Filed Pursuant to Rule 424(b)(5)
Registration No. 333- 274427

PROSPECTUS SUPPLEMENT
(To Prospectus dated September 8, 2023)

10,000,000 Shares

Common Stock

We are offering 10,000,000 shares of our common stock.

Our shares trade on the Nasdaq Capital Market under the symbol CPRX. On January 4, 2024, the last reported sale price of our common stock as reported on the Nasdaq Capital Market was $17.11 per share.

Investing in our common stock involves risks that are described in the "Risk Factors" section beginning on page S-8 of this prospectus supplement, on page 4 of the accompanying prospectus and the matters discussed in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.

	Per Share	Total
Public Offering Price	$15.00	$150,000,000
Underwriting discount (1)	$0.90	$9,000,000
Proceeds, before expenses, to us	$14.10	$141,000,000

(1) See "Underwriting" on page S-16 of this prospectus supplement for additional information regarding underwriting compensation.

We have granted the underwriters an option to purchase up to an additional 1,500,000 shares offered by us in the offering at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus supplement. If the underwriters exercise the option in full, the total underwriting discount payable by us will be $10,350,000 and the proceeds to us, before expenses, will be $162,150,000.

Neither the Securities and Exchange Commission ("SEC") nor any state securities commission or other regulatory body has approved or disapproved these securities, or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of our common stock to investors on or about , 2024.

Bookrunners

BofA Securities **Citi** **Piper Sandler** **Cantor** **Truist Securities**

Co-lead Managers

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

The date of this prospectus supplement is January 4, 2024.

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This document is in two parts. The first part is this prospectus supplement, which describes the terms of the offering of the securities offered hereby and also adds to and updates the information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part is the accompanying prospectus, which provides more general information. To the extent that there is any conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference herein or therein, on the other hand, you should rely on the information in this prospectus supplement.

You should rely only on the information contained in this prospectus supplement, contained in the accompanying prospectus or incorporated herein or therein by reference. We have not authorized anyone to provide you with information that is different. We are offering to sell, and seeking offers to buy, the securities offered hereby only in jurisdictions where offers and sales are permitted. The information contained, or incorporated by reference, in this prospectus supplement and contained, or incorporated by

reference, in the accompanying prospectus is accurate only as of the respective dates thereof, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or of any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus or incorporated herein or therein by reference, including the documents we have referred you to in the section entitled "Where You Can Find Additional Information" below.

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus is a part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (SEC), utilizing a "shelf" registration process for the delayed offering and sale of securities pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), and which became effective on September 8, 2023. The prospectus supplement describes the specific terms of this offering and also adds to and updates the information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The accompanying prospectus gives more general information, some of which may not apply to this offering. If there is a difference between the information contained in this prospectus supplement and the information contained in the accompanying prospectus or any document incorporated by reference, you should rely on the information in this prospectus supplement. Information in any document we subsequently file that is incorporated by reference shall modify or supersede the information in this prospectus supplement, the accompanying prospectus and documents incorporated by reference prior to such subsequent filing. Generally, when we refer to the prospectus, we are referring to this prospectus supplement and the accompanying prospectus combined.

We have not, and the underwriters have not, authorized anyone to provide you with information different than or inconsistent with the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents, regardless of the time of delivery of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus supplement entitled "Where You Can Find Additional Information" and "Incorporation of Information by Reference."

We and the underwriters are offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of our securities in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any restrictions relating to, the offering of our securities and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

Unless otherwise indicated, information contained, or incorporated by reference, in this prospectus supplement and the accompanying prospectus concerning our industry and the markets in which we operate, including our general expectations, market position and market opportunity, is based on our management's estimates and research, as well as industry and general publications and research, surveys and studies conducted by third parties. We believe that the information from these third-party publications, research, surveys and studies included, or incorporated by reference, in this prospectus is reliable. Management's estimates are derived

from publicly available information, their knowledge of our industry and their assumptions based on such information and knowledge, which we believe to be reasonable. This data involves a number of assumptions and limitations which are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described under the heading "Risk Factors" contained elsewhere in, and incorporated by reference into this prospectus supplement from our filings with the SEC. These and other factors could cause our future performance to differ materially from our assumptions and estimates.

This prospectus supplement, the accompanying prospectus and the information incorporated herein and therein by reference includes trademarks, service marks or trade names owned by us or other companies. All trademarks, service marks or trade names included in this prospectus supplement, the accompanying prospectus and the information incorporated herein and therein by reference are the property of their respective owners. Solely for convenience, the trademarks, service marks and trade names referred to in this prospectus supplement or in the documents incorporated by reference herein are listed without the ®, (sm) and ™ symbols, but we will assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensors to these trademarks, service marks and trade names.

SUMMARY

This summary highlights information contained elsewhere in this prospectus supplement and the accompanying prospectus or incorporated by reference; it does not contain all of the information you should consider before investing in our common stock. You should carefully read the entire prospectus supplement and accompanying prospectus, including the matters discussed under the headings "Risk Factors" and each of the documents incorporated herein by reference, before making an investment decision.

Throughout this prospectus supplement, the terms "we", "us", "our" and "company" refer to Catalyst Pharmaceuticals, Inc. and its subsidiary.

OVERVIEW

We are a commercial-stage patient-centric biopharmaceutical company focused on in-licensing, developing and commercializing novel high-quality medicines for patients living with rare diseases and diseases that are difficult to treat. With exceptional patient focus, we are committed to developing a robust pipeline of cutting-edge, best-in-class medicines for treating rare and difficult to treat diseases. We are dedicated to making a meaningful impact on the lives of those suffering from rare and difficult to treat diseases, and we believe in putting patients first in everything we do.

Our flagship U.S. commercial product is FIRDAPSE® (amifampridine) Tablets 10 mg. approved for the treatment of Lambert-Eaton myasthenic syndrome, or LEMS, for adults and for children ages six and up. Further, on January 24, 2023, we closed our acquisition of the U.S. rights to FYCOMPA® from Eisai Co., Ltd. (Eisai) and are now marketing that product in the United States. FYCOMPA® (perampanel) CIII is a prescription medication used alone or with other medicines to treat focal onset seizures with or without secondarily generalized seizures in people with epilepsy aged four and older and with other medicines to treat primary generalized tonic-clonic seizures in people with epilepsy aged 12 and older. Finally, on July 18, 2023, we closed our acquisition from Santhera Pharmaceuticals of an exclusive license for North America for vamorolone, a novel corticosteroid treatment for patients suffering from Duchenne muscular dystrophy (DMD). On October 26, 2023, the FDA approved AGAMREE® (vamorolone) oral suspension 40 mg/ml for the treatment of DMD. We are currently planning the commercial launch of AGAMREE® in the United States during the first quarter of 2024.

FIRDAPSE®

On November 28, 2018, we received approval from the United States Food and Drug Administration (FDA) of our new drug application (NDA) for FIRDAPSE® Tablets 10 mg for the treatment of adult patients (ages 17 and above) with LEMS, and in January 2019, we launched FIRDAPSE® in the United States. Further, on September 29, 2022, the FDA approved our supplemental NDA (sNDA) to expand the indicated age range for FIRDAPSE® Tablets 10 mg to include pediatric patients, six years of age and older for the treatment of LEMS.

We sell FIRDAPSE® through a field force experienced in neurologic, central nervous system or rare disease products consisting at this time of approximately 32 field personnel, including sales (Regional Account Managers), thought-leader liaisons, patient assistance and insurance navigation support (Patient Access Liaisons), and payor reimbursement (National Account Managers). We also have a field-based force of six medical science liaisons who are helping educate the medical communities and patients about LEMS and our programs supporting patients and access to FIRDAPSE®.

For the last few years, we have contracted with an experienced inside sales agency that works to generate leads through telemarketing to targeted physicians. This inside sales agency allowed our sales efforts to not only reach the neuromuscular specialists who regularly treat LEMS patients, but also the roughly 9,000 neurology and neuromuscular healthcare providers that may be treating a LEMS patient who can benefit from

FIRDAPSE®. However, effective January 1, 2024, we have terminated that arrangement. We also use non-personal promotion to reach the 20,000 neurologists who are potential LEMS treaters and the 16,000 oncologists who might be treating a LEMS patient with small cell lung cancer. Further, we continue to make available at no-cost a LEMS voltage gated calcium channel antibody testing program for use by physicians who suspect that one of their patients may have LEMS and wish to reach a definitive diagnosis.

Finally, we are continuing to expand our digital and social media activities to introduce our product and services to potential patients and their healthcare providers. We also work with several rare disease advocacy organizations (including Global Genes and the National Organization for Rare Disorders) to help increase awareness and level of support for patients living with LEMS and to provide education for the physicians who treat these rare diseases and the patients they treat.

We are supporting the distribution of FIRDAPSE® through Catalyst Pathways®, our personalized treatment support program for patients who enroll in it. Catalyst Pathways® is a single source for personalized treatment support, education and guidance through the challenging dosing and titration regimen required to reach an effective therapeutic dose. It also includes distributing the drug through a very small group of exclusive specialty pharmacies (primarily AnovoRx), which is consistent with the way that most drug products for ultra-orphan diseases are distributed and dispensed to patients. We believe that by using specialty pharmacies in this way, the difficult task of navigating the health care system is far better for the patient needing treatment for their rare disease and the health care community in general.

In order to help patients with LEMS afford their medication, we, like other pharmaceutical companies which are marketing drugs for ultra-orphan conditions, have developed an array of financial assistance programs that are available to reduce patient co-pays and deductibles to a nominal affordable amount. A co-pay assistance program designed to keep out-of-pocket costs to not more than $10.00 per month (currently less than $2.00 per month) is available for all LEMS patients with commercial coverage who are prescribed FIRDAPSE®. Our FIRDAPSE® co-pay assistance program is not available to patients enrolled in state or federal healthcare programs, including Medicare, Medicaid, VA, DoD, or TRICARE. However, we are donating, and committed to continuing to donate, funds to qualified, independent charitable foundations dedicated to providing assistance to any U.S. LEMS patients in financial need. Subject to compliance with regulatory requirements, our goal is that no LEMS patient is ever denied access to their medication for financial reasons.

In January 2023, we received Paragraph IV Certification Notice Letters from three generic drug manufacturers advising us that they had each submitted an Abbreviated New Drug Application (ANDA) to the FDA seeking authorization from the FDA to manufacture, use or sell a generic version of FIRDAPSE® in the United States. The notice letters each alleged that our six patents listed in the FDA Orange Book covering FIRDAPSE® are not valid, not enforceable, and/or will not be infringed by the commercial manufacture, use or sale of the proposed product described in these ANDA submissions. Under the Federal Food, Drug, and Cosmetic Act (FDCA), as amended by the Drug Price Competition and Patent Term Restoration Act of 1984, as amended, we had 45 days from receipt of the notice letters to commence patent infringement lawsuits against these generic drug manufacturers in a federal district court to trigger a stay precluding the FDA from approving any ANDA until May 2026 or entry of judgment holding the patents invalid, unenforceable, or not infringed, whichever occurs first. In that regard, after conducting the necessary due diligence, we filed lawsuits on March 1, 2023 in the U.S. District Court for the District of New Jersey against each of the three generic drug manufacturers who notified us of their ANDA submissions, thus triggering the stay. Further, on October 6, 2023, we received a further Paragraph IV Certification Notice Letter from a fourth generic drug manufacturer, and, after conducting the necessary due diligence, we filed a lawsuit in the U.S. District Court for the District of New Jersey on November 20, 2023 against this drug manufacturer.

