2024

Phio Pharmaceuticals Corp.

Annual Report

Dear Stockholder:

I'm excited to share with you recent highlights in Phio's continuing journey toward development of our lead INTASYL® siRNA compound, PH-762, for intratumoral treatment of cutaneous carcinomas.

Our dose escalating Phase 1b clinical study recently completed four dose escalating cohorts, and we are now enrolling what we expect to be the 5th and final cohort in the Phase 1b study. To date, we have experienced no dose limiting toxicities which otherwise could have prevented us from increasing the drug concentration of PH-762 in each subsequent cohort. Equally noteworthy has been PH-762's efficacy response rate on target lesions at the 5-week observation point in the Phase 1b study. Of the 15 patients treated thus far in the Phase 1b study, 13 presented with cutaneous squamous cell carcinoma (cSCC) as a target lesion. Through completion of the 4th cohort at the 5-week observation point, five patients had a 100% pathological response (complete cure). One patient experienced a greater than 90% response (near complete response) and one other showed >50% response (partial response). The result for one patient is pending. Of the five patients who did not respond, none experienced progression of the disease. The remaining two patients in the study included one metastatic stage 4 melanoma and one metastatic stage 4 Merkel cell. The melanoma patient did not respond to treatment; however, the Merkel cell patient did experience a partial response, notwithstanding the late stage of the disease.

Clinical study activities were accompanied by another important milestone in the drug development pathway: advancing the CMC (Chemistry, Manufacturing and Controls) program. CMC activities center on securing an-FDA compliant manufacturing site capable of producing active pharmaceutical ingredient (API) in commercial scale quantities. To that end, we recently executed a drug substance development services agreement with a reputable U.S. manufacturing site known for its expertise specializing in oligonucleotide chemistry. The site is strategically located in the Northeastern United States, accessible to Phio's technical team and with minimal tariff implications, should that become a future economic matter.

We made a few changes in our operations. As previously reported, we undertook a cost rationalization program in the 1st quarter of 2024, closing our administration and laboratory facility in Marlborough, MA. We now lease a small laboratory space at Biomedical Initiatives in Worcester, MA. We also relocated our corporate headquarters from Marlborough, Massachusetts to

King of Prussia, Pennsylvania, in the heart of the mid-Atlantic biopharma corridor. We have access to administrative space at the headquarters of Life Science Pennsylvania in King of Prussia, PA., the terms for which are economically attractive and flexible. The site is central to the majority of our employees and contracted subject matter experts. Pennsylvania also offers certain tax advantages at the state level not available in Massachusetts. Finally, we changed our outside auditor, now engaging Grant Thornton LLP, which has a strong biopharma healthcare practice presence in the greater Philadelphia area.

Regarding intellectual property, we initiated patent application filings centered on the use of our compounds in combination with other immuno-oncology compounds and expanding the number of therapeutic targets. Conversely, we also cost rationalized a number of patent applications where the cost/ benefit did not justify continued expenditures in certain geographies or where applications were deemed to have diminishing value.

During the last 12 months Phio participated in a number of prestigious medical symposiums, including presentations of posters and abstracts at ASCO, SITC and ASCGT. Most noteworthy, however, were invitations for podium presentations at the American Academy of Dermatology and Society for Investigative Dermatology, to present efficacy and safety data from our PH-762 Phase 1b study .

On the communications front, we took actions to increase our investor visibility among a broader range of target audiences. We engaged with Renmark Financial Communications, which has reach into a broad range of retail investors throughout North America. Since last November, Phio reached out to nine varied geographic targets through webcast virtual non-deal road shows. Phio also established an association with Sidoti & Company, a long established financial outreach organization targeting family office investors. The culmination of investor outreach was the assumption of research coverage in a detailed, comprehensive report from HC Wainwright Investment Bank research.

On behalf of the Phio Board of Directors and Management, I want to thank you for your continued interest and investment in our company. Our objective continues to be to drive shareholder value for you as we continue on our mission to eliminate cancer in ways that others cannot. We strive to execute our strategy effectively and efficiently through lean infrastructure and targeted deployment of funds, leveraging our patented INTASYL™ technology platform, which is designed to make our immune cells more effective at killing cancer cells.

Sincerely,

Robert Bitterman

Chairman, President and CEO

Phio Pharmaceuticals Corp.

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

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2024

Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number 001-36304

PHIO PHARMACEUTICALS CORP.

(Exact name of registrant as specified in its charter)

Delaware	**45-3215903**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

11 Apex Drive, Suite 300A PMB 2006, Marlborough, Massachusetts 01752
(Address of principal executive offices and Zip Code)

(508) 767-3861
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value, $0.0001 per share	PHIO	The Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act:

None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. ☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☒ Yes ☐ No

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). ☐ Yes ☒ No

The aggregate market value of the registrant's common stock, $0.0001 par value per share ("**Common Stock**"), held by non-affiliates of the registrant, based on the closing sale price of the Common Stock on June 28, 2024, was approximately $3.2 million. Shares of Common Stock held by each officer and director and by each person who is known to own 10% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 20, 2025 the registrant had 4,778,154 shares of Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as "intends," "believes," "anticipates," "indicates," "plans," "expects," "suggests," "may," "would," "should," "potential," "designed to," "will," "ongoing," "estimate," "forecast," "target," "predict," "could," and similar references, although not all forward-looking statements contain these words. Forward-looking statements are neither historical facts nor assurances of future performance. These statements are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results may differ materially from those indicated in the forward-looking statements as a result of a number of important factors, including, but not limited to:

- we are dependent on the success of our INTASYL™ technology, and our product candidates based on this technology, which is unproven and may never lead to approved and marketable products;
- our product candidates are in an early stage of development and we may fail, experience significant delays, never advance in clinical development or not be successful in our efforts to identify or discover additional product candidates, which may materially and adversely impact our business;
- if we experience delays or difficulties in identifying and enrolling subjects in clinical trials, it may lead to delays in generating clinical data and the receipt of necessary regulatory approvals;
- topline data may not accurately reflect or may materially differ from the complete results of a clinical trial;
- we rely upon third parties for the manufacture of the clinical supply for our product candidates;
- our business and operations would suffer in the event of computer system failures, cyberattacks or a deficiency in our cybersecurity;
- we are dependent on the patents we own and the technologies we license, and if we fail to maintain our patents or lose the right to license such technologies, our ability to develop new products would be harmed;
- we will require substantial additional funds to complete our research and development activities;
- future financing may be obtained through, and future development efforts may be paid for by, the issuance of debt or equity, which may have an adverse effect on our stockholders or may otherwise adversely affect our business;
- we may not be able to remain compliant with the continued listing requirements of The Nasdaq Capital Market; and
- the price of our Common Stock has been and may continue to be volatile.

The risks set forth above are not exhaustive and additional factors, including those identified in this Annual Report on Form 10-K under the heading "Risk Factors," for reasons described elsewhere in this Annual Report on Form 10-K and in other filings Phio Pharmaceuticals Corp. periodically makes with the Securities and Exchange Commission, could adversely affect our business and financial performance. Therefore, you should not rely unduly on any of these forward-looking statements. Forward-looking statements contained in this Annual Report on Form 10-K speak as of the date hereof and Phio Pharmaceuticals Corp. does not undertake to update any of these forward-looking statements to reflect a change in its views or events or circumstances that occur after the date of this report, except as required by law.

PART I

Unless otherwise noted, (1) the term "Phio" refers to Phio Pharmaceuticals Corp. and our subsidiary, MirImmune, LLC and (2) the terms "Company," "we," "us" and "our" refer to the ongoing business operations of Phio and MirImmune, LLC, whether conducted through Phio or MirImmune, LLC.

ITEM 1. *BUSINESS*

Overview

Phio Pharmaceuticals Corp. ("**Phio**," "**we**," "**our**" or the "**Company**") is a clinical stage biotechnology company whose proprietary INTASYL® small interfering RNA gene silencing technology is designed to make immune cells more effective in killing tumor cells. We are developing therapeutics that are designed to leverage INTASYL to precisely target specific proteins that reduce the body's ability to fight cancer, without the need for specialized formulations or drug delivery systems. We are committed to discovering and developing innovative cancer treatments for patients by creating new pathways toward a cancer-free future. The Company operates with a single operating segment and a single reporting segment – the Clinical segment.

PH-762 is an INTASYL compound designed to reduce the expression of cell death protein 1 ("PD-1"). PH-762 is currently being evaluated in a U.S. multi-center Phase 1b dose-escalating clinical trial through the intratumoral injection of PH-762 for the treatment of patients with cutaneous squamous cell carcinoma, melanoma and Merkel cell carcinoma. The trial (NCT 06014086) is designed to evaluate the safety and tolerability of neoadjuvant use of intratumorally injected PH-762, assess the tumor response, and determine the dose or dose range for continued study of PH-762 and is expected to enroll up to 30 patients. In May and December 2024, respectively, a Safety Monitoring Committee (SMC) reviewed data from the first and second dose cohorts treated with PH-762, and in both instances recommended escalation to the next dose concentration. A total of 7 patients with cutaneous carcinomas have been enrolled in dose cohorts 1 and 2. The second cohort enrolled a total of 4 patients who were diagnosed with cutaneous squamous cell carcinoma. At Day 36 (tumor excision), while patients in the first cohort had stable disease, a complete response (100% tumor clearance) was reported for 2 patients with cutaneous squamous cell carcinoma. Partial response (90% tumor clearance) was reported for 1 patient with cutaneous squamous cell carcinoma and 1 patient had stable disease, having not progressed. In this trial to date, intratumoral injection of PH-762 has been well tolerated in all enrolled patients and there were no dose-limiting toxicities or clinically relevant treatment-emergent adverse effects in the patients receiving intratumoral PH-762. The third dose cohort is fully enrolled and patients in this cohort are currently in the treatment or follow-up phase of the study. We expect to complete enrollment of all patients in the study in the third quarter of 2025.

INTASYL Technology

Overall, RNA is involved in the synthesis, regulation and expression of proteins. RNA takes the instructions from DNA and turns those instructions into proteins within the body's cells. RNA interference, or RNAi, is a biological process that inhibits the expression of genes or the production of proteins. Diseases are often related to the incorrect protein being made, excessive amounts of a specific protein being made, or the correct protein being made, but at the wrong location or time. RNAi offers a novel approach to drug development because RNAi compounds can be designed to silence any one of the thousands of human genes, many of which are considered "undruggable" by traditional therapeutics.

Our development efforts are based on our proprietary INTASYL small interfering RNA technology. It is a patented technology from which specific patented compounds are developed. INTASYL compounds are comprised of a unique sequence of chemically modified nucleotides (modified small interfering RNA, or siRNAs) that target a broad range of cell types and tissues. The compounds are designed to effectively silence genes that tumors use to evade the immune system.

Since the initial discovery of RNAi, drug delivery has been the primary challenge in developing RNAi-based therapeutics. Other siRNA technologies require cell targeting chemical conjugates which limit delivery to specific cell types. INTASYL is based on proprietary chemistry that is designed to maximize the activity and adaptability of the compound and is unique in that it can be delivered to any cell type or tissue without the need to modify the chemistry. This is designed to eliminate the need for formulations or delivery systems (for example, nanoparticles or electroporation). This provides efficient, spontaneous, cellular uptake with potent, long-lasting intracellular activity.

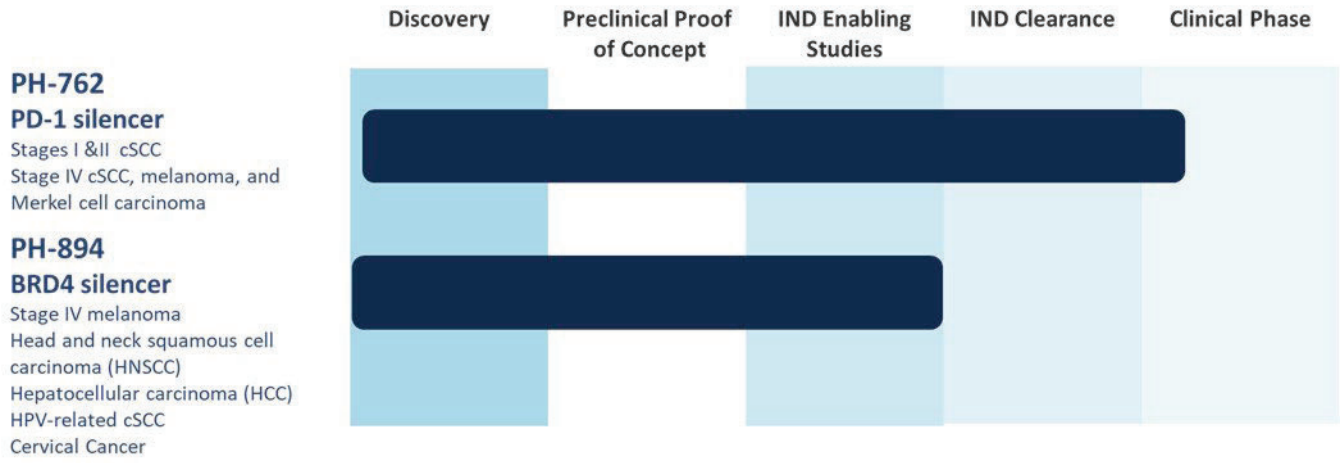
We believe that our INTASYL technology provides the following benefits including, but not limited to:

- Ability to target a broad range of cell types and tissues;
- Ability to target both intracellular and extracellular protein targets;
- Efficient uptake by target cells, avoiding the need for assisted delivery;
- Sustained, or long-term, effect *in vivo*;
- Ability to target multiple genes in one drug product;
- Favorable clinical safety profile with local administration; and
- Readily manufactured under current good manufacturing practices.

Our Pipeline

INTASYL compounds are designed to precisely target specific proteins that reduce the body's ability to fight cancer, without the need for specialized formulations or drug delivery systems, and are designed to make immune cells more effective in killing tumor cells. Our efforts are focused on developing immuno-oncology therapeutics using our INTASYL technology. We have demonstrated preclinical activity against multiple gene targets including PD-1, BRD4, CTLA-4, TIGIT and CTGF and have demonstrated preclinical efficacy in both direct-to-tumor injection and adoptive cell therapy ("**ACT**") applications with our INTASYL compounds.

The following table summarizes our product pipeline. Below we provide important information and context regarding each compound.



PH-762

PH-762 is an INTASYL compound designed to reduce the expression of PD-1. PD-1 is a protein that inhibits T cells' ability to kill cancer cells and is a clinically validated target in immunotherapy. Decreasing the expression of PD-1 can thereby increase the capacity of T cells, which protect the body from cancer cells and infections, to kill cancer cells.

Our preclinical studies have demonstrated that direct-to-tumor application of PH-762 resulted in potent anti-tumoral effects and have shown that direct-to-tumor treatment with PH-762 inhibits tumor growth in a dose dependent fashion in PD-1 responsive and refractory models. Importantly, direct-to-tumor administration of PH-762 resulted in activity against distant untreated tumors, indicative of a systemic anti-tumor response. We believe these data further support the potential for PH-762 to provide a strong local immune response without the dose immune-related adverse effects seen with systemic antibody therapy.PH-762 is currently being evaluated in a U.S. multi-center Phase 1b dose-escalating clinical trial through the intratumoral injection of PH-762 for the treatment of patients with cutaneous squamous cell carcinoma, melanoma and Merkel cell carcinoma. The trial (NCT 06014086) is designed to evaluate the safety and tolerability of neoadjuvant use of intratumorally injected PH-762, assess the tumor response, and determine the dose or dose range for continued study of PH-762 and is expected to enroll up to 30 patients. In November 2023, we announced the dosing of the first patient under a previously cleared Investigational New Drug ("**IND**") application by the U.S. Food and Drug Administration, and the trial is currently open for the continued enrollment of patients. In May and December 2024, respectively, a Safety Monitoring Committee (SMC) reviewed data from the first and second dose cohorts treated with PH-762, and in both instances recommended escalation to the next dose concentration. A total of 7 patients with cutaneous carcinomas have been enrolled in dose cohorts 1 and 2. The second cohort enrolled a total of 4 patients who were diagnosed with cutaneous squamous cell carcinoma. At Day 36 (tumor excision), while patients in the first cohort had stable disease, a complete response (100% tumor clearance) was reported for 2 patients with cutaneous squamous cell carcinoma. Partial response (90% tumor clearance) was reported for 1 patient with cutaneous squamous cell carcinoma and 1 patient had stable disease, having not progressed.

Intratumoral injection of PH-762 has been well tolerated in all patients enrolled in the trial to date. There were no dose-limiting toxicities or clinically relevant treatment-emergent adverse effects in the patients receiving intratumoral PH-762. The third dose cohort is fully enrolled and patients in this cohort are currently in the treatment or follow-up phase of the study. We expect to complete enrollment of all patients in the study in the third quarter of 2025. Due to INTASYL's ease of administration, we have shown that our compounds can easily be incorporated into current ACT manufacturing processes. In ACT, immune cells such as T cells, natural killer cells or dendritic cells are taken from a patient's or donor's blood or tumor tissue, grown in large numbers in a laboratory, and then given back to the patient to help the immune system fight cancer. By treating a patient's T cells with our INTASYL compounds while they are being grown outside the body, we believe our INTASYL compounds can improve these immune cells to make them more effective in killing cancer. Preclinical data generated in collaboration with AgonOx, Inc. ("**AgonOx**"), a private company developing a pipeline of novel immunotherapy drugs targeting key regulators of the immune response to cancer, demonstrated that treating AgonOx's "double positive" tumor infiltrating lymphocytes ("**DP TIL**") with PH-762 increased their tumor killing activity by two-fold.

In February 2021, we entered into a clinical co-development collaboration agreement (the "**Clinical Co-Development Agreement**") with AgonOx to develop a T cell-based therapy using PH-762 and AgonOx's DP TIL. Under the Clinical Co-Development Agreement, we had agreed to reimburse AgonOx up to $4 million in expenses incurred to conduct a Phase 1 clinical trial of PH-762 treated DP TIL in patients with advanced melanoma and other advanced solid tumors.

In May 2024, we terminated the Clinical Co-Development Agreement with AgonOx, which such termination was effective immediately. Effective as of the date of termination, the Clinical Co-Development Agreement and our continuing obligations and those of AgonOx thereunder were terminated in their entirety. We are no longer required to provide financial support for the development of costs incurred under the Clinical Co-Development Agreement and we are no longer entitled to future development milestones or royalty payments from AgonOx's licensing of its DP TIL technology. We agreed to pay to AgonOx all monetary obligations that accrued prior to the termination of the Clinical Co-Development Agreement. Remaining payments to be made to AgonOx as of December 31, 2024 totaled $34,320, which primarily relate to accrued obligations for patient fees and other miscellaneous costs as of the date of termination. Pursuant to the terms of the Clinical Co-Development Agreement, each of the Company and AgonOx shall be responsible for its own costs and expenses incurred in connection with the wind-down of the Phase 1 clinical trial.

Prior to the termination of the Clinical Co-Development Agreement with AgonOx, PH-762 treated DP TIL were being evaluated in a Phase 1 clinical trial in the U.S. with up to 18 patients with advanced melanoma and other advanced solid tumors by AgonOx. The primary trial objectives were to evaluate the safety and to study the potential for enhanced therapeutic benefit from the administration of PH-762 treated DP TIL. AgonOx had enrolled three patients. The first two patients were treated with DP TIL only and a third patient was treated with a combination of DP TIL and PH-762. Clinical results for the single patient who received a combination of DP TIL and PH-762 showed tumor size reductions of 65%, 100% and 81%, respectively, in three melanoma lesions.

PH-894

PH-894 is an INTASYL compound that is designed to silence BRD4, a protein that controls gene expression in both T cells and tumor cells, thereby affecting the immune system as well as the tumor. Intracellular and/or commonly considered "undruggable" targets, such as BRD4, represent a challenge for small molecule and antibody therapies. Therefore, what sets this compound apart is its dual mechanism: PH-894 suppression of BRD4 in T cells results in T cell activation, and suppression of BRD4 in tumor cells results in tumors becoming more sensitive to being killed by T cells.

Preclinical studies conducted have demonstrated that PH-894 resulted in a strong, concentration dependent and durable silencing of BRD4 in T cells and in various cancer cells. Similar to PH-762, preclinical studies have also shown that direct-to-tumor application of PH-894 resulted in potent and statistically significant anti-tumoral effects against distant untreated tumors, indicative of a systemic anti-tumor response. These preclinical data indicate that PH-894 can reprogram T cells and other cells in the tumor microenvironment to provide enhanced immunotherapeutic activity. We have completed the IND-enabling studies and are in the process of finalizing the study reports required for an IND submission with PH-894. As a result of the reprioritization to advance our clinical trial with PH-762 in the U.S., we have elected to defer the IND submission for PH-894.

Synergies With Other Therapies

Preclinical studies with our INTASYL compounds in combination with antibodies resulted in enhanced potency in vivo. The combination of INTASYL with antibodies may also increase the number of addressable drug targets. Unlike other antibody combination approaches, INTASYL can target multiple protein drug targets in a specific therapeutic dose, thereby enhancing potency while maintaining a favorable tolerability and safety profile.

We have demonstrated preclinical efficacy with INTASYL in ACT applications. In preclinical studies, INTASYL was shown to enhance the activity of ACT therapies, including with tumor infiltrating lymphocytes and natural killer cells. As demonstrated in these preclinical studies, INTASYL is easily incorporated into current ACT manufacturing processes.

Intellectual Property

INTASYL compounds have a single-stranded phosphorothioate region, a short duplex region, and contain a variety of nuclease-stabilizing and lipophilic chemical modifications that we believe combine the beneficial properties of both conventional RNAi and antisense technologies. We protect our proprietary information by means of United States and foreign patents, trademarks and copyrights. In addition, we rely upon trade secret protection and contractual arrangements to protect certain of our proprietary information and products. We have pending patent applications that relate to potential drug targets, compounds we are developing to modulate those targets, methods of making or using those compounds, and proprietary elements of our drug discovery platform.

We have also obtained rights to various patents and patent applications under licenses with third parties, which require us to pay royalties, milestone payments, or both.

The degree of patent protection for biotechnology products and processes, including ours, remains uncertain, both in the U.S. and in other important markets, because the scope of protection depends on decisions of patent offices, courts and lawmakers in these countries. There is no certainty that our existing patents or others, if obtained, will afford us substantial protection or commercial benefit. Similarly, there is no assurance that our pending patent applications or patent applications licensed from third parties will ultimately be granted as patents or that those patents that have been issued or are issued in the future will stand if they are challenged in court. We assess our license agreements on an ongoing basis and may from time to time terminate licenses to technology that we do not intend to employ in our technology platforms, or in our product discovery or development activities.

Patents and Patent Applications

We are actively seeking protection for our intellectual property and are prosecuting a number of patents and pending patent applications covering our compounds and technologies. A combined summary of these patents and patent applications is set forth below in the following table:

	Pending Applications	Issued Patents
United States	11	32
Canada	2	3
Europe	7	25
Japan	5	10
Other Markets	1	7

Our portfolio includes 77 issued patents, 69 of which cover our INTASYL technology. There are 19 patent families broadly covering both the composition and methods of use of our self-delivering INTASYL platform technology and uses of our INTASYL compounds targeting immune checkpoints for cancer therapy, as well as cellular differentiation and metabolism targets for Adoptive Cell Therapy cancer immunotherapies. The INTASYL technology patents are scheduled to expire between 2029 and 2038.

Furthermore, there are 26 patent applications, encompassing what we believe to be important new RNAi compounds and their use as therapeutics, chemical modifications of RNAi compounds that improve the compounds' suitability for therapeutic uses (including delivery) and compounds directed to specific targets (*i.e.*, that address specific disease states). The patents that may issue from these pending patent applications will, if issued, be set to expire between 2029 and 2044, not including any patent term extensions that may be afforded under the Federal Food, Drug, and Cosmetic Act ("**FFDCA**") (and the equivalent provisions in foreign jurisdictions) for any delays incurred during the regulatory approval process relating to human drug products (or processes for making or using human drug products).

Key Intellectual Property License Agreements

As we develop our own proprietary compounds, we continue to evaluate our in-licensed portfolio as well as the field for new technologies that could be in-licensed to further enhance our intellectual property portfolio and unique intellectual property position.

In September 2011, the Company entered into an agreement with Advanced RNA Technologies, LLC ("**Advirna**"), pursuant to which Advirna assigned to us its existing patent and technology rights related to the INTASYL technology in exchange for an annual maintenance fee, a one-time milestone payment upon the future issuance of the first patent with valid claims covering the assigned patent and technology rights and the issuance of shares of Common Stock equal to 5% of the Company's fully-diluted shares outstanding at the time of issuance. In 2012, we issued shares of Common Stock to Advirna equal to 5% of our fully-diluted shares outstanding at the time of issuance and paid $350,000 to Advirna upon the issuance of the first patent in 2014. Additionally, we also pay to Advirna an annual maintenance fee of $100,000 and are required to pay low single-digit royalties on any licensing revenue received by us with respect to future licensing of the assigned Advirna patent and technology rights. To date, any royalties owed to Advirna under the Advirna agreement have been minimal.

Our rights under the Advirna agreement will expire upon the later of: (i) the expiration of the last-to-expire of the "patent rights" (as defined therein) included in the Advirna agreement and (ii) the abandonment of the last-to-be abandoned of such patents, unless earlier terminated in accordance with the provisions of the Advirna agreement. Further, the Company also granted back to Advirna a license under the assigned patent and technology rights for fields of use outside human therapeutics.

Manufacturing and Supply

We do not have any manufacturing capability and therefore we currently rely on and intend to continue to rely on contract manufacturing organizations to produce our product candidates in accordance with regulatory requirements.

We currently rely on and contract with third parties for the manufacture of drug substances and drug products for use in our preclinical studies and clinical trials in accordance with regulatory requirements. We expect that we will continue to rely on and contract with third parties to manufacture our product candidates in the future.

Competition

The biotechnology and pharmaceutical industries, including the immuno-oncology field, are a constantly evolving landscape with rapidly advancing technologies and significant competition. There are a number of competitors in the immuno-oncology field including large and small pharmaceutical and biotechnology companies, academic institutions, government agencies and other private and public research organizations. Many of these companies are larger than us and have greater financial resources and human capital to develop competing products.

Government Regulation

Review and Approval of Drugs in the United States

The United States and many other countries extensively regulate the preclinical and clinical testing, manufacturing, labeling, storage, record-keeping, advertising, promotion, export, marketing and distribution of drugs and biologic products. The U.S. Food and Drug Administration ("**FDA**") regulates pharmaceutical and biologic products under the FFDCA, the Public Health Service Act and other federal statutes and regulations.

To obtain approval of our future product candidates from the FDA, we must, among other requirements, submit data supporting safety and efficacy for the intended indication as well as detailed information on the manufacture and composition of the product candidate. In most cases, this will require extensive laboratory tests, preclinical studies and clinical trials. The collection of these data, as well as the preparation of applications for review by the FDA involve significant time and expense. The FDA also may require post-marketing testing to monitor the safety and efficacy of approved products or place conditions on any approvals that could restrict the therapeutic claims and commercial applications of these products. Regulatory authorities may withdraw product approvals if we fail to comply with regulatory standards or if we encounter problems at any time following initial marketing of our products.

