

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

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

**Cocrystal Pharma, Inc.**  
(Exact name of Registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

2834  
(Primary Standard Industrial  
Classification Code Number)

35-2528215  
(I.R.S. Employer  
Identification Number)

**19805 N. Creek Parkway  
Bothell, WA 98011  
(877) 262-7123**  
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**James Martin  
4400 Biscayne Boulevard  
Miami, FL 33137  
(877) 262-7123**  
(Name, address, including zip code, and telephone number, including area code, of agent for service)

*Copies to:*

**Michael D. Harris, Esq.  
Nason, Yeager, Gerson, Harris & Fumero, P.A.  
3001 PGA Blvd., Suite 305  
Palm Beach Gardens, Florida 33410  
(561) 686-3307**

**Approximate date of commencement of proposed sale to the public:** As soon as practicable after this registration statement becomes effective.

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

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

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

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

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

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

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

**The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the U.S. Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

**The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**Subject to Completion, Dated September 19, 2025**

**PROSPECTUS**

# Cocrystal Pharma, Inc.

## 5,736,773 Shares of Common Stock

This prospectus relates to the resale, from time to time, by the selling stockholders identified in this prospectus under “Selling Stockholders,” of up to 5,736,773 shares of our common stock, par value \$0.001 per share, issuable upon exercise of outstanding warrants (the “Warrants”). The Warrants were issued in a private placement offering which occurred concurrently in connection with a registered direct offering of our common stock and consist of (i) 5,529,420 Warrants issued to certain accredited investors who participated in such offering and (ii) 207,353 Warrants issued as consideration to the placement agent in such offering.

We are not selling any securities under this prospectus, and we will not receive any proceeds from the sale of shares of our common stock by the selling stockholders under this prospectus. The selling stockholders will bear all brokerage commissions and similar expenses attributable to the sale of shares under this prospectus, and we will bear all costs, expenses and fees in connection with the registration of such shares. The selling stockholders may sell the shares of our common stock offered by this prospectus from time to time on terms to be determined at the time of sale through ordinary brokerage transactions or through any other means described in this prospectus. Such shares may be sold at fixed prices, at market prices prevailing at the time of sale, at prices related to prevailing market price or at negotiated prices. See “Plan of Distribution” beginning on page 17.

Our common stock is listed on The Nasdaq Capital Market under the symbol “COCP”. On September 18, 2025, the reported sale price of our common stock on The Nasdaq Capital Market was \$1.27 per share.

**Investing in our securities involves risk. See “Risk Factors” beginning on page 8 of this prospectus and any similar sections contained in the documents incorporated by reference into this prospectus.**

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

The date of this prospectus is , 2025.

---

### TABLE OF CONTENTS

|                                                                                                     |    |
|-----------------------------------------------------------------------------------------------------|----|
| <a href="#">ABOUT THIS PROSPECTUS</a>                                                               | 1  |
| <a href="#">CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS</a>                                | 2  |
| <a href="#">PROSPECTUS SUMMARY</a>                                                                  | 3  |
| <a href="#">RISK FACTORS</a>                                                                        | 8  |
| <a href="#">USE OF PROCEEDS</a>                                                                     | 14 |
| <a href="#">SELLING STOCKHOLDERS</a>                                                                | 14 |
| <a href="#">PLAN OF DISTRIBUTION</a>                                                                | 17 |
| <a href="#">LEGAL MATTERS</a>                                                                       | 21 |
| <a href="#">EXPERTS</a>                                                                             | 21 |
| <a href="#">INCORPORATION BY REFERENCE</a>                                                          | 21 |
| <a href="#">DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES</a> | 22 |
| <a href="#">WHERE YOU CAN FIND MORE INFORMATION</a>                                                 | 22 |

### ABOUT THIS PROSPECTUS

This prospectus relates to the resale, from time to time, by the selling stockholders identified in this prospectus under “Selling Stockholders” beginning on page 14, of up to 5,736,773 shares of our common stock issuable upon exercise of the Warrants. We are not selling any securities under this prospectus, and we will not receive any proceeds from the sale of shares of our common stock by the selling stockholders under this prospectus.

This prospectus is part of a registration statement on Form S-1 that we have filed with the Securities and Exchange Commission (the “SEC”). This prospectus omits some of the information contained in the registration statement, and we refer you to the full registration statement for further information about us and the securities being offered by the selling stockholders under this prospectus. Before making an investment decision, you should read, in addition to this prospectus and the registration statement, any documents that we incorporate by reference in this prospectus, as referred to under “Incorporation By Reference” beginning on page 21, and the information under “Where You Can Find More Information” beginning on page 22. Any statement contained in the prospectus concerning the provisions of any document filed as an exhibit to the registration statement or otherwise filed with the SEC is not necessarily complete, and in each instance reference is made to the copy of the document filed. You should review the complete document to evaluate these statements. Further, you should not assume that the information in this prospectus or any documents incorporated by reference herein is accurate as of any date other than the date of each document. Our business, financial condition, results of operations or prospects may have changed since those dates.

Neither we nor the selling stockholders have authorized any other person to provide you with any information or to make any representations, other than those contained in this prospectus or incorporated by reference in this prospectus. If anyone provides you with additional, different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

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

This prospectus and the documents incorporated by reference herein contain market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information, and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “Risk Factors” contained in this prospectus and under similar headings in other documents that are incorporated by reference herein. Accordingly, you should not place undue reliance on this information.

When we refer to “Cocrystal,” the “Company” “we,” “our,” “us” and the “Company” in this prospectus, we mean Cocrystal Pharma, Inc. and its consolidated subsidiaries, taken as a whole, unless otherwise specified. When we refer to “you,” we mean the potential purchasers of the securities offered by this prospectus.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including documents incorporated by reference into this prospectus, contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934 (the “Exchange Act”). Such forward-looking statements include those statements that express plans, anticipation, intent, contingency, goals, targets or future development and/or otherwise are not statements of historical fact, including expectations relating to our clinical trials and the sufficiency of our working capital. Forward-looking statements can generally be identified by the use of words such as “anticipate,” “expect,” “plan,” “could,” “may,” “will,” “should,” “would,” “intend,” “seem,” “potential,” “appear,” “continue,” “future,” “believe,” “estimate,” “forecast,” “project” and other words of similar meaning, although not all forward-looking statements contain these identifying words. In particular, these forward-looking statements include, among others, statements about our intended use of proceeds, the development and commercialization of broad-spectrum antiviral drug candidates and their potential qualities and success.

These statements are based on our current expectations and projections and involve estimates, assumptions, risks and uncertainties that could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed in this prospectus and the documents incorporated by reference herein. Important factors that could cause actual results to differ from those in the forward-looking statements include the risks and uncertainties arising from the risks arising from the economic impact of United States tariff policies and ongoing tariff litigation and the effect of geopolitical conflicts including the wars in Israel and Ukraine on our Company, our collaboration partners, and on the U.S., U.K., Australia and global economies, including downturns in economic activity and capital markets, recent unemployment increases which alone or with inflation may create the possibility of a recession, manufacturing and research delays arising from raw materials and labor shortages, supply chain disruptions and other business interruptions including any adverse impacts on our ability to obtain raw materials and test animals as well as similar problems with our vendors and our current and any future contract research organizations (CROs) and contract manufacturing organizations (CMOs), the progress and results of the studies for CC-42344 and CDI-988 including the delay of the Phase 2a study for CC-42344 which may require us to incur substantial additional costs, the results of the studies for CC-42344 and CDI-988 and any future preclinical and clinical trials, the ability of our CROs to recruit volunteers for, and to proceed with, clinical studies, and our collaboration partners’ technology and software performing as expected, financial difficulties experienced by certain partners, general risks arising from clinical trials, receipt of regulatory approvals and changes including based on initiatives and actions taken by the Trump Administration which could, among other things, result in delays in regulatory approvals or limit access to federal funding for our programs regulatory changes, development of effective treatments and/or vaccines by competitors, including as part of the programs financed by governmental authorities, potential mutations in a virus we are targeting which may result in variants that are resistant to a product candidate we develop and our ability to raise capital. We also refer you to the Risk Factors which begin on page 8 of this prospectus and our most recent Annual Report on Form 10-K for the year ended December 31, 2024, under the caption “Item 1A – Risk Factors” of such report, and the other documents incorporated by reference into this prospectus for both an expanded discussion of the risks and uncertainties described above and additional risks and uncertainties that could cause actual results to differ materially and adversely from those expressed or implied by forward-looking statements. However, factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them.

You should read this prospectus and the documents that we reference herein, completely and with the understanding that our actual future results may be materially different from what we expect. You are cautioned not to place undue reliance on the forward-looking statements contained in, or incorporated by reference into, this prospectus. Each forward-looking statement speaks only as of the date of this prospectus or, in the case of documents incorporated by reference, the date of the applicable document (or any earlier date indicated in the statement), and we undertake no obligation to update or revise any of these statements, whether as a result of new information, future developments or otherwise, except as required by law. We qualify all of our forward-looking statements by these cautionary statements.

