bloodborne Pathogens Standard (29 CFR 1910.1030) requires employers to adopt engineering and work practice controls that would eliminate or minimize employee exposure from hazards associated with bloodborne pathogens. In 2001, in response to the Needlestick Safety and Prevention Act, OSHA revised the Bloodborne Pathogens Standard. The revised standard clarifies and emphasizes the need for employers to select safer needle devices and to involve employees in identifying and choosing these devices. The revised standard also calls for the use of “automated controls” as it pertains to the minimization of healthcare exposure to bloodborne pathogens.

Most surgical procedures produce potentially infectious materials that must be disposed with the lowest possible risk of cross-contamination to healthcare workers. Current standards of care allow for these fluids to be retained in canisters and located in the operating room where they can be monitored throughout the surgical procedure. Once the procedure is complete these canisters and their contents are disposed using a variety of methods, all of which include manual handling and result in a heightened risk to healthcare workers for exposure to their contents. Canisters are the most prevalent means of collecting and disposing of infectious fluids in hospitals today. Traditional, non-powered canisters and related suction and fluid disposable products are exempt and do not require FDA clearance.

We believe that our virtually hands free direct-to-drain technology (1) significantly reduces the risk of healthcare worker exposure to these infectious fluids by replacing canisters, (2) further reduces the risk of worker exposure when compared to powered canister technology that requires transport to and from the operating room, (3) reduces the cost per procedure for handling these fluids, and (4) enhances the surgical team’s ability to collect data to accurately assess the patient’s status during and after procedures. In addition to the traditional canister method of waste fluid disposal, several other powered medical devices have been developed that address some of the deficiencies described above. Most of these competing products continue to utilize some variation on the existing canister technology, and while not directly addressing the canister, most have been successful in eliminating the need for an expensive gel and its associated handling and disposal costs. Our existing competitors with products already on the market have a clear competitive advantage over us in terms of brand recognition and market exposure. In addition, many of our competitors have extensive marketing and development budgets that could overpower an emerging growth company like ours.

We expect the hospital surgery market to continue to increase due to population growth, the aging of the population, and expansion of surgical procedures to new areas (for example, use of the endoscope) which requires more fluid management and new medical technology.

### **STREAMWAY System Product Sales**

Our Skyline Medical division consists primarily of sales of the STREAMWAY System, as well as sales of the proprietary cleaning fluid and filters for use with the STREAMWAY System. We manufacture an environmentally conscious system for the collection and disposal of infectious fluids resulting from surgical and other medical procedures. We have been granted patents for the STREAMWAY System in the United States, Canada, and Europe. We distribute our products to medical facilities where bodily and irrigation fluids produced during medical procedures must be contained, measured, documented, and disposed. Our products minimize the exposure potential to the healthcare workers who handle such fluids. In addition to simplifying the handling of these fluids, our goal is to create products that dramatically reduce staff exposure without significant changes to established operative procedures, historically a major industry stumbling block to innovation and product introduction.

The STREAMWAY System is a wall-mounted fully automated system that disposes of an unlimited amount of suction fluid providing uninterrupted performance for physicians while virtually eliminating healthcare workers' exposure to potentially infectious fluids collected during surgical and other patient procedures. The STREAMWAY System also provides an innovative way to dispose of ascites and pleural fluid with no evac bottles, suction canisters, transport, or risk of exposure. We also manufacture and sell two disposable products required for the operation of the STREAMWAY System: a bifurcated dual port procedure filter with tissue trap and a single use bottle of cleaning solution. Both items are utilized on a single procedure basis and must be discarded after use. The STREAMWAY disposables are a critical component of our business model. Recurring revenues from the sale of the disposables are expected to be significantly higher over time than the revenues from the initial sale of the unit. We have exclusive distribution rights to the disposable solution.

We sell our medical device products directly to hospitals and other medical facilities using employed sales representatives, independent contractors and distributors.

### **Corporate Information**

We were originally incorporated on April 23, 2002 and reincorporated in Delaware in 2013. We changed our name from Skyline Medical, Inc. to Precision Therapeutics, Inc. on February 1, 2018 and to Predictive Oncology, Inc. on June 13, 2019.

Our address is 2915 Commers Drive, Suite 900, Eagan, Minnesota 55121. Our telephone number is (651) 389-4800, and our website address is [www.predictive-oncology.com](http://www.predictive-oncology.com). The information contained on, or that can be accessed through, our website is not part of this prospectus.

## RISK FACTORS

An investment in our securities involves a number of risks. Before deciding to invest in our securities, you should carefully consider the risks described below and discussed under the sections captioned “Risk Factors” contained in our Annual Report on Form 10-K for the year ended December 31, 2020, which report is incorporated by reference in this prospectus, the information and documents incorporated by reference herein, and in any prospectus supplement or free writing prospectus that we have authorized for use in connection with an offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. The risks described in the documents referenced above are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business.

### CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements made in this prospectus are “forward-looking statements” that indicate certain risks and uncertainties related to the Company, many of which are beyond the Company’s control. The Company’s actual results could differ materially and adversely from those anticipated in such forward-looking statements as a result of certain factors, including those set forth below and elsewhere in this report. Important factors that may cause actual results to differ from projections include:

- We may not be able to continue operating without additional financing;
- Current negative operating cash flows;
- Our capital needs to accomplish our goals, including any further financing, which may be highly dilutive and may include onerous terms;
- Risks related to recent and future acquisitions, including the possibility of further impairment of goodwill and risks related to the benefits and costs of acquisition;
- Risks related to our partnerships with other companies, including the need to negotiate the definitive agreements; possible failure to realize anticipated benefits of these partnerships; and costs of providing funding to our partner companies, which may never be repaid or provide anticipated returns;
- Risk that we will be unable to protect our intellectual property or claims that we are infringing on others’ intellectual property;
- The impact of competition;
- Acquisition and maintenance of any necessary regulatory clearances applicable to applications of our technology;
- Inability to attract or retain qualified senior management personnel, including sales and marketing personnel;
- Risk that we never become profitable if our products and services are not accepted by potential customers;
- Possible impact of government regulation and scrutiny;
- Unexpected costs and operating deficits, and lower than expected sales and revenues, if any;

- Adverse results of any legal proceedings;
- The volatility of our operating results and financial condition,
- Management of growth; and
- Risk that our business and operations will continue to be materially and adversely affected by the COVID-19 pandemic, which has impacted on a significant supplier; has resulted in delayed production and less efficiency; and has impacted on our sales efforts, accounts receivable, and terms demanded by suppliers; and may impact financing transactions.