The first stage of the FDA approval process for a new biologic or drug involves completion of preclinical studies and the submission of the results of these studies to the FDA. These data, together with proposed clinical protocols, manufacturing information, analytical data and other information submitted to the FDA through an IND, must become effective before human clinical trials may commence. Preclinical studies generally involve evaluation of product characteristics and animal studies to assess the efficacy and safety of the product candidate. Many of these studies must be conducted in accordance with the FDA's current Good Laboratory Practices, the Animal Welfare Act, and other applicable regulations.

After the IND becomes effective, a company may commence human clinical trials. These are typically conducted in three sequential phases, but the phases may overlap. Phase 1 trials consist of testing the product candidate in a small number of patients or healthy volunteers, primarily for safety at one or more doses. Phase 2 trials, in addition to safety, evaluate the efficacy of the product candidate in a patient population somewhat larger than Phase 1 trials. Phase 3 trials typically involve additional testing for safety and clinical efficacy in an expanded population at multiple test sites. A company must submit to the FDA a clinical protocol, accompanied by the approval of the Institutional Review Board ("**IRB**") at the institutions participating in the trials, prior to commencement of each clinical trial.

To obtain FDA marketing authorization, a company must submit to the FDA the results of the preclinical and clinical testing, together with, among other things, detailed information on the manufacture and composition of the product candidate, in the form of a new drug application ("**NDA**"), or, in the case of a biologic, a biologics license application ("**BLA**").

The amount of time taken by the FDA to approve an NDA or BLA will depend upon a number of factors, including whether the product candidate has received priority review, the quality of the submission and studies presented, the potential contribution that the compound will make in improving the treatment of the disease in question and agency resources.

The FDA maintains several programs to facilitate and expedite the development and review of applications that are intended for the treatment of a serious or life-threatening disease or condition that meet certain other criteria, including Fast Track Designation, Breakthrough Designation, Priority Review, and the Accelerated Approval pathway.

We anticipate that our products will be manufactured by our strategic partners, licensees or other third parties. Before approving an NDA or BLA, the FDA will inspect the facilities at which the product is manufactured and will not approve the product unless the manufacturing facilities are in compliance with the FDA's current good manufacturing practice regulations ("**cGMP**"), which are regulations that govern the manufacture, holding and distribution of a product. Manufacturers of biologics also must comply with the FDA's general biological product standards. Our manufacturers also will be subject to regulation under the Occupational Safety and Health Act, the Nuclear Energy and Radiation Control Act, the Toxic Substance Control Act and the Resource Conservation and Recovery Act and other applicable environmental statutes. Following approval, the FDA and certain state agencies periodically inspect drug and biologic manufacturing facilities to ensure continued compliance with the cGMP. Our manufacturers will have to continue to comply with those requirements. Failure to comply with these requirements subjects the manufacturer to possible legal or regulatory action, such as suspension of manufacturing or recall or seizure of product. Adverse patient experiences with the product must be reported to the FDA and could result in the imposition of marketing restrictions through labeling changes or market removal. Product approvals may be withdrawn if compliance with regulatory requirements is not maintained or if problems concerning safety or efficacy of the product occur following approval.

The labeling, advertising, promotion, marketing and distribution of a drug or biologic product also must be in compliance with FDA and Federal Trade Commission requirements which include, among others, standards and regulations for off-label promotion, industry sponsored scientific and educational activities, promotional activities involving the internet, and direct-to-consumer advertising. We also will be subject to state and local requirements governing the manufacturing and distribution of pharmaceutical products. In addition, we will be subject to a variety of federal, state and local regulations relating to the use, handling, storage and disposal of hazardous materials, including chemicals and radioactive and biological materials. In addition, we will be subject to various laws and regulations governing laboratory practices and the experimental use of animals. In each of these areas, failure to comply with the applicable requirements could result in administrative or judicial enforcement action, which could include refusal to permit clinical trials, refusal to approve an application, withdrawal of an approval, issuance of a warning letter, product recall, product seizure, suspension of production or distribution, fines, refusals of government contracts, and restitution, disgorgement or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

In the future, we may also be subject to a variety of regulations governing clinical trials and sales of our products outside the U.S. Whether or not FDA approval has been obtained, approval of a product candidate by the comparable regulatory authorities of foreign countries and regions must be obtained prior to the commencement of marketing the product in those countries. The approval process varies from one regulatory authority to another and the time may be longer or shorter than that required for FDA approval. In the European Union, the United Kingdom, Canada and Australia, regulatory requirements and approval processes are similar, in principle, to those in the U.S.

European Union Data Laws for Review and Approval of Drugs in the European Union Including France

The collection and use of personal health data and other personal information in the European Union ("**EU**") is governed by the provisions of the General Data Protection Regulation ("**GDPR**"), which came into force in May 2018, and related implementing laws in individual EU Member States. In addition, following the United Kingdom's ("**UK**") formal departure from the EU on January 31, 2020, and the end of the transition period on December 31, 2020, the UK has become a "third country" for the purposes of EU data protection law. A "third country" is a country other than the EU Member States and the three additional European Economic Area countries (Norway, Iceland and Liechtenstein) that have adopted a national law implementing the GDPR. However, the trade and cooperation agreement ("**TCA**") entered into between the EU and UK following the end of the transition period includes a provision, whereby the transfer of personal data from the EU to the UK will not be considered as a transfer to a "third country" for a period of four months starting from the entry into force of the TCA. This period will be extended by two further months, unless the EU or the UK objects. Under the GDPR, personal data can only be transferred to third countries in compliance with specific conditions for cross-border data transfers. Appropriate safeguards are required to enable transfers of personal data from the EU Member States. This status has a number of significant practical consequences, in particular for international data transfers, competent supervisory authorities and enforcement of the GDPR. The GDPR increased responsibility and liability in relation to personal data that we process.

The GDPR imposes a number of strict obligations and restrictions on the ability to process (processing includes collection, analysis and transfer of) personal data, including health data from clinical trials and adverse event reporting. The GDPR also includes requirements relating to the consent of the individuals to whom the personal data relates, the information provided to the individuals prior to processing their personal data or personal health data, notification of data processing obligations to the national data protection authorities and the security and confidentiality of the personal data. The GDPR also prohibits the transfer of personal data to countries outside of the EU that are not considered by the EU to provide an adequate level of data protection, except if the data controller meets very specific requirements. These countries include the United States, and following the end of the six month period as laid out in the TCA, it may include the UK if no adequacy decision is given prior to this. Following the Schrems II decision of the Court of Justice of the European Union on July 16, 2020, there is uncertainty as to the general permissibility of international data transfers under the GDPR. In light of the implications of this decision we may face difficulties regarding the transfer of personal data from the EU to third countries. The European Data Protection Board has adopted draft recommendations for data controllers and processors who export personal data to third countries regarding supplementary measures to ensure compliance with the GDPR when transferring personal data outside of the EU. These recommendations were submitted to public consultation until December 21, 2020, however it is unclear when and in which form these recommendations will be published in final form.

Failure to comply with the requirements of the GDPR and the related national data protection laws of the EU Member States may result in significant monetary fines, other administrative penalties and a number of criminal offenses (punishable by uncapped fines) for organizations and in certain cases their directors and officers as well as civil liability claims from individuals whose personal data was processed. Data protection authorities from the different EU Member States may still implement certain variations, enforce the GDPR and national data protection laws differently, and introduce additional national regulations and guidelines, which adds to the complexity of processing personal data in the EU. Guidance developed at both EU level and at the national level in individual EU Member States concerning implementation and compliance practices are often updated or otherwise revised.

There is, moreover, a growing trend towards required public disclosure of clinical trial data in the EU which adds to the complexity of obligations relating to processing health data from clinical trials. Such public disclosure obligations are provided in the new EU Clinical Trials Regulation, EMA disclosure initiatives and voluntary commitments by industry. Failing to comply with these obligations could lead to government enforcement actions and significant penalties against us, harm to our reputation, and adversely impact our business and operating results. The uncertainty regarding the interplay between different regulatory frameworks, such as the Clinical Trials Regulation and the General Data Protection Regulation, further adds to the complexity that we face with regard to data protection regulation.

Environmental Compliance

Our research and development activities involve the controlled use of potentially harmful biological materials as well as hazardous materials, chemicals and various radioactive compounds. We are subject to federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specific waste products. We are also subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of bio-hazardous materials. The cost of compliance with these laws and regulations could be significant and may adversely affect capital expenditures to the extent we are required to procure expensive capital equipment to meet regulatory requirements. However, to date, compliance with such environmental laws and regulations has not had a material impact on our capital expenditures.

Human Capital Management

As of December 31, 2024, we had five full-time employees. One employee utilizes a rented lab space, and the other four employees are primarily remote. None of our employees are represented by a labor union or covered by a collective bargaining agreement, nor have we experienced any work stoppages.

We continually evaluate our business needs and weigh the use of in-house expertise and capacity with outsourced expertise and capacity. We currently outsource the functions of our accounting and finance department to a third-party consulting organization. We currently outsource substantially all preclinical and clinical trial work to third party contract research organizations and drug manufacturing contractors.

Our ability to identify, attract, retain and integrate additional qualified key personnel is also critical to our success and the competition for skilled research, product development, regulatory and technical personnel is intense. To attract qualified applicants, we offer a total rewards package consisting of base salary and cash target bonus, a comprehensive benefit package and equity compensation. Bonus opportunity and equity compensation increase as a percentage of total compensation based on level of responsibility. Actual bonus payouts are based on performance.

A majority of Phio's employees have obtained advanced degrees in their professions and we support our employees' further development with individualized development plans, mentoring, coaching, group training, and conference attendance.

Corporate Information

Effective July 5, 2024, the Company completed a 1-for-9 reverse stock split of the Company's outstanding Common Stock, including reclassifying an amount equal to the reduction in par value to additional paid-in capital. The reverse stock split did not reduce the number of authorized shares of the Company's common or preferred stock. All share and per share amounts have been adjusted to give effect to the reverse stock split.

We were incorporated in the state of Delaware in 2011 as RXi Pharmaceuticals Corporation. On November 19, 2018, we changed our name to Phio Pharmaceuticals Corp., to reflect our transition from a platform company to one that is fully committed to developing groundbreaking immuno-oncology therapeutics.

In 2023, we implemented a cost rationalization program driven by our transition from discovery research to product development. This resulted in a decision not to renew the lease for office and laboratory space in Marlborough, Massachusetts, which expired on March 31, 2024. Beginning in April 2024, we have continued operations as a remote business with a laboratory facility in Worcester, Massachusetts. Our executive offices are located at 11 Apex Drive, Suite 300A PMB 2006, Marlborough, Massachusetts 01752 and our telephone number is (508) 767-3861.

The Company's website address is *http://www.phiopharma.com*. We make available on our website, free of charge, copies of our annual reports on Form 10-K, our quarterly reports on Form 10-Q and our current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, (the "**Exchange Act**") as soon as reasonably practicable after these reports are filed electronically with, or otherwise furnished to, the Securities and Exchange Commission (the "**SEC**"). We also make available on our website the charters of our audit, compensation, nominating and governance committees, as well as our corporate code of ethics and conduct.

The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding Phio and other issuers that file electronically with the SEC. The SEC's website address is *http://www.sec.gov*. The contents of this website, and our website, are not incorporated by reference into this report and should not be considered to be part of this report.

ITEM 1A. *RISK FACTORS*

Risks Relating to Our Business and Industry

We are dependent on the success of our INTASYL technology, and our product candidates based on this platform, which is unproven and may never lead to approved and marketable products.

Our efforts have been focused on the development of product candidates based on our INTASYL technology. We have invested, and we expect to continue to invest, significant financial resources and efforts developing our product candidates. Our ability to eventually generate revenue is highly dependent on the successful development, regulatory approval and commercialization of our INTASYL product candidates by us or by collaborative partners, which may not occur for the foreseeable future, if ever, and is highly uncertain and depends on a number of factors, many of which are beyond our control. Therefore, it is difficult to accurately predict challenges we may face with our product candidates as they move through the discovery, preclinical and clinical development stages. We will spend large amounts of money developing our INTASYL technology and may never succeed in obtaining regulatory approval. In addition, our research methodology may be unsuccessful in identifying product candidates and results from preclinical studies and clinical trials may not predict the results that will be obtained in later phase trials of our product candidates or our product candidates may interact with patients in unforeseen or harmful ways that may make it impractical or impossible to manufacture, receive regulatory approval or commercialize. If we are not successful in bringing an INTASYL product candidate to market, it will negatively impact our business and financial condition and we may not be able to identify and successfully implement an alternative product development strategy.

Our product candidates are in an early stage of development and we may fail, experience significant delays, never advance clinical development or not be successful in our efforts to identify or discover additional product candidates, which may materially and adversely impact our business.

Our success depends heavily on the successful development of our product candidates, which may never occur. Our product candidates, which are in early stages of development, could be delayed, not advance into the clinic, or unexpectedly fail at any stage of development. Our ability to identify, develop and commercialize product candidates is dependent on extensive preclinical and other non-clinical tests in order to support an IND in the United States, or the equivalent with regulatory authorities in other jurisdictions, if applicable. These research programs to identify new product candidates require substantial financial and human resources, are difficult to design and can take many years to complete.

We cannot be certain of the outcome of our research studies and clinical trials and the results from these studies and clinical trials may not predict the results that will be obtained in later stages of development and we may focus our efforts and resources on product candidates that may prove to be unsuccessful. There is no assurance that we will be able to successfully develop our product candidates, and we may forego opportunities with certain product candidates or for indications that later prove to have greater commercial potential. If we are not able to successfully develop our product candidates, we may be forced to abandon or delay our development efforts, which may materially and adversely affect our business, financial condition, and results of operations.

Further, the FDA may not accept the results of our preclinical studies or clinical trials and may require us to complete additional studies or impose stricter approval conditions than we expect, which could impact the value of a particular program, the approvability or commercialization of the particular product candidate or product and our Company in general. Because of these factors, it is difficult to predict the time and cost of the development of our product candidates. Any delay or failure in obtaining required approvals may prevent us from completing our preclinical studies or clinical trials and could have a material adverse effect on our ability to initiate or commercialize drug or biologic candidate on a timely basis, or at all. Additionally, preclinical studies and clinical trials are lengthy and expensive and if our cash resources become limited, we may not be able to commence, continue or complete such preclinical studies or clinical trials.

If we experience delays or difficulties in identifying and enrolling patients in clinical trials, it may lead to delays in generating clinical data and the receipt of necessary regulatory approvals.

Clinical trials of a new drug or biologic candidate require the enrollment of a sufficient number of patients, including patients who are suffering from the disease or condition the drug or biologic candidate is intended to treat and who meet other eligibility criteria. Rates of patient enrollment are affected by many factors, and delays in patient enrollment can result in increased costs and longer development times, which could materially and adversely impact our business and financial condition. We may experience slower than expected patient enrollment in our current or future clinical trials. In addition, clinical trials for drug or biologic candidates that treat the same indications as our product candidates may result in patients who would otherwise be eligible for our clinical trials instead enrolling in clinical trials for other drug or biologic candidates.

Topline data may not accurately reflect or may materially differ from the complete results of a clinical trial.

From time to time, we may publicly disclose topline or interim data from our clinical trials based on a preliminary analysis of then-available data, of which the results, related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. Preliminary observations made in early stages of clinical trials are not necessarily indicative of results that will be obtained when full data sets are analyzed or in subsequent clinical trials. As a result, topline data may differ from future results from the same studies or different conclusions may qualify such results once additional data has been received and evaluated. Topline or interim data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data that we publicly disclose and should be viewed with caution until the complete data is available. If the topline data we report differs from future analysis of results, or if others, including regulatory authorities, disagree with the conclusions reached, our business, financial condition, and results of operations could be materially and adversely affected.

We rely upon third-parties to conduct our clinical trials and other studies for our product candidates, and if they do not successfully fulfill their obligations, the development of our product candidates may be materially impacted.

We rely upon third-party CROs, medical institutions, collaborators, clinical investigators, consultants and other third-parties to support and conduct our clinical trials and we rely on these third-party CROs for the execution of certain of our preclinical studies and expect to continue to do so. Because we rely on these third-parties, we cannot necessarily control the timing, quality of work or amount of resources that our contract partners will devote to these activities. We, our collaborators, and our CROs are responsible for ensuring that our clinical trials are conducted in accordance with applicable regulations and protocols. If we, our collaborators, or our CROs fail to comply with these applicable regulations, the FDA may not accept these data and may require us to complete additional preclinical studies and clinical trials, which could result in significant additional costs and delays to us.

As we only control certain aspects of their activities, we cannot guarantee that these partners will fulfill their obligations to us under these arrangements. If these third-parties do not successfully carry out their responsibilities, as well as within a timely fashion, our clinical trials and preclinical studies may be delayed, unsuccessful or otherwise adversely affected. If we have to enter into alternative arrangements it may delay or adversely affect the development of our product candidates and our business operations. This could be difficult, costly or impossible, and our preclinical studies or clinical trials may need to be extended, delayed, terminated or repeated, and we may not be able to obtain regulatory approval in a timely fashion, or at all, for the applicable drug or biologic candidate, or to commercialize such drug or biologic candidate being tested in such studies or trials.

Changes in U.S. and international trade policies may adversely impact our business and operating results.

From time to time, proposals are made to significantly change existing trade agreements and relationships between the U.S. and other countries. In recent years, the U.S. government has implemented substantial changes to U.S. trade policies, including import restrictions, increased import tariffs and changes in U.S. participation in multilateral trade agreements. Because some of our vendors, manufactures and suppliers are located in other foreign countries, we are exposed to the possibility of product supply disruption and increased costs in the event of changes in the policies, laws, rules and regulations of the United States or foreign governments, as well as political unrest or unstable economic conditions in foreign countries. The U.S. government has indicated its intent to adopt a new approach to trade policy and in some cases to renegotiate, or potentially terminate, certain existing bilateral or multi-lateral trade agreements. For example, on February 1, 2025, President Donald Trump signed executive orders imposing a 25% tariff on certain imports from Mexico and Canada, and a 10% tariff on certain imports from China, which were to take effect on February 4, 2025. President Donald Trump also announced a plan for reciprocal tariffs which are to take effect on April 2. Our supply may in the future be subject to these tariffs, which could increase our manufacturing costs and could make our products, if successfully developed and approved, less competitive than those of our competitors whose inputs are not subject to these tariffs. We may otherwise experience supply disruptions or delays, and our suppliers may not continue to provide us with clinical supply in our required quantities, to our required specifications and quality levels or at attractive prices. Such disruption could have adverse effects on the development of our product candidates and our business operations.

A number of different factors could prevent us from advancing into clinical development, obtaining regulatory approval, and ultimately commercializing our product candidates on a timely basis, or at all.

Before obtaining regulatory approval for the sale of any drug or biologic candidate, we must conduct extensive preclinical tests and successful clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Before human clinical trials may commence, we must submit to the FDA an IND. An IND involves the completion of preclinical studies and the submission of the results, together with proposed clinical protocols, manufacturing information, analytical data and other data in the IND submission. The FDA may require us to complete additional preclinical studies or disagree with our clinical trial study design. Also, animal models may not exist for some of the disease areas we choose to develop our product candidates for. As a result, our clinical trials may be delayed or we may be required to incur more expense than we anticipated.

Clinical trials require the review and oversight of IRBs, which approve and continually review clinical investigations and protect the rights and welfare of patients. Before our clinical trials can begin, we must also submit to the FDA a clinical protocol accompanied by the approval of the IRB at the institution(s) participating in the clinical trial. An inability or delay in obtaining IRB approval could prevent or delay the initiation and completion of our clinical trials, and the FDA may decide not to consider any data or information derived from a clinical investigation not subject to initial and continuing IRB review and approval.

Preclinical studies and clinical trials are lengthy and expensive, and their outcome is highly uncertain. Historical failure rates are high due to a number of factors, such as safety and efficacy of drug or biologic candidates. We, our collaborators, the FDA, or an IRB may suspend clinical trials of a drug or biologic candidate at any time for various reasons, including if we or they believe the patients participating in such trials are being exposed to unacceptable health risks. Among other reasons, adverse side effects of a drug or biologic candidate on patients in a clinical trial could result in the FDA suspending or terminating the clinical trial and refusing to approve a particular drug or biologic candidate for any or all indications of use.

An additional number of factors could affect the timing, cost or outcome of our drug development efforts, including the following:

- Delays in filing or acceptance of INDs, NDAs, or BLA for our product candidates;
- Difficulty in securing centers to conduct clinical trials;
- Conditions imposed on us by the FDA regarding the scope or design of our clinical trials;
- Problems in engaging IRBs to oversee trials or problems in obtaining or maintaining IRB approval of studies;
- Difficulty in enrolling patients in conformity with required protocols or projected timelines;
- Third-party contractors failing to comply with regulatory requirements or to meet their contractual obligations to us in a timely manner;
- Our drug or biologic candidates having unexpected and different chemical and pharmacological properties in humans than in laboratory testing and interacting with human biological systems in unforeseen, ineffective or harmful ways;
- The need to suspend or terminate clinical trials, for example, if the participants are being exposed to unacceptable health risks;
- Insufficient or inadequate supply or quality of our product candidates or other necessary materials necessary to conduct our clinical trials;
- Effects of our product candidates not having the desired effects or including undesirable side effects or the product candidates having other unexpected characteristics;
- The cost of our clinical trials being greater than we anticipate;
- Negative or inconclusive results from our clinical trials or the clinical trials of others for similar product candidates or inability to generate statistically significant data confirming the efficacy of the product being tested;
- Changes in the FDA’s requirements or expectations for testing during the course of that testing;
- Reallocation of our limited financial and other resources to other clinical programs; and
- Adverse results obtained by other companies developing similar drugs.

A failure of any preclinical study or clinical trial can occur at any stage of testing. Any delay or failure in obtaining required approvals may prevent us from completing our preclinical studies or clinical trials and could have a material adverse effect on our ability to initiate or commercialize any drug or biologic candidate on a timely basis, or at all. Additionally, preclinical studies and clinical trials are lengthy and expensive and if our cash resources become limited we may not be able to commence, continue or complete our clinical trials, which could have a material impact on our business, financial condition, and results of operations.

Disruptions at the FDA, including due to a reduction in the FDA's workforce and/or inadequate funding for the FDA, could prevent the FDA from performing normal functions on which our business relies, which could negatively impact our business.

The ability of the FDA to review and approve new products or review other regulatory submissions can be affected by a variety of factors, including statutory, regulatory and policy changes, inadequate government budget and funding levels, a reduction in the FDA's workforce and its ability to hire and retain key personnel. Disruptions at the FDA and other agencies may also increase the time to meet with and receive agency feedback, review and/or approve our submissions, conduct inspections, issue regulatory guidance, or take other actions that facilitate the development, approval and marketing of regulated products, which would adversely affect our business. In addition, government proposals to reduce or eliminate budgetary deficits may include reduced allocations to the FDA and other related government agencies. For example, the current President Trump administration (the "**Trump Administration**") recently established the Department of Government Efficiency, which implemented a federal government hiring freeze and announced certain additional efforts to reduce federal government employee headcount and the size of the federal government. It is unclear how these executive actions or other potential actions by the Trump Administration or other parts of the federal government will impact the FDA or other regulatory authorities that oversee our business. These budgetary pressures may reduce the FDA's ability to perform its responsibilities. If a significant reduction in the FDA's workforce occurs, the FDA's budget is significantly reduced or a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions or take other actions critical to the development or marketing of our products, if approved, which could have a material adverse effect on our business.

We are subject to significant competition and may not be able to compete successfully.

The biotechnology and pharmaceutical industries are intensely competitive, contain a high degree of risk and there are many other companies actively engaged in the discovery, development and commercialization of products that may compete with our product candidates. Many of our competitors have substantially greater experience and greater research and development capabilities, staffing, financial, manufacturing, marketing, technical and other resources than us, and we may not be able to successfully compete with them. These companies include large and small pharmaceutical and biotechnology companies, academic institutions, government agencies and other private and public research organizations.

In addition, even if we are successful in developing our product candidates, in order to compete successfully we may need to be first to market or to demonstrate that our products are superior to therapies based on different technologies. Some of our competitors may develop and commercialize products that are introduced to market earlier than our product candidates or on a more cost-effective basis. A number of our competitors have already commenced clinical testing of product candidates and may be more advanced than we are in the process of developing such product candidates. If we are not first to market or are unable to demonstrate superiority, on a cost-effective basis or otherwise, any products for which we are able to obtain approval may not be successful.

We also face competition acquiring technologies complementary to our INTASYL technology. Further, we may face competition with respect to product efficacy and safety, ease of use and adaptability to modes of administration, acceptance by physicians, timing and scope of regulatory approvals, reimbursement coverage, price and patent position, including dominant patent positions of others. If we are not able to successfully obtain regulatory approval or commercialize our product candidates, we may not be able to establish market share and generate revenues from our technology.

If we fail to attract, hire and retain qualified personnel, we may not be able to design, develop, market or sell our products or successfully manage our business.

We have a small core management team and are particularly dependent on them. Accordingly, our business prospects are dependent on the principal members of our executive team, the loss of whose services could make it difficult for us to manage our business successfully and achieve our business objectives. While we have entered into an employment agreement with our Chief Executive Officer, he could leave at any time, in addition to our other employees, who are all "at will" employees. Our ability to identify, attract, retain and integrate additional qualified key personnel is also critical to our success. Competition for skilled research, product development, regulatory and technical personnel is intense, and we may not be able to recruit and retain the personnel we need. The loss of the services of any key personnel, or our inability to hire new personnel with the requisite skills, could restrict our ability to develop our product candidates.

We are subject to potential liabilities from clinical testing and future product liability claims.

The use of our product candidates in clinical trials and, if any of our product candidates receive regulatory approval, the sale of our product candidates for commercial use exposes us to the risk of product liability claims. Product liability claims may be brought against us by patients, healthcare providers, consumers or others who come into contact with our product candidates or approved products. We have, and will seek to obtain, clinical trial insurance for current and any future clinical trials that we conduct, as well as liability insurance for any products that we market. However, there is no assurance that we will be able to obtain insurance in the amounts we seek, or at all. We anticipate that licensees who develop our products will carry liability insurance covering the clinical testing of our product candidates and the marketing of those product candidates, if approved. There is no assurance, however, that any insurance maintained by us or our licensees will prove adequate in the event of a claim against us. If we cannot successfully defend against product liability claims, we could incur substantial liabilities. Even if claims asserted against us are unsuccessful, they may divert management's attention from our operations and we may have to incur substantial costs to defend such claims. Any of these outcomes could materially impact our business and financial condition.

We rely upon third parties for the manufacture of the clinical supply for our product candidates.