We intend to vigorously protect and defend our intellectual property for FIRDAPSE® and, although there can be no assurance, we believe that our patent estate will protect FIRDAPSE® from generic competition for the life of our patents.

On August 4, 2023, we submitted an sNDA to the FDA seeking an increase in the maximum indicated dose of FIRDAPSE® from 80 mg per day to 100 mg per day. On October 13, 2023, we announced that the FDA had accepted our sNDA for review and assigned a Prescription Drug User Fee Act (PDUFA) action date of June 4, 2024. There can be no assurance that the FDA will approve our sNDA.

We are advised by our sub-licensee for FIRDAPSE® in Japan, DyDo Pharma, Inc. (DyDo), that on December 18, 2023, based on a preliminary favorable interim data analysis after six months into the safety phase of its registration study to evaluate the efficacy and safety of FIRDAPSE® for the treatment of LEMS, they filed a Japan NDA with the Pharmaceuticals and Medical Devices Agency (PMDA) in Japan seeking approval to commercialize the product in Japan. The review period is expected to be a minimum of approximately nine months from the submission date, and there can be no assurance that the NDA filing made by DyDo will be approved.

Further, upon the acceptance of the Japan NDA by the PMDA, our license for FIRDAPSE® will automatically expand to include other key markets in Asia, Central America and South America, and we are currently initiating plans to seek opportunities to expand FIRDAPSE®'s global footprint through strategic partnerships (with the current focus on the Asia Pacific and Latin America regions).

FYCOMPA®

On December 17, 2022, we entered into an asset purchase agreement with Eisai Co., Ltd. (Eisai) for the acquisition of the U.S. rights to FYCOMPA® (perampanel) CIII. FYCOMPA® is a selective non-competitive antagonist of AMPA receptors, the major subtype of ionotropic glutamate receptors. It was the first, and still the only, drug of its class to be approved for epilepsy. Studies suggest that AMPA receptor antagonism can lead to reduced overstimulation and anticonvulsant effects, as well as inhibiting seizure generation and spread. FYCOMPA® is a controlled substance and is approved with a box warning label.

FYCOMPA® is used to treat partial onset seizures with or without secondarily generalized seizures in adults and children 4 years of age and older. It is also used in combination with other medications to treat primary generalized tonic-clonic seizures (also known as a "grand mal" seizure, a seizure that involves the entire body) in adults and children 12 years of age or older. Perampanel is in a class of medications called anticonvulsants. It works by decreasing abnormal electrical activity in the brain.

On January 24, 2023 we closed our acquisition of the U.S. rights to FYCOMPA®. In connection with the acquisition, we purchased Eisai's regulatory approvals and documentation, product records, intellectual property, inventory, and other matters relating to the U.S. rights for FYCOMPA®, in exchange for a cash upfront payment of $160 million, plus $1.6 million for reimbursement of certain prepayments. Further, under certain circumstances, we may also be obligated to pay Eisai an additional cash payment of $25 million if a patent extension for FYCOMPA® until June 8, 2026 is approved by the U.S. Patent and Trademark Office (USPTO). Finally, we agreed to pay Eisai royalty payments after patent protection for FYCOMPA® expires, which royalty payments will be reduced upon generic equivalents to FYCOMPA® entering the market.

In conjunction with the closing of our acquisition of FYCOMPA®, we entered into two additional agreements with Eisai; a Transition Services Agreement and a Supply Agreement. Under the Transition Services Agreement, a U.S. subsidiary of Eisai is providing us with certain transitional services, and under the Supply Agreement, Eisai has agreed to manufacture FYCOMPA® for us for at least seven years at prices listed in the Supply Agreement (to be updated on a yearly basis).

Initially, following the closing of the acquisition, we began marketing FYCOMPA® in the U.S. through Eisai's U.S. subsidiary under the Transition Services Agreement as we built our FYCOMPA® marketing and sales team, and on May 1, 2023, we took over the marketing program for FYCOMPA®. In that regard, we have hired approximately 34 sales and marketing personnel to support FYCOMPA®, most of whom previously worked in Eisai's U.S. sales division marketing FYCOMPA®. We also have hired seven medical science liaisons to help us educate the medical community who treat epilepsy and the patients who have epilepsy about their disease and the benefits of FYCOMPA®.

Catalyst is supporting patients using FYCOMPA® through an Instant Savings Card Program. Through the program, eligible commercially insured patients could pay as little as $10 for their FYCOMPA® co-pay (with a maximum savings of $1,300 per year). The FYCOMPA® instant savings card program is not available to patients enrolled in state or federal healthcare programs, including Medicare, Medicaid, VA, DoD, or TRICARE.

Patent protection for FYCOMPA® is primarily from two patents listed in the Orange Book. The first, U.S. Patent No. 6,949,571 (the '571 patent), will expire no earlier than May 23, 2025, which is the current expiration date for the '571 patent that includes the USPTO's current patent term extension calculation. A request for reconsideration of the agency's patent term extension calculation to extend the period until June 8, 2026 was recently denied, and the Company is currently exploring its options to potentially obtain an extension of this patent term (and there can be no assurance that any extension of this patent term will be obtained). The second FYCOMPA® patent in the Orange Book is U.S. Patent No. 8,772,497 (the '497 patent) that expires on July 1, 2026. The '497 patent is the one that has been the subject of previous Paragraph IV certifications from three ANDA filers.

On February 20, 2023, Catalyst received a Paragraph IV Certification Notice Letter from a company that appears to have filed the first ANDA for the oral suspension formulation for FYCOMPA®. The same company sent a similar letter to the Company later in February with a similar certification for the tablet formulation for FYCOMPA®, the fourth such certification for this formulation. Both of these letters were paragraph IV certifications of non-infringement, non-validity, and unenforceability to the '497 patent for FYCOMPA® but each application, like the previous Paragraph IV notices from ANDA filers, for FYCOMPA® tablets does not challenge the '571 patent. Similar to our actions with the FIRDAPSE® Paragraph IV Certifications described above, after due diligence Catalyst filed lawsuits on April 5, 2023 in the U.S. District Court for the District of New Jersey against the drug manufacturer who notified Catalyst of their ANDA submissions for both FYCOMPA® formulations, thus triggering the 30 month stay for each application.

AGAMREE®

On June 19, 2023, we entered into a License and Collaboration Agreement (License Agreement) and an Investment Agreement (Investment Agreement) with Santhera Pharmaceuticals Holding, Inc. (Santhera). Under the License Agreement, we contracted to obtain an exclusive North America license, manufacturing and supply agreement for Santhera's investigational product candidate, AGAMREE® (vamorolone), a novel corticosteroid for the treatment of DMD. Under the Investment Agreement, we agreed to make a strategic investment into Santhera.

Both transactions closed on July 18, 2023. Under the License Agreement, upon closing, we made a $75 million payment to Santhera in return for the exclusive North American license for AGAMREE®. Additionally, following approval of the NDA for the drug, on October 26, 2023, we became obligated to make milestone payments of $36 million to Santhera, $26 million of which was used by Santhera to make milestone payments to third parties. This payment was made during the fourth quarter of 2023. We may also be obligated to pay future regulatory and commercial milestone payments to Santhera tied to calendar year sales of AGAMREE®, as well as commercial royalties. In addition to the rights to commercialize the product in North America, the License Agreement provides us with the right of first negotiation for AGAMREE® in Europe and

Japan should Santhera pursue partnership opportunities in those territories. Additionally, we will hold the North American rights to any future approved indications for AGAMREE®.

Concurrently with the closing of the License Agreement, we made a strategic investment into Santhera in which we acquired 1,414,688 of Santhera's post-reverse split ordinary shares (representing approximately 11.26% of Santhera's outstanding ordinary shares following the transaction) at an investment price of CHF 9.477 per share (corresponding to a mutually agreed volume weighted average price prior to signing), with the approximately $15 million investment to be used by Santhera for Phase IV studies of AGAMREE® in DMD and future development of additional indications for AGAMREE®.

DMD, the most common form of muscular dystrophy, is a rare and life-threatening neuromuscular disorder characterized by progressive muscle dysfunction, ultimately leading to loss of ambulation, respiratory failure, and fatality. Current standard treatment for DMD involves corticosteroids, which often come with significant side effects. It is estimated that between 11,000 and 13,000 patients in the U.S. are affected by DMD, with approximately 70% of patients currently receiving concomitant corticosteroid treatment.

AGAMREE®'s unique mode of action is based on differential effects on glucocorticoid and mineralocorticoid receptors and modifying further downstream activity and, as such, is considered a novel corticosteroid with dissociative properties in maintaining efficacy, with a better-tolerated side effect profile. This mechanism of action may allow vamorolone to emerge as an effective alternative to the current standard of care corticosteroids in children, adolescents, and adult patients with DMD. In the pivotal VISION-DMD study, vamorolone met the primary endpoint Time to Stand (TTSTAND) velocity versus placebo (p=0.002) at 24 weeks of treatment and showed a good safety and tolerability profile. The most commonly reported adverse events versus placebo from the VISION-DMD study were cushingoid features, vomiting, and vitamin D deficiency. Adverse events were generally of mild to moderate severity.

On October 13, 2023, Santhera announced that the European Union's Committee for Medicinal Products for Human Use (CHMP) adopted a positive position in favor of AGAMREE® for the treatment of DMD patients aged 4 and older. In its recommendation for approval, CHMP acknowledged that there was a positive benefit-risk profile of AGAMREE® in such patient population, including certain safety benefits of AGAMREE® compared to standard of care corticosteroids in the treatment of DMD. On October 26, 2023, the U.S. FDA approved Santhera's NDA for AGAMREE® for use in treating DMD in patients aged two years and older. As part of the previously described transaction, Santhera has transferred the approved New Drug Application to us. Further, on December 18, 2023, the European Commission (EC) granted to Santhera marketing authorization for AGAMREE® for the treatment of DMD in patients ages 4 years and older.

We currently expect to launch AGAMREE® in the U.S. during the first quarter of 2024. We are incurring substantial commercialization expenses, including sales, marketing, analytical infrastructure, patient services, patient advocacy and other commercialization related expenses, for AGAMREE® in preparation for the planned launch of the product. We incurred a portion of such commercialization expenses during the fourth quarter of 2023 and we are incurring additional expenses during the first quarter of 2024. We anticipate minimal sales and marketing personnel expansion to market AGAMREE®, with approximately 10 additional commercial team members required, due to the synergy of this product within our existing neuromuscular franchise. We will support the distribution of AGAMREE® through our Catalyst Pathways® patient services program to ensure that patients have access to a dedicated, personalized support team that assists families through the AGAMREE® patient journey, from answering questions to coordinating financial assistance programs for eligible patients.

We have established a joint steering committee with Santhera that will oversee the development of AGAMREE® for additional indications beyond DMD. Under our License Agreement with Santhera, we have agreed to purchase commercial supply of AGAMREE® from Santhera at agreed upon rates.

Business Development

We continue to advance our strategic initiatives and portfolio expansion efforts, focusing on broadening and diversifying our rare Neurology product portfolio with innovative therapies that address critical unmet medical needs and expanding the geographical footprint of our existing products. In that regard, we are currently exploring clinically differentiated opportunities, with a keen focus on products to treat rare neurological and epileptic diseases. These prospects include evaluating companies with existing commercial drug products or drugs in development, for potential partnerships, licensing, geographical expansion opportunities with our existing products, and/or asset acquisitions. We continue to employ a disciplined, comprehensive, and exhaustive approach to identifying and evaluating opportunities that we believe will add significant value to our company over the near, mid, and long term. However, no additional definitive agreements have been entered into to date, and there can be no assurance that these initiatives will be successful.