## PROSPECTUS SUMMARY

*This summary highlights information contained in other parts of this prospectus and in the documents we incorporate by reference. Because it is only a summary, it does not contain all of the information that you should consider before investing in our common stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere or incorporated by reference in this prospectus. You should read all such documents carefully, especially the risk factors and our consolidated financial statements and the related notes included or incorporated by reference in this prospectus, before deciding to buy shares of our common stock.*

### Our Business

Cocrystal is a clinical-stage biotechnology company seeking to discover and develop novel antiviral therapeutics as treatments for serious and/or chronic viral diseases. We employ unique structure-based technologies and Nobel Prize winning expertise to create antiviral drugs. These technologies are designed to efficiently deliver small molecule therapeutics that are safe, effective, and convenient to administer. We have identified promising discovery, preclinical and clinical stage antiviral compounds for unmet medical needs caused by coronavirus, influenza virus and norovirus.

The Company operates in one segment. Management uses cash flows as the primary measure to manage its business and does not segment its business for internal reporting or decision-making.

### Cocrystal Technology

We are developing antiviral therapeutics that inhibit the essential viral replication the function of RNA viruses causing acute and chronic viral diseases. Our goals include treating influenza viruses, norovirus, and coronavirus, infections by discovering and developing drug candidates targeting the viral replication process. In the case of coronavirus antiviral therapeutics, we target replication enzymes and proteases that are required for the viral replication and transcription. To discover and design these inhibitors, we use a proprietary platform comprising computational chemistry, medicinal chemistry, X-ray crystallography and our extensive know-how. We determine the structures of cocrystals containing the inhibitors bound to the enzyme or protein to guide our structure-based drug design. We also use advanced computational methods to screen and design product candidates using proprietary cocrystal structural information. In designing the candidates, we seek to anticipate and avert potential viral mutations leading to resistance. By designing and selecting drug candidates that interrupt the viral replication process and also have specific binding characteristics, we seek to develop drugs that are not only effective against both the virus and possible mutants of the virus, but which also have reduced off-target interactions that may cause undesirable clinical side effects. The successful application of our approach requires an extensive knowledge of viruses and drug targets. In addition, knowledge and experience in the fields of structural biology, and enzymology are required. We developed our proprietary structure-based drug design under the guidance of Dr. Roger Kornberg, our Chief Scientist and Chairman of both our Scientific Advisory Board and Board of Directors (the “Board”), in addition to a recipient of the Nobel Prize in Chemistry in 2006. Our drug discovery process focuses on the highly conserved regions of the viral enzymes and inhibitor-enzyme interactions at the atomic level. Additionally, we have developed proprietary chemical libraries consisting of non-nucleoside inhibitors, metal-binding inhibitors, and drug-like fragments. Our drug discovery process is different from traditional, empirical, medicinal chemistry approaches that often require iterative high-throughput compound screening and lengthy hit-to-lead processes. We will continue developing preclinical and clinical drug candidates using our proprietary drug discovery technology.

## Product Candidates

### Influenza Program

We have several candidates under development for the treatment of influenza infection. CC-42344, a novel PB2 inhibitor, was selected as a preclinical lead as an oral or inhaled treatment of pandemic and seasonal influenza A. This candidate binds to a highly conserved PB2 site of influenza polymerase complex (PB1: PB2: PA) and exhibits a novel mechanism of action. CC-42344 showed excellent *in vitro* antiviral activity against influenza A strains, including avian pandemic strains and Tamiflu® and Xofluza® resistant strains, and has favorable pharmacokinetic and drug resistance profiles.

In addition to the oral candidate of CC-42344, inhaled CC-42344 is being developed for the potential prophylactic treatment of pandemic and seasonal influenza infections. Dry powder inhalation development and toxicology studies have been completed.

We received authorization from the United Kingdom Medicines and Healthcare Products Regulatory Agency (MHRA) to conduct a Phase 2a human challenge study with oral CC-42344 as a potential treatment for pandemic and seasonal influenza A. This randomized, double-blind, placebo-controlled study is designed to evaluate the safety, tolerability, viral and clinical measurements of healthy subjects infected with the influenza A virus dosed with oral CC-42344 treatment. In May 2024 we announced the completion of enrollment of 78 subjects.

In December 2024, the Company announced plans to extend enrollment for the oral CC-42344 Phase 2a study due to an unexpectedly low influenza infection among study participants. Specifically, management determined that an extension of the study is necessary due to low infectivity rate of the challenge influenza strain used in this study, as the establishment of robust influenza infection in healthy, uninfected study subjects is critical to determine clinical endpoints for evaluating antiviral molecule, and the low infectivity obtained in this study hindered antiviral data analysis. The Company is currently in continuing discussions with the clinical research organization to address this study and determine a course forward with respect thereto, including potentially preparing a protocol amendment or a resubmission for approval by the MHRA in order to seek enrollment of additional healthy subjects infected with the influenza A virus to ensure necessary infection rates to secure sufficient data for analysis. CC-42344 has demonstrated favorable safety and tolerability profile from the Phase 2a study to date, with no SAEs and no drug-related discontinuations by study participants.

In June 2024 we reported the potential efficacy of CC-42344 against the new Texas avian flu strain from *in vitro* studies with the recently published genome sequence for H5N1. Using our proprietary structure-based platform technology, the Company reported a high-resolution cocrystal structure of this avian PB2 protein complexed with CC-42344 and confirmed that CC-42344 binds to its highly conserved PB2 region. The *in vitro* data using purified Texas avian H5N1 PB2 protein further showed *in vitro* affinity of CC-42344 similar to that of previous data using pandemic avian and seasonal influenza A PB proteins. In May 2025, we further demonstrated the *in vitro* efficacy of CC-42344 against the highly pathogenic H5N1 avian influenza A strain (A/Texas/37/2024). The data showed that CC-42344 is highly potent against the H5N1 avian influenza strain (EC50, 0.003 µM), consistent with the previous biochemical data.

We also continue developing novel broad-spectrum influenza antivirals targeting replication enzymes of pandemic and seasonal influenza A and B strains.

### Norovirus and Coronavirus Programs

We developed the novel protease inhibitor CDI-988 as an oral pan-viral treatment of noroviruses and coronaviruses, including SARS-CoV-2 and its variants. CDI-988 was specifically designed and developed using our proprietary structure-based drug discovery platform technology as a broad-spectrum antiviral inhibitor to a highly conserved region in the active site of noroviruses, coronaviruses and other 3CL viral proteases. We believe CDI-988 represents a pan-viral antiviral for the treatment of viral gastroenteritis caused by noroviruses and coronaviruses, including SARS-CoV-2 and its variants.

Oral CDI-988 is being clinically evaluated for safety, tolerability and pharmacokinetics including a food-effect cohort in healthy volunteers in a single-center, randomized, double-blind, placebo-controlled Phase 1 study being conducted in Australia. We expect that the oral CDI-988 Phase 1 data will support future norovirus and coronavirus studies.

In July 2024 we announced favorable safety and tolerability results from the single-ascending dose (SAD) cohorts of the Phase 1 study with CDI-988. Study participants in the SAD cohorts received CDI-988 in doses ranging from 100 mg to 600 mg. All participants completed the study with no discontinuations. There were no serious adverse events or severe treatment-emergent adverse events. No clinically significant observations were noted in laboratory assessments, physical exams or electrocardiograms.

In September 2024 we initiated dosing of the first subjects in the multiple-ascending dose (MAD) portion of the Phase 1 study with CDI-988. In January 2025 we reported topline results from the MAD portion of the Phase 1 study showing that CDI-988 administered at 800 mg, the highest dose tested, for 10 consecutive days was safe and well tolerated. We also announced an additional cohort for a higher dose of 1,200 mg and a shorter treatment duration of five consecutive days to further assess CDI-988's safety, tolerability and pharmacokinetics.

In April 2025 we reported that CDI-988 exhibits broad-spectrum activity against newly circulating GII.17 norovirus strains. The highly conserved binding mode of CDI-988 was also demonstrated using the Company's drug discovery platform technology.

## Intellectual Property

Our patent portfolio consists of issued patents and pending applications in the areas primarily related to the treatment of disease associated with Influenza A, Influenza A/B, and norovirus/coronaviruses.

In our Influenza A program, our patent portfolio consists of several patent families, including two pending international (PCT) applications and two families of pending applications in the U.S. and various foreign countries.

In our Influenza A/B program, our patent portfolio consists of a number of patent families pending, variously, as international (PCT) applications and in Taiwan. Aspects of this program were developed in collaboration with Merck, which is legally protecting the intellectual property of the collaboration compounds.

In our norovirus and coronavirus programs, our patent portfolio consists of three pending families of U.S. provisional applications.