We rely on third-party suppliers and manufacturers to provide us with the materials and services to manufacture our product candidates for certain preclinical studies and for our clinical trials, and we expect that we will continue to rely on third-party manufacturers for the supply of our product candidates in the future. We have limited in-house manufacturing capabilities and resources, and we do not own or lease manufacturing facilities or have our own supply source for the required materials to manufacture our compounds. Further, we have limited cGMP manufacturing capabilities and limited experience scaling up of clinical supply as our internal capabilities are limited to small-scale production of research material. Accordingly, we are dependent upon third-party suppliers and contract manufacturers to obtain supplies and manufacture our product candidates and we will need to either develop, contract for, or otherwise arrange for the necessary manufacturers for these supplies.

There are a limited number of manufacturers that make oligonucleotides and we currently contract with multiple manufacturers for the supply of our product candidates to reduce the risk of supply interruption or availability. However, there is no assurance that our supply of our product candidates will not be limited, interrupted, of satisfactory quality or be available at acceptable prices. For example, constraints on the supply chain and availability of resources have resulted in delays and shortages at manufacturing facilities. While we have engaged with multiple manufacturers for the supply of our product candidates in order to mitigate the impact of the loss or delay of any one manufacturer, there can be no assurance that our efforts will be successful. If for any reason we are unable to obtain the clinical supply of our product candidates from our current manufacturers, we would have to seek to contract with another major manufacturer. If we or any of these manufacturers are unable or unwilling to increase its manufacturing capacity or if we are unable to establish alternative arrangements on a timely basis or on acceptable terms, the development and commercialization of such an approved product may be delayed or there may be a shortage in supply. Any inability to manufacture our product candidates or future approved drugs in sufficient quantities when needed would seriously harm our business.

Approval of any of our product candidates will not occur unless the manufacturing facilities are in compliance with the FDA's cGMP regulations in order to ensure that drug products are safe and that they consistently meet applicable requirements and specifications. These requirements are enforced by the FDA through periodic inspections of the manufacturing facilities and can result in enforcement action, such as warning letters, fines and suspension of production if they are found not to be in compliance with the regulations. If our suppliers or manufacturers do not comply with the FDA regulations for our product candidates, we may experience delays in timing or supply, be forced to manufacture our product candidates ourselves or seek to contract with another supplier or manufacturer. If we are required to switch suppliers or manufacturers, we will be required to verify that the new supplier or manufacturer maintains facilities and processes in line with cGMP regulations, which may result in delays, additional expenses, and may have a material adverse effect on our ability to complete the development of our product candidates.

Unstable market and economic conditions, including elevated and sustained inflation, may have serious adverse consequences on our business, financial condition and stock price.

As has been widely reported, we are currently operating in a period of economic uncertainty and capital markets disruption, which has been significantly impacted by domestic and global monetary and fiscal policy, geopolitical instability, ongoing military conflicts, and high domestic and global inflation. The U.S. Federal Reserve and other central banks may be unable to contain inflation through more restrictive monetary policy and inflation may increase or continue for a prolonged period of time. Inflationary factors, such as increases in the cost of clinical supplies, interest rates, overhead costs and transportation costs may adversely affect our operating results. We continue to monitor these events and the potential impact on our business. Although we do not believe that inflation has had a material impact on our financial position or results of operations to date, we may be adversely affected in the future due to domestic and global monetary and fiscal policy, supply chain constraints, consequences associated with the coronavirus pandemic and the ongoing military conflicts, and such factors may lead to increases in the cost of manufacturing our product candidates and delays in initiating studies. In addition, global credit and financial markets have experienced extreme volatility and disruptions in the past several years and the foregoing factors have led to and may continue to cause diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, uncertainty about economic stability and increased inflation.

There can be no assurance that deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, or do not improve, it may make any necessary debt or equity financings more difficult, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers, manufacturers and other partners may not survive these difficult economic times, which could directly affect our ability to attain our operating goals.

Our business and operations would suffer in the event of computer system failures, cyberattacks or a deficiency in our cybersecurity.

Despite the implementation of security measures, our internal computer systems and those of our third-party contractors and collaborators are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures, cyberattacks or cyber-intrusions over the Internet, attachments to emails, persons inside our organization, or persons with access to systems inside our organization. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. Such an event could cause interruption of our operations. As part of our business, we and our third-party contractors and collaborators maintain large amounts of confidential information, including non-public personal information on patients and our employees. Breaches in security could result in the loss or misuse of this information, which could, in turn, result in potential regulatory actions or litigation, including material claims for damages, interruption to our operations, damage to our reputation or otherwise have a material adverse effect on our business, financial condition and operating results. We expect to have appropriate information security policies and systems in place in order to prevent unauthorized use or disclosure of confidential information, including non-public personal information, but there can be no assurance that such use or disclosure will not occur.

Risks Relating to Our Intellectual Property

We may be involved in litigation to protect our patents and intellectual property rights and our ability to protect our patents and intellectual property rights is uncertain and may subject us to potential liabilities.

We have filed patent applications, have pending patents that we have licensed and those that we own and expect to continue to file patent applications. We may also need to license patents and patent applications from research sponsored by us with third-parties. There is no assurance that these applications will result in any issued patents or that those patents would withstand possible legal challenges or protect our technologies from competition. The patent granting authorities have upheld stringent standards for the RNAi patents that have been prosecuted so far and, consequently, pending patents that we have licensed and those that we own may continue to experience long and difficult prosecution challenges and may ultimately issue with much narrower claims than those in the pending applications.

In addition, others may challenge the patents or patent applications that we currently license or may license in the future or that we own and, as a result, these patents could be narrowed, invalidated or rendered unenforceable, which would negatively affect our ability to exclude others from using the technologies described in these patents. There is no assurance that these patents or other pending applications or issued patents we license or that we own will withstand possible legal challenges. Moreover, the laws of some foreign countries may not protect our proprietary rights to the same extent as do the laws of the United States. Our efforts to enforce and maintain our intellectual property rights may not be successful and may result in substantial costs and diversion of management and key employees' time. If we are unable to defend our licensed or owned intellectual property, it may have a material and adverse impact on our business, results of operations and financial condition.

Third-parties may claim that we infringe their patents, which may result in substantial liabilities and prevent us from pursuing the development of our product candidates.

Because the field we operate in is constantly changing and patent applications are still being processed by government patent offices around the world, there is a great deal of uncertainty about which patents will issue, when, to whom and with what claims. Although we are not aware of any blocking patents or other proprietary rights, it is likely that there will be significant litigation and other proceedings, such as interference and opposition proceedings in various patent offices, relating to patent rights in the field we operate. Further, many patents in the fields we are pursuing have already been exclusively licensed to third-parties, including our competitors. It is possible that we may become a party to such proceedings.

If a claim should be brought against us and we are found to infringe the rights of others, we may be required to pay substantial damages, be forced to stop the development of product candidates affected by the claim, and/or establish licenses or similar arrangements. Furthermore, any such licenses may not be available when needed, on commercially reasonable terms or at all. Whether an infringement claim is successful or not, the cost of these proceedings may be significant and divert the attention of management and other key employees. As a result, we cannot be certain that our patents or those we license will not be challenged by others, which could have a material adverse effect on our business, results of operations and financial condition.

We are dependent on the patents we own and the technologies we license, and if we fail to maintain our patents or lose the right to license such technologies, our ability to develop new products would be harmed.

Our success depends upon our ability to obtain and maintain intellectual property protection for our product candidates. Any patents issued to us or our licensors may not provide us with any competitive advantages, and there is no assurance that the patents of others will not have an adverse effect on our ability to do business or to continue to develop our product candidates freely. Pending patents that we have licensed and those that we own may continue to experience long and difficult prosecution challenges and may ultimately issue with much narrower claims than those in the pending applications. Because of the extensive time required for development, testing, and regulatory review of a potential product, it is possible that, before any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thus reducing any advantage provided by the patent. Further, even if our rights are valid, enforceable and broad in scope, competitors may develop products based on technology that is not covered by our licenses or patents or patent applications that we own. If we are unable to derive value from our licensed or owned intellectual property, it may have a material and adverse impact on our business, results of operations and financial condition.

Third parties may hold or seek to obtain additional patents that could make it more difficult or impossible for us to develop products based on our technologies without obtaining a license to such patents, which licenses may not be available on attractive terms, or at all. If there is any dispute or issue of non-performance between us and the respective licensing partner regarding the rights or obligations under the license agreements, the ability to develop and commercialize the affected product candidate may be adversely affected. Moreover, if any of our existing licenses are terminated, the development of the product candidates contemplated by the licenses could be delayed or terminated and we may not be able to negotiate additional licenses on acceptable terms, if at all, which would have a material adverse effect on our business. To the extent that we are required and are able to obtain multiple licenses from third parties to develop or commercialize a product candidate, the aggregate licensing fees and milestones and royalty payments made to these parties may materially reduce our economic returns or even cause us to abandon development or commercialization of a product candidate.

Risks Relating to Our Financial Condition

We will require substantial additional funds to complete our research and development activities.

We have used substantial funds to develop our product candidates and will need to raise additional substantial funds to continue our drug development efforts and support our operations. Our future capital requirements and the period for which our existing resources are able to support our operations may vary significantly from what we expect. We anticipate that we will need to raise substantial amounts of money to fund a variety of future activities integral to the development of our business, which may include but is not limited to the following:

- To conduct research and development to successfully develop our product candidates;
- To obtain regulatory approval for our product candidates;
- To file and prosecute patent applications and to defend and assess patents to protect our technologies;
- To retain qualified employees, particularly in light of intense competition for qualified personnel;
- To manufacture products ourselves or through third parties;
- To market our products, either through building our own sales and distribution capabilities or relying on third parties; and
- To acquire new technologies, licenses or products.

We are dependent on obtaining funding from third parties, such as proceeds from the issuance of debt, sale of equity or strategic opportunities, in order to maintain our operations. We cannot assure you that additional financing will be available to us on acceptable terms, or at all. If we cannot, or are limited in the ability to, issue equity, incur debt or enter into strategic collaborations, we may be unable to fund the discovery and development of our product candidates or improve our technology. If we fail to obtain additional funding when needed, we may ultimately be unable to continue to develop and potentially commercialize our product candidates, and we may be forced to scale back or terminate our operations or seek to merge with or be acquired by another company.

We have a history of net losses, and we expect to continue to incur net losses for the foreseeable future and may not achieve or maintain profitability.

We have generated significant losses to date, have not generated any product revenue and may not generate product revenue in the foreseeable future, or ever. We expect to incur significant operating losses as we advance our product candidates through drug development and the regulatory process. Our ability to achieve profitability, if ever, will depend on, among other things, us or our collaborators, obtaining regulatory approvals and successfully commercializing our drug or biologic candidates. Even if we are able to successfully commercialize our drug or biologic candidates, we may not be able to achieve or sustain profitability, which could have a material adverse effect on our business, financial condition and results of operations.

Future financing may be obtained through, and future development efforts may be paid for by, the issuance of debt or equity, which may have an adverse effect on our stockholders or may otherwise adversely affect our business.

If we raise funds through the issuance of debt or equity, any debt securities or preferred stock issued will have rights, preferences and privileges senior to those of holders of our Common Stock in the event of a liquidation. In such event, there is a possibility that once all senior claims are settled, there may be no assets remaining to pay out to the holders of Common Stock. The terms of debt securities may also impose restrictions on our operations, which may include limiting our ability to incur additional indebtedness, to pay dividends on or repurchase our capital stock, or to make certain acquisitions or investments. In addition, we may be subject to covenants requiring us to satisfy certain financial tests and ratios, and our ability to satisfy such covenants may be affected by events outside of our control. If we raise funds through the issuance of additional equity, whether through private placements or public offerings, such an issuance would dilute current stockholders' ownership in us, perhaps substantially. The issuance of a significant amount of shares of Common Stock could cause the market price of our Common Stock to decline or become highly volatile.

We expect to continue to incur significant research and development expenses, which may make it difficult for us to attain profitability, and may lead to uncertainty as to our ability to continue as a going concern.

We expend substantial funds to develop our technologies, and additional substantial funds will be required for further research and development, including preclinical testing and clinical trials of any product candidates, and to manufacture and market any products that are approved for commercial sale. Because the successful development of our products is uncertain, we are unable to precisely estimate the actual funds we will require to develop and potentially commercialize them. In addition, we may not be able to generate enough revenue, even if we are able to commercialize any of our product candidates, to become profitable.

Changes in our operating plans, our existing and anticipated working capital needs, the acceleration or modification of our expansion plans, increased expenses, potential acquisitions or other events will all affect our ability to continue as a going concern. We have limited cash resources, have reported recurring losses from operations since inception, negative operating cashflows and have not yet received product revenues. These factors raise substantial doubt regarding our ability to continue as a going concern, and the Company's current cash resources may not provide sufficient capital to fund operations for at least the next 12 months from the date of the release of the consolidated financial statements included elsewhere in this Annual Report. The continuation of the Company as a going concern depends upon our ability to raise additional capital through equity offerings, debt offerings and/or strategic opportunities to fund our operations. There can be no assurance that we will be successful in accomplishing these plans in order to continue as a going concern. Any such inability to continue as a going concern may result in our common stockholders losing their entire investment. There is no guarantee that we will become profitable or secure additional financing.

Our ability to utilize net operating loss carryforwards and other tax benefits may be limited.

We have historically incurred net losses and may never achieve or sustain profitability. Under the Internal Revenue Code of 1986, as amended (the "**Code**"), a corporation is generally allowed a deduction for net operating losses carried forward from a prior taxable year. Under that provision, we can carry forward our net operating losses to offset our future taxable income, if any, until such net operating losses are used or expire. Net operating losses incurred in tax years beginning after December 31, 2017, may be carried forward indefinitely, but are limited to offsetting up to 80% of future taxable income. Certain net operating loss carryforwards predating December 31, 2017, could expire unused before offsetting potential future income tax liabilities.

Additionally, an ownership change, as defined by Section 382 and 383 of the Code, results from transactions increasing the ownership of certain stockholders or public groups in the stock of a corporation by more than 50% over a three-year period. Pursuant to Section 382 and 383 of the code, if the Company has experienced a change of control at any time since inception, utilization of the Company's net operating loss or tax credit carryforwards then in existence would be subject to an annual limitation. Any limitation may result in expiration of a portion of the net operating loss or tax credit carryforwards before utilization.

We have completed multiple assessments of the available net operating loss and tax credit carryforwards under Sections 382 and 383 of the Code through the year ended December 31, 2024 and determined that we underwent multiple ownership changes during the period from inception to 2024. As a result, our net operating losses and tax credit carryforwards are subject to substantial annual limitations under Sections 382 and 383 of the Code due to these ownership changes. The Company has adjusted its net operating loss and tax credit carryforwards to address the impact of the ownership changes. We assess the need to conduct an ownership change analysis to determine whether any changes occurred in ownership that would limit net operating loss or tax credit carryforwards on an annual basis. We may experience ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which may be outside of our control. If an ownership change occurs and our ability to use our net operating loss and tax credit carryforwards is materially limited, it could harm our future operating results by effectively increasing our future tax obligations.

Risks Relating to Our Securities

The price of our Common Stock has been and may continue to be volatile.

Our stock price has historically fluctuated widely and is likely to continue to be volatile. Because we are at an early stage of development and in the absence of product revenue as a measure of operating performance, we anticipate that the market price for our Common Stock may be influenced by, but not limited to, such factors as:

- Announcements regarding the initiation or completion, and the results of preclinical studies and clinical trials of our product candidates;
- Announcements regarding clinical trial results or development announcements concerning our competitors' product candidates;
- Regulatory or legal developments in the United States;
- The recruitment or departure of key personnel;
- The issuance of competitive patents or disallowance or loss of our patent rights;
- Our ability to raise additional capital and the terms on which additional capital is raised;
- To acquire new technologies, licenses or products; and
- General economic, industry and market conditions.

The stock market, in general, and the markets for drug delivery and pharmaceutical company stocks, in particular, have experienced extreme volatility, that has often been unrelated to the operating performance of these particular companies. These broad market fluctuations may adversely affect the trading price of our Common Stock and could result in the loss of all or part of your investment. In addition, the limited trading volume of our stock may contribute to its volatility. Moreover, if we are unable to trade above $1.00 for a certain period of time, or fulfill the other continued listing standards, The Nasdaq Stock Market ("**Nasdaq**") may delist our Common Stock. Delisting our Common Stock from Nasdaq would adversely affect our trading volume and would likely negatively impact our trading price.

We may not be able to maintain compliance with the continued listing requirements of The Nasdaq Capital Market.

To maintain continued listing on The Nasdaq Capital Market, we must satisfy minimum financial and other requirements. For example, Nasdaq Listing Rule 5550(b)(1) requires companies listed on the Nasdaq Capital Market to maintain stockholders' equity of at least $2.5 million for continued listing. As of December 31, 2024, our stockholders' equity was $4.7 million and there can be no assurance that we will be able to maintain or increase our stockholders' equity in the future. If our stockholders' equity falls below $2.5 million, as a result of operating losses or for other reasons, or if we are unable to demonstrate to Nasdaq's satisfaction that we subsequently regained compliance with this requirement, Nasdaq will notify us of such non-compliance. If we receive such notice from Nasdaq, in accordance with the Nasdaq Listing Rules, we will have 45 calendar days from the date of the notification to submit a plan to regain compliance with Nasdaq Listing Rule 5550(b)(1). If our compliance plan is accepted, we may be granted up to 180 calendar days from the date of the initial notification to evidence compliance. If our compliance plan is not accepted or we are otherwise unable to evidence compliance within Nasdaq's allotted timeframe, Nasdaq may take steps to delist our Common Stock.

In addition, Nasdaq Listing Rule 5550(a)(2) requires a minimum bid price of at least $1.00 per share, and Nasdaq Listing Rule 5810(c)(3)(A) provides that a failure to meet the minimum bid price requirement exists if the deficiency continues for a period of 30 consecutive business days. Although the Company is currently in compliance with this requirement, there can be no assurance that we will be able to maintain compliance. We have in the past effected reverse stock splits of our Common Stock in order to regain or maintain compliance with this requirement (most recently on July 5, 2024). Nasdaq Listing Rule 5810(c)(3)(A)(iv) states that any listed company that fails to meet this requirement and has effected a reverse stock split over the prior one-year period, or has effected one or more reverse stock splits over the prior two-year period with a cumulative ratio of 250 shares or more to one, may not be eligible for an automatic 180-day grace compliance period and the Nasdaq Listing Qualifications Department is obligated to immediately issue a delisting determination. Therefore, if we were to fall out of compliance with the minimum bid price requirement prior to July 5, 2025, we would not be able to effect a reverse stock split and would immediately be issued a delisting determination.

Such a delisting would have an adverse effect on the market liquidity of our securities, decrease the market price of our securities, result in the potential loss of confidence by investors, suppliers, customers and employees and fewer business development opportunities, and adversely affect our ability to obtain financing for the continuation of our operations.

Our Board of Directors has the authority to issue shares of "blank check" preferred stock and the terms of the preferred stock may reduce the value of our Common Stock.

We are authorized to issue up to 10,000,000 shares of preferred stock in one or more series. Our Board of Directors (the "**Board**") may determine the terms of future preferred stock offerings without further action by our stockholders. The issuance of our preferred stock could affect the rights of existing stockholders or reduce the value of our outstanding preferred stock or Common Stock. In particular, rights granted to holders of certain series of preferred stock may include voting rights, preferences as to dividends and liquidation, conversion and redemption rights and restrictions on our ability to merge with or sell our assets to a third party.

We may acquire other businesses or form joint ventures that may be unsuccessful and could dilute your ownership interest in the Company.

As part of our business strategy, we may pursue future acquisitions of other complementary businesses and technology licensing arrangements. We also may pursue strategic alliances. We have limited experience with respect to acquiring other companies and with respect to the formation of collaborations, strategic alliances and joint ventures. We may not be able to integrate such acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. We also could experience adverse effects on our reported results of operations from acquisition related charges, amortization of acquired technology and other intangibles and impairment charges relating to write-offs of goodwill and other intangible assets from time to time following the acquisition. Integration of an acquired company requires management resources that otherwise would be available for ongoing development of our existing business. We may not realize the anticipated benefits of any acquisition, technology license or strategic alliance. There is no assurance that we will be successful in developing such assets, and a failure to successfully develop such assets could diminish our prospects.

To finance future acquisitions, we may choose to issue shares of our Common Stock or preferred stock as consideration, which would dilute current stockholders' ownership interest in us. Alternatively, it may be necessary for us to raise additional funds through public or private financings. Additional funds may not be available on terms that are favorable to us and, in the case of equity financings, may result in dilution to our stockholders. Any future acquisitions by us also could result in large and immediate write-offs, the incurrence of contingent liabilities or amortization of expenses related to acquired intangible assets, any of which could harm our operating results.

Provisions of our certificate of incorporation and bylaws and Delaware law might discourage, delay or prevent a change of control of the Company or changes in our management and, as a result, depress the trading price of our Common Stock.

Our certificate of incorporation and bylaws contain provisions that could discourage, delay or prevent a change of control of the Company or changes in our management that the stockholders of the Company may deem advantageous. These provisions:

- Authorize the issuance of "blank check" preferred stock that our Board could issue to increase the number of outstanding shares and to discourage a takeover attempt;
- Prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- Provide that the Board is expressly authorized to adopt, alter or repeal our bylaws; and
- Establish advance notice requirements for nominations for election to our Board or for proposing matters that can be acted upon by stockholders at stockholder meetings.

Although we believe these provisions collectively provide for an opportunity to receive higher bids by requiring potential acquirers to negotiate with our Board, they would apply even if the offer may be considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management team by making it more difficult for stockholders to replace members of our Board, which is responsible for appointing the members of our management.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

None.

ITEM 1C. *CYBERSECURITY*

We are increasingly dependent on sophisticated software applications and computing infrastructure to conduct key operations. We depend on both our own systems, networks, and technology as well as the systems, networks and technology of our contractors, consultants, vendors and other business partners.

Cybersecurity Program

Given the importance of cybersecurity to our business, we maintain a robust cybersecurity program to support both the effectiveness of our systems and our preparedness for information security risks. This program includes a number of safeguards, such as: continuous monitoring for internal and external threats; regular evaluations of our cybersecurity program, including periodic external reviews; and industry benchmarking. We are implementing cybersecurity awareness trainings for all employees. Our program leverages standard industry frameworks to strengthen our program effectiveness and reduce cybersecurity risks.

We use a risk-based approach with respect to our use and oversight of third-party service providers, tailoring processes according to the nature and sensitivity of the data accessed, processed, or stored by such third-party service provider. We use a number of means to assess and manage cyber risks related to our third-party service providers, including conducting due diligence in connection with onboarding new vendors and seeking to include appropriate security terms in our contracts where applicable.

Process for Assessing, Identifying and Managing Material Risks from Cybersecurity Threats

In the event of a cybersecurity incident, designated personnel are responsible for assessing the severity of an incident and associated threat, containing the threat, remediating the threat, including recovery of data and access to systems, analyzing any reporting obligations associated with the incident, and performing post-incident analysis and program enhancements. We maintain a disaster recovery plan in the event of a significant cybersecurity incident.

We have relationships with a number of third-party service providers to assist with cybersecurity containment and remediation efforts, including insurance providers and various law firms.

Governance

Management Oversight

The controls and processes employed to assess, identify and manage material risks from cybersecurity threats are implemented and overseen by the use of consultants as the Company does not have a full-time dedicated cybersecurity position in the Company. Our consultants have over 20 years of experience in information technology matters and are responsible for the day-to-day management of the cybersecurity program, including the prevention, detection, investigation, response to, and recovery from cybersecurity threats and incidents, and are regularly engaged to help ensure the cybersecurity program functions effectively in the face of evolving cybersecurity threats.

Board Oversight

The Board of Directors (the "**Board**") has overall responsibility for risk oversight and cybersecurity risk matters. The Board is responsible for discussing with management the Company's data privacy, information technology and security and cybersecurity risk exposures, including: (i) the potential impact of those exposures on the Company's business, financial results, operations and reputation; (ii) the programs implemented by management to monitor and mitigate any exposures; and (iii) major legislative and regulatory developments that could materially impact the Company's data privacy and cybersecurity risk exposure.

Cybersecurity Risks

Our cybersecurity risk management processes are integrated into our overall information technology ("**IT**") processes. As part of our IT process, we identify, assess and evaluate risks impacting our operations across the Company, including those risks related to cybersecurity. We also maintain cybersecurity insurance providing coverage for certain costs related to cybersecurity-related incidents that impact our own systems, networks, and technology or the systems, networks and technology of our contractors, consultants, vendors and other business partners.

As of December 31, 2024, we are not aware of any material risks from cybersecurity threats, including as a result of any previous cybersecurity incidents, that have materially affected the business strategy, results of operations or financial condition of the Company or are reasonably likely to have such a material effect. While we maintain a robust cybersecurity program, the techniques used to infiltrate information technology systems continue to evolve. Accordingly, we may not be able to timely detect threats or anticipate and implement adequate security measures. For additional information, see "Item 1A—Risk Factors."

ITEM 2. *PROPERTIES*

The Company's lease for its corporate headquarters and primary research facility in Marlborough, Massachusetts expired on March 31, 2024. The Company has continued operations as a primarily remote business with a rented lab space and has contracted a private mailbox with an address of 11 Apex Drive, Suite 300A, PMB 2006, Marlborough, MA 01752, to use as its principal mailing address for SEC and other purposes.

The Company has also contracted with LifeSciences PA located at 411 Swedeland Road, King of Prussia, PA 19406 for access to full working space for normal hours of operations at a fee for $300 per month, cancellable at any time.

The Company entered into a lease for a laboratory facility located at 17 Briden Street, Worcester, Massachusetts. The lease had an original expiration date of August 31, 2024, and was subsequently extended through February 28, 2025. The Company continues to lease the space on a month-to-month basis. Monthly rent is approximately $2,500.

ITEM 3. *LEGAL PROCEEDINGS*

From time to time, the Company may become a party to various legal proceedings and complaints arising in the ordinary course of business. To our knowledge, we are not currently a party to any actual or threatened material legal proceedings.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

ITEM 5. *MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES*

Market Information

Our Common Stock is listed on The Nasdaq Capital Market under the symbol "PHIO."

Holders

At March 20, 2025, there were approximately 14 holders of record of our Common Stock. Because many of our shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of individual stockholders represented by these holders of record.

Dividends

We have never paid any cash dividends and do not anticipate paying any cash dividends on our Common Stock in the foreseeable future.

Recent Sales of Unregistered Sales of Securities

No sales or issuances of unregistered securities occurred that have not previously been disclosed in a Quarterly Report on Form 10-Q or in a Current Report on Form 8-K for the year ended December 31, 2024.

Purchases of Equity Securities by the Issuer and Affiliated Purchases

We did not repurchase any shares of our Common Stock during the years ended December 31, 2024 or 2023.