In some cases, you can identify forward-looking statements by terms such as “may”, “will”, “should”, “could”, “would”, “expects”, “plans”, “anticipates”, “believes”, “estimates”, “projects”, “predicts”, “potential” and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

Information regarding market and industry statistics contained in this prospectus is included based on information available to the Company that it believes is accurate. It is generally based on academic and other publications that are not produced for purposes of securities offerings or economic analysis. The Company has not reviewed or included data from all sources, and the Company cannot assure potential investors of the accuracy or completeness of the data included in this prospectus. Forecasts and other forward-looking information obtained from these sources are subject to the same qualifications and the additional uncertainties accompanying any estimates of future market size, revenue and market acceptance of products and services. The Company has no obligation to update forward-looking information to reflect actual results or changes in assumptions or other factors that could affect those statements.

#### **USE OF PROCEEDS**

Unless otherwise indicated in the prospectus supplement, we intend to use the net proceeds from the sale of securities offered by the prospectus for general corporate purposes and working capital requirements. We may also use a portion of the net proceeds to:

- make capital expenditures,
- license or acquire intellectual property or technologies to incorporate into our products, or
- fund possible investments in and acquisitions of complementary businesses, partnerships and minority investments.

We have not determined the amounts we plan to spend on the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds of the offerings. We have no current plans, commitments or agreements with respect to any acquisition as of the date of this prospectus.

## DESCRIPTION OF CAPITAL STOCK

The following description summarizes the material terms of our capital stock. This summary is, however, subject to the provisions of our certificate of incorporation and bylaws. For greater detail about our capital stock, please refer to our certificate of incorporation and bylaws.

### General

Our authorized capital stock consists of 100,000,000 shares of Common Stock, and 20,000,000 shares of preferred stock, \$0.01 par value per share (“Preferred Stock”). Out of the Preferred Stock, as of April 23, 2021, 2,300,000 shares have been designated Series B Convertible Preferred Stock, of which 79,246 shares were outstanding.

The outstanding shares of our Common Stock and Preferred Stock are fully paid and nonassessable.

The Series B Convertible Preferred Stock is convertible into Common Stock at the option of its holders on a 1:1 basis, subject to a 4.99% beneficial ownership blocker.

Our Board of Directors is authorized, subject to any limitations prescribed by law, to provide for the issuance of the shares of Preferred Stock in series and, by filing a certificate pursuant to the applicable law of the State of Delaware, to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, preferences and rights of the shares of each such series and any qualifications, limitations or restrictions thereon. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the outstanding shares of Common Stock without a vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the certificate or certificates establishing the series of Preferred Stock.

### Common Stock

As of April 23, 2021, we had 49,813,784 shares of common stock outstanding held by approximately 168 stockholders of record.

*Voting Rights.* The holders of our Common Stock are entitled to one vote for each outstanding share of Common Stock owned by that shareholder on every matter properly submitted to the shareholders for their vote. Shareholders are not entitled to vote cumulatively for the election of directors.

*Dividend Rights.* Subject to the dividend rights of the holders of any outstanding series of preferred stock, holders of our Common Stock are entitled to receive ratably such dividends and other distributions of cash or any other right or property as may be declared by our Board of Directors out of our assets or funds legally available for such dividends or distributions.

*Liquidation Rights.* In the event of any voluntary or involuntary liquidation, dissolution or winding up of our affairs, holders of our Common Stock would be entitled to share ratably in our assets that are legally available for distribution to shareholders after payment of liabilities and after the satisfaction of any liquidation preference owed to the holders of any Preferred Stock.

*Conversion, Redemption and Preemptive Rights.* Holders of our Common Stock have no conversion, redemption, preemptive, subscription or similar rights.

### Anti-Takeover Provisions

Bylaws. Certain provisions of our Bylaws could have anti-takeover effects. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our corporate policies formulated by our Board of Directors. In addition, these provisions also are intended to ensure that our Board of Directors will have sufficient time to act in what our Board of Directors believes to be in the best interests of our Company and our shareholders. Nevertheless, these provisions could delay or frustrate the removal of incumbent directors or the assumption of control of us by the holder of a large block of Common Stock, and could also discourage or make more difficult a merger, tender offer, or proxy contest, even if such event would be favorable to the interest of our shareholders. These provisions are summarized below.

*Advance Notice Provisions for Raising Business or Nominating Directors.* Sections 2.09 and 2.10 of our Bylaws contain advance-notice provisions relating to the ability of shareholders to raise business at a shareholder meeting and make nominations for directors to serve on our Board of Directors. These advance-notice provisions generally require shareholders to raise business within a specified period of time prior to a meeting in order for the business to be properly brought before the meeting.

*Number of Directors and Vacancies.* Our Bylaws provide that the exact number of directors shall be determined from time to time solely by resolution adopted by the affirmative vote of a majority of the entire Board of Directors. The Board of Directors is divided into three classes, as nearly equal in number as possible, designated: Class I, Class II and Class III (each, a “Class”). In the case of any increase or decrease, from time to time, in the number of directors, the number of directors in each class shall be apportioned as nearly equal as possible. Except as otherwise provided in the Certificate of Incorporation, each director serves for a term ending on the date of the third annual meeting of the Company’s stockholders following the annual meeting at which such director was elected; provided, that the term of each director shall continue until the election and qualification of a successor and be subject to such director’s earlier death, resignation or removal. Vacancies on the Board of Directors resulting from death, resignation, removal or otherwise and newly created directorships resulting from any increase in the number of directors may be filled solely by a majority of the directors then in office (although less than a quorum) or by the sole remaining director.