## Risk Factors

Our operations and financial results are subject to various risk and uncertainties. Before deciding to invest in our securities, you should carefully consider the factors described under “Risk Factors” beginning on page 8 of this prospectus, as well as the other information included elsewhere in this prospectus, and the risk factors described under “Part I, Item 1A. Risk Factors” in our most recent Annual Report on Form 10-K and in any subsequently-filed Quarterly Reports on Form 10-Q, and those contained in our other filings with the SEC that are incorporated by reference in this prospectus. Any of the foregoing risk factors could adversely affect our business, results of operations, financial condition and prospects. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also adversely affect our business operations.

#### Corporate Information

Our principal executive offices are located at 19805 N. Creek Parkway, Bothell, Washington 98011 and our telephone number is (877) 262-7123. Our Internet website address is [www.cocrystalpharma.com](http://www.cocrystalpharma.com). Information contained on our corporate website does not constitute part of this prospectus.

#### THE OFFERING

##### Common Stock Offered by the Selling Stockholders

Up to 5,736,773 shares of our common stock issuable upon exercise of the Warrants.

##### Terms of this Offering

The selling stockholders may sell the shares of our common stock offered by this prospectus from time to time on terms to be determined at the time of sale through ordinary brokerage transactions or through any other means described in this prospectus. Such shares may be sold at fixed prices, at market prices prevailing at the time of sale, at prices related to prevailing market price or at negotiated prices. See “Plan of Distribution” beginning on page 17.

##### Use of Proceeds

We are not selling any securities under this prospectus, and we will not receive any proceeds from the sale of shares of our common stock by the selling stockholders under this prospectus. All proceeds from the sale of shares of our common stock offered by this prospectus will be for the account of the selling stockholders. We will, however, receive proceeds from and to the extent of any cash exercises of the Warrants.

##### Registration Rights

We have filed the registration statement on Form S-1, of which this prospectus forms a part, to satisfy registration rights we granted to the selling stockholders.

##### Nasdaq Capital Market Symbol

COCP.

##### Risk Factors

Investing in our securities involves a high degree of risk and purchasers of our common stock may lose their entire investment. See the information contained in or incorporated by reference under “Risk Factors” beginning on page 8 of this prospectus, and in the documents incorporated by reference into this prospectus, before deciding to invest in our securities.

#### RISK FACTORS

Investing in our securities involves significant risks. You should carefully consider the risk factors set forth below, as well as the risk factors under the heading “Item 1A - Risk Factors” in our most recent Annual Report on Form 10-K and in any subsequently-filed Quarterly Reports on Form 10-Q, in addition to those contained in our other filings with the SEC that are incorporated by reference in this prospectus. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. These risks could materially affect our business, financial condition or results of operations and cause the value of our securities to decline. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

##### Risks Relating to Our Business

**Because there is substantial doubt as to the Company’s ability to continue as a going concern, we may not be successful and our ability to continue our operations is in doubt unless we can access sufficient working capital within the timeframe needed.**

The Company has limited capital and substantial accumulated deficit as of the date of this prospectus. We do not have sufficient working capital and cash flows for continued operations for at least the next 12 months, which raises a risk of our potential inability to continue as a going concern. In addition, our independent registered public accounting firm, in its audit report to the financial statements as of and for the year ended December 31, 2024, expressed substantial doubt about our ability to continue as a going concern. Our continued existence is dependent upon our obtaining the necessary capital to meet our expenditures, and we can provide no assurance that we will be able to raise adequate capital to meet our future working capital needs.

**We have never generated revenue from product sales and all of our product candidates are currently in the preclinical and early clinical stage, and we may continue to incur significant losses for the foreseeable future and never generate revenue from product sales.**

We are still in the process of researching and developing product candidates, and to-date have not completed development of, obtained regulatory approval for or commercialized any products. Because of the need to complete clinical trials, establish safety and efficacy and obtain regulatory approval, which is an expensive and time-consuming process, we do not anticipate generating revenue from product sales for at least four years and will continue to sustain considerable losses. We may develop a partnership that could generate income sooner, but there is no guarantee that will be achievable.

**We had an accumulated deficit of \$337,774,000 from inception through June 30, 2025 and expect to continue losing money in the future. We may never achieve income from operations or have positive cash flow from operations.**

As an early-stage drug development company, our focus is on developing product candidates, obtaining regulatory approvals and commercializing pharmaceutical products. As a result, we have accumulated losses of \$337,774,000 from inception through June 30, 2025, expect losses to continue, and have never generated revenue from product sales. We will need to raise additional capital in the near future to fund our operations and research and development programs for the next 12 months. There can be no assurance that we will ever generate income from operations or have positive cash flow from operations.

Because early-stage drug development requires major capital investment and is subject to various challenges, as we continue to incur operating losses, we will need to raise additional capital or form strategic partnerships to support our research and development activities in the future, which activities may not result in the results desired or further our business.

We are still in the early stages of clinical and preclinical development of our product candidates and have no products approved for commercial sale or presently in clinical trials. However, our ability to conduct clinical trials in a cost-effective manner and within the desired timeframes remains subject to uncertainties, supply chain shortages, and potential difficulties in obtaining adequate participant enrollments, infection rates or other study criteria. For example, in December 2024, the Company announced plans to extend enrollment for the oral CDI-42344 Phase 2a study due to unexpectedly low influenza infection among study participants. Specifically, management determined that the low infectivity obtained in this study hindered antiviral data analysis. The Company is currently in continuing discussions with the CRO to address this study and determine a course forward with respect thereto, including potentially by preparing a protocol amendment for approval by the United Kingdom MHRA in order to seek to extend enrollment in this study and to ensure necessary infection rates among enrolled study subjects in the study. While we cannot predict the ultimate outcome of these developments, we expect that we will need to incur additional expenses to proceed with trial and obtain data that can be used to continue our development of our CDI-42344 Influenza candidate, which development will also be delayed as a result. Further, our investments in the initial Phase 2a trial process could prove to be all or partially lost as a result. These and other challenges or events that may arise in the future with respect to our research and development efforts could materially adversely effect our operations and financial position, cause reputational harm or damage our relationships with key or prospective collaborators or have other adverse consequences on us and our business.

Further, developing pharmaceutical products, including conducting preclinical studies and clinical trials, is capital-intensive. As a rule, research and development expenses increase substantially as we advance our product candidates toward clinical programs. As we seek to advance our products through clinical trials, we will need to raise additional capital to support our operations and/or form partnerships, in addition to our existing collaborative alliances, which may give substantial rights to a partner. Such funding or partnerships may not be available to us on acceptable terms, or at all. Moreover, any future financing may be very dilutive to our existing stockholders.

As we move lead compounds through toxicology and other preclinical studies, also referred to as nonclinical studies, we have and we will be required to file an investigational new drug application (IND) or its equivalent in foreign countries, and as we conduct clinical development of product candidates, we may have adverse results that may cause us to consume additional capital. Our partners may not elect to pursue the development and commercialization of our product candidates subject to our respective agreements with them. These events may increase our development costs more than we expect. We may need to raise additional capital or otherwise obtain funding through strategic alliances if we initiate clinical trials for new product candidates other than programs currently partnered. We will require additional capital to obtain regulatory approval for, and to commercialize, product candidates.

In securing additional financing, such additional fundraising efforts may divert our management's attention from our day-to-day activities, which may adversely affect our ability to develop and commercialize product candidates. We cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. If we cannot raise additional capital when required or on acceptable terms, we may be required to:

- accept terms that restrict our ability to issue securities, incur indebtedness, or otherwise raise capital in the future, or restrict our ability to pay dividends or engage in acquisitions;
- significantly delay, scale back or discontinue the development or commercialization of any product candidates;
- seek strategic alliances for research and development programs at an earlier stage than otherwise would be desirable or on terms less favorable than might otherwise be available; or
- relinquish or license on unfavorable terms, our rights to technologies or any product candidates we otherwise would seek to develop or commercialize ourselves.

If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we will be prevented from pursuing development and commercialization efforts, which will have a material adverse effect on our business, operating results and prospects or may render the Company unable to continue operations.

**Our programs are in the early clinical stage and we face significant competition from major companies who have developed vaccines or treatments. If we fail to gain market share because our competitors develop and successfully commercialize effective vaccines or therapies or if we fail to obtain or maintain U.S. Food and Drug Administration authorization or to otherwise account for uncertainties surrounding the virus, our business and future prospects could be materially and adversely affected.**

We have committed substantial financial and other resources to our influenza A, norovirus and coronaviruses programs. While the approval or authorization of certain of these competitive offerings are limited to specified circumstances or patients, given the uncertainties in our ability to fully develop a viable therapeutic product, the substantial amount of time and resources that would be necessary to complete development and obtain regulatory approval, and the growing number of competitive offerings, we may ultimately be unable to produce a product that is commercially viable or is able to generate material revenue.