ITEM 6. *RESERVED*

ITEM 7. *MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the notes to those consolidated financial statements included in Item 8 of this Annual Report on Form 10-K. This discussion contains forward-looking statements that involve significant risks and uncertainties. As a result of many factors, such as those set forth under "Risk Factors" and elsewhere in this Annual Report on Form 10-K, our actual results may differ materially from those anticipated in these forward-looking statements. Please refer to the discussion under the heading "Forward-Looking Statements" above.

Overview

Phio Pharmaceuticals Corp. ("**Phio**," "**we**," "**our**" or the "**Company**") is a clinical stage biotechnology company whose proprietary INTASYL™ self-delivering RNAi® small interfering RNA gene silencing technology is designed to make immune cells more effective in killing tumor cells. We are developing therapeutics that are designed to leverage INTASYL to precisely target specific proteins that reduce the body's ability to fight cancer, without the need for specialized formulations or drug delivery systems. We are committed to discovering and developing innovative cancer treatments for patients by creating new pathways toward a cancer-free future.

PH-762 is an INTASYL compound designed to reduce the expression of cell death protein 1 ("**PD-1**"). PH-762 is currently being evaluated in a U.S. multi-center Phase 1b dose-escalating clinical trial through the intratumoral injection of PH-762 for the treatment of patients with cutaneous squamous cell carcinoma, melanoma and Merkel cell carcinoma. The trial (NCT 06014086) is designed to evaluate the safety and tolerability of neoadjuvant use of intratumorally injected PH-762, assess the tumor response, and determine the dose or dose range for continued study of PH-762 and is expected to enroll up to 30 patients. In May and December 2024, respectively, a Safety Monitoring Committee (SMC) reviewed data from the first and second dose cohorts treated with PH-762, and in both instances recommended escalation to the next dose concentration. A total of 7 patients with cutaneous carcinomas have been enrolled in dose cohorts 1 and 2. The second cohort enrolled a total of 4 patients who were diagnosed with cutaneous squamous cell carcinoma. At Day 36 (tumor excision), while patients in the first cohort had stable disease, a complete response (100% tumor clearance) was reported for 2 patients with cutaneous squamous cell carcinoma. Partial response (90% tumor clearance) was reported for 1 patient with cutaneous squamous cell carcinoma and 1 patient had stable disease, having not progressed. In this trial to date, intratumoral injection of PH-762 has been well tolerated in all enrolled patients and there were no dose-limiting toxicities or clinically relevant treatment-emergent adverse effects in the patients receiving intratumoral PH-762. The third dose cohort is fully enrolled and patients in this cohort are currently in the treatment or follow-up phase of the study. Phio expects to complete enrollment of all patients in the study in the third quarter of 2025.

In 2023, the Company implemented a cost rationalization program driven by its transition from discovery research to product development. This resulted in a decision not to renew the lease for office and laboratory space in Marlborough, Massachusetts, which expired on March 31, 2024. Beginning in April 2024, we have continued operations as a remote business with a laboratory facility in Worcester, Massachusetts. Beginning in January 2024, we rationalized discovery research personnel resulting in an overall headcount reduction by greater than 50%. Expense reductions have been redirected to funding the Phase 1b clinical trial with PH-762.

PH-762

PH-762 is an INTASYL compound designed to reduce the expression of PD-1. PD-1 is a protein that inhibits T cells' ability to kill cancer cells and is a clinically validated target in immunotherapy. Decreasing the expression of PD-1 can thereby increase the capacity of T cells, which protect the body from cancer cells and infections, to kill cancer cells.

Our preclinical studies have demonstrated that direct-to-tumor application of PH-762 resulted in potent anti-tumoral effects and have shown that direct-to-tumor treatment with PH-762 inhibits tumor growth in a dose dependent fashion in PD-1 responsive and refractory models. Importantly, direct-to-tumor administration of PH-762 resulted in activity against distant untreated tumors, indicative of a systemic anti-tumor response. We believe these data further support the potential for PH-762 to provide a strong local immune response without the dose immune-related adverse effects seen with systemic antibody therapy.

PH-762 is currently being evaluated in a U.S. multi-center Phase 1b dose-escalating clinical trial through the intratumoral injection of PH-762 for the treatment of patients with cutaneous squamous cell carcinoma, melanoma and Merkel cell carcinoma. The trial (NCT 06014086) is designed to evaluate the safety and tolerability of neoadjuvant use of intratumorally injected PH-762, assess the tumor response, and determine the dose or dose range for continued study of PH-762 and is expected to enroll up to 30 patients. In November 2023, we announced the dosing of the first patient under a previously cleared Investigational New Drug ("**IND**") application by the U.S. Food and Drug Administration. In May and December 2024, respectively, a Safety Monitoring Committee (SMC) reviewed data from the first and second dose cohorts treated with PH-762 and recommended escalation to the next dose concentration. A total of 7 patients with cutaneous carcinomas have enrolled in Cohorts 1 and 2. The second cohort enrolled a total of 4 patients who were diagnosed with cutaneous squamous cell carcinoma. At Day 36 (tumor excision), while patients in the first cohort had stable disease, the a complete response (100% tumor clearance) was reported for 2 patients with cutaneous squamous cell carcinoma. A partial response (90% tumor clearance) was reported for 1 patient with cutaneous squamous cell carcinoma and 1 patient had stable disease, having not progressed.

Intratumoral injection of PH-762 has been well tolerated in all patients enrolled in the trial to date. There were no dose-limiting toxicities or clinically relevant treatment-emergent adverse effects in the patients receiving intratumoral PH-762. The third dose cohort is fully enrolled and patients in this cohort are currently in the treatment or follow-up phase of the study. We expect to complete enrollment of all patients in the study in the third quarter of 2025.

Given our intention to focus our efforts and resources on our U.S. clinical trial with PH-762, we have completed the winding down process for our first-in-human clinical trial for PH-762 in France, which was limited to the treatment of patients with metastatic melanoma. Safety data from the initial cohort of three patients in the French clinical trial were evaluated by a data monitoring committee in the first quarter of 2023. The safety data review disclosed no dose-limiting toxicity, and no drug-related severe or serious adverse events.

Due to INTASYL's ease of administration, we have shown that our compounds can easily be incorporated into current ACT manufacturing processes. In ACT, T cells are usually taken from a patient's own blood or tumor tissue, grown in large numbers in a laboratory, and then given back to the patient to help the immune system fight cancer. By treating T cells with our INTASYL compounds while they are being grown in the laboratory, we believe our INTASYL compounds can improve these immune cells to make them more effective in killing cancer. Preclinical data generated in collaboration with AgonOx, Inc. ("**AgonOx**"), a private company developing a pipeline of novel immunotherapy drugs targeting key regulators of the immune response to cancer, demonstrated that treating AgonOx's "double positive" tumor infiltrating lymphocytes ("**DP TIL**") with PH-762 increased their tumor killing activity by twofold.

In February 2021, we entered into a clinical co-development collaboration agreement (the "**Clinical Co-Development Agreement**") with AgonOx to develop a T cell-based therapy using PH-762 and AgonOx's DP TIL. Under the Clinical Co-Development Agreement, we had agreed to reimburse AgonOx up to $4 million in expenses incurred to conduct a Phase 1 clinical trial of PH-762 treated DP TIL in patients with advanced melanoma and other advanced solid tumors. We were also eligible to receive certain future development milestones and low single-digit sales-based royalty payments from AgonOx's licensing of its DP TIL technology.

In May 2024, we terminated the Clinical Co-Development Agreement with AgonOx, which such termination was effective immediately. Effective as of the date of termination, the Clinical Co-Development Agreement and our continuing obligations and those of AgonOx thereunder were terminated in their entirety. We are no longer required to provide financial support for the development of costs incurred un the Clinical Co-Development Agreement and we are no longer entitled to future development milestones or royalty payments from AgonOx's licensing of its DP TIL technology. We agreed to pay to AgonOx all payment obligations that accured prior to the termination of the Clinical Co-Development Agreement. Remaining payments to be made to AgonOx as of December 31, 2024 totaled $34,320, which primarily relate to accrued obligations for patient fees and other miscellaneous costs as of the date of termination. Pursuant to the terms of the Clinical Co-Development Agreement, each of the Company and AgonOx shall be responsible for its own costs and expenses incurred in connection with the wind-down of the Phase 1 clinical trial.

Prior to the termination of the Clinical Co-Development Agreement with AgonOx, PH-762 treated DP TIL were being evaluated in a Phase 1 clinical trial in the U.S. with up to 18 patients with advanced melanoma and other advanced solid tumors by AgonOx. The primary trial objectives were to evaluate the safety and to study the potential for enhanced therapeutic benefit from the administration of PH-762 treated DP TIL. AgonOx had enrolled three patients. The first two patients were treated with DP TIL only and a third patient was treated with a combination of DP TIL and PH-762. Clinical results for the single patient who received a combination of DP TIL and PH-762 showed tumor size reductions of 65%, 100% and 81%, respectively, in three melanoma lesions.

PH-894

PH-894 is an INTASYL compound that is designed to silence BRD4, a protein that controls gene expression in both T cells and tumor cells, thereby affecting the immune system as well as the tumor. Intracellular and/or commonly considered "undruggable" targets, such as BRD4, represent a challenge for small molecule and antibody therapies. Therefore, what sets this compound apart is its dual mechanism: PH-894 suppression of BRD4 in T cells results in T cell activation, and suppression of BRD4 in tumor cells results in tumors becoming more sensitive to being killed by T cells.

Preclinical studies conducted have demonstrated that PH-894 resulted in a strong, concentration dependent and durable silencing of BRD4 in T cells and in various cancer cells. Similar to PH-762, preclinical studies have also shown that direct-to-tumor application of PH-894 resulted in potent and statistically significant anti-tumoral effects against distant untreated tumors, indicative of a systemic anti-tumor response. These preclinical data indicate that PH-894 can reprogram T cells and other cells in the tumor microenvironment to provide enhanced immunotherapeutic activity. We have completed the IND-enabling studies and are in the process of finalizing the study reports required for an IND submission with PH-894. As a result of the reprioritization to advance our clinical trial with PH-762 in the U.S., we have elected to defer the IND submission for PH-894.

Critical Accounting Policies and Estimates

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States ("**GAAP**"). The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates and base our estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions and could have a material impact on our reported results. While our significant accounting policies are more fully described in Note 1 to our consolidated financial statements included elsewhere in this Annual Report, we believe the following addresses our accounting policies to be the most critical in understanding the judgments and estimates we use in preparing our consolidated financial statements.

Research and Development Expenses

Research and development expenses are charged to expense as incurred. Payments made by us in advance for research and development services not yet provided and/or for materials not yet received are recorded as prepaid expenses and expensed when the service has been performed or when the goods have been received. Accrued liabilities are recorded with respect to services provided and/or materials that we have received for which vendors have not yet billed us. The financial terms of these contracts are subject to negotiation, vary from provider to provider and may result in uneven payment flows. There may be instances in which payments made to our vendors exceed the level of services provided and result in a prepayment of the expense. In other instances, payment depends on factors such as the successful completion of milestones.

We are required to estimate our accrued research and development expenses, of which a significant portion relate to third party providers we have contracted with to perform various research activities on our behalf for the continued development of our product candidates. This process includes reviewing open contracts and purchase orders, estimating the service performed and the associated cost incurred for research and development services not yet billed or otherwise notified of actual cost. Accrued liabilities for the services provided by contract research organizations are recorded during the period incurred based on such estimates and assumptions as expected cost, passage of time, the level of effort to be expended in each period, the achievement of milestones and other information available to us. Estimates of our research and development accruals are assessed on a quarterly basis based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our vendors and facts and circumstances known to us at that time and adjusted accordingly.

Actual results may differ from these estimates and could have a material impact on our reported results. Our historical accrual estimates have not been materially different from our actual costs. Due to the nature of estimates, we cannot provide assurance that we will not make changes to our estimates in the future as we become aware of additional information about the conduct of our research activities.

Financial Operations Overview

Revenues

We have not generated any commercial product revenue and do not expect to do so in the foreseeable future.

In the future, we may generate revenue from a combination of government grants, research and development agreements, license fees and other upfront payments, milestone payments, product sales and royalties in connection with future strategic collaborators and partners. We expect that any revenue we generate will fluctuate from period to period as a result of the timing of the achievement of any preclinical, clinical or commercial milestones and the timing and amount of payments received relating to those milestones and the extent to which any of our product candidates are approved and successfully commercialized by us or strategic collaborators and partners. If we or any future partner fail to develop product candidates in a timely manner or obtain regulatory approval for them, then our ability to generate future revenue and our results of operations and financial position would be adversely affected.

Research and Development Expenses

Research and development expenses relate to compensation and benefits for research and development personnel, facility-related expenses, supplies, external services, costs to acquire technology licenses, research activities under our research collaboration, expenses associated with preclinical and clinical development activities and other operating costs. Our research and development programs are focused on the development of immuno-oncology therapeutics based on our INTASYL therapeutic platform. Since we commenced operations, research and development expenses have been a significant portion of our total operating expenses and are expected to constitute the majority of our spending for the foreseeable future.

General and Administrative Expenses

General and administrative expenses relate to compensation and benefits for general and administrative personnel, facility-related expenses, professional fees for legal and patent-related activities, audit, tax and consulting services, as well as other general corporate expenses.

Interest Income (Expense), net

Interest Income (Expense) consists of interest income and expense.

Results of Operations

The following table summarizes our results of operations for the periods indicated, in thousands:

	Years Ended December 31,		Dollar
	2024	2023	Change
Operating expenses	$ 7,387	$ 10,824	$ (3,437)
Operating loss	$ (7,387)	$ (10,824)	$ 3,437
Net loss	$ (7,150)	$ (10,826)	$ 3,676

Comparison of the Years Ended December 31, 2024 and 2023

Operating Expenses

The following table summarizes our total operating expenses, for the periods indicated, in thousands:

	Years Ended December 31,		Dollar
	2024	2023	Change
Research and development	$ 3,643	$ 6,332	$ (2,689)
General and administrative	3,744	4,366	(622)
Impairment of property and equipment	–	126	(126)
Total operating expenses	$ 7,387	$ 10,824	$ (3,437)

Research and Development Expenses

Research and development expenses for the year ended December 31, 2024 decreased 42% as compared with the year ended December 31, 2023. The decrease in research and development expenses was primarily driven by our cost rationalization measures in transitioning from a research company to a product development company. These actions resulted in a decrease of $1,044,000 of expense due to the wind-down of preclinical studies, a reduction of $804,000 in salary-related costs including stock-based compensation expense, and $198,000 in lab supplies associated with the reduction in headcount. Additionally, we experienced a reduction in clinical consulting fees and clinical trial-related fees of $350,000 incurred in connection with our IND filing for PH-762 and our former PH-762 trials in ACT and European clinical trial, as well as a decrease of $245,000 in manufacturing fees for PH-762 compared with 2023.

General and Administrative Expenses

General and administrative expenses for the year ended December 31, 2024 decreased 14% as compared to the year ended December 31, 2023. The decrease in general and administrative expenses was primarily due to decreases in professional fees for a total of $430,000 primarily related to legal and patent expenses and in our D&O insurance premium of $88,000 as compared to the prior year period.

Impairment of Property and Equipment

The Company did not record loss on impairment in the year ended December 31, 2024. The impairment charge to our long-lived assets in the year ended December 31, 2023 was associated with our non-renewal of our office lease to operate as a remote business. The carrying value of these assets totaling $126,000 was deemed no longer recoverable and an impairment charge of $126,000 was recorded to adjust those assets to their fair value.

Liquidity and Capital Resources

Historically, our primary source of funding has been through the sale of our securities. In the future, we will be dependent on obtaining funding from third parties, such as proceeds from the issuance of debt, sale of equity or strategic opportunities, in order to maintain our operations. We have reported recurring losses from operations since inception and expect that we will continue to have negative cash flows from our operations for the foreseeable future. At December 31, 2024, we had cash of $5,382,000 as compared with $8,490,000 at December 31, 2023.

During the year ended December 31, 2024, we completed multiple financings and received total net proceeds of $4,001,000 after deducting placement agent fees and offering expenses. For further information regarding the financings, see Note 8 to our consolidated financial statements included elsewhere in this Annual Report.

Subsequent to year-end, we completed financings and received total net proceeds of $6,800,000 after deducting placement agent fees and offering expenses. For further information regarding the financings, see Note 13 to our consolidated financial statements included elsewhere in this Annual Report.

We have limited cash resources, have reported recurring losses from operations since inception, negative operating cash flows and have not yet received product revenues. These factors raise substantial doubt regarding our ability to continue as a going concern, and our current cash resources may not provide sufficient capital to fund operations for at least the next 12 months from the date of the release of the consolidated financial statements included elsewhere in this Annual Report. Our continuation as a going concern depends upon our ability to raise additional capital through equity offerings, debt offerings and/or strategic opportunities to fund our operations. There can be no assurance that we will be successful in accomplishing any of these plans in order to continue as a going concern. The consolidated financial statements included elsewhere in this Annual Report do not include any adjustments to the recoverability and classification of recorded asset amounts and classification of liabilities that might be necessary should we be unable to continue as a going concern.

The following table summarizes our cash flows for the periods indicated, in thousands:

	Years Ended December 31,	
	2024	2023
Net cash used in operating activities	$ (7,112)	$ (10,749)
Net cash provided by (used in) investing activities	8	(5)
Net cash provided by financing activities	3,996	7,413
Net decrease in cash and cash equivalents	$ (3,108)	$ (3,341)

Net Cash Flow from Operating Activities

Net cash used in operating activities for the year ended December 31, 2024 decreased 34% as compared with the year ended December 31, 2023. This change of approximately $3,600,000 reflects a reduction in net loss before subtracting non-cash items of $3,200,000 and a concurrent reduction of approximately $400,000 of cash outflows driven by the reduction of outstanding accounts payable and liquidation of various current assets primarily as a result of liabilities owed for the completion of preclinical studies in the prior year.

Net Cash Flow from Investing Activities

Net cash provided by investing activities for the year ended December 31, 2024 was approximately $8,000 as compared to the year ended December 31, 2023 where net cash used in investing activities was $5,000. The increase in net cash provided by investing activities was primarily due to laboratory and computer equipment purchases for our facility during the prior year and proceeds from the disposition of fixed assets in the current year.

Net Cash Flow from Financing Activities

Net cash provided by financing activities for the year ended December 31, 2024 decreased by 46% as compared to the year ended December 31, 2023, primarily due to the lower net proceeds from the completion of our securities offerings during the prior year as compared with the current year.

Contractual Obligations

Commitments

In February 2021, we entered into a Clinical Co-Development Agreement with AgonOx to develop a T cell-based therapy using PH-762 and AgonOx's DP TIL. Details of our obligations under the Clinical Co-Development Agreement as of December 31, 2024 can be found in Note 2 of the consolidated financial statements included elsewhere in this Annual Report. In May 2024, we terminated the Clinical Co-Development Agreement with AgonOx, which such termination was effective immediately. Effective as of the date of termination, the Clinical Co-Development Agreement and our continuing obligations and those of AgonOx thereunder were terminated in their entirety. We are no longer required to provide financial support for the development costs incurred under the Clinical Co-Development Agreement and we are no longer entitled to future development milestones or royalty payments from AgonOx's licensing of its DP TIL technology. We will pay to AgonOx all payment obligations that occurred prior to the termination of the Clinical Co-Development Agreement. Remaining payments to be made to AgonOx as of December 31, 2024 totaled $34,320, which primarily relate to accrued obligations for patient fees and other miscellaneous costs as of the date of termination. Pursuant to the terms of the Clinical Co-Development Agreement, each party shall be responsible for their own costs and expenses incurred in connection with the wind-down of the Phase 1 clinical trial.

Prior to the termination of the Clinical Co-Development Agreement with AgonOx, PH-762 treated DP TIL was being evaluated in a Phase 1 clinical trial in the U.S. with up to 18 patients with advanced melanoma and other advanced solid tumors by AgonOx. The primary trial objectives were to evaluate the safety and to study the potential for enhanced therapeutic benefit from the administration of PH-762 treated DP TIL. AgonOx had enrolled three patients. The first two patients were treated with DP TIL only and a third patient was treated with a combination of DP TIL and PH-762. Clinical results for the single patient who received a combination of DP TIL and PH-762 showed tumor size reductions of 65%, 100% and 81% respectively, in three melanoma lesions.

License Commitments

We enter into licensing agreements with third parties that often require milestone and royalty payments based on the progress of the asset through development stages. Milestone payments may be required, for example, upon progress through clinical trials, upon approval of the product by a regulatory agency and/or upon a percentage of sales of the product pursuant to such agreements. The expenditures required under these arrangements may be material individually in relation to any product candidates covered by the intellectual property licensed under any such arrangement, and material in the aggregate in the unlikely event that milestones for multiple products covered by these arrangements were reached in the same period. During the years ended December 31, 2024 and 2023, we did not trigger any milestone payments.

Our contractual license obligations that will require future cash payments as of December 31, 2024 are $500,000, which result from payments expected in connection with annual license fees.

Lease Commitments

We did not renew the lease for our corporate headquarters and primary research facility in Marlborough, Massachusetts, which expired on March 31, 2024. Beginning in April 2024, we have continued operations as a remote business with a laboratory facility in Worcester, Massachusetts. The new lease had an original expiration date of August 31, 2024, and was subsequently extended through February 28, 2025. The Company continues to lease the space on a month-to-month basis. Monthly rent is approximately $2,500.

For further information regarding our future cash commitments see Note 6 to our consolidated financial statements included elsewhere in this Annual Report.

ITEM 7A. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

As a smaller reporting company, we are not required to provide this information.

ITEM 8. *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

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Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors
Phio Pharmaceuticals Corp.
Marlborough, Massachusetts

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Phio Pharmaceuticals Corp. (the "Company") as of December 31, 2024 and 2023, the related consolidated statements of operations, preferred stock and stockholders' equity, and cash flows for each of the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024 and 2023, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has suffered recurring losses from operations and negative cash flows from operations that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for Certain Warrants Issued in 2024

As described in Note 8 to the consolidated financial statements, in July 2024 the Company issued new Series C and Series D warrants to purchase common stock to certain holders of existing warrants in connection with an Inducement Letter Agreement (the “July 2024 Financing”). In December 2024, the Company issued Series E and Series F warrants to purchase common stock to certain institutional and accredited investors in connection with registered direct offerings of common stock and concurrent private placement offerings of warrants to purchase common stock (the "December 2024 Offerings”). The Company first assessed the warrants and determined they were outside the scope of ASC 480 as there were no instances outside of the Company’s control that could require cash settlement. The Company then applied the applicable accounting guidance in ASC 815 to account for the warrants as either derivative liabilities or equity instruments. Warrants issued in connection with the July 2024 Financing and December 2024 Offerings did not meet the definition of a derivative instrument as they are indexed to the Company’s stock and are classified within stockholders’ equity.

We identified the assessment of the accounting for the Series C, D, E and F warrants (“Certain Warrants”) to purchase common stock issued in connection with the July 2024 Financing and December 2024 Offerings as a critical audit matter. Determining whether the Certain Warrants issued are in the scope of ASC 480 and whether these warrants should be accounted for as either derivative liabilities or equity instruments requires significant judgment due to the application of complex accounting guidance in evaluating whether there were no instances outside of the Company’s control that could require cash settlement and whether they are indexed to the Company’s stock and classified within stockholders’ equity. Auditing these elements involved especially challenging and complex auditor judgment due to the nature and extent of the audit effort required to address the matter, including the need for expertise in accounting for warrants.

The primary procedures we performed to address this critical audit matter included:

- Reading and analyzing agreements related to the Certain Warrants issued to identify relevant terms and conditions that affect whether they are in the scope of ASC 480 or should be accounted for as either derivative liabilities or equity instruments.

- With the assistance of professionals in our firm having expertise in accounting for warrants, we evaluated the Company’s conclusions regarding whether the Certain Warrants issued are in the scope of ASC 480 or should be accounted for as either derivative liabilities or equity instruments under accounting principles generally accepted in the United Stated of America.

/s/ BDO USA, P.C.

We have served as the Company's auditor since 2011.

Boston, Massachusetts

March 31, 2025

PHIO PHARMACEUTICALS CORP.
CONSOLIDATED BALANCE SHEETS
(Amounts in thousands, except share data)

	December 31, 2024	December 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 5,382	$ 8,490
Prepaid expenses and other current assets	354	832
Total current assets	5,736	9,322
Right of use asset	–	33
Property and equipment, net	2	6
Other assets	–	3
Total assets	$ 5,738	$ 9,364
LIABILITIES, PREFERRED STOCK AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 253	$ 657
Accrued expenses	762	942
Lease liability	–	35
Total current liabilities	1,015	1,634
Total liabilities	1,015	1,634
Commitments and Contingencies (Footnote 6)		
Series D Preferred Stock, $0.0001 par value; 10,000,000 shares authorized, 0 issued and outstanding at December 31, 2024 and December 31, 2023	–	–
Stockholders' equity:		
Common stock, $0.0001 par value, 100,000,000 shares authorized; 1,733,717 and 416,368 shares issued and outstanding at December 31, 2024 and December 31, 2023, respectively	–	–
Additional paid-in capital	151,079	146,936
Accumulated deficit	(146,356)	(139,206)
Total stockholders' equity	4,723	7,730
Total liabilities, preferred stock and stockholders' equity	$ 5,738	$ 9,364

See accompanying notes to consolidated financial statements.

PHIO PHARMACEUTICALS CORP.
CONSOLIDATED STATEMENTS OF OPERATIONS
(Amounts in thousands, except share and per share data)

	Year Ended December 31,	
	2024	**2023**
Operating expenses:		
Research and development	$ 3,643	$ 6,332
General and administrative	3,744	4,366
Loss on impairment of property and equipment	–	126
Total operating expenses	7,387	10,824
Operating loss	(7,387)	(10,824)
Interest income (expense), net	231	(8)
Other income	6	6
Net loss	$ (7,150)	$ (10,826)
Net loss per common share:		
Basic and diluted	$ (9.08)	$ (46.76)
Weighted average number of common shares outstanding		
Basic and diluted	787,466	231,508

See accompanying notes to consolidated financial statements.