Delaware Law. We are subject to Section 203 of the Delaware General Corporation Law. This provision generally prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date the stockholder became an interested stockholder, unless:

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

Section 203 defines a business combination to include:

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

In general, Section 203 defines an “interested stockholder” as any entity or person beneficially owning 15% or more of the outstanding voting stock of a corporation, or an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of a corporation at any time within three years prior to the time of determination of interested stockholder status; and any entity or person affiliated with or controlling or controlled by such entity or person.

These statutory provisions could delay or frustrate the removal of incumbent directors or a change in control of our company. They could also discourage, impede, or prevent a merger, tender offer, or proxy contest, even if such event would be favorable to the interests of stockholders. In addition, note that while Delaware law permits companies to opt out of its business combination statute, our Certificate of Incorporation does not include this opt-out provision.

### **Transfer Agent and Registrar**

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

### **Listing**

The shares of our common stock are listed on The Nasdaq Capital Market under the symbol "POAI." On April 23, 2021, the last reported sale price per share for our common stock as reported by The Nasdaq Capital Market was \$1.08.

### **Preferred Stock**

Our Board of Directors has the authority, without action by our stockholders, to designate and issue up to 20,000,000 shares of preferred stock in one or more series or classes and to designate the rights, preferences and privileges of each series or class, which may be greater than the rights of our common stock. The Board's authority to issue preferred stock without stockholder approval could make it more difficult for a third party to acquire control of our company, and could discourage such attempt.

#### *Series B Convertible Preferred Stock Outstanding*

In connection with an offering of units that closed on August 31, 2015, we issued as part of the units 1,895,010 shares of Series B Convertible Preferred Stock pursuant to a Certificate of Designation approved by our Board.

The Series B Convertible Preferred Stock separated from the other securities included within the units as of February 29, 2016 and are currently convertible. As of April 23, 2021, 79,246 shares of Series B Convertible Preferred Stock remain outstanding.

Each share of Series B Convertible Preferred Stock is convertible into one share of common stock. The number of shares of common stock issuable upon conversion of the Series B Convertible Preferred Stock is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock.

Upon the occurrence of a "Fundamental Transaction", each share of Series B Convertible Preferred Stock shall be automatically converted into one share of common stock of the Company, subject to the beneficial ownership limitation discussed in the next paragraph. A "Fundamental Transaction" means that (i) the Company shall, directly or indirectly, in one or more related transactions, (1) consolidate or merge with or into (whether or not the Company is the surviving corporation) any other person unless the shareholders of the Company immediately prior to such consolidation or merger continue to hold more than 50% of the outstanding shares of voting stock after such consolidation or merger, or (2) sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of the properties and assets of the Company and its subsidiaries, taken as a whole, to any other person, or (3) allow any other person to make a purchase, tender or exchange offer that is accepted by the holders of more than 50% of the outstanding shares of voting stock of the Company (not including any shares of voting stock of the Company held by the person or persons making or party to, or associated or affiliated with the persons making or party to, such purchase, tender or exchange offer), or (4) consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with any other person whereby such other person acquires more than 50% of the outstanding shares of voting stock of the Company (not including any shares of voting stock of the Company held by the other person or other persons making or party to, or associated or affiliated with the other persons making or party to, such stock or share purchase agreement or other business combination), or (ii) any "person" or "group" (as these terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act and the rules and regulations promulgated thereunder), other than a Permitted Holder, is or shall become the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% of the aggregate ordinary voting power represented by issued and outstanding voting stock of the Company. The term Permitted Holders means Josh Kornberg, Atlantic Partners Alliance and SOK Partners, LLC and each of their respective affiliates.

The Series B Convertible Preferred Stock is not convertible by the holder of such preferred stock to the extent (and only to the extent) that the holder or any of its affiliates would beneficially own in excess of 4.99% of the common stock of the Company. For purposes of the limitation described in this paragraph, beneficial ownership and all determinations and calculations are determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder.

The Series B Convertible Preferred Stock has no voting rights, except that the holders of shares of a majority of the Series B Convertible Preferred Stock will be required to effect or validate any amendment, alteration or repeal of any of the provisions of the Certificate of Designation that materially adversely affects the powers, preferences or special rights of the Series B Convertible Preferred Stock, whether by merger or consolidation or otherwise; provided, however, that (i) in the event of an amendment to terms of the Series B Convertible Preferred Stock, including by merger or consolidation, so long as the Series B Convertible Preferred Stock remains outstanding with the terms thereof materially unchanged, or the Series B Convertible Preferred Stock is converted into, preference securities of the surviving entity, or its ultimate parent, with such powers, preferences or special rights that are, in the good faith determination of the Board of the Company, taken as a whole, not materially less favorable to the holders of the Series B Convertible Preferred Stock than the powers, preferences or special rights of the Series B Convertible Preferred Stock in effect prior to such amendment or the occurrence of such event, taken as a whole, then such amendment or the occurrence of such event will not be deemed to materially and adversely affect such powers, preferences or special rights of the Series B Convertible Preferred Stock and (ii) the authorization, establishment or issuance by the Corporation of any other series of preferred stock with powers, preferences or special rights that are senior to or on a parity with the Series B Preferred Stock, including, but not limited to, powers, preferences or special rights with respect to dividends, distributions or liquidation preferences, shall not be deemed to materially and adversely affect the power, preferences or special rights of the Series B Preferred Stock, and in the case of either clause (i) or (ii), the holders shall not have any voting rights with respect thereto, and provided further that, (iii) prior to the date that is the six month anniversary of the Issuance Date, no amendment, alteration or repeal of any of the provisions of this Certificate of Designation shall be made that affects the powers, preferences or special rights of the Series B Preferred Stock in any manner, whether by merger or consolidation or otherwise. An amendment to the terms of the Series B Convertible Preferred Stock only requires the vote of the holders of Series B Convertible Preferred Stock.