Even if we do obtain U.S. Food and Drug Administration ("FDA") authorization for a therapeutic product, the FDA may subsequently rescind or limit such authorization as more information about the product, including its efficacy and side effects, becomes available. Further, this virus is highly mutative and a number of variants have already arisen, and any treatment we are able to develop and commercialize will therefore remain subject to the risk that a mutation will occur that produces a strain or strains of the virus to which such treatment has a diminished effect or is ineffective. For example, newer variants of the virus can be more resistant to treatments that were effective against prior variants of the virus. If we do develop a treatment that is effective against a current variant, a later variant may arise that reduces or eliminates the product's efficacy before we are able to commercialize it. Further, if this occurs, one or more competitors' products may be more effective against new variants than ours, resulting in a diminished market for our products. If we are unable to timely advance our programs, or if we fail to gain or maintain a market share as a result of our competitors developing and successfully commercializing vaccines and effective therapies more quickly than we do, our business and future prospects could be materially and adversely affected.

#### **Risks Related to Our Common Stock**

**Due to factors beyond our control, our common stock price may be volatile, or may decline regardless of our operating performance, and you may not be able to resell your shares.**

The market price of our common stock will depend on a number of factors, many of which are beyond our control and may not be related to our operating performance. These fluctuations could cause you to lose all or part of your investment in our common stock since you might be unable to sell your shares at or above the price you paid.

In addition, with limited exceptions, our common stock has not been actively traded. An active market for our common stock may not be sustained. Accordingly, investors may experience difficulty in selling their shares of common stock at or above the price they paid for them or in the volumes and at the times desired.

Factors that could cause fluctuations in the market price of our common stock include the following:

- price and volume fluctuations in the overall stock market from time-to-time;
- due to external factors such as geopolitical turmoil, a possible recession, inflation or other events, including the conflicts in Ukraine and Israel or other unknown hostilities, investors may sell our common stock to meet margin calls on other stocks or as the result of economic disruptions;
- volatility in the market prices and trading volumes of biotechnology stocks generally, or those in our peer group in particular;
- changes in operating performance and stock market valuations of other biotechnology companies generally, or those in our industry in particular;
- sales of shares of our stock by us or our stockholders;
- the failure of securities analysts to maintain coverage of us, changes in financial estimates by securities analysts who follow our company or our failure to meet these estimates or the expectations of investors;
- announcement of a future reverse split or our failure to obtain stockholder approval for a reverse split;
- announcements by us or our competitors of new novel medicines;
- the public's reaction to our earnings releases, other public announcements and filings with SEC;
- rumors and market speculation involving us or other companies in our industry;

---

11

- actual or anticipated developments in our business, our competitors' businesses or the competitive landscape generally;
- actual or anticipated changes in our operating results or fluctuations in our operating results;
- developments or disputes concerning our intellectual property or other proprietary rights;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in accounting standards, policies, guidelines, interpretations or principles;
- any significant change in our management; and
- general economic conditions and slow or negative growth in any of our significant markets.

In addition, in the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against these companies. Any litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

**Although our common stock is listed on The Nasdaq Capital Market, we are subject to a risk that Nasdaq will delist our common stock or subject us to additional trading restrictions, which could limit investors' ability to make transactions in our securities.**

Our common stock is listed on The Nasdaq Capital Market ("Nasdaq"), a national securities exchange. Nasdaq rules require us to meet certain requirements for continued listing including our stock price and number of public stockholders, and we may in the future fail to comply with these requirements. For example, in November 2021 we were notified by Nasdaq that we are not compliant with its closing bid price requirement because the closing bid price of our common stock was below \$1.00 per share for 30 consecutive trading days. In order to regain compliance with the Nasdaq minimum bid requirement, we effected a 1-for-12 reverse stock split by amending our Certificate of Incorporation on October 11, 2022. Further, previously in December 2019 and again in November 2020, we received notice of failure to comply with the Nasdaq minimum bid price although we were able to regain compliance without effecting a reverse stock split in those instances.

In addition, a new Nasdaq rule recently took effect which precludes listed issuers that have already effected a reverse split within the prior one-year period from receiving a grace period for bid price deficiencies. Prior to the rule taking effect, such issuers would generally be eligible to receive 180-day grace period to cure a bid price deficiency (plus the potential for an additional 180-day extension at the end of such initial grace period) to regain compliance with the minimum bid price requirement. Additionally, the new Nasdaq rule also provides that a reverse split cannot be used to cure a bid price deficiency if there have been two or more reverse splits within a two-year period and the combined ratios of such reverse splits are 250:1 or greater. These new rules may make it difficult to cure a bid price deficiency if the timing and circumstances are such that we cannot obtain a grace period or otherwise take the necessary actions and obtain the required approvals to effect a reverse split before a bid price deficiency occurs.

---

12

If our common stock is delisted from The Nasdaq Capital Market for failure to meet its continued listing requirements, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our common stock;
- reduced liquidity with respect to our common stock;
- a determination that our shares of common stock are a "penny stock" which will require broker-dealers trading in our common stock to adhere to more stringent rules, possibly resulting in a reduced level of trading activity in the secondary trading market for our common stock;
- a limited amount of news and analyst coverage for the Company; and
- a limited ability to issue additional securities or obtain additional financing in the future.

The National Securities Markets Improvement Act of 1996, which is a federal statute, prevents or preempts the states from regulating the sale of certain securities, which are referred to as "covered securities." Because our common stock is listed on Nasdaq, our common stock is a covered security. Although the states are preempted from regulating the sale of our securities, the federal statute does allow the states to investigate companies if there is a suspicion of fraud, and, if there is a finding of fraudulent activity, then the states can regulate or bar the sale of covered securities in a particular case. Further, if we were no longer listed on Nasdaq, our securities would not be covered securities and we would be subject to regulation in each state in which we offer our securities. In many states, we would not meet the merit review standards which are applied to public offerings.

**Because of the imposition and threat of tariffs and geopolitical conflicts, and other major events, the effect on the capital markets and the economy is uncertain, and we may have to deal with a recessionary economy and economic uncertainty including possible material adverse effects upon our business.**

Following President Trump's inauguration in January 2025, certain trends and events have begun to unfold which appear to be affecting the global and United States capital markets and economies, including rising unemployment and inflation, the imposition of tariffs and the uncertainty surrounding tariff litigation, trade wars among nations and ongoing geopolitical conflicts, and volatility in the capital markets. The duration of these events and their impact are at best uncertain, and their continuation may result in

negative consequences on the U.S. or global economies. The impact of United States tariff policies and the uncertainty of the tariff litigation could lead to renewed inflation as very recently inflation has begun to slowly increase. In the meantime, uncertainty in the markets and concerning the state and prospects for the U.S. and global economies and capital markets in the near term remains and has amplified due to the factors described above. If inflation does not fall low enough and/or the Federal Reserve declines to reduce interest rates in the near term, or tariffs imposed or threatened by President Trump are counteracted by retaliatory tariffs imposed by other countries or otherwise adversely impact the economy, the result could be tipping the U.S. economy into a recession. Ultimately the economy may turn into a recession with uncertain and potentially severe impacts upon the public capital markets and us. Among the potential consequences could be a substantial decline in stock prices including ours, a reduction in demand for securities of public companies (which may be more prevalent for smaller companies such as us) and more difficulty for us to raise capital we need and accessing capital on favorable terms or at all as a result. These and related consequences could also impact our vendors which could have negative impacts on us and our research programs. We cannot predict how this will affect our business, but the impact may be material and adverse.

#### **Future sales of our common stock, or the perception that such sales may occur, could cause the market price for our common stock to decline.**

We cannot predict the effect, if any, that market sales of shares of our common stock or the availability of shares of our common stock for sale will have on the market price of our common stock prevailing from time to time. Sales of substantial amounts of shares of our common stock in the public market, or the perception that those sales will occur, could cause the market price of our common stock to decline or be depressed.

The shares of common stock issued in on exercise of the Warrants will be freely tradable without restriction or further registration under the Securities Act.

#### **USE OF PROCEEDS**

We are not selling any securities under this prospectus, and we will not receive any proceeds from the sale of shares of our common stock by the selling stockholders under this prospectus. All proceeds from the sale of shares of our common stock offered by this prospectus will be for the account of the selling stockholders. We will, however, receive proceeds from and to the extent of any cash exercises of the Warrants.

The selling stockholders will bear all brokerage commissions and similar expenses attributable to the sale of shares under this prospectus, and we will bear all costs, expenses and fees in connection with the registration of such shares.

#### **SELLING STOCKHOLDERS**

This prospectus covers an aggregate of up to 5,736,773 shares of our common stock issuable upon exercise of the Warrants, which shares of common stock may be sold or otherwise disposed of by the selling stockholders.

The below table sets forth certain information with respect to each selling stockholder, including (a) the shares of our common stock beneficially owned by such selling stockholder prior to this offering, (b) the number of shares of our common stock being offered by such selling stockholder pursuant to this prospectus and (c) such selling stockholder's beneficial ownership of our common stock after completion of this offering, assuming that all of the shares of common stock covered by this prospectus (but none of the other shares, if any, held by the selling stockholders) are sold to third parties in this offering.