PHIO PHARMACEUTICALS CORP.
CONSOLIDATED STATEMENTS OF PREFERRED STOCK AND STOCKHOLDERS' EQUITY
(Amounts in thousands, except share data)

	Series D Preferred Stock		Common Stock		Additional Paid-in	Accumulated	
	Shares	Amount	Shares	Amount	Capital	Deficit	Total
Balance at December 31, 2022	1	$ 2	126,558	$ –	$ 139,218	$ (128,380)	$ 10,838
Cash-in-lieu of fractional shares for reverse stock split	–	–	(190)	–	(11)	–	(11)
Redemption of preferred stock	(1)	(2)	–	–	–	–	–
Issuance of common stock and warrants, net of offering costs	–	–	218,168	–	7,452	–	7,452
Issuance of common stock upon exercise of warrants	–	–	69,881	–	–	–	–
Issuance of common stock upon vesting of restricted stock units	–	–	2,601	–	–	–	–
Shares withheld for payroll taxes	–	–	(650)	–	(26)	–	(26)
Stock-based compensation expense	–	–	–	–	303	–	303
Net loss	–	–	–	–	–	(10,826)	(10,826)
Balance at December 31, 2023	–	–	416,368	–	146,936	(139,206)	7,730
Issuance of common stock upon exercise of warrants	–	–	420,578	–	–	–	–
Issuance of common stock upon vesting of restricted stock units	–	–	3,995	–	–	–	–
Shares withheld for payroll taxes	–	–	(689)	–	(5)	–	(5)
Cash issued in lieu of fractional shares for 1:9 reverse stock split	–	–	(255)	–	(1)	–	(1)
Issuance of common stock and warrants, net of offering costs	–	–	893,720	–	4,002	–	4,002
Stock-based compensation expense	–	–	–	–	147	–	147
Net loss	–	–	–	–	–	(7,150)	(7,150)
Balance at December 31, 2024	–	$ –	1,733,717	$ –	$ 151,079	$ (146,356)	$ 4,723

See accompanying notes to consolidated financial statements.

PHIO PHARMACEUTICALS CORP.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands)

	Year Ended December 31,	
	2024	**2023**
Cash flows from operating activities:		
Net loss	$ (7,150)	$ (10,826)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2	56
Amortization of right of use asset	33	128
Impairment of property and equipment	–	126
Net loss on the disposal of property and equipment	(6)	–
Stock-based compensation	147	303
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	481	(196)
Accounts payable	(404)	(122)
Accrued expenses	(180)	(83)
Lease liability	(35)	(135)
Net cash used in operating activities	(7,112)	(10,749)
Cash flows from investing activities:		
Cash paid for purchase of property and equipment	(1)	(5)
Asset sale proceeds	9	–
Net cash provided by (used in) investing activities	8	(5)
Cash flows from financing activities:		
Net proceeds from the issuance of common stock and warrants	4,002	7,452
Cash-in-lieu of fractional shares for reverse stock split	(1)	(11)
Redemption of Series D Preferred Stock	–	(2)
Payment of taxes on net share settlements of restricted stock units	(5)	(26)
Net cash provided by financing activities	3,996	7,413
Net decrease in cash and cash equivalents	(3,108)	(3,341)
Cash and cash equivalents at the beginning of year	8,490	11,831
Cash and cash equivalents at the end of year	$ 5,382	$ 8,490

	2024	**2023**
Supplemental cash flow information		
Cash paid during the year for:		
Interest	$ 13	$ 11

See accompanying notes to consolidated financial statements.

1. Organization and Significant Accounting Policies

Nature of Operations

Phio Pharmaceuticals Corp. ("**Phio**" or the "**Company**") is a clinical stage biotechnology company whose proprietary INTASYL™ self-delivering RNAi technology is designed to make immune cells more effective in killing tumor cells. The Company is developing therapeutics that are designed to leverage INTASYL to precisely target specific proteins that reduce the body's ability to fight cancer, without the need for specialized formulations or drug delivery systems.

Phio was incorporated in the state of Delaware in 2011 as RXi Pharmaceuticals Corporation. On November 19, 2018, the Company changed its name to Phio Pharmaceuticals Corp., to reflect its transition from a platform company to one that is fully committed to developing groundbreaking immuno-oncology therapeutics.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("**GAAP**").

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, MirImmune, LLC. All material intercompany accounts have been eliminated in consolidation.

Segments

The Company operates as one operating segment and all assets are located in the United States.

Reverse Stock Split

Effective July 5, 2024, the Company completed a 1-for-9 reverse stock split of the Company's outstanding common stock, including reclassifying an amount equal to the reduction in par value to additional paid-in capital. The reverse stock split did not reduce the number of authorized shares of the Company's common or preferred stock. All share and per share amounts have been adjusted to give effect to the reverse stock split.

Uses of Estimates in Preparation of Financial Statements

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The areas subject to significant estimates and judgement include, among others, those related to the fair value of equity awards, accruals for research and development expenses, useful lives of property and equipment, and the valuation allowance on our deferred tax assets. On an ongoing basis the Company evaluates its estimates and bases its estimates on historical experience and other relevant assumptions that the Company believes are reasonable under the circumstances. Actual results could differ materially from these estimates.

Liquidity

The Company has reported recurring losses from operations since its inception and expects to continue to have negative cash flows from operations for the foreseeable future. Historically, the Company's primary source of funding has been from sales of its securities. The Company's ability to continue to fund its operations is dependent on obtaining funding from third parties, such as proceeds from the issuance of debt, sale of equity, or strategic opportunities. This is dependent on a number of factors, including the market demand and liquidity of Common Stock. There is no guarantee that debt, additional equity or other funding will be available to us on acceptable terms, or at all. If the Company fails to obtain additional funding when needed, the Company would be forced to scale back or terminate its operations or seek to merge with or to be acquired by another company.

The Company has limited cash resources, has reported recurring losses from operations since inception, negative operating cash flows and has not yet received product revenues. These factors raise substantial doubt regarding the Company's ability to continue as a going concern, and the Company's current cash resources may not provide sufficient capital to fund operations for at least the next 12 months from the date of the release of these consolidated financial statements. The continuation of the Company as a going concern depends upon the Company's ability to raise additional capital through an equity offering, debt offering and/or strategic opportunity to fund its operations. There can be no assurance that the Company will be successful in accomplishing these plans in order to continue as a going concern. These consolidated financial statements do not include any adjustments to the recoverability and classification of recorded asset amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash. The Company maintains cash balances in several accounts with a reputable financial institution that management believes is creditworthy, and which at times are in excess of federally insured limits. These accounts are insured by the Federal Deposit Insurance Corporation for up to $250,000 per institution.

Property and Equipment

Property and equipment are stated at cost and depreciated using the straight-line method based on the estimated useful lives of the related assets. The Company provides for depreciation over the assets' estimated useful lives as follows:

Computer equipment	3 years
Machinery & equipment	5 years
Furniture & fixtures	5 years
Leasehold improvements	Lesser of lease term or 5 years

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment annually or whenever an event or change in circumstance occurs in which the related carrying amounts may not be recoverable. An impairment loss would be recognized based on the difference between the carrying value of the asset and its estimated fair value, which would be determined based on either discounted future cash flows or other appropriate fair value methods.

Leases

At the inception of a contract, the Company determines whether the contract is or contains a lease based on all relevant facts and circumstances. For contracts that contain a lease, the Company identifies the lease and non-lease components, determines the consideration in the contract and classifies the lease as operating or financing. For leases with a term greater than one year, the Company recognizes a liability to make lease payments and an asset representing the right to use the underlying asset during the lease term at the commencement date of the lease.

Lease liabilities and the corresponding right of use assets are recorded based on the present value of lease payments to be made over the lease term. The discount rate used to calculate the present value is the rate implicit in the lease, or if not readily determinable, the Company's incremental borrowing rate. The Company's incremental borrowing rate is the rate of interest that the Company would have to pay to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. Certain adjustments to the right of use asset may be required for items such as initial direct costs or incentives received. Lease payments on operating leases, including scheduled increases, are recognized on a straight-line basis over the expected term of the lease. Lease payments on financing leases are recognized using the effective interest method.

Fair Value of Financial Instruments

The carrying amounts of cash, accounts payable and accrued expenses of the Company approximate their fair values due to their short-term nature.

Derivative Financial Instruments

Financial instruments that meet the definition of a derivative are classified as an asset or liability and measured at fair value on the issuance date and are revalued on each subsequent balance sheet date. The changes in fair value are recognized as current period income or loss. Financial instruments that do not meet the definition of a derivative are classified as equity and measured at fair value and recorded as additional paid-in capital in stockholders' equity at the date of issuance. No further adjustments to their valuation are made.

Research and Development Expenses

Research and development expenses relate to compensation and benefits for research and development personnel, facility-related expenses, supplies, external services, costs to acquire technology licenses, research activities under our research collaborations, expenses associated with preclinical and clinical development activities and other operating costs. Research and development expenses are charged to expense as incurred. Payments made by the Company in advance for research and development services not yet provided and/or for materials not yet received are recorded as prepaid expenses and expensed when the service has been performed or when the goods have been received.

Accrued liabilities are recorded related to those expenses for which vendors have not yet billed the Company with respect to services provided and/or materials that it has received. Accrued liabilities for the services provided by contract research organizations are recorded during the period incurred based on such estimates and assumptions as expected cost, passage of time, the achievement of milestones and other information available to us and are assessed on a quarterly basis. Actual results may differ from these estimates and could have a material impact on the Company's reported results. The Company's historical accrual estimates have not been materially different from its actual costs.

Collaborative Arrangements

The Company follows the provisions of the Financial Accounting Standards Board (the "**FASB**") Accounting Standards Codification ("**ASC**") Topic 808, "*Collaborative Arrangements*," ("**Topic 808**") when collaboration agreements involve joint operating activities in which both parties are active participants and that are also both exposed to significant risks and rewards. The Company also considers the guidance in the FASB ASC Topic 606, "*Revenue from Contracts with Customers*," ("**Topic 606**") in determining the appropriate treatment for activities between the Company and its collaborative partners that are more reflective of a vendor-customer relationship and therefore, within the scope of Topic 606. Under Topic 808, the Company determines an appropriate recognition method, either by analogy to appropriate accounting literature or by applying a reasonable accounting policy election. Generally, the classification of transactions under the collaborative arrangements is determined based on the nature and contractual terms of the arrangement along with the nature of the operations of the participants. The Company recognizes its share of costs arising from research and development activities performed by collaborators in the period its collaborators incur such expense. Reimbursements that are the result of a collaborative relationship instead of a customer relationship, such as co-development activities, are evaluated on a quarterly basis and recorded as an offset to research and development expense incurred. Payments in excess of our collaboration expense will be recorded as revenue.

Patents and Patent Application Costs

Although the Company believes that its patents and underlying technology have continuing value, the amount of future benefits to be derived from the patents is uncertain. Patent costs are, therefore, expensed as general and administrative costs as incurred.

Stock-based Compensation

The Company follows the provisions of the FASB ASC Topic 718, "*Compensation — Stock Compensation*" ("**ASC 718**"), which requires the measurement and recognition of compensation expense for all stock-based payment awards. The fair value of RSUs is based upon the Company's closing stock price at the grant date. The Company uses the Black-Scholes option-pricing model to estimate the fair value of stock options at the grant date. The Black-Scholes valuation model requires the input of valuation assumptions to calculate the value of stock options, including expected volatility, expected term, risk-free interest rate and expected dividends. Stock-based compensation expense is recognized on a straight-line basis over the requisite service period, which generally represents the vesting period, and commences at the date of grant based on the fair value of the award.

Stock-based compensation expense recognized in the consolidated financial statements is based on awards that are ultimately expected to vest. Accordingly, the Company is also required to estimate forfeitures at the time of grant and to revise those estimates in subsequent periods if actual forfeitures differ from estimates. The Company uses historical data to estimate pre-vesting award forfeitures and record stock-based compensation expense only for those awards that are expected to vest. The Company's forfeiture rate estimates are based on an analysis of our actual forfeiture experience, employee turnover behavior, and other factors. The impact of any adjustments to the Company's forfeiture rates or to the extent that actual forfeitures differ from the Company's estimates, is recorded as a cumulative adjustment in the period the estimates are revised.

Income Taxes

The Company recognizes assets or liabilities for the deferred tax consequences of temporary differences between the tax basis of assets or liabilities and their reported amounts in the consolidated financial statements in accordance with the FASB ASC Topic 740, *"Accounting for Income Taxes"* ("**ASC 740**"). These temporary differences will result in taxable or deductible amounts in future years when the reported amounts of the assets or liabilities are recovered or settled. Those temporary differences referred to as deferred tax assets and liabilities are determined at the end of each period using the tax rate expected to be in effect when taxes are actually paid or recovered. Valuation allowances are established if, based on the weight of available evidence, it is more likely than not that all or a portion of a deferred tax asset will not be realized. The provision for income taxes, if any, represents the tax payable for the period and the change in deferred income tax assets and liabilities during the period.

The recognition and measurement of benefits related to the Company's tax positions requires significant judgment, as uncertainties often exist with respect to new laws, new interpretations of existing laws, and rulings by taxing authorities. The Company follows a more-likely-than not threshold for financial statement recognition and measurement of a tax position taken, or expected to be taken in a tax return. The guidance relates to, amongst other things, classification, accounting for interest and penalties associated with tax positions, and disclosure requirements. Any interest and penalties accrued related to uncertain tax positions are recorded as income tax expense. Differences between actual results and the Company's assumptions or changes in the Company's assumptions in future periods are recorded in the period they become known.

Comprehensive Loss

The Company's comprehensive loss is equal to its net loss for all periods presented.

Net Loss per Share

Basic net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding. Diluted net loss per share is computed by dividing the Company's net loss by the weighted average number of common shares outstanding and the impact of all dilutive potential common shares outstanding, except where such dilutive potential common shares would be anti-dilutive. Dilutive potential common shares primarily consist of warrants, RSUs and stock options.

Recently adopted accounting pronouncements

In November 2023, the Financial Accounting Standards Board ("**FASB**") issued Accounting Standards Update ("**ASU**") 2023-07, "Segment Reporting (Topic 280): Improvements to Reportable Segments," which aims to improve financial reporting by requiring disclosure of incremental segment information on an annual and interim basis for all public entities to enable investors to develop more decision-useful financial analyses. The amendments in this ASU do not change how a public entity identifies its operating segments, aggregates those operating segments, or applies the quantitative thresholds to determine its reportable segments. This ASU is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The Company adopted ASU 2023-07 during the year ended December 31, 2024, which resulted in the required additional disclosures included in Note 12 to the Company's consolidated financial statements.

Recent Accounting Pronouncements

In December 2023, the FASB issued ASU 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures," which requires public business entities to disclose additional information in specified categories with respect to the reconciliation of the effective tax rate to the statutory rate for federal, state, and foreign income taxes. It also requires greater detail about individual reconciling items in the rate reconciliation to the extent the impact of those items exceeds a specified threshold. In addition to new disclosures associated with the rate reconciliation, the ASU requires information pertaining to taxes paid (net of refunds received) to be disaggregated for federal, state, and foreign taxes and further disaggregated for specific jurisdictions to the extent the related amounts exceed a quantitative threshold. The ASU also describes items that need to be disaggregated based on their nature, which is determined by reference to the item's fundamental or essential characteristics, such as the transaction or event that triggered the establishment of the reconciling item and the activity with which the reconciling item is associated. The ASU eliminates the historic requirement that entities disclose information concerning unrecognized tax benefits having a reasonable possibility of significantly increasing or decreasing in the 12 months following the reporting date. This ASU is effective for annual periods beginning after December 15, 2024. Early adoption is permitted for annual financial statements that have not yet been issued or made available for issuance. This ASU should be applied on a prospective basis; however, retrospective application is permitted. The Company is currently evaluating the impact that ASU 2023–09 will have on its consolidated financial statements.

In November 2024, the FASB issued Accounting Standards Update ASU 2024-03, "Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosure (Subtopic 220-40): Disaggregation of Income Statement Expenses," which requires additional disclosure about the specific expense categories in the notes to financial statements at interim and annual reporting periods. The amendments in this ASU do not change or remove current expense disclosure requirements but affect where this information appears in the notes to financial statements. This ASU is effective for annual reporting periods beginning after December 15, 2026, and interim reporting periods beginning after December 15, 2027, with early adoption permitted. Upon adoption, the guidance can be applied prospectively or retrospectively. The Company is currently evaluating the impact that ASU 2024-03 will have on its consolidated financial statements.

2. Collaboration Agreement

*AgonOx, Inc. ("**AgonOx**")*

In February 2021, the Company entered into a clinical co-development collaboration agreement (the "**Clinical Co-Development Agreement**") with AgonOx, a private company developing a pipeline of novel immunotherapy drugs targeting key regulators of the immune response to cancer. Under the Clinical Co-Development Agreement, Phio and AgonOx were working to develop a T cell-based therapy using the Company's lead product candidate, PH-762, and AgonOx's "double positive" tumor infiltrating lymphocytes ("**DP TIL**") technology. Per the terms of the Clinical Co-Development Agreement, the Company agreed to reimburse AgonOx up to $4,000,000 in expenses incurred to conduct a Phase 1 clinical trial of PH-762 treated DP TIL in patients with advanced melanoma and other advanced solid tumors.

In May 2024, the Company terminated the Clinical Co-Development Agreement with AgonOx effective immediately. Effective as of the date of termination, the Clinical Co-Development Agreement and the Company's continuing obligations and those of AgonOx thereunder were terminated in their entirety. The Company no longer is required to provide financial support for the development costs incurred in the Clinical Co-Development Agreement and the Company is no longer entitled to future development milestones or royalty payments from AgonOx's licensing of its DP TIL technology. The Company will pay to AgonOx all payment obligations that accrued prior to the termination of the Clinical Co-Development Agreement. Remaining payments to be made to AgonOx as of December 31, 2024 totaled $34,320, which primarily relate to accrued obligations for patient fees and other miscellaneous costs as of the date of termination. Pursuant to the terms of the Clinical Co-Development Agreement, each of the Company and AgonOx shall be responsible for its own costs and expenses incurred in connection with the wind-down of the Phase 1 clinical trial.

The Company recognized approximately $106,000 and $1,115,000 of research and development expense in connection with these efforts during the years ended December 31, 2024 and 2023, respectively.

3. Property and Equipment

The following table summarizes the Company's major classes of property and equipment, in thousands:

	December 31,	
	2024	**2023**
Computer equipment	$ 35	$ 62
Machinery & equipment	265	964
Furniture & fixtures	8	70
Leasehold improvements	–	46
Total gross fixed assets	308	1,142
Less: accumulated depreciation and amortization	(306)	(1,136)
Property and equipment, net	$ 2	$ 6

Depreciation and amortization expense for the years ended December 31, 2024 and 2023 was $2,000 and $56,000, respectively.

4. Accrued Expenses

Accrued expenses consist of the following, in thousands:

	December 31,	
	2024	2023
Compensation and benefits	$ 31	$ 222
Professional fees	156	126
Research and development costs	558	517
Other	17	77
Total accrued expenses	$ 762	$ 942

5. Leases

The Company leases space for various corporate and research purposes. It is the Company's policy to apply the provisions of ASC 842 when accounting for arrangements that meet the criteria to be a lease. The Company calculates the lease liability as the present value of the lease's cash flows using the interest rate implicit in the lease, if determinable. If the rate implicit in the lease is not determinable, the Company uses its incremental borrowing rate. The incremental borrowing rate is defined as the rate the Company would have to pay to borrow on a collateralized basis over the lease term. The Company has elected the accounting policy election available under ASC 842 to not record a lease liability for leases with a term of less than one year.

From April 2014 to March 2024, the Company leased space that was utilized as its corporate headquarters and primary laboratory. The lease expired on March 31, 2024. On March 1, 2024, the Company commenced a lease for a laboratory facility located at 17 Briden Street, Worcester, Massachusetts. The lease had an original expiration date of August 31, 2024 and was subsequently extended through February 28, 2025. The Company continues to lease the space on a month-to-month basis. Monthly rent is approximately $2,500.

The lease for the Company's corporate headquarters had represented all of its significant lease obligations. The amounts reported in the 2023 consolidated balance sheets for the operating lease in which the Company is the lessee and other supplemental balance sheet information is set forth as follows, in thousands, except the lease term (number of years) and discount rate:

	December 31,	
	2024	2023
Assets		
Right of use asset	$ –	$ 33
Liabilities		
Lease liability, current	–	35
Lease liability, non-current	–	–
Total lease liability	$ –	$ 35
Lease Term and Discount Rate		
Weighted average remaining lease term	–	0.25
Weighted average discount rate	–	4.70%

Operating lease costs included in operating expense were $58,000 and $132,000 for the years ended December 31, 2024 and 2023, respectively.

Cash paid for the amounts included in the measurement of the operating lease liability on the Company's consolidated balance sheets and included within changes in the lease liability in the operating activities of the Company's consolidated statements of cash flows was $60,000 and $139,000 for the years ended December 31, 2024 and 2023, respectively.

6. Commitments and Contingencies

Commitments

In February 2021, the Company entered into the Clinical Co-Development Agreement with AgonOx to develop a T cell-based therapy using the Company's lead product candidate, PH-762, and AgonOx's DP TIL technology. Per the terms of the Clinical Co-Development Agreement, the Company agreed to reimburse AgonOx up to $4,000,000 in expenses incurred to conduct a Phase 1 clinical trial of PH-762 treated DP TIL in patients with advanced melanoma and other advanced solid tumors. In May 2024, the Company terminated the Clinical Co-Development Agreement with AgonOx effective immediately. Refer to Note 2 for further details on the Clinical Co-Development Agreement with AgonOx.

In September 2011, the Company entered into an agreement with Advanced RNA Technologies, LLC ("**Advirna**"), pursuant to which Advirna assigned to the Company its existing patent and technology rights related to the INTASYL technology in exchange for an annual maintenance fee of $100,000, a one-time milestone payment upon the future issuance of the first patent with valid claims covering the assigned patent and technology rights and the issuance of shares of Common Stock equal to 5% of the Company's fully-diluted shares outstanding at the time of issuance. The one-time milestone payment and the issuance of shares of Common Stock were completed in 2014 and 2012, respectively. Additionally, the Company is required to pay low single-digit royalties to Advirna on any licensing revenue received by the Company with respect to future licensing of the assigned Advirna patent and technology rights. To date, any royalties owed to Advirna under the Advirna agreement have been minimal.

The Company's rights under the Advirna agreement will expire upon the later of: (i) the expiration of the last-to-expire of the "patent rights" (as defined therein) included in the Advirna agreement; and (ii) the abandonment of the last-to-be abandoned of such patents, unless earlier terminated in accordance with the provisions of the Advirna agreement. Further, the Company also granted back to Advirna a license under the assigned patent and technology rights for fields of use outside human therapeutics.

As part of its business, the Company may enter into licensing agreements with third parties that require milestone and royalty payments based on the progress of the asset through development stages. Milestone payments may be required, for example, upon progress through clinical trials, upon approval of the product by a regulatory agency and/or upon a percentage of sales of the product pursuant to such agreements. The expenditures required under these arrangements may be material individually in relation to any product candidates covered by the intellectual property licensed under any such arrangement, and material in the aggregate in the unlikely event that milestones for multiple products covered by these arrangements were reached in the same period. Due to the contingent nature of these payments, they are not included in the table of contractual obligations shown below.

During the years ended December 31, 2024 and 2023, the Company did not trigger any milestone payments.

The Company's contractual license obligations that will require future cash payments as of December 31, 2024, which result from payments expected in connection with annual license fees, are as follows, in thousands:

Year Ending December 31,	
2025	$ 100
2026	100
2027	100
2028	100
2029	100
Total	$ 500

The Company applies the disclosure provisions of the FASB ASC Topic 460, "*Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*" ("**ASC 460**"), to its agreements that contain guarantee or indemnification clauses. The Company provides: (i) indemnifications of varying scope and size to certain investors and other parties for certain losses suffered or incurred by the indemnified party in connection with various types of third-party claims; and (ii) indemnifications of varying scope and size to officers and directors against third-party claims arising from the services they provide to us. These indemnifications give rise only to the disclosure provisions of ASC 460. To date, the Company has not incurred costs as a result of these obligations and does not expect to incur material costs in the future. Accordingly, the Company has not accrued any liabilities in its consolidated financial statements related to these indemnifications.

Litigation

From time to time, the Company may become a party to various legal proceedings and complaints arising in the ordinary course of business. To the Company's knowledge, it is not currently a party to any actual or threatened material legal proceedings. Accordingly, there were no contingent liabilities recorded as of the year ended December 31, 2024.

7. Preferred Stock

The Company has authorized up to 10,000,000 shares of preferred stock, $0.0001 par value per share, for issuance. The Company's Board of Directors (the "**Board**") is authorized under the Company's Amended and Restated Certificate of Incorporation (as may be amended and/or restated from time to time, the "**Amended Certificate**"), to designate the authorized preferred stock into one or more series and to fix and determine such rights, preferences, privileges and restrictions of any series of preferred stock, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be determined by the Board upon its issuance.

In November 2022, the Company sold one share of Series D Preferred Stock, par value $0.0001 per share (the "**Series D Preferred Stock**") to Robert Bitterman, then its interim Executive Chairman and current Chief Executive Officer, for $1,750. The Series D Preferred Stock was not convertible into, or exchangeable for, shares of any other class or series of stock or other securities of the Company; had no rights with respect to any distribution of assets of the Company, including upon a liquidation, bankruptcy, reorganization, merger, acquisition, sale, dissolution or winding up of the Company, whether voluntarily or involuntarily; and was not entitled to receive dividends of any kind.

The Series D Preferred Stock is entitled to 17,500,000 votes per share exclusively with respect to any proposal to amend the Company's Amended Certificate to effect a reverse stock split of Common Stock. The terms provide that it would be voted, without action by the holder, on any such proposal in the same proportion as shares of Common Stock are voted. The Series D Preferred Stock otherwise has no voting rights except as otherwise required by the General Corporation Law of the State of Delaware.

Under its terms, the outstanding share of Series D Preferred Stock was to be redeemed in whole, but not in part, at any time: (i) if such redemption was approved by the Board in its sole discretion or (ii) automatically and effective upon the approval by the Company's stockholders of an amendment to the Amended Certificate to effect a reverse stock split of Common Stock. The Series D Preferred Stock was redeemed in whole on January 4, 2023, upon the approval by the Company's stockholders of the 2023 1-for-12 reverse stock split. Upon such redemption, the holder of the Series D Preferred Stock received consideration of $1,750 in cash.

At December 31, 2024, there were no shares of preferred stock issued or outstanding.

8. Stockholders' Equity

The Company raised $4.0 million and $7.5 million through a series of warrants inducements, registered direct offerings, and concurrent private placements during the years ended December 31, 2024 and 2023, respectively.

April 2023 Financing

In April 2023, the Company completed a registered direct offering and a concurrent private placement of a total of: 353,983 registered shares of Common Stock at a purchase price per share of $5.65, unregistered five and one-half year term Series A warrants to purchase up to 353,983 shares of Common Stock at an exercise price of $5.40 per share and unregistered eighteen month term Series B warrants to purchase up to 353,983 shares of Common Stock at an exercise price of $5.40 per share (collectively, the "**April 2023 Financing**"). In addition, the Company issued unregistered warrants to the placement agent, H.C. Wainwright & Co., LLC ("**HCW**"), in the April 2023 Financing to purchase a total of 26,549 shares of Common Stock at an exercise price of $7.0625 per share. Net proceeds to the Company from the April 2023 Financing were $1,538,000 after deducting placement agent fees and offering expenses.