With respect to payment of dividends and distribution of assets upon liquidation or dissolution or winding up of the Company, the Series B Convertible Preferred Stock shall rank equal to the common stock of the Company. No sinking fund has been established for the retirement or redemption of the Series B Convertible Preferred Stock. As such, the Series B Convertible Preferred Stock is not subject to any restriction on the repurchase or redemption of shares by the Company due to an arrearage in the payment of dividends or sinking fund installments.

The Series B Convertible Preferred Stock also has no liquidation rights or preemption rights, and there are no special classifications of our Board related to the Series B Convertible Preferred Stock.

The shares of common stock issuable upon conversion of the Series B Convertible Preferred Stock have been duly authorized, validly issued and fully paid and are non-assessable. We have authorized and reserved at least that number of shares of common stock equal to the number of shares of common stock issuable upon conversion of all outstanding Series B Convertible Preferred Stock.

**THE HOLDER OF SERIES B CONVERTIBLE PREFERRED STOCK DO NOT POSSESS ANY RIGHTS AS A STOCKHOLDER UNDER THE SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK UNTIL THE HOLDER CONVERTS THE SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK.**

There is no established public trading market for our Series B Convertible Preferred Stock, and we do not expect a market to develop. We do not intend to apply to list Series B Convertible Preferred Stock on any securities exchange. Without an active market, the liquidity of the Series B Convertible Preferred Stock will be limited.



## One or More New Series of Preferred Stock

The following description of preferred stock and the description of the terms of any particular series of preferred stock that we choose to issue hereunder and that will be set forth in the related prospectus supplement are not complete. These descriptions are qualified in their entirety by reference to the certificate of designation relating to that series. The rights, preferences, privileges and restrictions of the preferred stock of each series will be fixed by the certificate of designation relating to that series.

Our board of directors has the authority, without stockholder approval, subject to limitations prescribed by law, to provide for the issuance of the shares of preferred stock in one or more series, and by filing a certificate pursuant to the applicable law of the State of Delaware, to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, preferences and rights of the shares of each series and the qualifications, limitations or restrictions, including, but not limited to, the following:

- the number of shares constituting that series;
- dividend rights and rates;
- voting rights;
- conversion terms;
- rights and terms of redemption (including sinking fund provisions); and
- rights of the series in the event of liquidation, dissolution or winding up.

All shares of preferred stock offered hereby will, when issued, be fully paid and nonassessable and will not have any preemptive or similar rights. Our board of directors could authorize the issuance of shares of preferred stock with terms and conditions that could have the effect of discouraging a takeover or other transaction that might involve a premium price for holders of the shares or which holders might believe to be in their best interests.

We will set forth in a prospectus supplement relating to the series of preferred stock being offered the following items:

- the title and stated value of the preferred stock;
- the number of shares of the preferred stock offered, the liquidation preference per share and the offering price of the preferred stock;
- the dividend rate(s), period(s) and/or payment date(s) or method(s) of calculation applicable to the preferred stock;
- whether dividends are cumulative or non-cumulative and, if cumulative, the date from which dividends on the preferred stock will accumulate;
- the procedures for any auction and remarketing, if any, for the preferred stock;
- the provisions for a sinking fund, if any, for the preferred stock;
- the provision for redemption, if applicable, of the preferred stock;
- any listing of the preferred stock on any securities exchange;
- the terms and conditions, if applicable, upon which the preferred stock will be convertible into common stock, including the conversion price (or manner of calculation) and conversion period;
- voting rights, if any, of the preferred stock;

- a discussion of any material and/or special United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights upon the liquidation, dissolution or winding up of our affairs;
- any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the class or series of preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
- any other specific terms, preferences, rights, limitations or restrictions of the preferred stock.

The transfer agent and registrar for any series of preferred stock will be set forth in the applicable prospectus supplement.

#### ***Certificate of Incorporation and Bylaws***

Our current Certificate of Incorporation authorizes the issuance of “blank check” preferred stock that could be issued by our Board of Directors to defend against a takeover attempt. See “Preferred Stock” above.

#### **DESCRIPTION OF WARRANTS**

We may issue warrants for the purchase of our common stock or preferred stock, or a combination thereof. Warrants may be issued independently or together with our debt securities, preferred stock or common stock and may be attached to or separate from any offered securities. 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 warrants. The warrant agent will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This description is a summary of the certain provisions of the units, and does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the warrant agreement that will be filed with the SEC in connection with an offering of the warrants. The particular terms of any units offered by us will be described in the applicable prospectus supplement. To the extent the terms of the warrants described in the prospectus supplement differ from the terms set forth in this summary, the terms described in the prospectus supplement will supersede the terms described below.

The prospectus supplement relating to a particular series of warrants to purchase our common stock or preferred stock will describe the terms of the warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- the aggregate number of warrants;
- the designation and terms of the common stock or preferred stock that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the number of shares of common stock or preferred stock that may be purchased upon exercise of a warrant and the exercise price for the warrants;

- the dates on which the right to exercise the warrants shall commence and expire;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material U.S. federal income tax considerations;
- the antidilution provisions of the warrants, if any;
- the redemption or call provisions, if any, applicable to the warrants;
- any provisions with respect to holder's right to require us to repurchase the warrants upon a change in control or similar event; and
- any additional terms of the warrants, including procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of equity warrants will not be entitled:

- to vote, consent or receive dividends;
- receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter; or
- exercise any rights as stockholders of the Company.

## **DESCRIPTION OF DEBT SECURITIES**

This description is a summary of the material provisions of the debt securities and the related indenture. We urge you to read the form of indenture filed as an exhibit to the registration statement of which this prospectus is a part because the indenture, and not this description, governs your rights as a holder of debt securities. References in this prospectus to an "indenture" refer to the particular indenture under which we may issue a series of debt securities.