The table is based on information supplied to us by the selling stockholders. Beneficial and percentage ownership is determined in accordance with the rules and regulations of the SEC, which is based on voting or investment power with respect to such shares, and this information does not necessarily indicate beneficial ownership for any other purpose. In accordance with SEC rules, in computing the number of shares beneficially owned by a selling stockholder, shares of common stock subject to derivative securities held by that selling stockholder that are currently exercisable or convertible, or that will be exercisable or convertible within 60 days of September 18, 2025, are deemed outstanding for purposes of such selling stockholder, but not for any other selling stockholder. The selling stockholder's percentage ownership in the table below is based on 13,039,348 shares of our common stock outstanding as of September 18, 2025.

The selling stockholders may sell all, some or none of their shares of common stock covered by this prospectus. We do not know the number of such shares, if any, that will be offered for sale or otherwise disposed of by any of the selling stockholders. Furthermore, since the date on which we filed this prospectus, the selling stockholders may have sold, transferred or disposed of shares of common stock covered by this prospectus in transactions exempt from the registration requirements of the Securities Act. See "Plan of Distribution" beginning on page 17.

| <b>Name of Selling Stockholders</b>         | <b>Beneficially Owned Before Offering</b> |                   | <b>Shares of Common Stock Offered Under this Prospectus</b> | <b>Beneficially Owned After Offering(1)</b> |                   |
|---------------------------------------------|-------------------------------------------|-------------------|-------------------------------------------------------------|---------------------------------------------|-------------------|
|                                             | <b>Number</b>                             | <b>Percentage</b> |                                                             | <b>Number</b>                               | <b>Percentage</b> |
| Anson East Master Fund LP                   | 152,060(2)                                | 1.1%              | 152,060                                                     | -                                           | -                 |
| Anson Investments Master Fund LP            | 539,118(3)                                | 4.0%              | 539,118                                                     | -                                           | -                 |
| Bigger Capital Fund, LP                     | 345,588(4)                                | 2.6%              | 345,588                                                     | -                                           | -                 |
| BPY Limited                                 | 262,648(5)                                | 2.0%              | 262,648                                                     | -                                           | -                 |
| District 2 Capital Fund LP                  | 345,588(6)                                | 2.6%              | 345,588                                                     | -                                           | -                 |
| Hudson Bay Master Fund Ltd.                 | 684,837(7)                                | 4.99%             | 691,178                                                     | -                                           | -                 |
| Intracoastal Capital LLC                    | 684,837(8)                                | 4.99%             | 691,178                                                     | -                                           | -                 |
| Iroquois Capital Investment Group, LLC      | 138,234(9)                                | 1.0%              | 138,234                                                     | -                                           | -                 |
| Iroquois Master Fund, Ltd.                  | 552,944(10)                               | 4.1%              | 552,944                                                     | -                                           | -                 |
| L1 Capital Global Opportunities Master Fund | 684,837(11)                               | 4.99%             | 691,178                                                     | -                                           | -                 |
| Nomis Bay Ltd                               | 428,528(12)                               | 3.2%              | 428,528                                                     | -                                           | -                 |
| Orca Capital AG                             | 684,837(13)                               | 4.99%             | 691,178                                                     | 345,589                                     | 1.8%              |
| Charles Worthman                            | 2,074(14)                                 | *                 | 2,074                                                       | -                                           | -                 |
| Craig Schwabe                               | 6,998(14)                                 | *                 | 6,998                                                       | -                                           | -                 |
| Michael Vasinkevich                         | 132,965(14)                               | 1.0%              | 132,965                                                     | -                                           | -                 |
| Noam Rubinstein                             | 65,316(14)                                | *                 | 65,316                                                      | -                                           | -                 |

\* Less than 1%.

(1) Assumes that all of the shares of common stock being registered by this prospectus are resold by the selling stockholders to third parties.

- (2) Represents shares of common stock issuable upon exercise of Warrants. Anson Advisors Inc and Anson Funds Management LP, the Co-Investment Advisers of Anson East Master Fund LP (“Anson East”), hold voting and dispositive power over the Common Shares held by Anson East. Tony Moore is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Moore, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these Common Shares except to the extent of their pecuniary interest therein. The principal business address of Anson East is Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands.
- (3) Represents shares of common stock issuable upon exercise of Warrants. Anson Advisors Inc and Anson Funds Management LP, the Co-Investment Advisers of Anson Investments Master Fund LP (“Anson Investments”), hold voting and dispositive power over the Common Shares held by Anson Investments. Tony Moore is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Moore, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these Common Shares except to the extent of their pecuniary interest therein. The principal business address of Anson Investments is Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands.
- (4) Represents shares of common stock issuable upon exercise of Warrants. Michael Bigger is the Managing Member of the General Partner of Bigger Capital Fund, LP. The business address of Bigger Capital Fund, LP is 11700 W Charleston Blvd 170-659 Las Vegas, NV 89135.
- (5) Represents shares of common stock issuable upon exercise of Warrants. James Keyes is the Director of BPY Limited. The business address of BPY Limited is 145 Adelaide Street west, Suite 400, Toronto, ON M5H 4E5.
- (6) Represents shares of common stock issuable upon exercise of Warrants. Michael Bigger is the Managing Member of the General Partner of District 2 Capital Fund LP. The business address of District 2 Capital Fund LP is 14 Wall Street, 2nd Floor, Huntington, NY 11743.
- (7) Represents shares of common stock issuable upon exercise of Warrants. Hudson Bay Capital Management LP, the investment manager of Hudson Bay Master Fund Ltd., has voting and investment power over these securities. Sander Gerber is the managing member of Hudson Bay Capital GP LLC, which is the general partner of Hudson Bay Capital Management LP. Each of Hudson Bay Master Fund Ltd. and Sander Gerber disclaims beneficial ownership over these securities. The business address of Hudson Bay Master Fund Ltd. is 290 Harbor Dr., 3rd Floor, Stamford, CT 06902.
- (8) Represents shares of common stock issuable upon exercise of Warrants. Mitchell P. Kopin (“Mr. Kopin”) and Daniel B. Asher (“Mr. Asher”), each of whom are managers of Intracoastal Capital LLC (“Intracoastal”), have shared voting control and investment discretion over the securities reported herein that are held by Intracoastal. As a result, each of Mr. Kopin and Mr. Asher may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of the securities reported herein that are held by Intracoastal. The business address of Intracoastal is 245 Palm Trail, Delray Beach, FL 33483.
- (9) Represents shares of common stock issuable upon exercise of Warrants. Richard Abbe is the Managing Member of Iroquois Capital Investment Group, LLC. The business address of Iroquois Capital Investment Group, LLC is 2 Over Hill Rd. Suite 400 Scarsdale, NY 10583.
- (10) Represents shares of common stock issuable upon exercise of Warrants. Richard Abbe is the Managing Member of Iroquois Master Fund, Ltd. The business address of Iroquois Master Fund, Ltd. is 2 Over Hill Rd. Suite 400 Scarsdale, NY 10583.

---

15

- (11) Represents shares of common stock issuable upon exercise of Warrants. David Feldman and Joel Arber are the Directors of L1 Capital Global Opportunities Master Fund, Ltd. As such they may be deemed to be beneficial owners of such shares of common stock. To the extent Mr. Feldman and Mr. Arber are deemed to beneficially own such securities, Mr. Feldman and Mr. Arber disclaim beneficial ownership of these securities for all other purposes. The business address of L1 Capital Global Opportunities Master Fund, Ltd. is 161A Shedden Road, 1 Artillery Court, PO Box 10085, Grand Cayman KY1-1001, Cayman Islands.
- (12) James Keyes is the Director of Nomis Bay Ltd. The business address of Nomis Bay Ltd Zais 145 Adelaide Street west, Suite 400, Toronto, ON M5H 4E5.
- (13) Represents shares of common stock issuable upon exercise of Warrants and 345,589 shares of common stock purchased in the Offering described below. Thomas Koenig is the Executive Board Member of Orga Capital AG. The business address of Orga Capital AG is Sperling 2, 85276 Pfaffenhofen, Germany.
- (14) Each of these selling stockholders is affiliated with H.C. Wainwright & Co., LLC, a registered broker dealer with a registered address of 430 Park Ave, 3rd Floor, New York, NY 10022, and has sole voting and dispositive power over the securities held. The number of shares beneficially owned consists of shares of common stock issuable upon exercise of Warrants, which were received as compensation in the Offering. The Selling Securityholder acquired the Warrants in the ordinary course of business and, at the time the Warrants were acquired, the Selling Securityholder had no agreement or understanding, directly or indirectly, with any person to distribute such securities.

## Description of Offering

On September 12, 2025, we entered into a securities purchase agreement (the “Securities Purchase Agreement”) with certain accredited investors (each, an “Investor”), pursuant to which we agreed to issue and sell to the Investors (i) in a registered direct offering, an aggregate of 2,764,710 shares of our common stock at a price of \$1.70 per share and (ii) in a concurrent private placement, Warrants to acquire up to an aggregate of 5,529,420 shares of common stock (the “Investor Warrants”), at an initial exercise price of \$1.50 per share (collectively, the “Offering”).