Capital Resources

At September 30, 2023, we had cash and cash equivalents of approximately $121.0 million. Subsequent to the end of the fourth quarter of 2023, we became obligated to make a payment of $36 million to Santhera as a result of the FDA's approval of the NDA for AGAMREE®, which milestone payment was paid during the fourth quarter of 2023. Based on our current financial condition and forecasts of available cash, we believe that we have sufficient funds to support our operations for at least the next 12 months.

There can be no assurance that (i) we will continue to be successful in commercializing FIRDAPSE® and FYCOMPA®, (ii) we will be able to successfully commercialize AGAMREE®, or (iii) we will continue to be profitable and cash flow positive. Further, there can be no assurance that if we need additional funding in the future, whether such funding will be available to us on acceptable terms. See "Liquidity and Capital Resources" in our Form 10-K for 2022 and in our other filings with the SEC for further information on our liquidity and cash flow. See "Incorporation of Information By Reference" starting on page S-31 of this prospectus supplement.

Recent Management Changes

On December 31, 2023, Patrick J. McEnany, our then-President and Chief Executive Officer, and Alicia Grande, our then-Vice President, Treasurer and Chief Financial Officer, both retired from their respective roles with the Company. On January 1, 2024, Richard J. Daly became the Company's President and Chief Executive Officer, and Michael W. Kalb became the Company's Executive Vice President and Chief Financial Officer. Mr. McEnany remains as the Chairman of our Board of Directors and Mr. Daly remains on our Board of Directors.

THE OFFERING

Common Stock Offered	10,000,000 shares
Underwriters' Option	We have granted the underwriters an option to purchase up to an additional 1,500,000 shares from us within 30 days of the date of this prospectus supplement.
Common Stock to be Outstanding after this Offering	117,564,816 shares (or 119,064,816 shares if the underwriters exercise their option to purchase additional shares in full)
Use of Proceeds	We intend to use the net proceeds from the sale of the securities: (i) to potentially acquire new products, and (ii) for general corporate purposes. See "Use of Proceeds" on page S-13 for more information.
Risk Factors	See "Risk Factors" beginning on page S-8 of this prospectus supplement, on page 3 of the accompanying prospectus and in our Annual Report on Form 10-K for the year ended December 31, 2022, in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2023 and in the other documents which are incorporated by reference in this prospectus supplement in their entirety for a discussion of factors you should consider carefully before deciding to invest in our common stock.
NASDAQ Capital Market Symbol	"CPRX"

The number of shares of our common stock to be outstanding after this offering as shown above is based on 107,564,816 shares outstanding as of January 3, 2024 and excludes:

- 14,001,435 shares of our common stock subject to outstanding stock options, having a weighted average exercise price of $8.11 per share;
- 890,152 unvested restricted stock units; and
- 1,499,042 shares of our common stock that have been reserved for issuance under our 2018 Stock Incentive Plan.

Unless otherwise indicated, all information in this prospectus supplement assumes no exercise by the underwriters of their option to up to purchase 1,500,000 additional shares of our common stock.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks and uncertainties described below and those under the section titled "Risk Factors" contained in our most recent Annual Report on Form 10-K, as well as any amendments thereto reflected in subsequent filings with the Commission and other reports we file with the SEC, which are incorporated by reference into this prospectus supplement in their entirety, together with other information in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein and therein and any free writing prospectus that we may authorize for use in connection with this offering.

The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section below titled "Cautionary Statement Regarding Forward-Looking Statements."

Risks Related to this Offering

Management will have broad discretion to use the proceeds from this offering, and we may not use the proceeds effectively.

While we have noted our intended use of the proceeds of this offering in the "Offering" section and the "Use of Proceeds" section of this prospectus supplement, we have not designated any portion of the net proceeds from this offering to be used for any particular purpose. Accordingly, our management will have broad discretion as to the application of the net proceeds from this offering and could spend the proceeds in ways that do not necessarily improve our operating results or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates, and cause the price of our common stock to decline.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution with respect to the net tangible book value of the common stock you purchase in this offering. Based on the public offering price of $15.00 per share and our net tangible book value as of September 30, 2023, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of $12.25 per share with respect to the net tangible book value per share of the common stock. See the section titled "Dilution" in this prospectus supplement for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

In addition, we have a significant number of stock options outstanding. To the extent that outstanding stock options have been or may be exercised, investors purchasing our common stock in this offering may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders or result in downward pressure on the price of our common stock**.**

A sale of a substantial number of shares of our common stock may cause the price of our common stock to decline.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market, the market price of our common stock could decline significantly.

We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. However, future sales of substantial amounts of our common stock in the public market, including shares issued upon exercise of outstanding options or warrants, or the perception that such sales may occur, could adversely affect the market price of our common stock.

In addition, BofA Securities, Inc. may, in its sole discretion, release all or some portion of the shares subject to lock-up agreements at any time and for any reason. Sales of a substantial number of such shares upon expiration of the lock-up and market stand-off agreements, the perception that such sales may occur, or early release of these agreements, could cause our market price to fall or make it more difficult for you to sell your common stock at a time and price that you deem appropriate.

We do not anticipate paying any dividends on our common stock in the foreseeable future.

We have not paid any dividends on our common stock to date and do not expect to declare or pay any cash or other dividends in the foreseeable future on our common stock. Accordingly, we do not anticipate that our board of directors will declare any dividends in the foreseeable future on our common stock. As a result, you may not receive any return on an investment in our common stock unless you sell our common stock for a price greater than that which you paid for it. See "Dividend Policy."

We may fail to meet our publicly announced guidance or other expectations about our business and future operating results, which would cause our stock price to decline.

We release earnings guidance from time to time in our quarterly and annual earnings releases, or otherwise, regarding our future performance that represents our management's estimates as of the date of release. This guidance includes forward-looking statements based on projections prepared by our management. Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies on our business, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. For example, in light of our acquisition of an exclusive license for North America for vamorolone in July 2023, you are cautioned not to place undue reliance on any guidance issued prior to such acquisition.

The principal reason that we release guidance is to provide a basis for our management to discuss our business outlook with analysts and investors. Furthermore, analysts and investors may develop and publish their own projections of our business, which may form a consensus about our future performance. Our actual business results may vary significantly from such guidance or that consensus due to a number of factors, many of which are outside of our control. Furthermore, if we make downward revisions of our previously announced guidance, if we withdraw our previously announced guidance, or if our publicly announced guidance of future operating results fails to meet expectations of securities analysts, investors or other interested parties, the price of our common stock would decline.

Guidance is necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying the guidance furnished by us will not materialize or will vary significantly from actual results. Accordingly, our guidance is only an estimate of what management believes is realizable as of the date of release. Actual results may vary from our guidance and the variations may be material. In light of the foregoing, investors are urged not to rely upon our guidance in making an investment decision regarding our common stock. Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth under the header "Risk Factors" in this prospectus supplement and incorporated by reference into this prospectus supplement from our filings with the SEC could result in the actual operating results being different from our guidance, and the differences may be adverse and material.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein contain "forward-looking statements", as that term is defined in the Private Securities Litigation Reform Act of 1995. These include statements regarding our expectations, beliefs, plans or objectives for future operations and anticipated results of operations. For this purpose, any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, "believes", "anticipates", "proposes", "plans", "expects", "intends", "may", and other similar expressions are intended to identify forward-looking statements. Such statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or other achievements to be materially different from any future results, performances or achievements expressed or implied by such forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in the section entitled "Risk Factors" in this prospectus supplement, the accompany prospectus and in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC, on March 15, 2022, and any additional information and risks that we may disclose in subsequent periodic reports we file with the SEC, which are incorporated by reference in this prospectus supplement, for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements.

The continued successful commercialization of FIRDAPSE®, FYCOMPA® and now AGAMREE® are highly uncertain. Factors that will affect our success include the uncertainty of:

- The impact of the COVID-19 pandemic, or any future pandemic, on our business or on the economy generally;
- Whether we will be able to continue to successfully market FIRDAPSE® and FYCOMPA®, and successfully market AGAMREE® in future periods, while maintaining full compliance with applicable federal and state laws, rules and regulations;
- Whether our estimates of the size of the market for FIRDAPSE® for the treatment of Lambert-Eaton Myasthenic Syndrome (LEMS) will prove to be accurate;
- Whether we will be able to locate LEMS patients who are undiagnosed or are misdiagnosed with other diseases;
- Whether patients will discontinue from the use of FIRDAPSE® and FYCOMPA® at rates that are higher than historically experienced or are higher than we project;
- Whether the daily dose of FIRDAPSE® taken by patients changes over time and affects our results of operations;
- Whether new FIRDAPSE® patients and FYCOMPA® patients can be successfully titrated to stable therapy;
- Whether we can continue to market FIRDAPSE® and FYCOMPA®, and market AGAMREE® in future periods, on a profitable and cash flow positive basis;
- Whether we can successfully integrate the team that we have hired to market FYCOMPA® into our current business structure;
- Whether the acquisition of FYCOMPA® will prove to be accretive to EBITDA and EPS in 2024;

- Whether any revenue or earnings guidance that we provide to the public market will turn out to be accurate;
- Whether payors will reimburse for our products at the price we charge for our products;
- The ability of our third-party suppliers and contract manufacturers to maintain compliance with current Good Manufacturing Practices (cGMP);
- The ability of our third party suppliers and contract manufacturers to supply sufficient product to meet our customers' needs in future periods;
- The ability of those third parties that distribute our products to maintain compliance with applicable law;
- Our ability to maintain compliance with applicable rules relating to our patient assistance programs for FIRDAPSE® and FYCOMPA®;
- Our ability to maintain compliance with the applicable rules that relate to our contributions to 501(c)(3) organizations that support LEMS patients;
- The scope of our intellectual property and the outcome of any challenges to our intellectual property, and, conversely, whether any third-party intellectual property presents unanticipated obstacles for FIRDAPSE®, FYCOMPA® or AGAMREE®;
- Our ability to obtain a favorable resolution of our dispute with the U.S. Patent Office on the term extension for one of our patents listed in the Orange Book for FYCOMPA®;
- Whether there will be a post-closing review by antitrust regulators of our previous acquisition transactions, and the outcome of any such reviews if they occur;
- Whether we will be able to acquire additional drug products under development, complete the research and development required to commercialize such products, and thereafter, if such products are approved for commercialization, successfully market such products;
- Whether our patents will be sufficient to prevent generic competition for FIRDAPSE® after our orphan drug exclusivity for FIRDAPSE® expires;
- Whether we will be successful in our litigation to enforce our patents against the Paragraph IV challengers who have filed relating to FIRDAPSE® and FYCOMPA®;
- The impact on our profits and cash flow of adverse changes in reimbursement and coverage policies from government and private payors such as Medicare, Medicaid, insurance companies, health maintenance organizations and other plan administrators, or the impact of pricing pressures enacted by industry organizations, the federal government or the government of any state, including as a result of increased scrutiny over pharmaceutical pricing or otherwise;
- Changes in the healthcare industry and the effect of political pressure from and actions by the President, Congress and/or medical professionals seeking to reduce prescription drug costs, and changes to the healthcare industry occasioned by any future changes in laws relating to the pricing of drug products, including changes made in the Inflation Reduction Act of 2022, or changes in the healthcare industry generally;

- Whether we will be able to successfully commercialize AGAMREE® in the territory and whether we will be successful in launching the product during the first quarter of 2024;
- Whether our commercialization of AGAMREE® will prove accretive to earnings;
- Whether we and Santhera can successfully develop additional indications for AGAMREE® and obtain the ability to commercialize the product for these additional indications;
- The state of the economy generally and its impact on our business;
- The potential impact of future healthcare reform in the United States, including the Inflation Reduction Act of 2022, and measures being taken worldwide designed to reduce healthcare costs and limit the overall level of government expenditures, including the impact of pricing actions and reduced reimbursement for our product;
- The scope, rate of progress and expense of our clinical trials and studies, pre-clinical studies, proof-of-concept studies, and our other drug development activities, and whether our trials and studies will be successful;
- Our ability to complete any clinical trials and studies that we may undertake on a timely basis and within the budgets we establish for such trials and studies;
- Whether FIRDAPSE® can be successfully commercialized in Canada on a profitable basis through KYE Pharmaceuticals, our collaboration partner in Canada;
- The impact on sales of FIRDAPSE® in the United States if an amifampridine product is purchased in Canada for use in the United States;
- Whether our collaboration partner in Japan, DyDo, will successfully complete the clinical trial in Japan that will be required to seek approval to commercialize FIRDAPSE® in Japan;
- Whether DyDo will be able to obtain approval to commercialize FIRDAPSE® in Japan; and
- Whether our plans to expand the reach of FIRDAPSE® into other global regions will be successful.