In connection with the April 2023 Financing, the Company entered into warrant amendment agreements (the "**Warrant Amendment Agreements**") with the participating investors to amend the exercise price of certain existing warrants to purchase up to an aggregate of 191,619 shares of Common Stock that were previously issued in April 2018 through January 2021, such that each of the amended warrants had an exercise price of $5.40 per share. The Company received $24,000 as consideration in connection with the Warrant Amendment Agreements. The Company assessed the amendments to the exercise price of the warrants under the FASB ASC Topic 815, "Derivatives and Hedging" ("**ASC 815**") and determined that the amendment to the exercise price was completed in connection with and contingent on the close of the April 2023 Financing. The increase in fair value of $293,000 related to the Warrant Amendment Agreements was recognized as an equity issuance cost and recorded in additional paid in capital per ASC 815.

June 2023 Financing

In June 2023, the Company completed a registered direct offering and a concurrent private placement of a total of: 233,646 registered shares and 72,000 unregistered shares of Common Stock each at a purchase price per share of $4.28, unregistered pre-funded warrants to purchase up to an aggregate of 628,935 shares of Common Stock at a purchase price per share of $4.279 and with an exercise price of $0.001 per share, unregistered five and one-half year term Series A warrants to purchase up to an aggregate of 934,581 shares of Common Stock at an exercise price of $4.03 per share and unregistered eighteen month term Series B warrants to purchase up to an aggregate of 934,581 shares of Common Stock at an exercise price of $4.03 per share (collectively, the "**June 2023 Financing**"). In addition, the Company issued unregistered warrants to the placement agent, HCW, in the June 2023 Financing to purchase a total of 70,094 shares of Common Stock at an exercise price of $5.35 per share. Net proceeds to the Company from the June 2023 Financing were $3,510,000 after deducting placement agent fees and offering expenses.

December 2023 Financing

In December 2023, the Company entered into an inducement letter agreement (the "**Inducement Letter Agreement**") with certain holders of the Company's existing warrants to purchase up to an aggregate of 2,130,252 shares of Common Stock. The existing warrants were originally issued on dates between October 2018 and June 2023 with an exercise price of $5.40 or $4.03 per share. Pursuant to the Inducement Letter Agreement, these warrants were exercised for cash at a reduced exercise price of $1.33 per share in consideration of the Company's agreement to issue new five and one-half year term Series A warrants to purchase up to 2,270,320 shares of Common Stock at an exercise price of $1.08 per share and new eighteen month term Series B warrants to purchase up to 1,990,184 shares of Common Stock at an exercise price of $1.08 per share (collectively, the "**December 2023 Financing**"). In addition, the Company issued warrants to the placement agent, HCW, in the December 2023 Financing to purchase a total of 159,769 shares of Common Stock at an exercise price of $1.66 per share.

Pursuant to the terms of the Inducement Letter Agreement, in the event that the exercise of the existing warrants in the December 2023 Financing would have otherwise caused a holder to exceed the beneficial ownership limitations set forth in the existing warrant, the Company issued the number of shares that would not cause a holder to exceed such beneficial ownership limitation and agreed to hold such balance of shares of Common Stock in abeyance. Accordingly, at December 31, 2023, an aggregate of 826,370 shares of Common Stock were held in abeyance (the "**December 2023 Abeyance Shares**") with such December 2023 Abeyance Shares evidenced through the holder's existing warrants and which are deemed to be prepaid. The December 2023 Abeyance Shares will be held until notice is received by the holder that the balance of the shares of Common Stock may be issued in compliance with such beneficial ownership limitations and may be exercised pursuant to a notice of exercise from the holder. Until such time, the December 2023 Abeyance Shares are evidenced through the holder's existing warrants and have been included in the Company's table of outstanding warrants below.

Net proceeds to the Company from the December 2023 financing were $2,404,000 after deducting placement agent fees and offering expenses. The Company assessed the amendments to the exercise price of the warrants under the ASC 815 and determined that the amendment to the exercise price was completed in connection with and contingent on the close of the December 2023 Financing. The increase in fair value of $412,000 related to the modification of the terms of the warrants to induce exercise was recognized as an equity issuance cost and recorded in additional paid in capital per ASC 815.

May 2024 Financing

On May 16, 2024, the Company entered into a purchase agreement (the "**Purchase Agreement**") with Triton Funds LP ("**Triton**"), pursuant to which the Company agreed to sell, and Triton agreed to purchase, upon the Company's request in one or more transactions, up to 862,500 shares of Common Stock at a purchase price of $0.72 per share (the "**Purchase Price**"), for aggregate gross proceeds of up to $621,000. The Company recorded expense of approximately $100,000, primarily related to legal fees, in connection with the execution of the Purchase Agreement with Triton. On July 3, 2024, the Company terminated the Purchase Agreement with Triton effective immediately. No shares of Common Stock were sold by the Company pursuant to the Purchase Agreement prior to termination.

July 2024 Financing

On July 11, 2024, the Company entered into inducement letter agreements (the "**July 2024 Inducement Letter Agreements**") with certain holders of certain of the Company's existing warrants to purchase up to an aggregate of 545,286 shares of Common Stock. The existing warrants were originally issued in February 2020 through December 2023, having exercise prices between $324.00 and $9.72 per share. Pursuant to the July 2024 Inducement Letter Agreements, these warrants were exercised for cash at a reduced exercise of $5.45 per share in consideration of the Company's agreement to issue new unregistered five and one-half year term Series C warrants to purchase up to 583,098 shares of Common Stock at an exercise price of $5.45 and new unregistered eighteen month term Series D warrants to purchase up to 507,474 shares of Common Stock at an exercise price of $5.45, both issued and sold at a price of $0.125 per warrant share (the "**July 2024 Financing**"). In addition, the Company issued warrants to the placement agent, HCW, to purchase a total of 40,896 shares of Common Stock at an exercise price of $6.8125 per share. The net proceeds to the Company from the July 2024 Financing were approximately $2,646,000, after deducting placement agent fees and offering expenses. The Company incurred non-cash equity issuance cost of approximately $2.4 million for the incremental fair value of the outstanding equity classified warrants and approximately $0.2 million for placement agent warrants.

Pursuant to the terms of the July 2024 Inducement Letter Agreements, in the event that the exercise of the existing warrants in the July 2024 Financing would have otherwise caused a holder to exceed the beneficial ownership limitations set forth in the existing warrant, the Company issued the number of shares that would not cause a holder to exceed such beneficial ownership limitation and agreed to hold such balance of shares of Common Stock in abeyance. Accordingly, an aggregate of 328,758 shares of Common Stock were held in abeyance (the "**July 2024 Abeyance Shares**") with such July 2024 Abeyance Shares evidenced through the holder's existing warrants and which are deemed to be prepaid. The July 2024 Abeyance Shares were held until notice was received by the holder that the balance of the shares of Common Stock could be issued in compliance with such beneficial ownership limitations and were exercised pursuant to a notice of exercise from the holder. Until such time, the Abeyance Shares were evidenced through the holder's existing warrants and have been included in the Company's table of outstanding warrants below. During the year ended December 31, 2024, all of the July 2024 Abeyance Shares were released.

December 19, 2024 Concurrent Registered Direct Offering and Private Placement

On December 19, 2024, the Company entered into a securities purchase agreement (the "**December 19, 2024 Securities Purchase Agreement**") with certain institutional and accredited investors in connection with a registered direct offering (the "**December 19, 2024 Registered Direct Offering**") and concurrent private placement (the "**December 19, 2024 Private Placement**" and, together with the December 19, 2024 Registered Direct Offering, the "**December 19, 2024 Offerings**"). The December 19, 2024 Offerings closed on December 20, 2024. The net proceeds to the Company from the December 19, 2024 Offerings were approximately $900,000, after deducting placement agent fees and offering expenses.

Pursuant to the December 19, 2024 Securities Purchase Agreement, the Company offered and sold in the December 19, 2024 Registered Direct Offering 437,192 shares of Common Stock at a purchase price of $2.635 per share. In the December 19, 2024 Private Placement, the Company also issued to such institutional and accredited investors unregistered warrants to purchase up to 437,192 shares of Common Stock (the "**Series E Warrants**"). Under the terms of the December 19, 2024 Securities Purchase Agreement, for each share of Common Stock issued in the December 19, 2024 Registered Direct Offering, an accompanying Series E Warrant was issued to the purchaser thereof. Each Series E Warrant is exercisable for one share of Common Stock at an exercise price of $2.51 per share and will expire on December 20, 2029. The Series E Warrants were offered and sold at a purchase price of $0.125 per Series E Warrant, which purchase price is included in the offering price per share of Common Stock issued in the December 19, 2024 Registered Direct Offering.

December 23, 2024 Concurrent Registered Direct Offering and Private Placement

On December 23, 2024, the Company entered into a securities purchase agreement (the "**December 23, 2024 Securities Purchase Agreement**") with certain institutional and accredited investors in connection with a registered direct public offering (the "**December 23, 2024 Registered Direct Offering**") and concurrent private placement (the "**December 23, 2024 Private Placement**" and, together with the December 23, 2024 Registered Direct Offering, the "**December 23, 2024 Offerings**" and together with the December 19, 2024 Offerings, the "December 2024 Offerings"). The December 23, 2024 Offerings closed on December 24, 2024. The net proceeds to the Company from the December 23, 2024 Offerings were approximately $480,000, after deducting placement agent fees and offering expenses.

Pursuant to the December 23, 2024 Securities Purchase Agreement, the Company offered and sold in the December 23, 2024 Registered Direct Offering 240,000 shares of Common Stock at a purchase price of $2.00 per share. In the December 23, 2024 Private Placement, the Company also issued to such institutional and accredited investors unregistered warrants to purchase up to 240,000 shares of Common Stock (the "**Series F Warrants**"). Under the terms of the December 23, 2024 Securities Purchase Agreement, for each share of Common Stock issued in the December 23, 2024 Registered Direct Offering, an accompanying Series F Warrant was issued to the purchaser thereof. Each Series F Warrant is exercisable for one share of Common Stock at an exercise price of $2.00 per share and will expire on December 24, 2029. The Series F Warrants were offered and sold at a purchase price of $0.125 per Series F Warrant, which purchase price is included in the offering price per share of Common Stock issued in the December 23, 2024 Registered Direct Offering.

In connection with the December 2024 Offerings, the Company agreed to issue to H.C. Wainwright & Co., LLC (the "Placement Agent"), or its designees, warrants to purchase up to an aggregate of 50,789 shares of Common Stock (the "Placement Agent Warrants"), which represent 7.5% of the aggregate number of shares of Common Stock sold in the December 19, 2024 Registered Direct Offering and the December 23, 2024 Registered Direct Offering. The Placement Agent Warrants have substantially the same terms as the Series E Warrants and the Series F Warrants, except that (i) 32,789 of the Placement Agent Warrants have an exercise price equal to $3.2938, or 125% of the offering price per share of Common Stock sold in the December 19, 2024 Registered Direct Offering, and are exercisable until December 19, 2029, and (ii) 18,000 of the Placement Agent Warrants have an exercise price equal to $2.50, or 125% of the offering price per share of Common Stock sold in the December 23, 2024 Registered Direct Offering, and are exercisable until December 23, 2029.

Warrants

The Company first assessed the warrants in the April 2023 Financing, June 2023 Financing, December 2023 Financing, July 2024 Financing, and December 2024 Offerings under the FASB ASC Topic 480, "*Distinguishing Liabilities from Equity*" ("**ASC 480**") to determine whether they were within the scope of ASC 480. As there were no instances outside of the Company's control that could require cash settlement, the Company's warrants issued in the April 2023 Financing, June 2023 Financing, December 2023 Financing, July 2024 Financing, and December 2024 Offerings were determined to be outside the scope of ASC 480.

The Company then applied and followed the applicable accounting guidance in ASC 815. Financial instruments are accounted for as either derivative liabilities or equity instruments depending on the specific terms of the agreement. The warrants issued in the April 2023 Financing, June 2023 Financing, December 2023 Financing, July 2024 Financing, and December 2024 Offerings did not meet the definition of a derivative instrument as they are indexed to Common Stock and classified within stockholders' equity. Based on this determination, the warrants issued in the April 2023 Financing, June 2023 Financing, December 2023 Financing, July 2024 Financing, and December 2024 Offerings were classified within stockholders' equity.

The Company accounted for the 2023 and 2024 placement agent warrants, issued to H.C. Wainwright & Co., LLC in conjunction with the financings, as issuance costs related to the offering of the Company's shares and warrants. These warrants meet the criteria for equity classification.

In addition to the December 2023 Financing, on December 6, 2023, the Company issued 628,935 shares of Common Stock related to exercises from the pre-funded warrants issued in the June 2023 Financing for proceeds of $630.

The following table summarizes the Company's outstanding warrants, all of which are classified as equity instruments, at December 31, 2024:

	Number of Warrants	Weighted-Average Exercise Price Per Share
Outstanding at December 31, 2022	60,600	$ 490.75
Issued	858,162	19.55
Exercised	(214,757)	8.08
Expired	(475)	5,621.55
Outstanding at December 31, 2023	703,530	33.09
Issued	1,859,449	4.28
Exercised	(637,112)	6.39
Expired	–	–
Outstanding at December 31, 2024	1,925,867	$ 12.66

9. Stock-based Compensation

Stock Plans

The Company's approved equity plans include the Phio Pharmaceuticals Corp. 2020 Long Term Incentive Plan (the "**2020 Plan**") and the Phio Pharmaceuticals Corp. 2012 Long Term Incentive Plan (the "**2012 Plan**"). These plans are administered by our Board and provide for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock awards, RSU awards, performance stock awards, and performance cash awards. Upon adoption of the 2020 Plan, shares that remained available for grant under the 2012 Plan and shares that were subject to outstanding awards under the 2012 Plan were included in the authorized shares available for grant under the 2020 Plan. Further, upon adoption of the 2020 Plan, the Company no longer grants new equity awards under the 2012 Plan. In July 2024, the Company's stockholders approved an amendment to the 2020 Plan to increase the number of shares authorized for issuance thereunder to 110,000,000 shares, consisting of 100,000,000 shares of Common Stock and 10,000,000 shares of Preferred Stock.

As of December 31, 2024, there were 1,126 shares subject to outstanding stock options and 71,000 shares subject to unvested RSUs.

Restricted Stock Units

RSUs are issued under the Company's 2020 Plan or as inducement grants issued outside of the 2020 Plan to new employees. RSUs are generally subject to the satisfaction of certain service requirements. RSUs granted by the Company to employees generally vest 1 year after the grant date. Upon vesting, each outstanding RSU will be settled for one share of Common Stock. Employee RSU recipients may elect to net share settle upon vesting, in which case the Company pays the employee's income taxes due upon vesting and withholds a number of shares of equal value. The Company does not expect to repurchase shares to satisfy RSU vests. The fair value of the RSUs awarded is based upon the Company's closing stock price at the grant date and is expensed over the requisite service period.

The following table summarizes the activity of the Company's RSUs for the year ended December 31, 2024:

	Number of Shares	Weighted-Average Grant Date Fair Value Per Share
Unvested units at December 31, 2022	5,257	$ 135.26
Granted	4,836	47.16
Vested	(2,599)	134.88
Forfeited	(1,969)	88.92
Unvested units at December 31, 2023	5,525	74.83
Granted	71,000	2.77
Vested	(3,995)	71.10
Forfeited	(1,530)	84.55
Unvested units at December 31, 2024	71,000	$ 2.77

The weighted-average fair value of RSUs granted during the years ended December 31, 2024 and 2023 was $2.77 and $5.24, respectively.

Stock-based compensation expense related to RSUs was $141,000 and $298,000 for the years ended December 31, 2024 and 2023, respectively.

The aggregate fair value of awards that vested during the years ended December 31, 2024 and 2023 was $21,000 and $105,000, which represents the market value of Common Stock on the date that the RSUs vested.

As of December 31, 2024, the compensation expense for all unvested RSUs in the amount of approximately $142,000 will be recognized in the Company's results of operations over a weighted average period of .95 years.

Stock Options

Stock options are available for issuance under the 2020 Plan or as inducement grants issued outside of the 2020 Plan to new employees. Stock options are generally subject to graded vesting and the satisfaction of service requirements. Stock options granted by the Company to employees generally vest annually over 4 years after the grant date and generally vest over 1 year after the grant date for members of the Board of Directors and expire within ten years of grant. Upon the exercise of a stock option, the Company issues new shares and delivers them to the recipient. The Company does not expect to repurchase shares to satisfy stock option exercises.

The Company uses the Black-Scholes option-pricing model to determine the fair value of all its option grants. The risk-free interest rate used for each grant was based upon the yield on zero-coupon U.S. Treasury securities with a term similar to the expected life of the related option. The Company's expected stock price volatility assumption is based upon the Company's own implied volatility. As the Company has limited stock option exercise information, the expected life assumption used for option grants is based upon the simplified method provided for under ASC 718. The dividend yield assumption is based upon the fact that the Company has never paid cash dividends and presently has no intention of paying cash dividends.

The Company did not grant stock options during the year ended December 31, 2024. For valuing options granted during the year ended December 31, 2023, the following assumptions were used:

	December 31, 2023
Risk-free interest rate	4.72%
Expected volatility	113.74%
Expected lives (in years)	5.25
Expected dividend yield	0%

The weighted average grant date fair value of options granted during the year ended December 31, 2023 was $1.14 per share.

The following table summarizes the Company's stock option activity for the year ended December 31, 2024:

	Total Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Balance at December 31, 2022	20	$ 317,082.58		
Granted	1,136	12.33		
Exercised	–	–		
Forfeited	–	–		
Expired	(10)	473,197.73		
Balance at December 31, 2023	1,146	$ 10,120.69	9.74 years	$ –
Granted	–	–		
Exercised	–	–		
Forfeited	–	–		
Expired	(20)	512,001.27		
Balance at December 31, 2024	1,126	$ 1,206.29	8.71 years	$ –
Exercisable at December 31, 2024	1,126	$ 1,206.29	8.71 years	$ –

Stock-based compensation expense related to stock options for the years ended December 31, 2024 and 2023 was $6,000 and $5,000, respectively.

As of December 31, 2024, there was no compensation expense for unvested stock options.

There is no income tax benefit as the Company is currently operating at a loss and an actual income tax benefit may not be realized.

Compensation Expense Related to Equity Awards

The following table sets forth total stock-based compensation expense for the years ended December 31, 2024 and 2023, in thousands:

	December 31, 2024	December 31, 2023
Research and development	$ 30	$ 132
General and administrative	117	171
Total stock-based compensation	$ 147	$ 303

10. Income Taxes

The provision for income taxes for the years ended December 31, 2024 and 2023 are as follows, in thousands:

	Years Ended December 31,	
	2024	2023
Current		
Federal	$ –	$ –
State	–	–
Total current	–	–
Deferred		
Federal	1,589	(1,831)
State	623	(718)
Total deferred	2,212	(2,549)
Valuation allowance	(2,212)	2,549
Total provision for income taxes	$ –	$ –

The following table presents a reconciliation of the U.S. statutory tax rate to the Company's actual effective income tax rate:

	Years Ended December 31,	
	2024	2023
Federal statutory rate	21.0%	21.0%
State income taxes, net of federal benefit	10.6%	5.9
Non-deductible expenses	(0.8%)	(0.5)
Income tax credits	0.1%	2.1
Valuation allowance	(30.9%)	(28.5)
Effective tax rate	0.0%	0.0%

The Company recognizes deferred tax assets and liabilities to reflect the tax effects of temporary differences between the tax basis of assets or liabilities and their reported amounts in the consolidated financial statements in accordance with ASC 740. These temporary differences will result in taxable or deductible amounts in future years when the reported amounts of the assets or liabilities are recovered or settled.

ASC 740 requires that a valuation allowance be established when management determines that it is more likely than not that all or a portion of a deferred asset will not be realized. The Company evaluates the realizability of its net deferred income tax assets and valuation allowances as necessary, at least on an annual basis. During this evaluation, the Company reviews its forecasts of income in conjunction with other positive and negative evidence surrounding the realizability of its deferred income tax assets to determine if a valuation allowance is required. As a result of this evaluation, the Company has recorded a full valuation allowance against its deferred tax assets as the Company believes it is more likely than not that the benefit of all of its deferred tax assets will not be realized. The federal valuation allowance for the years ended December 31, 2024 and December 31, 2023 was $337,000 and $2,549,000, respectively. The decrease of $2,212,000 is primarily due to a reduction in carryforwards during the year ended December 31, 2024.

The significant components of the Company's deferred tax assets and liabilities are as follows, in thousands:

	Years Ending December 31,	
	2024	2023
Deferred tax assets:		
Net operating loss carryforwards	$ 26	$ 774
Tax credit carryforwards	5	295
Stock-based compensation	21	80
Capitalized research and development expenses	295	1,384
License fees	3	3
Lease liability	–	9
Other timing differences	–	13
Deferred tax assets	350	2,558
Deferred tax liabilities:		
Right of use asset	–	(9)
Other timing differences	(13)	–
Deferred tax liability	(13)	(9)
Valuation allowance	(337)	(2,549)
Net deferred tax asset	$ –	$ –

Ownership changes may limit the amount of net operating loss ("**NOL**") carryforwards or tax credit carryforwards that can be utilized to offset future taxable income or tax liability. Pursuant to Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the "**Code**"), NOL and tax credit carryforwards may be subject to annual limitations in the event a cumulative change in ownership of more than 50% occurs within a three-year period. Any limitation may result in expiration of a portion of the NOL carryforwards or tax credit carryforwards before utilization.

During 2023, the Company completed an assessment of the available NOL and tax credit carryforwards under Sections 382 and 383 of the Code since the last assessment completed in 2021 and concluded that the Company underwent an ownership change in 2023. As a result, NOL and tax credit carryforwards attributable to the pre-ownership change are subject to substantial annual limitations under Sections 382 and 383 of the Code. The Company adjusted its NOL and tax credit carryforwards to address the impact of the ownership change. For the year ended December 31, 2023, federal and state NOLs were reduced by $52,000,000 and $25,900,000, respectively, and federal and state research and development tax credit carryforwards were reduced by $918,000 and $517,000, respectively, as a result of the ownership change in 2023. The Company may experience ownership changes in the future as a result of subsequent shifts in stock ownership, some of which may be outside of the Company's control.

For 2024, the Company updated its analysis to determine the annual Section 382 NOL utilization limitation as a result of a change in ownership that occurred on December 20, 2024. As a result of this ownership change, the Company's NOLs were reduced by $6,265,000 and $4,893,000, respectively, and federal and state research and development tax credits carryforwards were reduced by $401,000 and $174,000, respectively.

At December 31, 2024, the Company had federal and state NOL carryforwards of approximately $103,000 and $75,000, respectively, to reduce future taxable income. The utilization of the federal carryforwards as an available offset to future taxable income is subject to limitations under federal income tax laws. Under current federal income tax law, federal NOLs generated in tax years beginning after December 31, 2017 may be carried forward indefinitely, but are limited to offset up to 80% of future taxable income. As of December 31, 2024, all our federal NOL carryforwards will carryforward indefinitely. The Company's available state NOL carryforwards will begin to expire in 2045, unless previously utilized.

At December 31, 2024, the Company also had federal research and development credits of approximately $5,000,and no state research and development credits. The federal tax credit carryforwards will begin to expire in 2045.

The Company has not recorded any uncertain tax positions as of December 31, 2024 or 2023. The Company does not believe there will be any material changes in its unrecognized tax positions over the next 12 months.

The Company has not incurred any interest or penalties. In the event that the Company is assessed interest or penalties at some point in the future, they will be classified in the consolidated financial statements as income tax expense.

The Company files income tax returns in the United States and in multiple state jurisdictions. The Company is subject to tax examinations for federal and state purposes for tax years 2021 through 2024.

11. Net Loss per Share

Basic net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding. Diluted net loss per share is computed by dividing the Company's net loss by the weighted average number of common shares outstanding and the impact of the dilutive effect of potential common stock equivalents, except when the inclusion of such potential common stock equivalents would be anti-dilutive. Dilutive potential common stock equivalents primarily consist of stock options, RSUs and warrants. Therefore, basic and diluted net loss per share applicable to common stockholders were the same for all periods presented because the impact of these items is generally anti-dilutive during periods of net loss.

The following table sets forth the potential common shares excluded from the calculation of net loss per common share because their inclusion would be anti-dilutive:

	December 31,	
	2024	2023
Stock options	1,126	10,084
Unvested restricted stock units	71,000	49,683
Warrants	1,925,867	5,504,918
Total	1,997,993	5,564,685

12. Segment Information

The Company is a clinical stage biotechnology company that has yet to generate operating revenues. Management has determined that the Company operates with a single operating segment and a single reporting segment – the Clinical segment. The Chief Operating Decision Maker (CODM) is the Chief Executive Officer (CEO). The CEO assesses performance and allocates resources to achieve the Company's goals based on operating income/(loss) and net income/(loss) as reported in the Consolidated Statements of Operations. The measure of segment assets is Total Assets as presented on the Consolidated Balance Sheets. All of the Company's operations occur within the United States.

The following table presents selected financial information with respect to the Company's single operating segment (in thousands):

	December 31,	
	2024	2023
Research and development expense	$ (3,643)	$ (6,332)
General and administrative expense	(3,744)	(4,366)
Impairment loss on property and equipment	–	(126)
Other income	6	6
Interest income	244	3
Interest expense	(13)	(11)
Net loss	$ (7,150)	$ (10,826)
Total assets	$ 5,738	$ 9,364

13. Subsequent Events

On January 13, 2025, the Company entered into a securities purchase agreement (the "**January 13, 2025 Securities Purchase Agreement**") with certain institutional and accredited investors in connection with a registered direct public offering (the "**January 13, 2025 Registered Direct Offering**") and concurrent private placement (the "**January 13, 2025 Private Placement**" and, together with the January 13, 2025 Registered Direct Offering, the "**January 13, 2025 Offerings**"). The January 13, 2025 Offerings closed on January 14, 2025. In addition, the Company issued warrants to the placement agent, HCW, to purchase a total of 79,775 shares of Common Stock at an exercise price of $3.75 per share. The net proceeds to the Company from the January 13, 2025 Registered Direct Offerings and the January 13, 2025 Private Placement is approximately $2.9 million, after deducting fees and estimated offering expenses.

Pursuant to the January 13, 2025 Securities Purchase Agreement, the Company offered and sold in the January 13, 2025 Registered Direct Offering 1,063,670 shares of Common Stock at a purchase price of $3.00 per share. In the January 13, 2025 Private Placement, the Company also issued to certain institutional and accredited investors unregistered warrants to purchase up to 2,127,340 shares of Common Stock (the "**Series G Warrants**"). Under the terms of the January 13, 2025 Securities Purchase Agreement, for each share of Common Stock issued in the January 13, 2025 Registered Direct Offering, two accompanying Series G Warrants were issued to the purchaser thereof. Each Series G Warrant is exercisable for one share of Common Stock at an exercise price of $3.00 per share and will expire on January 14, 2027.