On September 15, 2025, we closed the Offering, raising gross proceeds of approximately \$4.7 million before deducting placement agent fees and other offering expenses payable by us. We intend to use the net proceeds from the Offering for general corporate purposes and the continued development of novel medicines for use in the treatment of human viral diseases.

The Shares were offered at-the-market under the rules of The Nasdaq Stock Market, LLC and pursuant to our shelf registration statement on Form S-3 (File No. 333-271883).

The Investor Warrants (and the shares of common stock issuable upon the exercise of the Investor Warrants) were not registered under the Securities Act, and were offered pursuant to an exemption from the registration requirements of the Securities Act provided under Section 4(a)(2) of the Securities Act. The Investor Warrants are exercisable upon issuance and will expire on the 24 month anniversary of the effective date of this Registration Statement, and in certain circumstances may be exercised on a cashless basis. If we fail for any reason to deliver shares of common stock upon the valid exercise of the Investor Warrants within the prescribed period set forth in the Investor Warrants, we are required to pay the applicable holder liquidated damages in cash as set forth in the Investor Warrants. The Investor Warrants also include customary buy-in rights in the event we fail to deliver shares of common stock upon exercise thereof within the prescribed period as set forth in the Investor Warrants.

---

16

A holder is not be entitled to exercise any portion of an Investor Warrant, if, after giving effect to such exercise, the aggregate number of shares of common stock beneficially owned by the holder (together with its affiliates and any other persons whose beneficial ownership of common stock would or could be aggregated with the holder’s ownership for purposes of Section 13(d) or Section 16 of the Exchange Act) would exceed 4.99% (or at the election of the holder, 9.99%) of the common stock outstanding after giving effect to the exercise. Such 4.99% limitation may be increased at the holder’s election upon 61 days’ notice to the Company, provided that such percentage may not exceed 9.99%.

H.C. Wainwright & Co., LLC (“HCW”) acted as our placement agent in connection with Offering. We paid HCW consideration consisting of (i) a cash fee equal to 7.0% of the aggregate gross proceeds in the Offering, (ii) a management fee equal to 1.0% of the aggregate gross proceeds in the Offering, (iii) reimbursement of certain expenses and (iv) Warrants to acquire up to an aggregate of 207,353 shares of common stock (the “Placement Agent Warrants”). The Placement Agent Warrants are similar to the Investor Warrants, except that the initial exercise price of the Placement Agent Warrants is \$2.125 per share and have a term of exercise equal to the earlier of (i) 24 months from the effective date of the Resale Registration Statement and (ii) September 12, 2030.

The foregoing descriptions of the Securities Purchase Agreement, Investor Warrants and Placement Agent Warrants do not purport to be complete and are qualified in their entirety by reference to the full texts of the form of Securities Purchase Agreement, form of Investor Warrant and form Placement Agent Warrant, copies of which are filed as

## PLAN OF DISTRIBUTION

We are registering the shares of common stock covered by this prospectus on behalf of the selling stockholders. All costs, expenses and fees connected with the registration of such shares of common stock will be borne by us. Any brokerage commissions and similar expenses connected with selling such shares of common stock will be borne by the selling stockholders. The selling stockholders may offer and sell such shares of common stock from time to time in one or more transactions. As used in this prospectus, the term “selling stockholders” includes pledgees, donees, transferees and other successors-in-interest who may acquire such shares of common stock through a pledge, gift, partnership distribution or other non-sale related transfer from the selling stockholders. The selling stockholders will act independently of the Company in making decisions with respect to the timing, manner and size of each sale. These transactions include:

- in “at the market offerings” within the meaning of Rule 415(a)(4) under the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;
- directly to a limited number of purchasers or to a single purchaser;
- through agents;
- by delayed delivery contracts or by remarketing firms;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its own account pursuant to this prospectus;
- exchange or over-the-counter distributions in accordance with the rules of the exchange or other market;
- block trades in which the broker-dealer attempts to sell the shares of common stock covered by this prospectus as agent but may position and resell a portion of the block as principal to facilitate the transaction, or in crosses, in which the same broker acts as agent on both sides of the trade;

---

17

- transactions in options, swaps or other derivatives that may or may not be listed on an exchange;
- through distributions by a selling stockholder or its successors in interest to its members, general or limited partners or stockholders (or their respective members, general or limited partners or stockholders);
- a combination of any such method of sale; or
- any other method permitted pursuant to applicable law.
- In connection with distributions of the shares of common stock covered by this prospectus or otherwise, the selling stockholders may:
- sell such shares of common stock:
  - in one or more transactions at a fixed price or prices, which may be changed from time to time;
  - at market prices prevailing at the times of sale;
  - at prices related to such prevailing market prices; or
  - at negotiated prices;
- sell such shares of common stock:
  - on a national securities exchange;
  - in the over-the-counter market; or
  - in transactions otherwise than on an exchange or in the over-the-counter market, or in combination;
- enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to them of the shares of common stock covered by this prospectus, which they may in turn resell; and
- pledge the shares of common stock covered by this prospectus to broker-dealers or other financial institutions, which, upon a default, they may in turn resell.

The selling stockholders may also resell all or a portion of the shares of common stock covered by this prospectus in open market transactions in reliance upon Rule 144 under the Securities Act, as permitted by that rule, Section 4(a)(1) under the Securities Act, if available, or any other exemption from the registration requirements that become available, rather than under this prospectus.

If underwriters are used in the sale of any shares of common stock covered by this prospectus, such shares of common stock will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions described above. Shares of common stock covered by this prospectus may be either offered to the public through underwriting syndicates represented by managing underwriters or directly by underwriters. We may use underwriters with whom we have a material relationship. As applicable, we will describe in each accompanying prospectus supplement the name of the underwriter(s) and the nature of any such relationship(s).

The shares of common stock covered by this prospectus may be sold directly or through agents designated from time to time. We will name any agent involved in the offering and sale of such shares and we will describe any commissions paid to the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, the agent will act on a best-efforts basis for the period of its appointment.

---

18

Agents may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments made by the agents, under agreements between us and the agents.

Agents may receive compensation in the form of discounts, concessions or commissions from us or our purchasers, as their agents in connection with the sale of securities. These agents may be considered to be underwriters under the Securities Act. As a result, discounts, commissions or profits on resale received by the agents may be treated as underwriting discounts and commissions. Each accompanying prospectus supplement will identify any such agent and describe any compensation received by them from us.

In connection with sales of shares of common stock covered by this prospectus, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of such shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell the shares of common stock covered by this prospectus short and the selling stockholders may deliver shares of common stock to close out short positions and to return borrowed shares of common stock in connection with such short sales. The selling stockholders may also loan or pledge shares of common stock covered by this prospectus to broker-dealers that in turn may sell such shares of common stock, to the extent permitted by applicable law. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares of common stock covered by this prospectus, which shares of common stock such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock covered by this prospectus owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell such shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b) or other applicable provision of the Securities Act, amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders may also transfer and donate shares of common stock covered by this prospectus in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

A selling stockholder that is an entity may elect to make an in-kind distribution of shares of common stock covered by this prospectus to its members, general or limited partners or stockholders pursuant to the registration statement of which this prospectus forms a part, by delivering a prospectus. To the extent that such members, general or limited partners or stockholders are not affiliates of ours, such members, partners or stockholders would thereby receive freely tradable shares of common stock pursuant to the distribution through a registration statement. Additionally, to the extent that entities, members, partners or stockholders are affiliates of ours received shares in any such distribution, such affiliates will also be selling stockholders and will be entitled to sell such shares pursuant to this prospectus.

Agents who may become involved in the sale of shares of common stock covered by this prospectus may engage in transactions with, and perform other services for, us in the ordinary course of their business for which they receive compensation.

In effecting sales, the selling stockholders may engage broker-dealers or agents, who may in turn arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling stockholders and/or from the purchasers of shares of common stock covered by this prospectus for whom the broker-dealers may act as agents or to whom they sell as principal, or both. The compensation to a particular broker-dealer may be in excess of customary commissions. To our knowledge, there is currently no plan, arrangement or understanding between any selling stockholders and any broker-dealer or agent regarding the sale of any shares of common stock by the selling stockholders.

The selling stockholders, any broker-dealers or agents and any participating broker-dealers that act in connection with the sale of the shares of common stock covered by this prospectus may be “underwriters” under the Securities Act with respect to those shares of Common Stock and will be subject to the prospectus delivery requirements of the Securities Act. Any profit that the selling stockholders realize, and any compensation that any broker-dealer or agent may receive in connection with any sale, including any profit realized on resale of such shares of common stock acquired as principal, may constitute underwriting discounts and commissions. If the selling stockholders are deemed to be underwriters, the selling stockholders may be subject to certain liabilities under statutes including, but not limited to, Section 11, 12 and 17 of the Securities Act and Section 10(b) and Rule 10b-5 under the Exchange Act.