Our current plans and objectives are based on assumptions relating to the continued commercialization of FIRDAPSE® and FYCOMPA®, the commercialization of AGAMREE®, and on our plans to seek to acquire or in-license additional products. Although we believe that our assumptions are reasonable, any of our assumptions could prove inaccurate. Considering the significant uncertainties inherent in the forward-looking statements we have made herein, which reflect our views only as of the date of this prospectus supplement, you should not place undue reliance upon such statements. We undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We expect that the net proceeds from this offering will be approximately $140.1 million (or approximately $161.3 million if the underwriters exercise their option to purchase additional shares of our common stock in full), after deducting underwriting fees and estimated offering expenses payable by us. We intend to use the net proceeds from the sale of the securities: (i) to fund the potential acquisition of new product candidates, and (ii) for general corporate purposes.

As of the date of this prospectus supplement, we cannot specify with certainty the particular uses of all of the proceeds from this offering. As a result, our management will retain broad discretion in the allocation and use of the net proceeds from this offering. Pending the application of the net proceeds for these purposes, we expect to invest the proceeds in short-term, interest-bearing instruments or other investment-grade securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common shares or any other securities. We currently anticipate that we will retain all available funds and any future earnings, if any, in the foreseeable future for use in the operation of our business and do not currently anticipate paying cash dividends in the foreseeable future. Payment of future cash dividends, if any, will be at the discretion of the board of directors, subject to applicable law and will depend on various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements of any debt instruments and other factors the board of directors deems relevant.

DILUTION

The net tangible book value of our common stock as of September 30, 2023 was $181,440,000, or $1.70 per share. Net tangible book value per share of our common stock is equal to our net tangible assets (tangible assets less total liabilities) divided by the number of shares of our common stock issued and outstanding as of September 30, 2023.

Dilution in net tangible book value per share represents the difference between the public offering price per share of our common stock and the adjusted net tangible book value per share of our common stock after giving effect to this offering. After giving effect to the sale of 10,000,000 shares of our common stock in this offering at the public offering price of $15.00 per share, and after deducting the underwriter's fees and estimated offering expenses payable by us, our adjusted net tangible book value per share of our common stock at September 30, 2023, would have been approximately $321,540,000, or $2.75 per share. This represents an immediate increase in net tangible book value per share of our common stock of approximately $1.05 per share to existing stockholders and an immediate dilution of approximately $12.25 per share to purchasers in this offering. The following table illustrates this per-share dilution:

Public offering price per share		$ 15.00
Net tangible book value per share as of September 30, 2023,	$1.70	
Increase per share attributable to this offering	$1.05	
As adjusted net tangible book value per share as of September 30, 2023		$ 2.75
Dilution per share to new investors		$ 12.25

The foregoing discussion and table do not take into account further dilution to new investors that could occur upon the exercise of the underwriters' option to purchase additional shares of our common stock within 30 days of the date of this prospectus supplement. If the underwriters exercise in full their option to purchase additional shares of our common stock, our net tangible book value as of January 4, 2024, after giving effect to this offering, would have been approximately $342,690,000, or approximately $2.90 per share, representing an immediate dilution of $12.10 per share to new investors purchasing shares of common stock in this offering.

The number of shares of our common stock to be outstanding after this offering as shown above is based on 106,605,007 shares outstanding at September 30, 2023, and excludes:

- 12,145,818 shares of our common stock subject to outstanding stock options, having a weighted average exercise price of $6.28 per share;
- 572,337 unvested restricted stock units outstanding; and
- 4,658,467 shares of our common stock that have been reserved for issuance under our 2018 Stock Incentive Plan.

DESCRIPTION OF SECURITIES

The following description of our capital stock is intended as a summary only and is qualified in its entirety by reference to our amended and restated certificate of incorporation, as amended, and to our by-laws.

Our authorized capital stock consists of:

- 200,000,000 shares of common stock, par value $0.001 per share; and
- 5,000,000 shares of preferred stock, par value $0.001 per share.

As of January 3, 2024 we had outstanding:

- 107,564,816 shares of our common stock;
- 14,001,435 shares of our common stock subject to outstanding stock options, having a weighted average exercise price of $8.11 per share;
- 890,152 unvested restricted stock units outstanding; and
- 1,499,042 shares of our common stock that have been reserved for issuance under our 2018 Stock Incentive Plan.

Common Stock

The material terms of our common stock are described under the caption “General Description of our Capital Stock” starting on page 11 of the accompanying prospectus.

UNDERWRITING

BofA Securities, Inc. and Citigroup Global Markets Inc. are acting as representatives of each of the underwriters named below. Subject to the terms and conditions set forth in an underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock set forth opposite its name below.

Underwriter	Number of Shares
BofA Securities, Inc.	3,500,000
Citigroup Global Markets Inc.	2,200,000
Piper Sandler & Co.	1,300,000
Cantor Fitzgerald & Co.	1,200,000
Truist Securities, Inc.	800,000
H.C. Wainwright & Co., LLC	500,000
Oppenheimer & Co. Inc.	500,000
Total	10,000,000

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representatives have advised us that the underwriters propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus supplement and to dealers at that price less a concession not in excess of $0.54 per share. After the initial offering, the public offering price, concession or any other term of the offering may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares.

	Per Share	Total Without Option	Total With Option
Public Offering Price	$15.00	$150,000,000	$172,500,000
Underwriting discount	$0.90	$9,000,000	$10,350,000
Proceeds, before expenses, to us	$14.10	$141,000,000	$162,150,000

We estimate expenses payable by us in connection with this offering, other than the underwriting discount referred to above, will be approximately $900,000. We have also agreed to reimburse the underwriters for certain of their expenses in connection with this offering in an amount up to $20,000.

Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus supplement, to purchase up to an additional 1,500,000 shares offered by us in the offering at the public offering price, less the underwriting discount. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

No Sales of Similar Securities

We have agreed that, with limited exceptions, for a period of 90 days after the date of this prospectus supplement, we will not, without the prior written consent of BofA Securities, Inc. (i) directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock or file any registration statement under the Securities Act with respect to any of the foregoing or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the common stock, whether any such swap or transaction described in clause (i) or (ii) above is to be settled by delivery of common stock or such other securities, in cash or otherwise. The foregoing sentence shall not apply to (A) the common stock to be sold in this offering, (B) any shares of common stock issued by us upon the exercise of an option or warrant or the conversion of a security outstanding on the date of this prospectus supplement and referred to in the prospectus supplement, the accompany prospectus or the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, (C) any shares of common stock issued and options to purchase common stock or other equity incentive awards granted pursuant to existing employee benefit, equity incentive or employee stock purchase plans of us referred to in the prospectus supplement, the accompany prospectus or the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, (D) the filing of any registration statement on Form S-8 or any successor form thereto with respect to the registration of securities to be offered under any plan referred to in clause (C) above, or (E) any shares of common stock issued pursuant to any non-employee director stock plan or dividend reinvestment plan referred to in the prospectus supplement, the accompany prospectus or the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.

Our executive officers and our directors have entered into lock-up agreements with the underwriters prior to the commencement of this prospectus supplement to which each of these persons, with limited exceptions, for a period of 90 days after the date of this prospectus supplement, may not, without the prior written consent of BofA Securities, Inc. (i) directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of common stock or any securities convertible into or exchangeable or exercisable for common stock with respect to which such executive officers or directors owns or hereafter acquires or with respect to which such executive officers or directors has or hereafter acquires the power of disposition ("lock-up securities"), (ii) enter into any swap or other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequences of ownership of the lock-up securities, whether any such swap or transaction is to be settled by delivery of common stock or such other securities, in cash or otherwise.

Notwithstanding the foregoing, and subject to the conditions below, our executive officers and our directors may transfer the lock-up securities without the prior written consent of the BofA Securities, Inc., provided that (1) the BofA Securities, Inc. receives a signed lock-up agreement for the balance of the lockup period from each donee, trustee, distributee, or transferee, as the case may be, (2) any such transfer shall not involve a disposition for value, (3) such transfers are not required to be reported with the SEC on Form 4 in accordance with Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and

(4) our executive officers and our directors do not otherwise voluntarily effect any public filing or report regarding such transfers:

- as a bona fide gift or gifts;
- to any trust for the direct or indirect benefit of the transferor or the immediate family of the transferor (for purposes of this lock-up agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin);
- as a distribution to limited partners or stockholders of the transferor;
- by will or intestate succession upon the death of the transferor; or
- to the transferor's affiliates or to any investment fund or other entity controlled or managed by the transferor.

Furthermore, our executive officers and our directors may sell shares of common stock purchased by such person on the open market following this offering if and only if (i) such sales are not required to be reported in any public report or filing with the SEC, or otherwise and (ii) such person does not otherwise voluntarily effect any public filing or report regarding such sales.

Further, the foregoing restrictions shall not apply to (i) the exercise of stock options to purchase shares of common stock or the vesting and settlement of restricted stock units granted under any equity incentive plan or share purchase plan of the Company described in this prospectus, and the receipt by such executive officer or director from the Company shares of common stock upon such exercise or vesting and settlement insofar as such stock option or restricted stock unit is outstanding as of the date of this prospectus, or (ii) any related transfer of shares of common stock to the Company in connection with the exercise or vesting and settlement of such stock options or restricted stock units, including those (x) deemed to occur upon the "cashless" or "net" exercise or settlement of such stock options or restricted stock units and (y) for the purpose of paying the exercise price of such stock options or for paying taxes due as a result of the exercise of such stock options, the receipt of shares of common stock upon such exercise or as a result of the vesting and settlement of such shares of common Stock; provided, that any shares of common stock received or retained by the undersigned upon such exercise or vesting and settlement shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement, and provided, further, that, if required, any public report or filing under Section 16 of the Exchange Act shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this paragraph and that shares of common stock received or retained up such exercise of the stock option are subject to the lock-up agreement with the underwriters of this offering.

Nasdaq Capital Market Listing

The shares of common stock are listed on the Nasdaq Capital Market under the symbol "CPRX."

Price Stabilization, Short Positions

Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not

greater than the underwriters' option to purchase additional shares described above. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option granted to them. "Naked" short sales are sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the completion of the offering.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on The Nasdaq Global Select Market, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Passive Market Making

In connection with this offering, underwriters and selling group members may engage in passive market making transactions in the common stock on The Nasdaq Global Select Market in accordance with Rule 103 of Regulation M under the Exchange Act during a period before the commencement of offers or sales of common stock and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of those transactions. The underwriters and dealers are not required to engage in passive market making and may end passive market making activities at any time.