### **General**

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in an officers' certificate or by a supplemental indenture. Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series. The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series, including any pricing supplement. The prospectus supplement will set forth specific terms relating to some or all of the following:

- the offering price;
- the title;
- any limit on the aggregate principal amount;
- the person who shall be entitled to receive interest, if other than the record holder on the record date;
- the date the principal will be payable;
- the interest rate, if any, the date interest will accrue, the interest payment dates and the regular record dates;
- the place where payments may be made;

- any mandatory or optional redemption provisions;
- if applicable, the method for determining how the principal, premium, if any, or interest will be calculated by reference to an index or formula;
- if other than U.S. currency, the currency or currency units in which principal, premium, if any, or interest will be payable and whether we or the holder may elect payment to be made in a different currency;
- the portion of the principal amount that will be payable upon acceleration of stated maturity, if other than the entire principal amount;
- any defeasance provisions if different from those described below under “Satisfaction and Discharge; Defeasance”;
- any conversion or exchange provisions;
- any obligation to redeem or purchase the debt securities pursuant to a sinking fund;
- whether the debt securities will be issuable in the form of a global security;
- any subordination provisions, if different from those described below under “Subordination”;
- any deletions of, or changes or additions to, the events of default or covenants; and
- any other specific terms of such debt securities.

Unless otherwise specified in the prospectus supplement, the debt securities will be registered debt securities. Debt securities may be sold at a substantial discount below their stated principal amount, bearing no interest or interest at a rate which at the time of issuance is below market rates.

### **Exchange and Transfer**

Debt securities may be transferred or exchanged at the office of the security registrar or at the office of any transfer agent designated by us.

We will not impose a service charge for any transfer or exchange, but we may require holders to pay any tax or other governmental charges associated with any transfer or exchange.

In the event of any potential redemption of debt securities of any series, we will not be required to:

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

We may initially appoint the trustee as the security registrar. Any transfer agent, in addition to the security registrar, initially designated by us will be named in the prospectus supplement. We may designate additional transfer agents or change transfer agents or change the office of the transfer agent. However, we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

## Global Securities

The debt securities of any series may be represented, in whole or in part, by one or more global securities. Each global security will:

- be registered in the name of a depositary that we will identify in a prospectus supplement;
- be deposited with the depositary or nominee or custodian; and
- bear any required legends.

No global security may be exchanged in whole or in part for debt securities registered in the name of any person other than the depositary or any nominee unless:

- the depositary has notified us that it is unwilling or unable to continue as depositary or has ceased to be qualified to act as depositary;
- an event of default is continuing; or
- the Company executes and delivers to the trustee an officers' certificate stating that the global security is exchangeable.

As long as the depositary, or its nominee, is the registered owner of a global security, the depositary or nominee will be considered the sole owner and holder of the debt securities represented by the global security for all purposes under the indenture. Except in the above limited circumstances, owners of beneficial interests in a global security:

- will not be entitled to have the debt securities registered in their names;
- will not be entitled to physical delivery of certificated debt securities; and
- will not be considered to be holders of those debt securities under the indentures.

Payments on a global security will be made to the depositary or its nominee as the holder of the global security. Some jurisdictions have laws that require that certain purchasers of securities take physical delivery of such securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global security.

Institutions that have accounts with the depositary or its nominee are referred to as "participants." Ownership of beneficial interests in a global security will be limited to participants and to persons that may hold beneficial interests through participants. The depositary will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants.

Ownership of beneficial interests in a global security will be shown on and effected through records maintained by the depositary, with respect to participants' interests, or any participant, with respect to interests of persons held by participants on their behalf.

Payments, transfers and exchanges relating to beneficial interests in a global security will be subject to policies and procedures of the depositary.

The depositary policies and procedures may change from time to time. Neither we nor the trustee will have any responsibility or liability for the depositary's or any participant's records with respect to beneficial interests in a global security.

## **Payment and Paying Agent**

The provisions of this paragraph will apply to the debt securities unless otherwise indicated in the prospectus supplement. Payment of interest on a debt security on any interest payment date will be made to the person in whose name the debt security is registered at the close of business on the regular record date. Payment on debt securities of a particular series will be payable at the office of a paying agent or paying agents designated by us. However, at our option, we may pay interest by mailing a check to the record holder. The corporate trust office will be designated as our sole paying agent.

We may also name any other paying agents in the prospectus supplement. We may designate additional paying agents, change paying agents or change the office of any paying agent. However, we will be required to maintain a paying agent in each place of payment for the debt securities of a particular series.

All moneys paid by us to a paying agent for payment on any debt security which remain unclaimed at the end of two years after such payment was due will be repaid to us. Thereafter, the holder may look only to us for such payment.

## **Consolidation, Merger and Sale of Assets**

Except as otherwise set forth in the prospectus supplement, we may not consolidate with or merge into any other person, in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to, any person, unless:

- the successor, if any, is a U.S. corporation, limited liability company, partnership, trust or other entity;
- the successor assumes our obligations on the debt securities and under the indenture;
- immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and
- certain other conditions are met.

## **Events of Default**

Unless we inform you otherwise in the prospectus supplement, the indenture will define an event of default with respect to any series of debt securities as one or more of the following events:

- (1) failure to pay principal of or any premium on any debt security of that series when due;
- (2) failure to pay any interest on any debt security of that series for 30 days when due;
- (3) failure to deposit any sinking fund payment when due;
- (4) failure to perform any other covenant in the indenture continued for 90 days after being given the notice required in the indenture;
- (5) our bankruptcy, insolvency or reorganization; and
- (6) any other event of default specified in the prospectus supplement.

An event of default of one series of debt securities is not necessarily an event of default for any other series of debt securities.

If an event of default, other than an event of default described in clause (5) above, shall occur and be continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding securities of that series may declare the principal amount of the debt securities of that series to be due and payable immediately.

If an event of default described in clause (5) above shall occur, the principal amount of all the debt securities of that series will automatically become immediately due and payable. Any payment by us on subordinated debt securities following any such acceleration will be subject to the subordination provisions described below under "Subordinated Debt Securities."

After acceleration the holders of a majority in aggregate principal amount of the outstanding securities of that series may, under certain circumstances, rescind and annul such acceleration if all events of default, other than the non-payment of accelerated principal, or other specified amount, have been cured or waived.