The securities laws of some states may require the selling stockholders to sell the shares of common stock covered by this prospectus in those states only through registered or licensed brokers or dealers. These laws may also require that we register or qualify such shares of common stock for sale in those states unless an exemption from registration and qualification is available and the selling stockholders and we comply with that exemption. In addition, the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares of common stock in the market and to the activities of the selling stockholders and their affiliates. Regulation M may restrict the ability of any person engaged in the distribution of shares of common stock to engage in market-making activities with respect to such shares of common stock. All of the foregoing may affect the marketability of the shares of common stock covered by this prospectus and the ability of any person to engage in market-making activities with respect to such shares.

If any selling stockholder notifies us that he has entered into any material arrangement with a broker-dealer for the sale of shares of common stock covered by this prospectus through a block trade, special offering, exchange distribution, over-the-counter distribution or secondary distribution, or a purchase by a broker or dealer, we will file any necessary supplement to this prospectus to disclose:

- the number of shares of common stock involved in the arrangement;
- the terms of the arrangement, including the names of any underwriters, dealers or agents who purchase such shares of common stock, as required;
- the proposed selling price to the public;
- any discount, commission or other underwriting compensation;
- the place and time of delivery for the shares of common stock being sold;

- any discount, commission or concession allowed, reallocated or paid to any dealers; and
- any other material terms of the distribution of the shares of common stock.

In addition, if the selling stockholder notifies us that a donee, pledgee, transferee or other successor-in-interest of the selling stockholder intends to sell any shares of common stock covered by this prospectus, we will file an amendment to the registration statement of which this prospectus forms a part, or a supplement to this prospectus, if required.

## LEGAL MATTERS

Nason, Yeager, Gerson, Harris & Fumero, P.A. will pass upon certain legal matters relating to the shares of our common stock offered by this prospectus.

## EXPERTS

The consolidated financial statements of Cocrystal Pharma, Inc. as of and for the years ended December 31, 2024 and 2023, appearing in Cocrystal Pharma, Inc.’s Annual Report on Form 10-K for the fiscal year ended December 31, 2024, have been audited by Weinberg & Company, P.A., independent registered public accounting firm, as set forth in their report therein, which includes an explanatory paragraph regarding the Company’s ability to continue as a going concern. Such consolidated financial statements are incorporated herein by reference in reliance upon the report of such firm given their authority as experts in auditing and accounting.

## INCORPORATION BY REFERENCE

The SEC’s rules allow us to “incorporate by reference” information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

We incorporate by reference in this prospectus our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, between the date of this prospectus and the termination of the offering of the securities described in this prospectus. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the future, that are not deemed “filed” with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC:

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2024;
- Our Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2025](#) and [June 30, 2025](#);
- Our current reports on Form 8-K filed on [April 1, 2025](#), [April 8, 2025](#), [June 18, 2025](#), [July 1, 2025](#) and [September 15, 2025](#) (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits that are related to such item); and

- The description of our common stock contained in our Registration Statement on [Form 8-A](#) (File No. 001-38418), filed under Section 12(b) of the Exchange Act on March 9, 2018, including any subsequent amendment or report filed for the purpose of amending such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of Exchange Act prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

Upon written or oral request, we will provide to you, without charge, a copy of any or all of the documents that are incorporated by reference into this prospectus supplement and the accompanying prospectus but not delivered with the prospectus, including exhibits which are specifically incorporated by reference into such documents. Requests should be directed to:

Cocrystal Pharma, Inc.  
19805 N. Creek Parkway  
Bothell, Washington 98011  
Telephone number: (877) 262-7123

## DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the registrant, the registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

## WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-1 that we have filed with the SEC. This prospectus omits some of the information contained in the registration statement, and we refer you to the full registration statement for further information about us and the securities being offered by the selling stockholders under this prospectus. Before making an investment decision, you should read, in addition to this prospectus and the registration statement, any documents that we incorporate by reference in this prospectus, as referred to under "Incorporation By Reference."

We file reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is <http://www.sec.gov>.

Our website address is [www.cocrystalpharma.com](http://www.cocrystalpharma.com). Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider information on our website to be part of this prospectus. We have included our website address as an inactive textual reference only.

## PART II - INFORMATION NOT REQUIRED IN PROSPECTUS

### Item 13. Other Expenses of Issuance and Distribution.

The following is an estimate (other than the SEC registration fee) of the expenses expected to be incurred in connection with the securities being registered hereby, other than underwriting discounts and commissions. All such expenses are to be paid by the registrant.

|                              |    |           |
|------------------------------|----|-----------|
| SEC registration fee         | \$ | 702.38    |
| Legal fees and expenses      | \$ | 10,000    |
| Accounting fees and expenses | \$ | 5,000     |
| Total                        | \$ | 15,702.38 |

### Item 14. Indemnification of Directors and Officers.

Section 145(a) of the Delaware General Corporation Law (the "DGCL"), which Cocrystal is subject to, provides that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful. Section 145(b) of the DGCL provides that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper. To the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in Section 145(a) and (b) of the DGCL, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

Any indemnification under Section 145(a) and (b) of the DGCL (unless ordered by a court) shall be made by Cocrystal only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because the person has met the applicable standard of conduct set forth in Section 145(a) and (b). Such determination shall be made, with respect to a person who is a director or officer at the time of such determination, (1) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (2) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, or (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, or (4) by the shareholders. Expenses (including attorneys' fees) incurred by an officer or director in defending any civil, criminal, administrative or investigative action,

suit or proceeding may be paid by the corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the corporation as authorized in this section. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the corporation deems appropriate. The indemnification and advancement of expenses provided by, or granted pursuant to, Section 145 shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of shareholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. We have entered into Indemnification Agreements with each director and executive officer.

Section 145 of the DGCL also empowers a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under Section 145.

Article 11 of Cocrysal's Certificate of Incorporation provides that directors and officers of the Company, and any persons serving at the request of the Company as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, shall be indemnified to the fullest extent permitted by the DGCL.

---

II-2

---

Cocrysal carries directors and officers liability coverages designed to insure its officers and directors and those of its subsidiaries against certain liabilities incurred by them in the performance of their duties, and also providing for reimbursement in certain cases to Cocrysal and its subsidiaries for sums paid to directors and officers as indemnification for similar liability.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, Cocrysal has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

**Item 15. Recent Sales of Unregistered Securities.**

On April 4, 2023, Cocrysal entered into a Securities Purchase Agreement with two accredited investors whereby the investors agreed to purchase a total of 2,030,458 shares of common stock at a price of \$1.97 per share for a total purchase price of \$4,000,000 in two equal \$2,000,000 investments. The investors consisted of Fred Hassan, who is Chairman of the investment firm Caret Group and Director of the private equity firm Warburg Pincus, and Frost Gamma Investments Trust, a trust in which Phillip Frost, M.D., who serves as a director of the Company and as Chairman and CEO of OPKO Health, is the trustee.

On September 12, 2025, the Company sold and issued the Warrants to the Investors pursuant to the Securities Purchase Agreement. See "The Selling Stockholders – Description of the Offering" at page 16, which description is incorporated herein by reference.

The foregoing transactions were exempt from registration pursuant to Section 4(a)(2) of the Securities Act and Rule 506(b) of Regulation D promulgated thereunder.

---

II-3

---

**Item 16. Exhibits and Financial Statements Schedules.**

(a) The following exhibits are filed as part of this Registration Statement:

| <b>Exhibit No.</b> | <b>Description</b>                                                                                                                                                                          |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.1                | <a href="#">Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.1 to Form 10-Q filed on August 16, 2021)</a>                                                   |
| 3.1(a)             | <a href="#">Certificate of Amendment to Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Form 8-K filed on October 3, 2022)</a>                                    |
| 3.1(b)             | <a href="#">Certificate of Amendment to Certificate of Incorporation – reduce number of authorized shares (incorporated by reference to Exhibit 3.1 to Form 8-K filed on June 28, 2024)</a> |
| 3.2                | <a href="#">Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to Form 8-K filed on February 19, 2021)</a>                                                               |
| 3.2(a)             | <a href="#">Amendment No. 1 to Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to Form 8-K filed on June 18, 2025)</a>                                                |
| 4.1                | <a href="#">Specimen Common Stock Certificate (incorporated herein by reference to Exhibit 4.1 to Form S-3 filed on August 14, 2015)</a>                                                    |
| 4.2                | <a href="#">Form of Investor Warrant (incorporated by reference to Exhibit 4.1 to Form 8-K filed on September 15, 2025)</a>                                                                 |
| 4.3                | <a href="#">Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.2 to Form 8-K filed on September 15, 2025)</a>                                                          |
| 5.1                | <a href="#">Legal Opinion of Nason, Yeager, Gerson, Harris &amp; Fumero, P.A.</a>                                                                                                           |
| 10.1               | <a href="#">Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 to Form 8-K filed on September 15, 2025)</a>                                                   |
| 10.2               | <a href="#">2025 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to Form 8-K filed on April 8, 2025)</a>                                                                   |
| 23.1               | <a href="#">Consent of Weinberg &amp; Company</a>                                                                                                                                           |
| 23.2               | <a href="#">Consent of Nason, Yeager, Gerson, Harris &amp; Fumero, P.A. (included in Exhibit 5.1)</a>                                                                                       |
| 107                | <a href="#">Filing fee table</a>                                                                                                                                                            |

**Item 17. Undertakings**

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

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

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

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii), and (a)(1)(iii) above do not apply if the information required to be included in a post-effective amendment by those

paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is a part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

---

## II-4

(i) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

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

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the undersigned registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

---

## II-5

### SIGNATURES

In accordance with the requirements of the Securities Act of 1933, has duly caused this registration statement to be signed on its behalf by the undersigned thereunto duly authorized, in the City of Bothell, State of Washington, on September 19, 2025.