Electronic Distribution

In connection with this offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

Other Relationships

Some of the underwriters and their respective affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions. In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area (each a "Relevant State"), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(i) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(ii) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the Global Coordinator for any such offer; or

(iii) in any other circumstances falling within Article 1(4) of the Prospectus Regulation.

provided that no such offer of shares shall require the Issuer or any representative to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

Each person in a Relevant State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the Company and the representatives that it is a qualified investor within the meaning of the Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 5(1) of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in a Relevant State to qualified investors, in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

The above selling restriction is in addition to any other selling restrictions set out below.

In connection with the offering, the underwriters are not acting for anyone other than the issuer and will not be responsible to anyone other than the issuer for providing the protections afforded to their clients nor for providing advice in relation to the offering.

Notice to Prospective Investors in the United Kingdom

No shares have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the shares which has been approved by the

Financial Conduct Authority, except that offers of shares may be made to the public in the United Kingdom at any time under the following exemptions under the U.K. Prospectus Regulation:

(i) to any legal entity which is a qualified investor as defined under Article 2 of the U.K. Prospectus Regulation;

(ii) to fewer than 150 natural or legal persons (other than qualified investors as defined under the U.K. Prospectus Regulation), subject to obtaining the prior consent of the representative for any such offer; or

(iii) in any other circumstances falling within Section 86 of the Financial Services Markets Act 2000 (as amended, the "FSMA");

provided that no such offer of shares shall require us or any representative to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the U.K. Prospectus Regulation.

Each person in the United Kingdom who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with us and the representative that it is a qualified investor within the meaning of Article 2 of the U.K. Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 1(4) of the U.K. Prospectus Regulation, each financial intermediary will also be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offering have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public, other than their offer or resale in the United Kingdom to qualified investors as so defined or in circumstances in which the prior consent of the representative has been obtained to each such proposed offer or resale.

For the purposes of this provision: the expression an "offer to the public" in relation to any shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares; and the expression "U.K. Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

Notice to Prospective Investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus supplement relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus supplement is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for the prospectus supplement. The shares to which this prospectus supplement relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus supplement you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This prospectus supplement does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus supplement contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus supplement is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (i) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

Neither this prospectus supplement nor the accompanying prospectus have been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, the shares were not offered or sold or caused to be made the subject of an invitation for subscription or purchase and will not be offered or sold or caused to be made the subject of an invitation for subscription or purchase, and this prospectus supplement, the accompanying prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, has not been circulated or distributed, nor will it be circulated or distributed, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the "SFA")) pursuant to Section 274 of the SFA; (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(i) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(ii) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;

(c) where the transfer is by operation of law;

(d) as specified in Section 276(7) of the SFA; or

(e) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018 of Singapore.

Notice to Prospective Investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

MATERIAL U.S. FEDERAL TAX CONSIDERATIONS FOR HOLDERS OF OUR COMMON STOCK

The following discussion describes the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering. This discussion is based on the current provisions of the Internal Revenue Code of 1986, as amended, or the Code, existing and proposed U.S. Treasury regulations promulgated thereunder, and administrative rulings and court decisions in effect as of the date of this prospectus supplement, all of which are subject to change or to differing interpretation at any time, possibly with retroactive effect. Any change or differing interpretation could alter the tax consequences to holders described in this prospectus supplement. No ruling has been or will be sought from the Internal Revenue Service, or the IRS, with respect to the matters discussed below, and there can be no assurance the IRS will not take a contrary position regarding the tax consequences of the acquisition, ownership or disposition of our common stock, or that any such contrary position would not be sustained by a court.

We assume in this discussion that the shares of our common stock will be held as capital assets (generally, property held for investment). This discussion does not address all aspects of U.S. federal income taxes, does not discuss the potential application of the Medicare contribution tax on net investment income or the alternative minimum tax and does not address state or local taxes, U.S. federal gift and estate tax laws, except as specifically provided below with respect to non-U.S. holders, or any non-U.S. tax consequences that may be relevant to holders in light of their particular circumstances. This discussion also does not address the special tax rules applicable to particular holders, such as:

- financial institutions;
- brokers or dealers in securities;
- tax-exempt organizations;
- pension plans;
- owners that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment;
- insurance companies;
- controlled foreign corporations;
- passive foreign investment companies; and
- certain U.S. expatriates.

In addition, this discussion does not address the tax treatment of partnerships or other entities that are pass-through entities for U.S. federal income tax purposes or persons who hold their shares of our common stock through partnerships or such other pass-through entities. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her or its own tax advisor regarding the tax consequences of the ownership and disposition of our common stock through a partnership or other pass-through entity, as applicable.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT, AND IS NOT INTENDED TO BE, LEGAL OR TAX ADVICE. PROSPECTIVE INVESTORS SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE U.S. FEDERAL, STATE, LOCAL,

AND NON-U.S. INCOME, ESTATE AND OTHER TAX CONSIDERATIONS OF ACQUIRING, HOLDING AND DISPOSING OF OUR COMMON STOCK.

For purposes of this discussion, a "U.S. holder" means a beneficial owner (other than a partnership or other pass-through entity) of our common stock that is, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation, or other entity treated as a corporation for U.S. federal income tax purposes, created or organized in or under the laws of the United States, any state thereof, or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if (1) a U.S. court is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have authority to control all substantial decisions of the trust or (2) the trust has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

A "non-U.S. holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is not a U.S. holder or a partnership for U.S. federal income tax purposes.

Tax Considerations Applicable to U.S. Holders

Distributions

In the event that we make distributions on our common stock to a U.S. holder, those distributions generally will constitute dividends for U.S. federal income tax purposes to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces, but not below zero, a U.S. holder's adjusted tax basis in our common stock. Any remaining excess will be treated as gain realized on the sale or exchange of our common stock as described below under the section titled "— Disposition of our Common Stock".

Disposition of our Common Stock

Upon a sale or other taxable disposition of our common stock, a U.S. holder generally will recognize capital gain or loss in an amount equal to the difference between the amount realized and the U.S. holder's adjusted tax basis in the common stock. Capital gain or loss will constitute long-term capital gain or loss if the U.S. holder's holding period for the common stock exceeds one year. The deductibility of capital losses is subject to certain limitations. U.S. holders who recognize losses with respect to a disposition of our common stock should consult their own tax advisors regarding the tax treatment of such losses.

Information Reporting and Backup Withholding

Information reporting requirements generally will apply to payments of dividends on the common stock and to the proceeds of a sale or other disposition of common stock paid by us to a U.S. holder unless such U.S. holder is an exempt recipient, such as a corporation. Backup withholding will apply to those payments if the U.S. holder fails to provide the holder's taxpayer identification number, or certification of exempt status, or if the holder otherwise fails to comply with applicable requirements to establish an exemption. Backup withholding is not an additional tax. Rather, any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against the U.S. holder's U.S. federal income tax liability provided the required information is timely furnished to the IRS.

Tax Considerations Applicable to Non-U.S. Holders

Distributions

In the event that we make distributions on our common stock to a non-U.S. holder, those distributions generally will be treated in the manner described in "Tax Considerations Applicable to U.S. Holders — Distributions".

Any distribution on our common stock that is treated as a dividend paid to a non-U.S. holder that is not effectively connected with the holder's conduct of a trade or business in the United States will generally be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and the non-U.S. holder's country of residence. To obtain a reduced rate of withholding under a treaty, a non-U.S. holder generally will be required to provide the applicable withholding agent with a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E or other appropriate form, certifying the non-U.S. holder's entitlement to benefits under that treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim with the IRS. Non-U.S. holders are urged to consult with their own tax advisors regarding their entitlement to benefits under a relevant income tax treaty and the specific methods available to them to satisfy these requirements.

We generally are not required to withhold tax on dividends paid to a non-U.S. holder that are effectively connected with the holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base that the holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us or the applicable withholding agent. In general, such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular rates applicable to U.S. persons. A corporate non-U.S. holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate non-U.S. holder's effectively connected earnings and profits, subject to certain adjustments.

See also the sections below titled "— Information Reporting and Backup Withholding" and "—FATCA" for additional withholding rules applicable to non-U.S. holders.

Disposition of our Common Stock

Subject to the discussions below under the headings "—Information Reporting and Backup Withholding" and "—FATCA," a non-U.S. holder generally will not be subject to U.S. federal income or withholding tax on any gain realized upon such non-U.S. holder's sale, exchange or other disposition of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States, and, if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States; in these cases, the non-U.S. holder generally will be taxed on a net income basis at the rates and in the manner applicable to U.S. persons (as defined in the Code), and, if the non-U.S. holder is a non-U.S. corporation, the branch profits tax described above under the heading "Tax Considerations Applicable to Non-U.S. Holders—Distributions" may also apply;

- the non-U.S. holder is a non-resident alien present in the United States for 183 days or more in the taxable year of the disposition and certain other requirements are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income

tax treaty between the United States and such holder's country of residence) on the net gain derived from the disposition, which may be offset by certain U.S.-source capital losses of the non-U.S. holder, if any, provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or

- we are or have been, at any time during the five-year period preceding such disposition (or the non-U.S. holder's holding period of the common stock, if shorter) a "U.S. real property holding corporation" unless our common stock is regularly traded on an established securities market and the non-U.S. holder held no more than 5% of our outstanding common stock, directly or indirectly, during the shorter of the five-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. If we are determined to be a U.S. real property holding corporation and the foregoing exception does not apply, then the non-U.S. holder generally will be taxed on its net gain derived from the disposition at the U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Generally, a corporation is a "U.S. real property holding corporation" if the fair market value of its "U.S. real property interests" (as defined in the Code and applicable regulations) equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we believe that we are not currently, and we do not anticipate becoming, a "U.S. real property holding corporation" for U.S. federal income tax purposes. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rule described above.

See the sections titled "— Information Reporting and Backup Withholding" and "— FATCA" below for additional information regarding withholding rules that may apply to proceeds of a disposition of our common stock paid to non-U.S. holders.

U.S. Federal Estate Tax

Shares of our common stock that are owned or treated as owned by an individual who is a non-U.S. holder (as specially defined for U.S. federal estate tax purposes) at the time of death will be included in the individual's gross estate for U.S. federal estate tax purposes and, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax or other treaty provides otherwise.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. holders generally will have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Generally, a non-U.S. holder will comply with such procedures if it provides a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable Form W-8), or otherwise meets documentary evidence requirements for establishing that it is a non-U.S. holder, or otherwise establishes an exemption. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above under the heading "Tax Considerations Applicable to Non-U.S. Holders—Distributions," will generally be exempt from U.S. backup withholding.

Information reporting and backup withholding generally will apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or non-U.S., unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a

broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder's U.S. federal income tax liability, if any, provided that an appropriate claim is timely filed with the IRS.

FATCA

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, generally impose a 30% withholding tax on dividends on, and (subject to the proposed U.S. Treasury regulations discussed below) gross proceeds from the sale or other disposition of, our common stock if paid to a non-U.S. entity unless (1) if the non-U.S. entity is a "foreign financial institution," the non-U.S. entity undertakes certain due diligence, reporting, withholding, and certification obligations, (2) if the non-U.S. entity is not a "foreign financial institution," the non-U.S. entity identifies certain of its U.S. investors, if any, or (3) the non-U.S. entity is otherwise excepted under FATCA.