On January 14, 2025, the Company entered into a securities purchase agreement (the "**January 14, 2025 Securities Purchase Agreement**") with certain institutional and accredited investors in connection with a registered direct public offering (the "**January 14, 2025 Registered Direct Offering**") and concurrent private placement (the "**January 14, 2025 Private Placement**" and together with the January 14, 2025 Registered Direct Offering, the "**January 14, 2025 Offerings**"). The January 14, 2025 Offerings closed on January 15, 2025. In addition, the Company issued warrants to the placement agent, HCW, to purchase a total of 62,500 shares of Common Stock at an exercise price of $3.75 per share. The net proceeds to the Company from the January 14, 2025 Registered Direct Offering and the January 14, 2025 Private Placement are approximately $2.2 million, after deducting fees and estimated offering expenses.

Pursuant to the January 14, 2025 Securities Purchase Agreement, the Company offered and sold in the January 14, 2025 Registered Direct Offering 833,335 shares of Common Stock at a purchase price of $3.00 per share. In the January 14, 2025 Private Placement, the Company also issued to such institutional and accredited investors unregistered warrants to purchase up to 1,666,670 shares of Common Stock (the "**Series H Warrants**"). Under the terms of the January 14, 2025 Securities Purchase Agreement, for each share of Common Stock issued in the January 14, 2025 Registered Direct Offering, two accompanying Series H Warrants were issued to the purchaser thereof. Each Series H Warrant is exercisable for one share of Common Stock at an exercise price of $3.00 per share and will expire on January 15, 2027.

On January 16, 2025, the Company entered into a securities purchase agreement (the "**January 16, 2025 Securities Purchase Agreement**") with certain institutional and accredited investors in connection with a registered direct public offering (the "**January 16, 2025 Registered Direct Offering**") and concurrent private placement (the "**January 16, 2025 Private Placement**" and together with the January 16, 2025 Registered Direct Offering, the "**January 16, 2025 Offerings**"). The January 16, 2025 Offerings closed on January 17, 2025. In addition, the Company issued warrants to the placement agent, HCW, to purchase a total of 45,750 shares of Common Stock at an exercise price of $3.75 per share The net proceeds to the Company from the January 16, 2025 Registered Direct Offering and the January 16, 2025 Private Placement are approximately $1.6 million, after deducting fees and estimated offering expenses.

Pursuant to the January 16, 2025 Securities Purchase Agreement, the Company offered and sold in the January 16, 2025 Registered Direct Offering 610,000 shares of Common Stock at a purchase price of $3.00 per share. In the January 16, 2025 Private Placement, the Company also issued to such institutional and accredited investors unregistered warrants to purchase up to 1,220,000 shares of Common Stock (the "**Series I Warrants**"). Under the terms of the January 16, 2025 Securities Purchase Agreement, for each share of Common Stock issued in the January 16, 2025 Registered Direct Offering, two accompanying Series I Warrants were issued to the purchaser thereof. Each Series I Warrant is exercisable for one share of Common Stock at an exercise price of $3.00 per share and will expire on January 19, 2027.

ITEM 9. *CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE*

None.

ITEM 9A. *CONTROLS AND PROCEDURES*

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Principal Executive Officer and our Principal Financial Officer, evaluated the effectiveness of disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**")) as of the end of the period covered by this report to ensure that information that we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives. We believe that a control system, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the control system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected. Based on the evaluation of our disclosure controls and procedures as of the end of the period covered by this report, management, with the participation of our Principal Executive Officer and our Principal Financial Officer, concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of such date.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention or overriding of controls. Accordingly, even effective internal controls can provide only reasonable assurances with respect to financial statement preparation. Further, because of changes in conditions, the effectiveness of internal control may vary over time.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2024. In making this assessment, management used the criteria set forth in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this assessment, management, with the participation of our Principal Executive Officer and our Principal Financial Officer, concluded that, as of December 31, 2024, our internal control over financial reporting was effective.

Attestation Report of the Registered Public Accounting Firm

This Annual Report on Form 10-K provides only management's report. As a smaller reporting company, we are not required to provide an attestation report by our independent registered public accounting firm regarding our internal control over financial reporting.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. *OTHER INFORMATION*

Trading Plans

During the three months ended December 31, 2024, no director or officer of the Company adopted or terminated a Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement, as each term is defined in Item 408(a) of Regulation S-K.

Employment Agreement Amendment

On March 25, 2025, we and Robert Bitterman entered into an amendment (the "Amendment") to the existing employment agreement with Mr. Bitterman, dated February 20, 2023 (the "Existing Employment Agreement"). The Amendment amends the severance provision in the Existing Employment Agreement to provide that, in addition to the (3) months of continued payment of Mr. Bitterman's then-current base salary that Mr. Bitterman is entitled to under the Existing Employment Agreement in certain circumstances then, in such cases, he shall also be entitled to an additional one (1) month of continued payment of his then-current base salary for each completed year of service with the Company, not to exceed a total severance of six (6) months. Except as set forth in the Amendment, all other terms and conditions of the Existing Employment Agreement remain in full force and effect, and descriptions of such terms and conditions are included within Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed on May 11, 2023, which is incorporated herein by reference. The description of the Amendment is a summary only, and is qualified in its entirety by reference to the Amendment, which is attached hereto as Exhibit 10.30 and incorporated herein by reference.

ITEM 9C. *DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS*

Not applicable.

PART III

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

Management

Set forth below are the present directors and executive officers of the Company as of March 20, 2025. There are no arrangements or understandings between any of the directors, officers and other persons pursuant to which such person was selected as a director or officer.

Name and Year First Became a Director (if applicable)	Age	Position(s) with the Company
Robert J. Bitterman (2012)	74	President, Chief Executive Officer and Chairman of the Board of Directors
Robert M. Infarinato	79	Vice President, Chief Financial Officer
Patricia A. Bradford (2022)	74	Director
Robert L. Ferrara (2019)	73	Director
Jonathan E. Freeman, Ph.D. (2017)	57	Director
Curtis A. Lockshin, Ph.D. (2013)	64	Director
David H. Deming (2025)	72	Director

Robert J. Bitterman has served as a member and the Chair of the Board since 2012 and as our President and Chief Executive Officer since February 2023. Mr. Bitterman served as the Interim Executive Chair of the Company from September 2022 to February 2023 until his appointment as President and Chief Executive Officer. Mr. Bitterman served as the President and Chief Executive Officer of Cutanea Life Sciences, Inc., a private company he founded in 2005 that focused on developing innovative technologies to treat diseases and disorders of the skin and subcutaneous tissue, until its acquisition by Biofrontera, Inc., USA in March 2019. Since leaving Cutanea, Mr. Bitterman was retired until commencing the Interim Executive Chair role with the Company in September 2022. Prior to his role at Cutanea Life Sciences, Inc., Mr. Bitterman also held the position of President and Chief Executive Officer of Isolagen, Inc., President and General Manager of Dermik Laboratories and various positions of increasing responsibility in financial and commercial capacities within Aventis S.A. Mr. Bitterman holds an A.B. degree in Economics from The College of the Holy Cross and a Master of Business Administration degree from Boston University. He also holds a Doctor of Humane Letters (Honoris Causa) from the New York College of Podiatric Medicine.

Robert M. Infarinato, CPA, JD joined Phio as our Vice President and Chief Financial Officer in August 2024. From 2001 until this appointment, he served as a Principal at International Business Consulting, He held various CFO and Vice President roles at companies such as Rosenbluth International, Rhone-Poulenc Rorer, Rorer Group (Corporate Controller), Serono, and Revlon. He also served as the European treasurer and tax manager for Pfizer from 1975 to 1978. Additionally, he served as Chair of the Board of Trustees for Abington Health System from 2010 until 2013. He currently is registered/licensed as an Attorney at Law and a Certified Public Accountant. He was a Board Leadership Fellow for the National Association of Corporate Directors in 2012. Mr. Infarinato holds a JD from Fordham University School of Law and a Bachelor of Science in Accounting from Syracuse University.

Patricia A. Bradford has served as a member of the Board since 2022. Ms. Bradford served as Senior Vice President Global Human Resources at Unisys Corporation, a global information technology solutions company, where her total service at Unisys spanned from 1982 until her retirement in 2013. In her role at Unisys, Ms. Bradford strategically led all global human resource programs and initiatives, including talent management, at multiple levels of the organization. Ms. Bradford's roles at Unisys progressively included all areas of human resources, including an overseas assignment at the Unisys European headquarters where she provided human resources leadership to the region. Prior to Unisys, Ms. Bradford was employed by Deloitte, an audit, consulting, tax, and advisory services firm, from 1978 to 1982. Since 2014, Ms. Bradford has maintained a consulting practice focused on individual coaching for senior executives and high potential employees recommended by management. Ms. Bradford received a B.S. degree with an emphasis on accounting and statistics from Walsh College and is a Certified Public Accountant.

Robert L. Ferrara has served as a member of the Board since 2019 and currently serves as our Lead Independent Director. He most recently served as the Chief Financial Officer of Cutanea Life Sciences, Inc., a private company focused on developing innovative technologies to treat diseases and disorders of the skin and subcutaneous tissue, from January 2012 to his retirement in June 2019. Prior to Cutanea, Mr. Ferrara served as the Chief Financial Officer of Storeroom Solutions Inc., a venture capital financed, technology enhanced, integrated supply chain solutions company, from 2004 to 2011, and NER Data Products, Inc., an IT service management company, from 2000 to 2003, as well as holding other senior level financial positions in national and international public companies in the greater Philadelphia area. Mr. Ferrara received a B.S. in Accounting from Lehigh University and is a Certified Public Accountant.

Jonathan E. Freeman, Ph.D. has served as a member of the Board since 2017. Dr. Freeman currently serves as the Chief Operating Officer of Anthos Therapeutics Inc., a clinical-stage biopharmaceutical company developing therapies for cardiovascular patients, a position he has held since July 2021. Anthos Therapeutics Inc. was launched by Novartis and Blackstone Life Sciences, a private investment firm, where Dr. Freeman has also served as a Senior Advisor since July 2018. From 2017 to June 2018, Dr. Freeman held the position of Chief Business Officer of Vedanta Biosciences, a clinical-stage company developing therapies for immune-mediated diseases. Prior to his role with Vedanta Biosciences, Dr. Freeman was the Senior Vice President of Strategy and Portfolio Management and Head of Business Development and Licensing at Merck KGaA, a leading science and technology company, from 2008 to 2016. Dr. Freeman received a Ph.D. in Molecular Pharmacology and Drug Metabolism from the Imperial Cancer Research Fund (now CRUK), an M.A. and First Class Honours in Biochemistry from Cambridge University and a MBA with a finance major from Webster University, St. Louis.

Curtis A. Lockshin, Ph.D. has served as a member of the Board since 2013. Dr. Lockshin currently serves as the Chief Scientific Officer of Xenetic Biosciences, Inc., a biopharmaceutical company focused on the development of novel oncology therapeutics, a position he has held since January 2017. Prior to this appointment, Dr. Lockshin served as Xenetic Biosciences, Inc.'s Vice President of Research and Operations from March 2014 to January 2017. From July 2016 to December 2016, Dr. Lockshin served as Chief Technical Officer of VBI Vaccines, Inc., a company developing vaccines in infectious disease and immuno-oncology. VBI Vaccines, Inc. merged with SciVac Therapeutics, Inc. and its subsidiary SciVac, Ltd., a commercial-stage biologics and vaccine company, in July 2016 where Dr. Lockshin had served as its Chief Executive Officer and director since September 2014. Since 2004, Dr. Lockshin has served as a Director of the Ruth K. Broad Biomedical Research Foundation, a Duke University Support Corporation. Since May 2013, Dr. Lockshin has also served as President and Chief Executive Officer of Guardum Pharmaceuticals, LLC, a private pharmaceutical company. Dr. Lockshin holds a S.B. degree in Life Sciences and a Ph.D. in Biological Chemistry from the Massachusetts Institute of Technology.

David H. Deming has served as a member of the Board since February 2025. Mr. Deming currently serves as the President and CEO of Barramundi Capital LLC (formerly Parker Street Securities), a broker-dealer for private placements of private securities, a position he has held since April 2023. Mr. Deming has also been a Senior Advisor at ID Fund Advisors LLC, a registered investment adviser, since June 2018. From April 2013 to February 2018, Mr. Deming served as Managing Partner of TAG Healthcare Advisors, where he advised healthcare companies on business and financial strategies. Mr. Deming currently serves on the board of directors of Better For You Wellness, Inc. (OTC: BFYW), where he is a member of the audit committee. Mr. Deming began his career at J.P. Morgan in 1976 and was a Managing Director in charge of the Global Healthcare Investment Banking Group from 1991 to 2003. Mr. Deming received a B.A. in Economics from Hobart College.

As of the date of this Annual Report on Form 10-K, we have two executive officers, Robert Bitterman, who serves as our President and Chief Executive Officer, and Robert Infarinato, who serves as our Vice President and Chief Financial Officer. The size of the Board of Directors (the "**Board**") is currently set at six directors.

Audit Committee

We have a separately-designated standing audit committee established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"). The Audit Committee of the Board (the "**Audit Committee**") is comprised of Mr. Ferrara (Chairman), Ms. Bradford and Dr. Freeman. The Board has determined that all members of the Audit Committee satisfy the current independence and experience requirements of Rule 10A-3 of the Exchange Act and the current Nasdaq independence standards, and Mr. Ferrara is an "audit committee financial expert," as the Securities and Exchange Commission (the "**SEC**") has defined that term in Item 407 of Regulation S-K.

Code of Business Conduct and Ethics

We have adopted a Code of Business Conduct and Ethics that applies to all employees, officers and directors. Our Code of Business Conduct and Ethics, as well as other corporate governance materials, is located on our website at *www.phiopharma.com*. Waivers of our Code of Business Conduct and Ethics may only be granted by the Board. We intend to disclose on our website any amendments to, or waivers from, the Code of Business Conduct and Ethics that are required to be disclosed pursuant to the disclosure requirements of Item 5.05 of Form 8-K within four business days following the date of such amendment or waiver.

Insider Trading Arrangements and Policies

We are committed to promoting high standards of ethical business conduct and compliance with applicable laws, rules and regulations. As part of this commitment, we have adopted an insider trading policy (the "**Insider Trading Policy**") governing the purchase, sale, and/or other dispositions of our securities by our directors, officers, employees and designated contractors, as well as by Phio Pharmaceuticals Corp. itself, that we believe is reasonably designed to promote compliance with insider trading laws, rules and regulations, and the exchange listing standards applicable to us. A copy of the Insider Trading Policy is filed as Exhibit 19.1 to this Form 10-K.

ITEM 11. *EXECUTIVE COMPENSATION*

The following describes the compensation earned by each of the executive officers identified below in the Summary Compensation Table, who are referred to collectively as our "named executive officers" or NEOs. Our NEOs with respect to the fiscal year that ended on December 31, 2024 are Robert J. Bitterman and Robert M. Infarinato.

Summary Compensation Table

Name and principal position	Year	Salary ($)	Stock awards ($)[1]	Non-equity incentive plan compensation ($)	All other compensation ($)[2]	Total ($)
Robert J. Bitterman [3]	2024	342,615	43,245	–	1,159	387,019
President and Chief Executive Officer	2023	380,000	57,640	–	252	437,892
Robert M. Infarinato [4]	2024	75,462	29,330	–	414	105,206
Vice President and Chief Financial Officer						

(1) The amounts shown reflect the grant date fair value of restricted stock units ("**RSUs**") computed in accordance with the Financial Accounting Standards Board (the "**FASB**") Accounting Standards Codification ("**ASC**") Topic 718, "*Compensation — Stock Compensation*" for the indicated year. See Note 9 to our consolidated financial statements included elsewhere in this Annual Report for further information.

(2) Represents amounts for the dollar value of life insurance premiums paid.

(3) Mr. Bitterman has served as a member of the Company's Board of Directors since 2012 and served as the Company's Interim Executive Chairman from September 2022 to February 2023 and was appointed as our President and Chief Executive Officer in February 2023. Upon his appointment to Interim Executive Chairman, Mr. Bitterman ceased receiving compensation in connection with his position as a director of the Company, including as Chairman of the Board. Effective as of October 16, 2023, Mr. Bitterman voluntarily reduced his base salary by $100,000.

(4) Mr. Infarinato was appointed Vice President and Chief Financial Officer effective August 1, 2024.

Outstanding Equity Awards at Fiscal Year-End

The following table shows information regarding outstanding equity awards as of December 31, 2024 for our NEOs:

		Option Awards				Stock Awards			
Name	Grant Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)	Equity Incentive Plan Awards: Number of Unearned Shares or Units of Stock That Have Not Vested (#)	Equity Incentive Plan Awards: Market Value of Unearned Shares or Units of Stock That Have Not Vested ($)[1]
Robert J. Bitterman [2]	6/1/2015	1	–	225,720.00	6/1/2025	–	–	–	–
	2/10/2016	1	–	169,884.00	2/10/2026	–	–	–	–
	2/1/2017	1	–	37,362.60	2/1/2027	–	–	–	–
	9/11/2024	–	–	–	–	15,500	43,245	–	–
Robert M. Infarinato[3]	8/13/2024	–	–	–	–	8,000	20,960	–	–
	9/11/2024	–	–	–	–	3,000	8,370	–	–

(1) Value is based on the closing price of $1.80 of Common Stock on December 31, 2024.

(2) The equity awards granted to Mr. Bitterman on June 2, 2014, June 1, 2015, February 10, 2016, and February 1, 2017 vested in one installment on the first anniversary of the grant date. The equity award granted to Mr. Bitterman on September 11, 2024 will vest in full on the first anniversary of the grant date.

(3) The equity awards granted to Mr. Infarinato on August 13, 2024 and September 11, 2024 will each vest on the first anniversary of the respective grant date.

Base Salary

When reviewing and approving our executive compensation arrangements, including the base salaries paid to our executive officers, the Compensation Committee of the Board (the "**Compensation Committee**") considers a number of factors, including, but not limited to: the performance of the executive officer to the Company's overall performance, the performance of the executive officer against the Company's corporate objectives, the executive officer's skills, experience and qualifications in such executive officer's role, review of compensation surveys of base salaries paid by comparable organizations and market compensation data. These factors provide the framework for decisions regarding the base salary compensation for each executive officer. No single factor is determinative in setting base salary levels, nor was the impact of any factor on the determination of pay levels quantifiable.

Incentive Compensation

Annual Incentive Bonus

Annual bonuses are based on the achievement of corporate goals typically comprised of a mix of clinical development, discovery, financial, business development, and investor relations related performance objectives. The corporate goals are approved by the Board on an annual basis at the start of each year. Annual bonuses for all employees, including executive officers, take into account the achievement of specified business objectives and individual performance objectives, with the exception of the Company's President and Chief Executive Officer, whose annual bonus is determined solely by the achievement of business objectives. The Compensation Committee reviews our achievements against these corporate goals and their assessment of the goals and recommendations regarding funding is presented to our full Board for approval. The Compensation Committee maintains full discretion in determining overall performance under the annual bonus and may adjust bonus payouts based on factors it deems relevant. Neither of our NEOs received any annual incentive bonus payments in 2024 or 2023.

Equity Incentive

We maintain the Phio Pharmaceuticals Corp. 2020 Long Term Incentive Plan (the "**2020 Plan**") pursuant to which we currently grant RSU awards to eligible participants. Grants of restricted stock units under this plan to our NEOs are disclosed in the Summary Compensation and Outstanding Equity Awards at Fiscal Year-End tables above.

The Compensation Committee last granted a stock option in October 2023. We have no program, practice or plan to grant stock options in coordination with the release of material nonpublic information. We also have not timed the release of material nonpublic information for the purpose of affecting the value of stock options or other compensation, and we have no plan to do so. These considerations are not applicable to RSUs or other types of equity awards that do not include an exercise price related to the market price of our stock on the date of grant.

Employment and Change of Control Agreements

The following provides description of the employment agreements that are currently in effect for our NEOs:

Robert J. Bitterman

Mr. Bitterman was appointed President and Chief Executive Officer and entered into an employment agreement, dated February 20, 2023, pursuant to which he was entitled to an initial annual base salary of $440,000 and is eligible to receive an annual bonus of up to 40% of his annual base salary, based on the achievement of certain performance goals established annually by the Board. In connection with his appointment, the Company granted Mr. Bitterman RSUs settleable for 11,000 shares of Common Stock under the Company's 2020 Plan. The RSUs vested in two equal annual installments, commencing on the first anniversary of the date of grant. Effective as of October 16, 2023, Mr. Bitterman voluntarily reduced his base salary by $100,000.

If Mr. Bitterman's employment is terminated by the Company due to death or disability, the Company shall pay to Mr. Bitterman or to his estate, as applicable, any earned, but unpaid, base salary and any amounts owed to Mr. Bitterman for reimbursement of expenses properly incurred which are reimbursable, in each case as earned or incurred, as applicable through the date of termination (the "**Accrued Benefits**"), as well as pay any accrued but unpaid bonus then due to Mr. Bitterman and all equity awards that have been granted will immediately vest on a pro-rata basis. If Mr. Bitterman's employment is terminated by the Board for cause or by Mr. Bitterman without good reason, the Company shall pay to Mr. Bitterman the Accrued Benefits through the date of termination. If Mr. Bitterman's employment is terminated by Mr. Bitterman for good reason or by the Company other than as a result of death or disability and other than for cause, then the Company shall pay to Mr. Bitterman the Accrued Benefits through the date of termination, continue to pay Mr. Bitterman his base salary for three months from the date of separation, pay any accrued but unpaid bonus and if, and only if, such termination occurs within one year of a change in control all equity awards that have been granted but are not exercisable at the time of such termination shall immediately become exercisable in full.

Mr. Bitterman is eligible to participate in the Company's 2020 Plan and other benefits available to the Company's executive officers.

Robert M. Infarinato

Mr. Infarinato was appointed Vice President and Chief Financial Officer and entered into an offer letter and employment agreement, effective August 1, 2024, pursuant to which he is entitled to an initial annual base salary of $180,000 and is eligible to receive an annual bonus of up to 30% of his annual base salary, based on the achievement of certain performance goals established annually by the Board. In connection with his appointment, the Company granted Mr. Infarinato RSUs settleable for 8,000 shares of Common Stock under the 2020 Plan. The RSUs vest in equal annual installments over three years, commencing on the first anniversary of the grant date, subject to Mr. Infarinato's continuous service with us through each such vesting date.

Mr. Infarinato's employment is at-will, which means that we or Mr. Infarinato may terminate his employment with us at any time, with or without notice or cause.

Mr. Infarinato is eligible to participate in the Company's 2020 Plan and other benefits available to the Company's executive officers.

Pay versus Performance

As required by Section 953(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 402(v) of Regulation S-K, we are providing the following information about the relationship between the SEC-defined Compensation Actually Paid ("**CAP**") to our NEOs and certain of our financial performance metrics during the fiscal years listed below. The SEC-defined CAP data set forth in the table below does not necessarily reflect amounts actually paid, earned or received by our NEOs, and the metrics are not those that the Compensation Committee uses when setting executive compensation.

The following table sets forth additional compensation information of our principal executive officer ("**PEO**") along with total shareholder return and net income for our 2024, 2023 and 2022 fiscal years. The Company appointed Robert M. Infarinato as Chief Financial Officer in August of 2024, and Mr. Infarinato is considered a non-PEO NEO for fiscal year 2024. The Company did not have any non-PEO NEOs for 2023 and 2022 fiscal years.

Year	Summary Compensation Table Total for PEO (1)	CAP to PEO (2)	Summary Compensation Table Total for Non-PEO NEO	CAP to Non-PEO NEO (3)	Value of Initial Fixed $100 Investment Based On Total Shareholder Return (4)	Net Income (Loss) (Thousands)
2024	$387,019	$384,546	$105,206	$106,566	$23.25	$(7,150)
2023	$437,892	$379,393	–	–	$6.33	$(10,826)
2022	$109,380	$94,715	–	–	$13.83	$(11,480)

(1) Mr. Bitterman has served as a member of the Company's Board since 2012, served as the Company's Interim Executive Chair from September 2022 to February 2023 and was appointed as our President and Chief Executive Officer in February 2023.

(2) CAP reflects the following exclusions and inclusions for the PEO in the table above:

Year	Summary Compensation Table Total	Minus: Grant Date Fair Value of Stock Awards and Option Awards from Summary Compensation Table	Plus: Year-end Fair Value of Unvested Equity Awards Granted During Year	Plus: Year-Over-Year Difference of Year-End Fair Value of Unvested Awards Granted in Prior Years	Plus: Fair Value at Vest Date for Awards Granted and Vested During Year	Plus: Year-Over-Year Difference of Year-End Fair Value of Prior Years' Awards Vested During Year	Minus: Fair Value at Prior Year-end for Prior Years' Awards that Fail to Meet Vesting Conditions During Year	Compensation Actually Paid
2024	$387,019	$(43,245)	$43,245	–	–	$(2,473)	–	$384,546
2023	$437,892	$(57,640)	$8,360	–	–	$(9,219)	–	$379,393
2022	$109,380	$(31,464)	$18,590	–	–	$(1,791)	–	$94,715

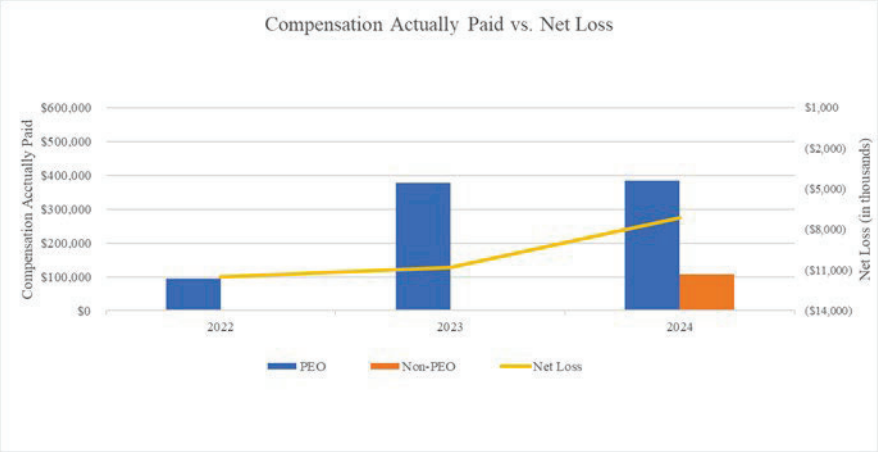
(3) CAP reflects the following exclusions and inclusions for the Non-PEO NEO in the table above:

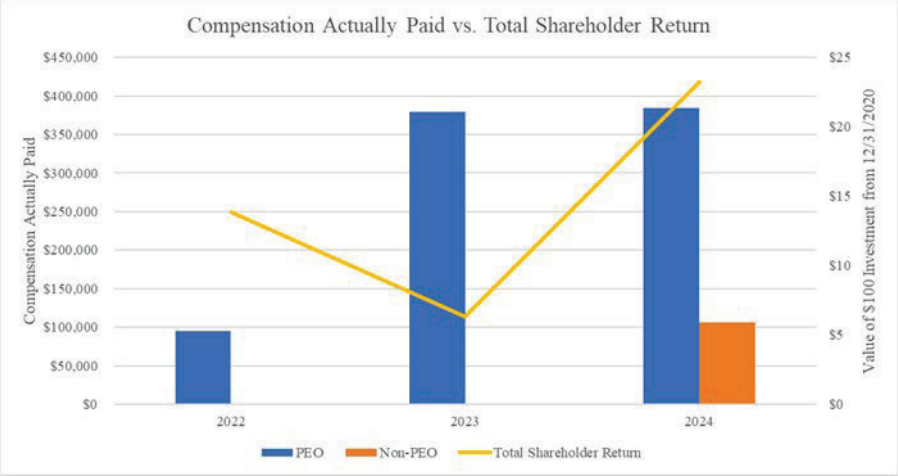
Year	Summary Compensation Table Total	Minus: Grant Date Fair Value of Stock Awards and Option Awards from Summary Compensation Table	Plus: Year-end Fair Value of Unvested Equity Awards Granted During Year	Plus: Year-Over-Year Difference of Year-End Fair Value of Unvested Awards Granted in Prior Years	Plus: Fair Value at Vest Date for Awards Granted and Vested During Year	Plus: Year-Over-Year Difference of Year-End Fair Value of Prior Years' Awards Vested During Year	Minus: Fair Value at Prior Year-end for Prior Years' Awards that Fail to Meet Vesting Conditions During Year	Compensation Actually Paid
2024	$105,206	$(29,330)	$30,690	$0	$0	$0	$0	$106,566
2023	–	–	–	–	–	–	–	–
2022	–	–	–	–	–	–	–	–

(4) Total shareholder return as calculated based on a fixed investment of $100 measured from the market close on December 31, 2022 through and including the end of the fiscal year for each year reported in the table.