Other than the duty to act with the required care during an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request of the holders unless the holders shall have offered to the trustee reasonable indemnity. Generally, the holders of a majority in aggregate principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee.

A holder will not have any right to institute any proceeding under the indentures, or for the appointment of a receiver or a trustee, or for any other remedy under the indentures, unless:

- (1) the holder has previously given to the trustee written notice of a continuing event of default with respect to the debt securities of that series;
- (2) the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made a written request and have offered reasonable indemnity to the trustee to institute the proceeding; and
- (3) the trustee has failed to institute the proceeding and has not received direction inconsistent with the original request from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series within 90 days after the original request.

Holders may, however, sue to enforce the payment of principal or interest on any debt security on or after the due date without following the procedures listed in (1) through (3) above.

#### **Modification and Waiver**

Except as provided in the next two succeeding paragraphs, the applicable trustee and we may make modifications and amendments to the indentures (including, without limitation, through consents obtained in connection with a tender offer or exchange offer for, outstanding securities) and may waive any existing default or event of default (including, without limitation, through consents obtained in connection with a tender offer or exchange offer for, outstanding securities) with the consent of the holders of a majority in aggregate principal amount of the outstanding securities of each series affected by the modification or amendment.

However, neither we nor the trustee may make any amendment or waiver without the consent of the holder of each outstanding security of that series affected by the amendment or waiver if such amendment or waiver would, among other things:

- change the amount of securities whose holders must consent to an amendment, supplement or waiver;
- change the stated maturity of any debt security;
- reduce the principal on any debt security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund;
- reduce the principal of an original issue discount security on acceleration of maturity;
- reduce the rate of interest or extend the time for payment of interest on any debt security;

- make a principal or interest payment on any debt security in any currency other than that stated in the debt security;
- impair the right to enforce any payment after the stated maturity or redemption date;
- waive any default or event of default in payment of the principal of, premium or interest on any debt security (except certain rescissions of acceleration); or
- waive a redemption payment or modify any of the redemption provisions of any debt security;

Notwithstanding the preceding, without the consent of any holder of outstanding securities, we and the trustee may amend or supplement the indentures:

- to provide for the issuance of and establish the form and terms and conditions of debt securities of any series as permitted by the indenture;
- to provide for uncertificated securities in addition to or in place of certificated securities;
- to provide for the assumption of our obligations to holders of any debt security in the case of a merger, consolidation, transfer or sale of all or substantially all of our assets;
- to make any change that does not adversely affect the legal rights under the indenture of any such holder;
- to comply with requirements of the Commission in order to effect or maintain the qualification of an indenture under the Trust Indenture Act; or
- to evidence and provide for the acceptance of appointment by a successor trustee with respect to the debt securities of one or more series and to add to or change any of the provisions of the indenture as shall be necessary to provide for or facilitate the administration of the trusts by more than one Trustee.

The consent of holders is not necessary under the indentures to approve the particular form of any proposed amendment. It is sufficient if such consent approves the substance of the proposed amendment.

#### **Satisfaction and Discharge; Defeasance**

We may be discharged from our obligations on the debt securities of any series that have matured or will mature or be redeemed within one year if we deposit with the trustee enough cash to pay all the principal, interest and any premium due to the stated maturity date or redemption date of the debt securities.

Each indenture contains a provision that permits us to elect:

- to be discharged from all of our obligations, subject to limited exceptions, with respect to any series of debt securities then outstanding; and/or
- to be released from our obligations under the following covenants and from the consequences of an event of default resulting from a breach of certain covenants, including covenants as to payment of taxes and maintenance of corporate existence.

To make either of the above elections, we must deposit in trust with the trustee enough money to pay in full the principal and interest on the debt securities. This amount may be made in cash and/or U.S. government obligations. As a condition to either of the above elections, we must deliver to the trustee an opinion of counsel that the holders of the debt securities will not recognize income, gain or loss for federal income tax purposes as a result of the action.

If any of the above events occurs, the holders of the debt securities of the series will not be entitled to the benefits of the indenture, except for the rights of holders to receive payments on debt securities or the registration of transfer and exchange of debt securities and replacement of lost, stolen or mutilated debt securities.



## **Notices**

Notices to holders will be given by mail to the addresses of the holders in the security register.

## **Governing Law**

The indentures and the debt securities will be governed by, and construed under, the law of the State of New York.

## **Regarding the Trustee**

The indenture limits the right of the trustee, should it become a creditor of us, to obtain payment of claims or secure its claims.

The trustee is permitted to engage in certain other transactions. However, if the trustee acquires any conflicting interest, and there is a default under the debt securities of any series for which they are trustee, the trustee must eliminate the conflict or resign.

## **Subordination**

Payment on subordinated debt securities will, to the extent provided in the indenture, be subordinated in right of payment to the prior payment in full of all of our senior indebtedness (except that holders of the notes may receive and retain (i) permitted junior securities and (ii) payments made from the trust described under “Satisfaction and Discharge; Defeasance”). Any subordinated debt securities also are effectively subordinated to all debt and other liabilities, including lease obligations, if any.

Upon any distribution of our assets upon any dissolution, winding up, liquidation or reorganization, the payment of the principal of and interest on subordinated debt securities will be subordinated in right of payment to the prior payment in full in cash or other payment satisfactory to the holders of senior indebtedness. In the event of any acceleration of subordinated debt securities because of an event of default, the holders of any senior indebtedness would be entitled to payment in full in cash or other payment satisfactory to such holders of all senior indebtedness obligations before the holders of subordinated debt securities are entitled to receive any payment or distribution, except for certain payments made by the trust described under “Satisfaction and Discharge; Defeasance.” The indenture requires us or the trustee to promptly notify holders of designated senior indebtedness if payment of subordinated debt securities is accelerated because of an event of default.

We may not make any payment on subordinated debt securities, including upon redemption at the option of the holder of any subordinated debt securities or at our option, if:

- a default in the payment of the principal, premium, if any, interest, rent or other obligations in respect of designated senior indebtedness occurs and is continuing beyond any applicable period of grace (called a “payment default”); or
- a default other than a payment default on any designated senior indebtedness occurs and is continuing that permits holders of designated senior indebtedness to accelerate its maturity, and the trustee receives notice of such default (called a “payment blockage notice) from us or any other person permitted to give such notice under the indenture (called a “non-payment default”).