Withholding under FATCA generally applies to payments of dividends on our common stock. While withholding under FATCA would have applied also to payments of gross proceeds from a sale or other disposition of our common stock, under proposed U.S. Treasury regulations, withholding on payments of gross proceeds is not required. Although such regulations are not final, applicable withholding agents may rely on the proposed regulations until final regulations are issued.

If withholding under FATCA is required on any payment related to our common stock, investors not otherwise subject to withholding (or that otherwise would be entitled to a reduced rate of withholding) on such payment may be required to seek a refund or credit from the IRS. An intergovernmental agreement between the United States and an applicable non-U.S. country may modify the requirements described in this section. Non-U.S. holders should consult their own tax advisors regarding the possible implications of FATCA on their investment in our common stock.

The preceding discussion of material U.S. federal tax considerations is for informational purposes only. It is not legal or tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local, and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed changes in applicable laws.

LEGAL MATTERS

The validity of the shares of common stock that we are offering hereby will be passed upon by Akerman LLP, Fort Lauderdale, Florida. Certain legal matters in connection with this offering will be passed upon on behalf of the underwriters by Latham & Watkins LLP.

EXPERTS

The audited financial statements incorporated by reference in this prospectus supplement and the accompanying prospectus have been so incorporated by reference in reliance upon the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing in giving said report, which is also incorporated by reference in this prospectus supplement and the accompanying prospectus.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the SEC's website at https://www.sec.gov. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at (800) SEC–0330 for further information on the operating rules and procedures for the public reference room. Our SEC filings are also available free of charge at our website, https://ir.catalystpharma.com.

This prospectus supplement and the accompanying prospectus do not contain all of the information included in the registration statement. We have omitted certain parts of the registration statement in accordance with the rules and regulations of the SEC. For further information, we refer you to the registration statement, including its exhibits and schedules. Statements contained in this prospectus supplement and the accompanying prospectus about the provisions or contents of any contract, agreement or any other document referred to are not necessarily complete. Please refer to the actual exhibit for a more complete description of the matters involved.

INCORPORATION OF INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring you to those documents. Information incorporated by reference is part of this prospectus supplement and the accompanying prospectus. Later information filed with the SEC will update and supersede this information.

We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement until the termination of the offering of the shares covered by this prospectus supplement (other than any information furnished under Item 2.02 or Item 7.01 of any current report on Form 8-K and exhibits filed on such form that are related to such items):

a. The Company's Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on March 15, 2023, and the amendment thereto, filed with the SEC on April 24, 2023.

b. The Company's Quarterly Reports on Form 10-Q (i) for the quarter ended March 31, 2023, filed with the SEC on May 10, 2023; (ii) for the quarter ended June 30, 2023, filed with the SEC on August 9, 2023; and (iii) for the quarter ended September 30, 2023, filed with the SEC on November 8, 2023.

c. The Company's Proxy Statement for its Annual Stockholders' meeting held on August 22, 2023, filed with the SEC on July 12, 2023.

d. The Company's Current Reports on Form 8-K filed with the SEC on January 23, 2023, January 24, 2023, January 30, 2023 (as amended on April 10, 2023), February 7, 2023, March 7, 2023, March 15, 2023, March 31, 2023, May 9, 2023, May 10, 2023, May 30, 2023, June 1, 2023, June 23, 2023, July 21, 2023, July 28, 2023, August 9, 2023 August 25, 2023, October 13, 2023, October 20, 2023, October 27, 2023, November 3, 2023, November 8, 2023, December 7, 2023, and December 19, 2023.

e. The description of the Common Shares filed with the SEC on Form 8-A12B on September 29, 2006, as amended on October 18, 2006.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits which are specifically incorporated by reference into such documents. You should direct any requests for documents Catalyst Pharmaceuticals, Inc., 355 Alhambra Circle, Suite 801, Coral Gables, Florida, 33134, Attn: Investor Relations, or by calling (305) 420-3200.

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus.

In accordance with Rule 412 of the Securities Act, any statement contained in a document incorporated by reference herein shall be deemed modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement.

We maintain an internet site at https://ir.catalystpharma.com. Our website and the information contained on or connected to it shall not be deemed to be incorporated into this prospectus supplement or the registration statement of which it forms a part.

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PROSPECTUS

$500,000,000

COMMON STOCK
PREFERRED STOCK
WARRANTS TO PURCHASE COMMON STOCK
DEBT SECURITIES
UNITS

We may from time to time, in one or more offerings, offer and sell shares of our common stock, shares of our preferred stock, warrants to purchase shares of our common stock, debt securities, and units that may consist of one or more of such securities. The securities we may offer may be convertible into or exercisable or exchangeable for other securities.

This prospectus describes some of the general terms that may apply to these securities. This prospectus may not be used to sell securities unless accompanied by a prospectus supplement, which will describe the method and terms of the offering. We will provide you with the specific amount, price and terms of the applicable offered securities in one or more supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with any such offerings. You should carefully read this prospectus, any applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference, before you purchase any of our securities being offered.

Our common stock is listed on the Nasdaq Capital Market under the symbol “CPRX”. On September 7, 2023, the closing price of our common stock on the Nasdaq Capital Market was $12.92 per share.

We may offer and list the securities in amounts, at prices and on terms determined at the time of an offering. We may sell the securities directly to you, through agents we select, or through underwriters and dealers we select. If we use agents, underwriters or dealers to sell the securities, we will name them and describe their compensation in a prospectus supplement. In addition, the underwriters may overallot a portion of the securities. For additional information regarding the methods of sale of these securities, you should refer to the section entitled “Plan of Distribution” in this prospectus.

Investing in our securities involves risk. Please carefully review the information under “Risk Factors” beginning on page 4 of this prospectus as well as any risks and uncertainties contained in an applicable prospectus supplement and any free writing prospectus, and in any other documents that are incorporated by reference into this prospectus or into the applicable prospectus supplement.

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

This prospectus is dated September 8, 2023

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, as a "well-known seasoned issuer" as defined in Rule 405 under the Securities Act of 1933, as amended (the "Securities Act"), using a "shelf" registration process. Under this shelf process, we may, from time to time, offer or sell any combination of the securities described in this prospectus in one or more offerings. Before purchasing any securities, you should read this prospectus and any applicable prospectus supplement together with the additional information described under the headings "Where You Can Find Additional Information" and "Information Incorporated by Reference."

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add to, update or change information contained in the prospectus or in the documents incorporated by reference in the prospectus. To the extent inconsistent, information in this prospectus is superseded by the information in the prospectus supplement.

The prospectus supplement may describe, as applicable: the terms of the securities offered, the public offering price, net proceeds, and any other specific terms related to the offering of the securities.

You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement or issuer free writing prospectus relating to a particular offering. No person has been authorized to give any information or make any representations in connection with this offering other than those contained or incorporated by reference in this prospectus, any accompanying prospectus supplement and any related free writing prospectus in connection with the offering described herein and therein, and, if given or made, such information or representations must not be relied upon as having been authorized by us. Neither this prospectus nor any prospectus supplement nor any related issuer free writing prospectus shall constitute an offer to sell or a solicitation of an offer to buy offered securities in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation. This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. You should read the entire prospectus and any prospectus supplement and any related issuer free writing prospectus, as well as the documents incorporated by reference into this prospectus or any prospectus supplement or any related issuer free writing prospectus, before making an investment decision. Neither the delivery of this prospectus or any prospectus supplement or any issuer free writing prospectus nor any sale made hereunder shall under any circumstances imply that the information contained or incorporated by reference herein or in any prospectus supplement or issuer free writing prospectus is correct as of any date subsequent to the date hereof or of such prospectus supplement or issuer free writing prospectus, as applicable.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus; it does not contain all of the information you should consider before investing. You should carefully read the entire prospectus, plus any prospectus supplement we may file in the future when we offer our securities under this prospectus, before making an investment decision.

This prospectus includes trademarks, service marks or trade names owned by us or other companies. All trademarks, service marks or trade names included in this prospectus are the property of their respective owners.

Throughout this prospectus, the terms "we", "us", "our" and "company" refer to Catalyst Pharmaceuticals, Inc.

OVERVIEW

We are a commercial-stage patient-centric biopharmaceutical company focused on in-licensing, developing and commercializing novel high-quality medicines for patients living with rare diseases and diseases that are difficult to treat. With exceptional patient focus, we are committed to developing a robust pipeline of cutting-edge, best-in-class medicines for treating rare and difficult to treat diseases. We are dedicated to making a meaningful impact on the lives of those suffering from rare and difficult to treat diseases, and we believe in putting patients first in everything we do.

Our flagship U.S. commercial product is FIRDAPSE® (amifampridine) Tablets 10 mg. approved for the treatment of Lambert-Eaton myasthenic syndrome, or LEMS, for adults and for children ages six and up. Further, on January 24, 2023, we closed our acquisition of FYCOMPA® and are now also marketing that product in the United States. FYCOMPA® (perampanel) CIII is a prescription medication used alone or with other medicines to treat focal onset seizures with or without secondarily generalized seizures in people with epilepsy aged four and older and with other medicines to treat primary generalized tonic-clonic seizures in people with epilepsy aged 12 and older. Finally, on July 18, 2023, we closed our acquisition of an exclusive license for North America for vamorolone, a promising best-in-class dissociative anti-inflammatory steroid treatment for patients suffering from Duchenne Muscular Dystrophy (DMD). Vamorolone has received FDA Orphan Drug and Fast Track designations and has been granted a Prescription Drug User Fee Act (PDUFA) action date of October 26, 2023. Assuming regulatory approval on the PDUFA date, we expect to launch vamorolone in the first quarter of 2024, of which there can be no assurance.

We also continue to advance our strategic initiatives and portfolio expansion efforts, focusing on broadening and diversifying our rare Neurology product portfolio with innovative therapies that address critical unmet medical needs and expanding the geographical footprint of our existing products. In that regard, we are currently exploring clinically differentiated and adequately de-risked opportunities, with a keen focus on products to treat rare neurological and epileptic diseases. These prospects include evaluating companies with existing commercial drug products or drugs in development, for potential partnerships, licensing, geographical expansion opportunities with our existing products, and/or asset acquisitions. We continue to employ a disciplined, comprehensive, and exhaustive approach to identifying and evaluating opportunities that we believe will add significant value to our company over the near, mid, and long term. However, no additional definitive agreements have been entered into to date, and there can be no assurance that these initiatives will be successful.

CORPORATE INFORMATION

Our principal executive office is located at 355 Alhambra Circle, Suite 801, Coral Gables, Florida and our telephone number is (305) 420-3200. Our corporate website address is *www.catalystpharma.com*. Our website

and the information contained or that can be assessed through, our website will not be deemed incorporated by reference is, and are not considered part of, this prospectus. You should not rely on such information in making your decision whether to purchase our securities.

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and current Reports on Form 8-K, and amendments to those reports filed on or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") are available, free of charge on or through our website as soon as reasonably practicable after such reports and amendments are electronically filed with or furnished to the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding our filings at *www.sec.gov*.

For additional information about our company, please refer to the other documents we have filed with the SEC and that are incorporated by reference into this prospectus, as listed under the heading "Incorporation of Information by Reference."

RISK FACTORS

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks and uncertainties described under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and discussed under the section titled "Risk Factors" contained in our most recent Annual Report on Form 10-K and in our most recent Quarterly Report on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the Commission, which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus, any applicable prospectus supplement, the documents incorporated by reference and any free writing prospectus that we may authorize for use in connection with this offering.

The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section below titled "Cautionary Statement Regarding Forward-Looking Statements."