**Cocrystal Pharma, Inc.**

By: /s/ James Martin  
James Martin  
Co-Chief Executive Officer

In accordance with the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| <u>Signature</u>                                  | <u>Title</u>                                                                                                         | <u>Date</u>        |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------|
| <u>/s/ James Martin</u><br>James Martin           | Co-Chief Executive Officer and Chief Financial Officer (Principal Executive Officer and Principal Financial Officer) | September 19, 2025 |
| <u>/s/ Sam Lee</u><br>Sam Lee                     | Co-Chief Executive Officer (Principal Executive Officer)                                                             | September 19, 2025 |
| <u>/s/ Roger Kornberg</u><br>Roger Kornberg       | Chairman of the Board of Directors                                                                                   | September 19, 2025 |
| <u>/s/ Phillip Frost</u><br>Phillip Frost         | Director                                                                                                             | September 19, 2025 |
| <u>/s/ Fred Hassan</u><br>Fred Hassan             | Director                                                                                                             | September 19, 2025 |
| <u>/s/ Anthony Japour</u><br>Anthony Japour       | Director                                                                                                             | September 19, 2025 |
| <u>/s/ Richard Pfenniger</u><br>Richard Pfenniger | Director                                                                                                             | September 19, 2025 |
| <u>/s/ Steven Rubin</u><br>Steven Rubin           | Director                                                                                                             | September 19, 2025 |



**Nason, Yeager, Gerson, Harris & Fumero, P.A.**  
**3001 PGA Blvd., Suite 305**  
**Palm Beach Gardens, FL 33410**

September 19, 2025

Cocrystal Pharma, Inc.  
19805 N. Creek Parkway  
Bothell, Washington 98011  
Attention: Mr. James Martin, Co-Chief Executive Officer and Chief Financial Officer

Dear Mr. Martin:

You have requested our opinion with respect to certain matters in connection with the sale by Cocrystal Pharma, Inc., a Delaware corporation (the “Company”) of 5,736,773 shares of the Company’s common stock, par value \$0.001 per share (the “Shares”) pursuant to the Company’s Registration Statement on Form S-1 (the “Registration Statement”) to be filed on the date hereof by the Company with the Securities and Exchange Commission (the “SEC”) under the Securities Act of 1933 (the “Securities Act”). The Registration Statement relates to the issuance and sale from time to time by the Company of shares of the Company’s common stock issuable upon exercise of outstanding warrants to purchase Common Stock (the “Warrants”). The Warrants were issued in a private placement offering which occurred concurrently in connection with a registered direct offering of our common stock and consist of (i) 5,529,420 Warrants issued to certain accredited investors who participated in such offering and (ii) 207,353 Warrants issued as consideration to the placement agent in such offering.

In connection with this opinion, we have examined such documents and such matters of fact and law as we have deemed necessary as a basis for this opinion, including, but not limited to, (i) the Registration Statement; (ii) the forms of Warrants; (iii) the Company’s Certificate of Incorporation, as amended; (iv) the Company’s Bylaws; and (v) certain resolutions of the Board of Directors of the Company. As to various questions of fact material to this opinion, we have relied upon representations of officers or directors of the Company and documents furnished to us by the Company without independent verification of their accuracy. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof, and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

The opinions expressed herein are limited to the General Corporation Law of the State of Delaware, as currently in effect, and we express no opinion as to the effect of any other law of the State of Delaware or the laws of any other jurisdiction.

Based on the foregoing, we are of the opinion that the Shares, when issued and delivered against payment of the consideration therefor specified in the Warrants, will be validly issued, fully paid and non-assessable.

This opinion is being furnished to you for submission to the SEC as Exhibit 5.1 to the Registration Statement in accordance with the requirements of Item 16 of Form S-1 and Item 601(b)(5)(i) of Regulation S-K promulgated under the Securities Act. We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement with the SEC on the date hereof and to the use of the name of our firm in the section entitled “Legal Matters” in the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated thereunder by the SEC.

This opinion is limited to the matters stated in this letter, and no opinion may be implied or inferred beyond the matters expressly stated in this letter. This opinion is given as of the date hereof, and we assume no obligation to advise you after the date hereof of facts or circumstances that come to our attention or changes in the law, including judicial or administrative interpretations thereof, that occur which could affect the opinions contained herein.

Very truly yours,

/s/ Nason, Yeager, Gerson, Harris & Fumero, P.A.  
Nason, Yeager, Gerson, Harris & Fumero, P.A.

---

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in this Registration Statement on Form S-1 (File No. 333-\_\_\_\_) of our report dated March 31, 2025, relating to the consolidated financial statements of Cocrysal Pharma, Inc. as of and for the years ending December 31, 2024 and 2023 (which report includes an explanatory paragraph regarding substantial doubt about the Company's ability to continue as a going concern) included in Cocrysal Pharma, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2024, filed with the Securities and Exchange Commission. We also consent to the reference to our firm under the caption "Experts" in such Registration Statement and related Prospectus.

/s/Weinberg & Company, P.A.  
Los Angeles, California  
September 19, 2025

---

## Calculation of Filing Fee Tables

Form S-1  
(Form Type)Cocrystal Pharma, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

| Security Type               | Security Class Title | Fee Calculation or Carry Forward Rule     | Amount Registered (1) | Proposed Maximum Offering Price Per Unit | Maximum Aggregate Offering Price | Fee Rate       | Amount of Registration Fee | Carry Forward Form Type | Carry Forward File Number | Carry Forward Initial effective date | Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward |
|-----------------------------|----------------------|-------------------------------------------|-----------------------|------------------------------------------|----------------------------------|----------------|----------------------------|-------------------------|---------------------------|--------------------------------------|---------------------------------------------------------------------------------------|
| Newly Registered Securities |                      |                                           |                       |                                          |                                  |                |                            |                         |                           |                                      |                                                                                       |
| Fees to Be Paid             | Equity               | Common Stock, par value \$0.001 per share | 457(g)                | 2,764,710                                | \$ 1.50(2)                       | \$4,147,065.00 | \$153.10 per \$1,000,000   |                         | \$ 634.92                 |                                      |                                                                                       |
| Fees to Be Paid             | Equity               | Warrants to Purchase Common Stock         | 457(g)                | 207,353                                  | \$ 2.125(2)                      | \$ 440,625.13  | \$153.10 per \$1,000,000   |                         | 67.46                     |                                      |                                                                                       |
| Previously Paid             |                      |                                           |                       |                                          |                                  |                |                            |                         |                           |                                      |                                                                                       |
| Carry Forward Securities    |                      |                                           |                       |                                          |                                  |                |                            |                         |                           |                                      |                                                                                       |
| Carry Forward Securities    |                      |                                           |                       |                                          |                                  |                |                            |                         |                           |                                      |                                                                                       |
| Total Offering Amounts      |                      |                                           |                       |                                          | \$4,587,690.13                   |                | \$ 702.38                  |                         |                           |                                      |                                                                                       |
| Total Fees Previously Paid  |                      |                                           |                       |                                          |                                  |                | \$ -                       |                         |                           |                                      |                                                                                       |
| Total Fee Offsets           |                      |                                           |                       |                                          |                                  |                | -                          |                         |                           |                                      |                                                                                       |
| Net Fee Due                 |                      |                                           |                       |                                          |                                  |                | \$ 702.38                  |                         |                           |                                      |                                                                                       |

(1) Consists of (i) 2,764,710 shares of common stock issuable upon conversion of investor warrants held by investors (“Investor Warrants”); and (ii) 207,353 shares of common stock issuable upon exercise of placement agent warrants (the “PA Warrants”), in each case as more particularly described in the registration statement on Form S-1 to which this filing fee table relates. Also includes such indeterminate number of additional shares of common stock issuable by reason of any stock dividend, stock split, recapitalization or other similar transaction, including, but not limited to, as a result of the anti-dilution provisions contained in the securities.

(2) Pursuant to Rule 457(g) under the Securities Act of 1933, and solely for the purpose of calculating the registration fee, the proposed maximum offering price per share of common stock issuable upon exercise of the Investor Warrants which are exercisable at \$1.50 per share and the PA Warrants which are exercisable at \$2.125 per share is in each case estimated based upon the higher of (a) the exercise price of such Warrants, as applicable, and (b) \$1.385, which is the average of the high and low sale prices of the shares of common stock as of September 15, 2025, as reported on The Nasdaq Capital Market.