If the trustee or any holder of the notes receives any payment or distribution of our assets in contravention of the subordination provisions on subordinated debt securities before all senior indebtedness is paid in full in cash, property or securities, including by way of set-off, or other payment satisfactory to holders of senior indebtedness, then such payment or distribution will be held in trust for the benefit of holders of senior indebtedness or their representatives to the extent necessary to make payment in full in cash or payment satisfactory to the holders of senior indebtedness of all unpaid senior indebtedness.

In the event of our bankruptcy, dissolution or reorganization, holders of senior indebtedness may receive more, ratably, and holders of subordinated debt securities may receive less, ratably, than our other creditors (including our trade creditors). This subordination will not prevent the occurrence of any event of default under the indenture.

We are not prohibited from incurring debt, including senior indebtedness, under the indenture. We may from time to time incur additional debt, including senior indebtedness.

We are obligated to pay reasonable compensation to the trustee and to indemnify the trustee against certain losses, liabilities or expenses incurred by the trustee in connection with its duties under the indenture. The trustee's claims for these payments will generally be senior to those of noteholders in respect of all funds collected or held by the trustee.

#### **Certain Definitions**

“indebtedness” means:

- (1) all indebtedness, obligations and other liabilities for borrowed money, including overdrafts, foreign exchange contracts, currency exchange agreements, interest rate protection agreements, and any loans or advances from banks, or evidenced by bonds, debentures, notes or similar instruments, other than any account payable or other accrued current liability or obligation incurred in the ordinary course of business in connection with the obtaining of materials or services;
- (2) all reimbursement obligations and other liabilities with respect to letters of credit, bank guarantees or bankers' acceptances;
- (3) all obligations and liabilities in respect of leases required in conformity with generally accepted accounting principles to be accounted for as capitalized lease obligations on our balance sheet;
- (4) all obligations and other liabilities under any lease or related document in connection with the lease of real property which provides that we are contractually obligated to purchase or cause a third party to purchase the leased property and thereby guarantee a minimum residual value of the leased property to the lessor and our obligations under the lease or related document to purchase or to cause a third party to purchase the leased property;
- (5) all obligations with respect to an interest rate or other swap, cap or collar agreement or other similar instrument or agreement or foreign currency hedge, exchange, purchase or other similar instrument or agreement;
- (6) all direct or indirect guaranties or similar agreements in respect of, and our obligations or liabilities to purchase, acquire or otherwise assure a creditor against loss in respect of, indebtedness, obligations or liabilities of others of the type described in (1) through (5) above;
- (7) any indebtedness or other obligations described in (1) through (6) above secured by any mortgage, pledge, lien or other encumbrance existing on property which is owned or held by us; and
- (8) any and all refinancings, replacements, deferrals, renewals, extensions and refundings of, or amendments, modifications or supplements to, any indebtedness, obligation or liability of the kind described in clauses (1) through (7) above.

“permitted junior securities” means (i) equity interests in the Company; or (ii) debt securities of the Company that are subordinated to all senior indebtedness and any debt securities issued in exchange for senior indebtedness to substantially the same extent as, or to a greater extent than the notes are subordinated to senior indebtedness under the indenture.

“senior indebtedness” means the principal, premium, if any, interest, including any interest accruing after bankruptcy, and rent or termination payment on or other amounts due on our current or future indebtedness, whether created, incurred, assumed, guaranteed or in effect guaranteed by us, including any deferrals, renewals, extensions, refundings, amendments, modifications or supplements to the above. However, senior indebtedness does not include:

- indebtedness that expressly provides that it shall not be senior in right of payment to subordinated debt securities or expressly provides that it is on the same basis or junior to subordinated debt securities;
- our indebtedness to any of our majority-owned subsidiaries; and
- subordinated debt securities.

#### **DESCRIPTION OF UNITS**

This description is a summary of the certain provisions of the units, and does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the unit agreement that will be filed with the SEC in connection with an offering of the units. The particular terms of any units offered by us will be described in the applicable prospectus supplement. To the extent the terms of the units described in the prospectus supplement differ from the terms set forth in this summary, the terms described in the prospectus supplement will supersede the terms described below.

We may issue units consisting of one or more of the other securities described in this prospectus or the applicable prospectus supplement in any combination in such amounts and in such numerous distinct series as we determine.

Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security.

The terms of units described in the applicable prospectus supplement may include the following:

- 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;
- a description of the terms of any unit agreement governing the units;
- a description of any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- whether the units will be issued in fully registered or global form.

#### **PLAN OF DISTRIBUTION**

We may sell the securities offered by this prospectus in any one or more of the following ways from time to time:

- directly to investors, including through a specific bidding, auction or other process;
- to investors through agents;
- directly to agents;
- to or through brokers or dealers;
- to the public through underwriting syndicates led by one or more managing underwriters;
- to one or more underwriters acting alone for resale to investors or to the public; or
- through a combination of any such methods of sale.

We may also sell the securities offered by this prospectus in “at the market offerings” within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise.

The prospectus supplement related to a particular offering will set forth the terms of the offering and the method of distribution and will identify any firms acting as underwriters, dealers or agents in connection with the offering, including:

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

Only those underwriters identified in such prospectus supplement are deemed to be underwriters in connection with the securities offered in the prospectus supplement. Any underwritten offering may be on a best efforts or a firm commitment basis.

The distribution of the securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, at varying prices determined at the time of sale, or at prices determined as the applicable prospectus supplement specifies. The securities may be sold through a rights offering, forward contracts or similar arrangements. In any distribution of subscription rights to shareholders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties.

In connection with the sale of the securities, underwriters, dealers or agents may be deemed to have received compensation from us in the form of underwriting discounts or commissions and also may receive commissions from securities purchasers for whom they may act as agent. Underwriters may sell the securities to or through dealers, and the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agent.