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements in this Registration Statement on Form S-3 are "forward-looking statements", as that term is defined in the Private Securities Litigation Reform Act of 1995. These include statements regarding our expectations, beliefs, plans or objectives for future operations and anticipated results of operations. For this purpose, any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, "believes", "anticipates", "proposes", "plans", "expects", "intends", "may", and other similar expressions are intended to identify forward-looking statements. Such statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. The forward-looking statements made in this Registration Statement on Form S-3 are based on current expectations that involve numerous risks and uncertainties.

The continued successful commercialization of FIRDAPSE® and FYCOMPA® are highly uncertain. Factors that will affect our success include the uncertainty of:

- The impact of the COVID-19 pandemic, or any future pandemic, on our business or on the economy generally;
- Whether we will be able to continue to successfully market FIRDAPSE® and now successfully market FYCOMPA® while maintaining full compliance with applicable federal and state laws, rules and regulations;
- Whether our estimates of the size of the market for FIRDAPSE® for the treatment of LEMS will prove to be accurate;
- Whether we will be able to locate LEMS patients who are undiagnosed or are misdiagnosed with other diseases;
- Whether patients will discontinue from the use of FIRDAPSE® and FYCOMPA® at rates that are higher than historically experienced or are higher than we project;
- Whether the daily dose of FIRDAPSE® taken by patients changes over time and affects our results of operations;
- Whether new FIRDAPSE® patients and FYCOMPA® patients can be successfully titrated to stable therapy;
- Whether we can continue to market FIRDAPSE® and now market FYCOMPA® on a profitable and cash flow positive basis;
- Whether we can successfully integrate the team that we have hired to market FYCOMPA® into our current business structure;
- Whether the acquisition of FYCOMPA® will prove to be accretive to EBITDA and EPS in 2023;
- Whether any revenue or earnings guidance that we provide to the public market will turn out to be accurate;
- Whether payors will reimburse for our products at the price that we charge for our products;
- The ability of our third-party suppliers and contract manufacturers to maintain compliance with current Good Manufacturing Practices (cGMP);
- The ability of those third parties that distribute our products to maintain compliance with applicable law;
- Our ability to maintain compliance with applicable rules relating to our patient assistance programs for FIRDAPSE® and FYCOMPA®;

- Our ability to maintain compliance with the applicable rules that relate to our contributions to 501(c)(3) organizations that support LEMS patients;
- The scope of our intellectual property and the outcome of any challenges to our intellectual property, and, conversely, whether any third-party intellectual property presents unanticipated obstacles for FIRDAPSE® or FYCOMPA®;
- Our ability to obtain a favorable resolution of our dispute with the U.S. Patent Office on the term extension for one of our patents listed in the Orange Book for FYCOMPA®;
- Whether there will be a post-closing review by antitrust regulators of our previous acquisition transactions, and the outcome of any such reviews if they occur;
- Whether we will be able to acquire additional drug products under development, complete the research and development required to commercialize such products, and thereafter, if such products are approved for commercialization, successfully market such products;
- Whether our patents will be sufficient to prevent generic competition for FIRDAPSE® after our orphan drug exclusivity for FIRDAPSE® expires;
- Whether we will be successful in our litigation to enforce our patents against the Paragraph IV challengers who have filed relating to FIRDAPSE® or FYCOMPA®;
- The impact on our profits and cash flow of adverse changes in reimbursement and coverage policies from government and private payors such as Medicare, Medicaid, insurance companies, health maintenance organizations and other plan administrators, or the impact of pricing pressures enacted by industry organizations, the federal government or the government of any state, including as a result of increased scrutiny over pharmaceutical pricing or otherwise;
- Changes in the healthcare industry and the effect of political pressure from and actions by the President, Congress and/or medical professionals seeking to reduce prescription drug costs, and changes to the healthcare industry occasioned by any future changes in laws relating to the pricing of drug products, including changes made in the Inflation Reduction Act of 2022, or changes in the healthcare industry generally;
- Whether Santhera's NDA for vamorolone will be approved by the PDUFA date, or at all;
- Whether, if Santhera's NDA for vamorolone is approved, we will be able to successfully commercialize vamorolone in the territory;
- Whether our commercialization of vamorolone, if the drug is approved, will prove accretive to earnings;
- Whether we and Santhera can successfully develop additional indications for vamorolone and obtain the ability to commercialize the product for these additional indications;
- The state of the economy generally and its impact on our business;
- The potential impact of future healthcare reform in the United States, including the Inflation Reduction Act of 2022, and measures being taken worldwide designed to reduce healthcare costs and limit the overall level of government expenditures, including the impact of pricing actions and reduced reimbursement for our product;
- The scope, rate of progress and expense of our clinical trials and studies, pre-clinical studies, proof-of-concept studies, and our other drug development activities, and whether our trials and studies will be successful;
- Our ability to complete any clinical trials and studies that we may undertake on a timely basis and within the budgets we establish for such trials and studies;

- Whether FIRDAPSE® can be successfully commercialized in Canada on a profitable basis through KYE Pharmaceuticals, our collaboration partner in Canada;
- The impact on sales of FIRDAPSE® in the United States if an amifampridine product is purchased in Canada for use in the United States;
- Whether our collaboration partner in Japan, DyDo, will successfully complete the clinical trial in Japan that will be required to seek approval to commercialize FIRDAPSE® in Japan;
- Whether DyDo will be able to obtain approval to commercialize FIRDAPSE® in Japan; and
- Whether our version of vigabatrin tablets will ever be approved by the FDA and successfully marketed by Endo, whether we will earn milestone payments or royalties on sales of our version of generic vigabatrin tablets, and whether Endo's bankruptcy filing will impact these issues.

Our current plans and objectives are based on assumptions relating to the continued commercialization of FIRDAPSE® and FYCOMPA®, the potential commercialization of vamorolone and on our plans to seek to acquire or in-license additional products. Although we believe that our assumptions are reasonable, any of our assumptions could prove inaccurate. Considering the significant uncertainties inherent in the forward-looking statements we have made herein, which reflect our views only as of the date of this report, you should not place undue reliance upon such statements. We undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

Except as may otherwise be provided in a prospectus supplement, we will use the net proceeds from sales of securities to fund future product acquisitions, to fund non-clinical studies and clinical studies with respect to any of our product candidates, for manufacturing and marketing purposes for any product candidate which we may commercialize, and for general working capital purposes. When particular securities are offered, the prospectus supplement relating to that offering will set forth our intended use of the net proceeds received from the sale of those securities.

Pending the application of the net proceeds for these purposes, we expect to invest the proceeds in short-term, interest-bearing instruments or other investment-grade securities.

DILUTION

Information on the potential dilutive effects of any offering of common stock we may make under this prospectus will be set forth in the relevant prospectus supplement for such offering.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, direct sales to the public, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities from time to time in one or more transactions:

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

A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of the underwriters, if any;
- the purchase price of the securities or other consideration therefor, and the proceeds, if any, we will receive from the sale;
- any options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
- any public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement will be underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement, other than securities covered by any option to purchase additional securities from us. Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities, including liabilities under the Securities Act of 1933 ("Securities Act"), or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we may offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or in the open market after the distribution is completed, to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Any underwriters or agents that are qualified market makers on the Nasdaq Capital Market may engage in passive market making transactions in the common stock on the Nasdaq Capital Market in accordance with Regulation M under the Exchange Act, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the common stock. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

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

GENERAL DESCRIPTION OF OUR CAPITAL STOCK

Our authorized capital currently consists of 200,000,000 shares of common stock, par value $0.001 per share, and 5,000,000 shares of preferred stock, par value $0.001 per share. As of the date of this prospectus, we had 106,592,507 shares of our common stock outstanding. There are no shares of preferred stock outstanding.

Common Stock

The following summary of the material features of our common stock does not purport to be complete and is subject to, and qualified in its entirety by the provisions of our Certificate of Incorporation, our Bylaws and other applicable law. See "Where You Can Find Additional Information."

Each holder of common stock is entitled to one vote for each share held of record on all matters presented to our stockholders, including the election of directors. In the event of our liquidation, dissolution, or winding-up, the holders of common stock are entitled to share ratably and equally in our assets, if any, that remain after paying all debts and liabilities and the liquidation preferences of any outstanding preferred stock. The common stock has no preemptive or cumulative rights and no redemption or conversion provisions.

Holders of our common stock are entitled to receive dividends if, as, and when declared by our board of directors out of funds legally available therefor, subject to the dividend and liquidation rights of any preferred stock that may be issued and outstanding, all subject to any dividend restrictions in our credit facilities. No dividend or other distribution (including redemptions and repurchases of shares of capital stock) may be made, if after giving effect to such distribution, we would not be able to pay our debts as they come due in the usual course of business, or if our total assets would be less than the sum of our total liabilities plus the amount that would be needed at the time of a liquidation to satisfy the preferential rights of any holders of preferred stock.

Preferred Stock

Our Certificate of Incorporation, as amended, authorizes our board of directors to establish one or more series of preferred stock. Unless required by law or by any stock exchange on which our common stock is listed, the authorized shares of preferred stock will be available for issuance at the discretion of our board of directors without further action by our stockholders. Our board of directors is able to determine, with respect to any series of preferred stock, the terms and rights of that series, including:

- the designation of the series;
- the number of shares of the series;
- whether dividends, if any, will be cumulative or non-cumulative and the dividend rate, if any, of the series;
- the dates at which dividends, if any, will be payable;
- the redemption rights and price or prices, if any, for shares of the series;
- the terms and amounts of any sinking fund provided for the purchase or redemption of shares of the series;
- the amounts payable on shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the affairs of our company;
- whether the shares of the series will be convertible into shares of any other class or series, or any other security, of our company or any other entity, and, if so, the specification of the other class or series or other security, the conversion price or prices or rate or rates and provisions for any adjustments to such prices or rates, the date or dates as of which the shares will be convertible, and all other terms and conditions upon which the conversion may be made;

- the ranking of such series with respect to dividends and amounts payable on our liquidation, dissolution or winding-up, which may include provisions that such series will rank senior to our common stock with respect to dividends and those distributions;
- restrictions on the issuance of shares of the same series or any other class or series; or
- voting rights, if any, of the holders of the series.

The issuance of preferred stock could adversely affect, among other things, the voting power of holders of common stock and the likelihood that stockholders will receive dividend payments and payments upon our liquidation, dissolution or winding up. The issuance of preferred stock could also have the effect of delaying, deferring or preventing a change in control of us.

A prospectus supplement relating to any series of preferred stock being offered will include specific terms related to the offering. They will include, where applicable:

- the title and stated value of the series of preferred stock and the number of shares constituting that series;
- the number of shares of the series of preferred stock offered, the liquidation preference per share and the offering price of the shares of preferred stock;
- the dividend rate(s), period(s) and/or payment date(s) or the method(s) of calculation for those values relating to the shares of preferred stock of the series;
- the date from which dividends on shares of preferred stock of the series shall cumulate, if applicable;
- our right, if any, to defer payment of dividends and the maximum length of any such deferral period;
- the procedures for any auction and remarketing, if any, for shares of preferred stock of the series;
- the provision for redemption or repurchase, if applicable, of shares of preferred stock of the series;
- any listing of the series of shares of preferred stock on any securities exchange;
- the terms and conditions, if applicable, upon which shares of preferred stock of the series will be convertible into shares of preferred stock of another series or common stock, including the conversion price, or manner of calculating the conversion price;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange period, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted;
- voting rights, if any, of the preferred stock;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in shares of preferred stock of the series will be represented by global securities;
- any other specific terms, preferences, rights, limitations or restrictions of the series of shares of preferred stock;
- a discussion of any material United States federal income tax consequences of owning or disposing of the shares of preferred stock of the series;
- the relative ranking and preferences of shares of preferred stock of the series as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
- any limitations on issuance of any series of shares of preferred stock ranking senior to or on a parity with the series of shares of preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs.