Relationship Between Pay and Performance

The following charts shown below illustrate the relationship of compensation actually paid to our PEO and, for 2024, to our Non-PEO NEO, as set forth in the table above, as compared to: our (1) total shareholder return and (2) net income (loss).





Director Compensation

Non-Employee Director Compensation Policy

We compensate our non-employee directors for their service as a member of our Board. Each non-employee director is entitled to receive an annual cash retainer of $35,000. The chairs of our Board and Audit Committee are entitled to receive an additional annual cash retainer of $15,000 and the chairs of the Compensation, Governance and Nominating Committees are entitled to receive an additional cash retainer of $7,500. In addition, the Lead Independent Director, if any, is entitled to receive an additional annual cash retainer of $12,500. Each non-employee director is also entitled to receive an annual grant of RSUs as determined by the Board, which vest in full on the one-year anniversary of the respective date of grant.

The Compensation Committee and the Board reassess the appropriate levels of cash and equity compensation for non-employee directors on an annual basis.

Non-employee directors are also reimbursed for their travel and reasonable out-of-pocket expenses incurred in connection with attending Board and committee meetings and in attending continuing education seminars, to the extent that attendance is required by the Board or the committee(s) on which that director serves.

Non-Employee Director Compensation Table

The following table shows the compensation to the Company's non-employee directors in fiscal year 2024. We compensate our non-employee directors for their service as a member of our Board. Compensation paid to Robert J. Bitterman, the Company's President, Chief Executive Officer and Chairman of the Board, is set forth above in the Summary Compensation Table due to Mr. Bitterman's status as an NEO of the Company. As noted above, Mr. Deming did not join the Board until February 2025; accordingly, he is not included in the table below as this table relates to fiscal year 2024.

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)[1]	Total ($)
Patricia A. Bradford	50,000	22,320	72,320
Robert L. Ferrara	62,500	27,900	90,400
Jonathan E. Freeman, Ph.D.	35,000	2,790	37,790
Curtis A. Lockshin, Ph.D.	42,500	5,580	48,080

(1) The amounts shown reflect the grant date fair value of RSUs computed in accordance with the FASB ASC Topic 718, "Compensation — Stock Compensation".

As of December 31, 2024, the aggregate number of shares underlying stock options and RSUs by our non-employee directors is as follows: Patricia A. Bradford — 8,000 RSUs, Robert L. Ferrara — 10,000 RSUs, Jonathan E. Freeman, Ph.D. — 1,000 RSUs, and Curtis A. Lockshin, Ph.D. —2,000 RSUs. Mr. Bitterman's outstanding equity awards are also included in the Outstanding Equity Awards at Fiscal Year-End table above due to his status a NEO during the fiscal year ended December 31, 2024.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

Security Ownership of Certain Beneficial Owners and Management

Based on information available to us and filings with the SEC, the following table sets forth certain information regarding the beneficial ownership (as defined by Rule 13d-3 under the Exchange Act) of our outstanding Common Stock for (i) each of our directors, (ii) each of our executive officers, (iii) all of our directors and executive officers as a group and (iv) persons known to us to beneficially own more than 5% of our outstanding Common Stock. The following information is presented as of March 20, 2025 or such other date as may be reflected below.

Beneficial ownership and percentage ownership are determined in accordance with the rules of the SEC and include voting or investment power with respect to shares of stock. This information does not necessarily indicate beneficial ownership for any other purpose. Under these rules, shares of Common Stock not outstanding but deemed beneficially owned by virtue of the right of a person to acquire them as of March 20, 2025, or within 60 days of March 20, 2025, are deemed outstanding for the purpose of computing the percentage ownership of each person, but are not deemed outstanding for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated and subject to applicable community property laws, to our knowledge, each stockholder named in the following table possesses sole voting and investment power over their shares of Common Stock, except for those jointly owned with that person's spouse. Unless otherwise indicated below, the address of each person listed on the table is c/o Phio Pharmaceuticals Corp., 11 Apex Drive Suite 300A, PMB 2006, Marlborough, MA, 01752.

	Shares Beneficially Owned	
Name and Address of Beneficial Owner	**Number [1]**	**Percent of Class [2]**
Greater than 5% Holders		
Intracoastal Capital LLC[3]	472,907	9.99%
Directors and Named Executive Officers:		
Robert J. Bitterman	2,418	*
Robert M. Infarinato	–	*
Patricia A. Bradford	352	*
Robert Ferrara	666	*
Jonathan E. Freeman, Ph.D.	356	*
Curtis A. Lockshin, Ph.D.	356	*
David H. Deming	–	*
All current directors and executive officers as a group (seven persons)	4,148	*

* Indicates less than 1%.

(1) Represents shares of Common Stock held as of March 20, 2025 plus shares of Common Stock that may be acquired upon the exercise of options and warrants within 60 days of March 20, 2025.

(2) Based on 4,778,154 shares of Common Stock that were issued and outstanding as of March 20, 2025. Shares not outstanding but deemed beneficially owned by virtue of the right of a person to acquire them as of March 20, 2025, or within 60 days of March 20, 2025, are treated as outstanding only when determining the ownership and voting power for each person (or all directors and executive officers as a group).

(3) Based on information provided by Intracoastal Capital LLC ("**Intracoastal**"). Each of Intracoastal, Mitchell P. Kopin ("**Mr. Kopin**") and Daniel B. Asher ("**Mr. Asher**") be deemed to have beneficial ownership of 472,907 shares of Common Stock issuable upon the exercise of certain warrants held by Intracoastal. Certain of the warrants held by Intracoastal contain a blocker provision under which the holder thereof does not have the right to exercise its warrants to the extent (but only to the extent) that such exercise would result in beneficial ownership by the holder thereof, together with the holder's affiliates, and any other persons acting as a group together with the holder or any of the holder's affiliates, of more than 9.99% of the Company's Common Stock. Based upon information provided by Intracoastal, Intracoastal and Messrs. Kopin and Asher would be deemed to have beneficial ownership of 1,045,576 shares of Common Stock in the absence of such blocker provisions. The principal business office of Mr. Kopin and Intracoastal is 245 Palm Trail, Delray Beach, Florida 33483. The principal business office of Mr. Asher is 111 W. Jackson Boulevard, Suite 2000, Chicago, Illinois 60604.

Equity Compensation Plan Information

The following table sets forth certain information as of December 31, 2024 about the securities authorized for issuance under our equity compensation plans, which consist of our 2020 Plan and our 2013 Employee Stock Purchase Plan. Upon adoption of the 2020 Plan, shares that remained available for grant under our prior Phio Pharmaceuticals Corp. 2012 Long-Term Incentive Plan (the "**2012 Plan**") and shares that were subject to outstanding awards under the 2012 Plan were included in the authorized shares available for grant under the 2020 Plan. Further, upon adoption of the 2020 Plan, the Company no longer grants new equity awards under the 2012 Plan.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in First Column)
Equity compensation plans approved by security holders[(1)]	72,126	$ 1,206.29	889
Equity compensation plans not approved by security holders	–	–	–
Total	72,126	$ 1,206.29	889

(1) Includes 1,126 outstanding options and 71,000 unvested RSUs under the 2020 Plan.

ITEM 13. ***CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE***

The Board, with the assistance of the Audit Committee, reviews and approves all transactions with directors, officers and holders of more than 5% of our voting securities and their affiliates. Prior to the Board's consideration of a transaction with such a related party, the material facts as to the related party's relationship or interest in the transaction must be disclosed to the Board, and the transaction will not be considered approved by the Board unless a majority of the directors who are not interested in the transaction (if applicable) approve the transaction. Furthermore, when stockholders are entitled to vote on a transaction with a related party, the material facts of the related party's relationship or interest in the transaction must be disclosed to the stockholders, who must approve the transaction in good faith.

During the last two completed fiscal years, there has not been, nor is there currently proposed, any transaction or series of related transactions to which we were or will be a party in which the amount involved exceeded or will exceed the lesser of (i) $120,000 and (ii) one percent of the average of Company's total assets at yearend for the last two completed fiscal years and in which the other parties included or will include any of our directors, executive officers, holders of 5% or more of our voting securities, or any member of the immediate family of any of the foregoing persons, other than compensation arrangements with directors and executive officers, which are described where required in Item 11. Executive Compensation of this Annual Report on Form 10-K.

Indemnification Agreements

We have entered into indemnification agreements with each of our executive officers and directors. These agreements provide that, subject to limited exceptions and among other things, we will indemnify each of our executive officers and directors to the fullest extent permitted by law and advance expenses to each indemnitee in connection with any proceeding in which a right to indemnification is available.

Director Independence

We believe that the Company benefits from having a strong and independent Board. For a director to be considered independent, the Board must determine that the director does not have any direct or indirect material relationship with the Company that would affect his or her exercise of independent judgment. On an annual basis, the Board reviews the independence of all directors under the applicable SEC rules and Nasdaq listing standards. The Board also considers each director's affiliations with the Company and members of management, as well as significant holdings of Company securities. This review considers all known relevant facts and circumstances in making an independence determination. Based on this review, the Board has made an affirmative determination that all directors are independent, other than our President and Chief Executive Officer and Chairman of the Board, Mr. Bitterman.

In addition, Nasdaq listing standards require that, subject to specified exceptions, each member of our Audit, Compensation, Governance and Nominating Committees of the Board be independent and that members of our Audit Committee also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act. The Board has determined that all members of the Audit Committee, Compensation Committee, Governance Committee, and Nominating Committee are independent under the applicable Nasdaq listing standards and the Exchange Act.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

Pre-Approval Policies and Procedures

Under the Sarbanes-Oxley Act of 2002, all audit and permissible non-audit services provided by our independent registered public accounting firm must be approved in advance by our Audit Committee to ensure that such services do not impair the independent registered public accounting firm's independence from us. Accordingly, the Audit Committee reviews and pre-approves all audit and non-audit services performed by our independent registered public accounting firm, as well as the fees charged for such services. In its review of non-audit service fees, the Audit Committee considers, among other things, the possible impact of the performance of such services on the independent registered public accounting firm's independence.

The following is a summary of the fees billed and expected to be billed to the Company by BDO USA, P.C. ("**BDO**"), our independent registered public accounting firm, for professional services rendered for the fiscal years ended December 31, 2024 and 2023. All fees incurred in fiscal years 2024 and 2023 for services rendered by BDO were approved in accordance with the pre-approval policies and procedures described above.

	2024	2023
Audit Fees	$ 440,150	$ 443,162
Audit-Related Fees	–	–
Tax Fees	–	–
All Other Fees	–	–
Total All Fees:	$ 440,150	$ 443,162

Audit Fees consist of fees for the audit of the Company's consolidated financial statements included in our annual reports on Form 10-K, the review of the Company's consolidated financial statements included in our quarterly reports on Form 10-Q and other statutory and regulatory filings, including auditor consents.

Audit-Related Fees consist of fees billed for assurance and related services that are also performed by our independent registered public accounting firm.

Tax Fees consist of services rendered for tax compliance, tax advice and tax planning.

All Other Fees consist of the aggregate fees billed for products and services provided by BDO and not otherwise included in Audit Fees, Audit-Related Fees or Tax Fees.

PART IV

ITEM 15. *EXHIBITS AND FINANCIAL STATEMENT SCHEDULES*

Financial Statements

Our consolidated financial statements are set forth in Item 8 to this Annual Report on Form 10-K.

Financial Statement Schedules

Certain schedules are omitted because they are not applicable, or are not required by smaller reporting companies.

Exhibits

Exhibit Number	Description	Incorporated by Reference Herein	
		Form	Date
3.1	Amended and Restated Certificate of Incorporation of Phio Pharmaceuticals Corp.	Current Report on Form 8-K (File No. 001-36304)	November 19, 2018
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Phio Pharmaceuticals Corp.	Current Report on Form 8-K (File No. 001-36304)	January 14, 2020
3.3	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Phio Pharmaceuticals Corp.	Current Report on Form 8-K (File No. 001-36304)	January 25, 2023
3.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Phio Pharmaceuticals Corp.	Current Report on Form 8-K (File No. 001-36304)	July 2, 2024
3.5	Certificate of Designation of Series D Preferred Stock, dated November 16, 2022.	Current Report on Form 8-K (File No. 001-36304)	November 16, 2022
3.6	Amended and Restated Bylaws of Phio Pharmaceutical Corp.	Current Report on Form 8-K (File No. 001-36304)	May 2, 2022
4.1	Form of Warrant.	Amendment No. 1 to the Registration Statement on Form S-1 (File No. 333-221173)	September 28, 2018
4.2	Form of Placement Agent Warrant.	Current Report on Form 8-K (File No. 001-36304)	November 19, 2019
4.3	Form of Warrant.	Current Report on Form 8-K (File No. 001-36304)	February 6, 2020
4.4	Form of Warrant.	Current Report on Form 8-K (File No. 001-36304)	February 13, 2020
4.5	Form of Underwriter Warrant.	Current Report on Form 8-K (File No. 001-36304)	February 13, 2020

Exhibit Number	Description	Incorporated by Reference Herein	
		Form	Date
4.6	Form of Warrant.	Current Report on Form 8-K (File No. 001-36304)	April 2, 2020
4.7	Form of Common Stock Warrant.	Current Report on Form 8-K (File No. 001-36304)	January 25, 2021
4.8	Form of Placement Agent Warrant.	Current Report on Form 8-K (File No. 001-36304)	February 17, 2021
4.9	Form of Series A Common Stock Warrant.	Current Report on Form 8-K (File No. 001-36304)	April 20, 2023
4.10	Form of Series B Common Stock Warrant.	Current Report on Form 8-K (File No. 001-36304)	April 20, 2023
4.11	Form of Existing Warrant Amendment.	Current Report on Form 8-K (File No. 001-36304)	April 20, 2023
4.12	Form of Series A Common Stock Warrant.	Current Report on Form 8-K (File No. 001-36304)	June 2, 2023
4.13	Form of Series B Common Stock Warrant.	Current Report on Form 8-K (File No. 001-36304)	June 2, 2023
4.14	Form of Series A/B Warrant.	Current Report on Form 8-K (File No. 001-36304)	December 8, 2023
4.15	Form of Placement Agent Warrant.	Current Report on Form 8-K (File No. 001-36304)	December 8, 2023
4.16	Description of Securities Registered Pursuant to Section 12(b) of the Securities Exchange Act of 1934.	Annual Report on Form 10-K (File No. 00136304)	April 1, 2024
4.17	Form of Series C/D Warrant	Current Report on Form 8-K (File No. 001-36304)	July 12, 2024
4.18	Form of Placement Agent Warrant	Current Report on Form 8-K (File No. 001-36304)	July 12, 2024
4.19	Form of Series E Common Stock Warrant	Current Report on Form 8-K (File No. 001-36304)	December 20, 2024
4.20	Form of Placement Agent Warrant	Current Report on Form 8-K (File No. 001-36304)	December 20, 2024

Exhibit Number	Description	Incorporated by Reference Herein	
		Form	Date
4.21	Form of Series F Common Stock Warrant	Current Report on Form 8-K (File No. 001-36304)	December 26, 2024
4.22	Form of Placement Agent Warrant	Current Report on Form 8-K (File No. 001-36304)	December 26, 2024
4.23	Form of Series G Common Stock Warrant	Current Report on Form 8-K (File No. 001-36304)	January 14, 2024
4.24	Form of Placement Agent Warrant	Current Report on Form 8-K (File No. 001-36304)	January 14, 2024
4.25	Form of Series H Common Stock Warrant	Current Report on Form 8-K (File No. 001-36304)	January 15, 2024
4.26	Form of Placement Agent Warrant	Current Report on Form 8-K (File No. 001-36304)	January 15, 2024
4.27	Form of Series I Common Stock Warrant	Current Report on Form 8-K (File No. 001-36304)	January 17, 2024
4.28	Form of Placement Agent Warrant	Current Report on Form 8-K (File No. 001-36304)	January 17, 2024
10.1	Patent and Technology Assignment Agreement between RXi Pharmaceuticals Corporation (formerly RNCS, Inc.) and Advirna, LLC, effective as of September 24, 2011.	Registration Statement on Form S-1 (File No. 333-177498)	October 25, 2011
10.2	Clinical Co-development Agreement, dated February 26, 2021, by and between Phio Pharmaceuticals Corp. and AgonOx, Inc.+	Annual Report on Form 10-K (File No. 00136304)	March 22, 2023
10.3	Phio Pharmaceuticals Corp. 2020 Long Term Incentive Plan, as amended and restated.#	Quarterly Report on Form 10-Q (File No. 001-36304)	November 9, 2023
10.4	Form of Restricted Stock Unit Award under the Company's 2020 Long Term Incentive Plan.#	Annual Report on Form 10-K (File. 001-36304)	March 25, 2021
10.5	Form of Nonqualified Stock Option Award under the Company's 2020 Long Term Incentive Plan.#	Annual Report on Form 10-Q (File. 001-36304)	November 9, 2023
10.6	Phio Pharmaceuticals Corp. 2012 Long Term Incentive Plan.#	Quarterly Report on Form 10-Q (File No. 001-36304)	November 12, 2019
10.7	Form of Restricted Stock Unit Award under the Company's 2012 Long Term Incentive Plan, as amended.#	Amendment No. 2 to the Registration Statement on Form S-1 (File No. 333-177498)	December 29, 2011

Exhibit Number	Description	Incorporated by Reference Herein	
		Form	Date
10.8	Form of Incentive Stock Option Award under the Company's 2012 Long Term Incentive Plan, as amended.#	Registration Statement on Form S-1 (File No. 333-191236)	September 18, 2013
10.9	Form of Non-Qualified Stock Option Award under the Company's 2012 Long Term Incentive Plan, as amended.#	Registration Statement on Form S-1 (File No. 333-191236)	September 18, 2013
10.10	RXi Pharmaceuticals Corporation Employee Stock Purchase Plan.#	Registration Statement on Form S-8 (File No. 333-277013)	August 24, 2018
10.11	Form of Indemnification Agreement.#	Amendment No. 3 to the Registration Statement on Form S-1 (File No. 333-177498)	January 23, 2012
10.12	Employment Agreement, dated February 20, 2023, by and between Phio Pharmaceuticals Corp. and Robert Bitterman.#	Current Report on Form 8-K (File No. 001-36304)	February 22, 2023
10.13	Lease Agreement dated December 17, 2013 between RXi Pharmaceuticals Corporation and 257 Simarano Drive, LLC, Brighton Properties, LLC, Robert Stubblebine 1, LLC and Robert Stubblebine 2, LLC.	Current Report on Form 8-K (File No. 000-54910)	December 20, 2013
10.14	First Amendment to Lease dated January 22, 2019.	Current Report on Form 8-K (File No. 001-36304)	January 28, 2019
10.15	Registration Rights Agreement, dated January 21, 2021, by and between the Company and the Purchasers signatory therein.	Current Report on Form 8-K (File No. 001-36304)	January 25, 2021
10.16	Form of Securities Purchase Agreement, dated April 18, 2023, by and between the Company and each of the Purchasers signatory thereto.	Current Report on Form 8-K (File No. 001-36304)	April 20, 2023
10.17	Form of Securities Purchase Agreement, dated May 31, 2023, by and between the Company and each of the Purchasers signatory thereto (Registered Direct Offering).	Current Report on Form 8-K (File No. 001-36304)	June 2, 2023
10.18	Form of Securities Purchase Agreement, dated May 31, 2023, by and between the Company and each of the Purchasers signatory thereto (PIPE Private Placement).	Current Report on Form 8-K (File No. 001-36304)	June 2, 2023
10.19	Form of Registration Rights Agreement, dated May 31, 2023, by and between the Company and each of the Purchasers signatory thereto.	Current Report on Form 8-K (File No. 001-36304)	June 2, 2023
10.20	Form of Inducement Letter Agreement, dated December 6, 2023, by and between Phio Pharmaceuticals Corp. and the Holders.	Current Report on Form 8-K (File No. 001-36304)	December 8, 2023
10.21	Purchase Agreement, dated May 16, 2024, by and between the Company and Triton Funds LP.	Current Report on Form 8-K (File No. 001-36304)	May 17, 2024

Exhibit Number	Description	Incorporated by Reference Herein	
		Form	Date
10.22	Phio Pharmaceuticals Corp. 2020 Long Term Incentive Plan	Current Report on Form 8-K (File No. 001-36304)	June 21, 2024
10.23	Form of Inducement Letter Agreement, dated July 11, 2024, by and between the Company and the Holders.	Current Report on Form 8-K (File No. 001-36304)	July 12, 2024
10.24	Employment Agreement, dated July 9, 2024, by and between the Company and Robert M. Infarinato.	Current Report on Form 8-K (File No. 001-36304)	August 1, 2024
10.25	Form of Securities Purchase Agreement, dated December 19, 2024, by and between the Company and each of the Purchasers signatory thereto.	Current Report on Form 8-K (File No. 001-36304)	December 20, 2024
10.26	Form of Securities Purchase Agreement, dated December 23, 2024, by and between the Company and each of the Purchasers signatory thereto.	Current Report on Form 8-K (File No. 001-36304)	December 26, 2024
10.27	Form of Securities Purchase Agreement, dated January 13, 2025, by and between the Company and each of the Purchasers signatory thereto.	Current Report on Form 8-K (File No. 001-36304)	January 14, 2025
10.28	Form of Securities Purchase Agreement, dated January 14, 2025, by and between the Company and each of the Purchasers signatory thereto.	Current Report on Form 8-K (File No. 001-36304)	January 15, 2025
10.29	Form of Securities Purchase Agreement, dated January 16, 2025, by and between the Company and each of the Purchasers signatory thereto.	Current Report on Form 8-K (File No. 001-36304)	January 17, 2025
10.30	First Amendment to the Employment Agreement of Robert J. Bitterman, dated March 25, 2025, by and between the Company and Robert Bitterman.*		
19.1	Insider Trading Policy.*		
23.1	Consent of BDO USA, P.C., an Independent Registered Public Accounting Firm.*		
31.1	Sarbanes-Oxley Act Section 302 Certification of Principal Executive Officer.*		
31.2	Sarbanes-Oxley Act Section 302 Certification of Principal Financial Officer.*		
32.1	Sarbanes-Oxley Action Section 906 Certification of Principal Executive Officer and Principal Financial Officer.**		
97.1	Phio Pharmaceuticals Corp. Incentive Compensation Recovery Policy.*	Annual Report on Form 10-K (File No. 001-35304)	April 1, 2024

Exhibit Number	Description	Incorporated by Reference Herein	
		Form	Date
101.INS	Inline XBRL Instance Document.*		
101.SCH	Inline XBRL Taxonomy Extension Schema Document.*		
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.*		
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.*		
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.*		
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.*		
104	The cover page for this report, formatted in Inline XBRL (included in Exhibit 101).*		

_____

* Filed herewith.
** Furnished herewith.
# Indicates a management contract or compensatory plan or arrangement.
+ Certain portions of this Exhibit have been redacted pursuant to Item 601(b)(10) of Regulation S-K. The Company agrees to furnish supplementally an unredacted copy of this Exhibit to the SEC upon request.

ITEM 16. ***FORM 10-K SUMMARY***

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PHIO PHARMACEUTICALS CORP.

By: /s/ Robert J. Bitterman
Robert J. Bitterman
President and Chief Executive Officer
(as Principal Executive Officer)

Date: March 31, 2025

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ Robert J. Bitterman Robert J. Bitterman	President, Chief Executive Officer and Director (Principal Executive Officer)	March 31, 2025
/s/ Robert Infarinato Robert Infarinato	Vice President and Chief Financial Officer (Principal Financial Officer)	March 31, 2025
/s/ Patricia Bradford Patricia Bradford	Director	March 31, 2025
/s/ Robert L. Ferrara Robert L. Ferrara	Director	March 31, 2025
/s/ Jonathan E. Freeman Jonathan E. Freeman, Ph.D.	Director	March 31, 2025
/s/ Curtis A. Lockshin Curtis A. Lockshin, Ph.D.	Director	March 31, 2025
/s/ David H. Deming David H. Deming	Director	March 31, 2025

Board of Directors

Robert J. Bitterman, Chair
President & CEO, Phio Pharmaceuticals Corp.

Patricia A. Bradford
Former Senior Vice President Global Human Resources, Unisys Corporation

Robert L. Ferrara
Former CFO, Cutanea Life Sciences, Inc.

Jonathan E. Freeman, Ph.D.
Co-founder and COO, Anthos Therapeutics Inc.

Curtis A. Lockshin, Ph.D.
Former CSO, Xenetic Biosciences, Inc.

David H. Deming
Former Investment Banker and Asset Management, JP Morgan

Management Team

Robert J. Bitterman
President & CEO

Linda Mahoney
Senior Vice President of Development

Lisa Carson
Vice President of Finance & Administration

Jennifer Phillips, Pharm.D.
Vice President of Regulatory & Corporate Affairs

Transfer Agent

Computershare Trust Company, N.A.

By Regular Mail:

P.O. Box 43078
Providence, RI 02940-3078

By Overnight Delivery:

150 Royall Street, Suite 101
Canton, MA 02021

Securities Listing

The Nasdaq Capital Market

Ticker: PHIO

Corporate Counsel

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Philadelphia, PA

Auditors

Grant Thornton, LLP

Philadelphia, PA

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