We will provide in the applicable prospectus supplement information regarding any underwriting discounts or other compensation that we pay to underwriters or agents in connection with the securities offering, and any discounts, concessions or commissions which underwriters allow to dealers. Underwriters, dealers and agents participating in the securities distribution may be deemed to be underwriters, and any discounts and commissions they receive and any profit they realize on the sale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act.

In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the aggregate maximum discount, commission, agency fees or other items constituting underwriting compensation to be received by any FINRA member or independent broker dealer may not exceed 8% of the gross proceeds received from the sale of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act.

Unless otherwise specified in the related prospectus supplement, each series of securities will be a new issue with no established trading market, other than shares of our common stock, which are listed on The NASDAQ Capital Market. Any common stock sold pursuant to a prospectus supplement will be listed on The NASDAQ Capital Market, subject to compliance with applicable NASDAQ continued listing requirements. We may elect to list any series on an exchange, but we are not obligated to do so. It is possible that one or more underwriters may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given as to the liquidity of, or the trading market for, any offered securities.

In connection with an offering, the underwriters may purchase and sell securities in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of securities than they are required to purchase in an offering. Stabilizing transactions consist of bids or purchases made for the purpose of preventing or retarding a decline in the market price of the securities while an offering is in progress. The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the underwriters have repurchased securities sold by or for the account of that underwriter in stabilizing or short-covering transactions. These activities by the underwriters may stabilize, maintain or otherwise affect the market price of the securities. As a result, the price of the securities may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. Underwriters may engage in over-allotment. If any underwriters create a short position in the securities in an offering in which they sell more securities than are set forth on the cover page of the applicable prospectus supplement, the underwriters may reduce that short position by purchasing the securities in the open market.

Underwriters, dealers or agents that participate in the offer of securities, or their affiliates or associates, may be customers of, have engaged or engage in transactions with, and perform services for, us or our affiliates in the ordinary course of business for which they may have received or receive customary fees and reimbursement of expenses.

## **LEGAL MATTERS**

The validity of any securities offered from time to time by this prospectus and any related prospectus supplement will be passed upon by Maslon LLP, Minneapolis, Minnesota.

## **EXPERTS**

The 2020 financial statements (not separately presented herein) incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2020 have been audited by Baker Tilly US, LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. The 2020 financial statements have been so incorporated in reliance upon the reports of Baker Tilly US, LLP given upon their authority as experts in accounting and auditing.

The 2019 financial statements (before the effects of the retrospective adjustments to the financial statement disclosures discussed in Note 14) (not separately presented herein) incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2020 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference (which report expresses an unqualified opinion and includes an explanatory paragraph relating to the substantial doubt about the Company's ability to continue as a going concern). The retrospective adjustments to the 2019 financial statements discussed in Note 14 have been audited by Baker Tilly US, LLP. The 2019 financial statements have been so incorporated in reliance upon the reports of Deloitte & Touche LLP and Baker Tilly US, LLP given upon their authority as experts in accounting and auditing.

The financial statements of Helomics Holding Corporation for the fiscal year ended December 31, 2018, as restated, incorporated by reference in this prospectus have been so incorporated in reliance on the report of Schneider Downs & Co., Inc., certified public accountants registered with the Public Company Accounting Oversight Board, as auditor for Helomics Holding Corporation prior to the acquisition by the Company.

## WHERE YOU CAN FIND MORE INFORMATION

We 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 we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Reports filed with the SEC pursuant to the Exchange Act, including proxy statements, annual and quarterly reports, and other reports filed by the Company can be inspected and copied at the public reference facilities maintained by the SEC at the Headquarters Office, 100 F Street N.E., Room 1580, Washington, D.C. 20549. The reader may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The reader can request copies of these documents upon payment of a duplicating fee by writing to the SEC. Our filings are also available on the SEC's internet site at <http://www.sec.gov> and the Company's website at [www.predictive-oncology.com](http://www.predictive-oncology.com). Information on any Company website, any subsection, page, or other subdivision of any Company website, or any website linked to by content on any Company website, is not part of this prospectus and you should not rely on that information unless that information is also in this prospectus or incorporated by reference in this prospectus.

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The documents incorporated by reference into this prospectus contain important information that you should read about us. The following documents are incorporated by reference into this prospectus:

We are allowed to incorporate by reference information contained in documents that we file with the SEC. This means that we can disclose important information to you by referring you to those documents and that the information in this prospectus is not complete and you should read the information incorporated by reference for more detail. We incorporate by reference in two ways. First, we list certain documents that we have already filed with the SEC. The information in these documents is considered part of this prospectus. Second, the information in documents that we file in the future will update and supersede the current information in, and incorporated by reference in, this prospectus.

We incorporate by reference the documents listed below and any future filings we will make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than information furnished in Current Reports on Form 8-K filed under Item 2.02 or 7.01 of such form unless such form expressly provides to the contrary):

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2020 filed on March 15, 2021;
- Current Reports on Form 8-K filed on April 27, 2021, April 7, 2021, March 23, 2021, March 15, 2021, February 22, 2021, February 12, 2021, January 29, 2021, January 26, 2021, January 21, 2021, January 12, 2021, and Amendment No. 2 to Form 8-K as filed on September 26, 2019 (as to the Restated Audited Financial Statements for 2018 and 2017 of Helomics Holding Corporation); and
- The description of the Company’s common stock filed as Exhibit 4.29 “Description of Registrant’s Securities” to the Company’s Annual Report on Form 10-K on March 15, 2021.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus but not delivered with this prospectus. You may request a copy of this information at no cost, by writing or telephoning us at the following address or telephone number:

Predictive Oncology Inc.  
Attention: Corporate Secretary  
2915 Commers Drive, Suite 900  
Eagan, Minnesota 55121  
(651) 389-4800



**PREDICTIVE ONCOLOGY INC.**

**3,837,280 Shares of Common Stock**

---

**PROSPECTUS SUPPLEMENT**

---

**H.C. Wainwright & Co.**

**May 16, 2022**