If we issue shares of preferred stock under this prospectus, the shares will be fully paid and nonassessable and will not have, or be subject to, any preemptive or similar rights.

Provisions of the Certificate and Bylaws

A number of provisions of our certificate of incorporation and bylaws concern matters of corporate governance and the rights of stockholders. Certain of these provisions, as well as the ability of our board of directors to issue shares of preferred stock and to set the voting rights, preferences and other terms thereof, may be deemed to have an anti-takeover effect and may discourage takeover attempts not first approved by the board of directors (including takeovers which certain stockholders may deem to be in their best interests). To the extent takeover attempts are discouraged, temporary fluctuations in the market price of the common stock, which may result from actual or rumored takeover attempts, may be inhibited. These provisions, together with the ability of the board to issue preferred stock without further stockholder action, also could delay or frustrate the removal of incumbent directors or the assumption of control by stockholders, even if such removal or assumption would be beneficial to our stockholders. These provisions also could discourage or make more difficult a merger, tender offer or proxy contests, even if they could be favorable to the interests of stockholders, and could potentially depress the market price of the common stock. The board of directors believes that these provisions are appropriate to protect our interest and the interests of our stockholders.

Meetings of Stockholders. The bylaws provide that a special meeting of stockholders may be called only by the board of directors unless otherwise required by law. The bylaws provide that only those matters set forth in the notice of the special meeting may be considered or acted upon at that special meeting, unless otherwise provided by law. In addition, the bylaws set forth certain advance notice and informational requirements and time limitations on any director nomination or any new business which a stockholder wishes to propose for consideration at an annual meeting of stockholders.

No Stockholder Action by Written Consent. The certificate provides that any action required or permitted to be taken by our stockholders at an annual or special meeting of stockholders must be effected at a duly called meeting and may not be taken or effected by a written consent of stockholders in lieu thereof.

Amendment of the Certificate. The certificate provides that an amendment thereof must first be approved by a majority of the board of directors and (with certain exceptions) thereafter approved by the holders of a majority of the total votes eligible to be cast by holders of voting stock with respect to such amendment or repeal; provided, however, that the affirmative vote of 80% of the total votes eligible to be cast by holders of voting stock, voting together as a single class, is required to amend provisions relating to the establishment of the board of directors and amendments to the certificate.

Amendments of Bylaws. The certificate provides that the board of directors or the stockholders may amend or repeal the bylaws. Such action by the board of directors requires the affirmative vote of a majority of the directors then in office. Such action by the stockholders requires the affirmative vote of the holders of at least two-thirds of the total votes eligible to be cast by holders of voting stock with respect to such amendment or repeal at an annual meeting of stockholders or a special meeting called for such purposes, unless the board of directors recommends that the stockholders approve such amendment or repeal at such meeting, in which case such amendment or repeal shall only require the affirmative vote of a majority of the total votes eligible to be cast by holders of voting stock with respect to such amendment or repeal.

Certain Anti-Takeover Matters

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, regulating corporate takeovers. In general, these provisions prohibit a Delaware corporation from engaging in any business

combination with any interested stockholders for a period of three years following the date that the stockholder became an interested stockholder, unless:

- either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder is approved by our board of directors before the date the interested stockholder attained that status;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after that date, the business combination is approved by our board of directors and authorized at a meeting of stockholders, and not by written consent, by at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines "business combination" to include the following:

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

In general, Section 203 of the DGCL defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by any of these entities or persons.

A Delaware corporation may opt out of this provision either with an express provision in its original certificate of incorporation or in an amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out of this provision. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us.

Limitation of Liability and Indemnification Matters

Our certificate of incorporation limits the liability for monetary damages for breach of fiduciary duty by members of our Board of Directors, except for liability that cannot be eliminated under Delaware law. Under Delaware law, our directors have a fiduciary duty to us which is not eliminated by this provision in our certificate of incorporation. In addition, each of our directors is subject to liability under Delaware law for breach of their duty of loyalty for acts or omissions which are found by a court of competent jurisdiction to be not in good faith or which involve intentional misconduct or knowing violations of law for actions leading to improper personal benefit to the director and for payments of dividends or approval of stock repurchases or redemptions that are prohibited by Delaware law. This provision does not affect our directors' responsibilities under any other laws, such as federal securities laws.

Delaware law provides that the directors of a company will not be personally liable for monetary damages for breach of their fiduciary duty as directors, except for liability for any of the following:

- any breach of a director's duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Delaware law provides that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which our directors and officers may be entitled to under our bylaws, any agreement, a vote of stockholders or otherwise. Our certificate of incorporation and bylaws eliminate the personal liability of directors to the maximum extent permitted by Delaware law. In addition, our certificate of incorporation and bylaws provide that we may fully indemnify any person who is or was a party to or is threatened to be made a party to any threatened, pending or completed action, suit of proceeding (whether civil, criminal, administrative or investigative) by reason of the fact that such person is or was one of our directors, officers, employees or other agents, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding.

Listing

Our common stock is listed on the Nasdaq Capital Market and trades under the symbol "CPRX".

Transfer Agent and Registrar

Our transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company. They are located at One State Street Plaza, 30th Floor, New York, New York 10004. They can be reached via telephone at (212) 509-4000.

DESCRIPTION OF DEBT SECURITIES

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

When describing any debt securities, references to "issuer" refers to Catalyst Pharmaceuticals, Inc.

We have filed as an exhibit to the registration statement, of which this prospectus is a part, the form of indenture pursuant to which the debt securities will be issued and will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of debt security that describes the terms of the particular debt securities we are offering before the issuance of the related debt securities. We may issue debt securities from time to time in one or more distinct series. The debt securities may be senior debt securities or subordinated debt securities. Senior debt securities may be issued under a senior indenture and subordinated debt securities may be issued under a subordinated indenture. If we issue debt securities pursuant to an indenture, we will specify the trustee under such indenture in the applicable prospectus supplement. We will include in a supplement to this prospectus the specific terms of debt securities being offered, including the terms, if any, on which debt securities may be convertible into or exchangeable for common stock or other debt securities. The statements and descriptions in this prospectus or in any prospectus supplement regarding provisions of debt securities and any indentures are summaries of those provisions, do not purport to be complete and are subject to, and are qualified in their entirety by reference to, all of the provisions of the debt securities and the indentures (including any amendments or supplements we may enter into from time to time which are permitted under the debt securities or any indenture).

Unless otherwise specified in a prospectus supplement, the debt securities will be our direct unsecured obligations. Any debt securities designated as senior will rank equally with any of our other senior and unsubordinated debt. Any debt securities designated as subordinated will be subordinate and junior in right of payment to any senior indebtedness. There may be subordinated debt securities that are senior or junior to other series of subordinated debt securities.

The payment obligations of the issuer under any series of debt securities may be guaranteed by one or more of our direct or indirect subsidiaries (if in the future we have any subsidiaries). If a series of debt securities is so guaranteed, the guarantors will execute the applicable indenture, a supplemental indenture or a notation of guarantee as further evidence of their guarantee. The applicable prospectus supplement will describe the terms of any guarantee.

The obligations of each guarantor under its guarantee may be limited to the maximum amount that will not result in such guarantee obligations constituting a fraudulent conveyance or fraudulent transfer under federal or state law, after giving effect to all other contingent and fixed liabilities of that subsidiary and any collections from or payments made by or on behalf of any other guarantor in respect to its obligations under its guarantee.

The applicable prospectus supplement will set forth the terms of the debt securities or any series thereof, including, if applicable:

- the title of the debt securities and whether the debt securities will be senior debt securities or subordinated debt securities;
- any limit upon the aggregate principal amount of the debt securities;
- the date or dates on which the principal amount of the debt securities will mature;

- if the debt securities bear interest, the rate or rates at which the debt securities bear interest, or the method for determining the interest rate, and the date or dates from which interest will accrue;
- if the debt securities bear interest, the dates on which interest will be payable, or the method for determining such dates, and the regular record dates for interest payments;
- any optional redemption provisions, which would allow us to redeem the debt securities in whole or in part;
- any sinking fund or other provisions that would obligate us to redeem, repay or purchase the debt securities;
- the denominations in which any registered securities will be issuable, if other than denominations of $1,000 and any integral multiple thereof;
- if other than the entire principal amount, the portion of the principal amount of debt securities which will be payable upon a declaration of acceleration of the maturity of the debt securities;
- the events of default and covenants relevant to the debt securities, including, the inapplicability of any event of default or covenant set forth in the indenture relating to the debt securities, or the applicability of any other events of defaults or covenants in addition to the events of default or covenants set forth in the indenture relating to the debt securities;
- the name and location of the corporate trust office of the applicable trustee under the indenture for such debt securities;
- if the debt securities are to be payable, at our election or the election of a holder of the debt securities, in a currency other than that in which the debt securities are denominated or stated to be payable, the terms and conditions upon which that election may be made, and the time and manner of determining the exchange rate between the currency in which the debt securities are denominated or stated to be payable and the currency in which the debt securities are to be so payable;
- if the debt securities are issuable as indexed securities, the manner in which the amount of payments of principal, any premium and interest will be determined;
- if the debt securities do not bear interest, the dates on which we will furnish to the applicable trustee the names and addresses of the holders of the debt securities;
- any provisions for the satisfaction and discharge or defeasance or covenant defeasance of the indenture under which the debt securities are issued;
- the date as of which any bearer securities and any global security will be dated if other than the date of original issuance of the first debt security of a particular series to be issued;
- whether and under what circumstances we will pay additional amounts to non–United States holders in respect of any tax assessment or government charge;
- whether the debt securities will be issued in whole or in part in the form of a global security or securities and, in that case, any depositary and global exchange agent for the global security or securities, whether the global form shall be permanent or temporary;
- if debt securities are to be issuable initially in the form of a temporary global security, the circumstances under which the temporary global security can be exchanged for definitive debt securities and whether the definitive debt securities will be registered securities and provisions relating to the payment of interest in respect of any portion of a global security payable in respect of an interest payment date prior to the exchange date;
- the extent and manner to which payment on or in respect of debt securities will be subordinated to the prior payment of our other liabilities and obligations;

- whether payment of any amount due under the debt securities will be guaranteed by one or more guarantors;
- whether the debt securities will be secured or unsecured;
- whether the debt securities will be convertible and the terms of any conversion provisions;
- the forms of the debt securities;
- a discussion of any material United States federal income tax consequences of owning and disposing of the debt securities; and
- any other terms of the debt securities, which terms shall not be inconsistent with the requirements of the Trust Indenture Act of 1939, as amended.

This prospectus is part of a registration statement that provides that we may issue debt securities from time to time in one or more series under one or more indentures, in each case with the same or various maturities, at par or at a discount. Unless indicated in a prospectus supplement, we may issue additional debt securities of a particular series without the consent of the holders of the debt securities of such series outstanding at the time of the issuance. Any such additional debt securities, together with all other outstanding debt securities of that series, will constitute a single series of debt securities under the applicable indenture.

We intend to disclose any restrictive covenants for any issuance or series of debt securities in the applicable prospectus supplement.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of common stock in one or more series. We may issue warrants independently or together with common stock, preferred stock, or debt securities, and the warrants may be attached to or separate from these securities. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. The terms of any warrants offered under a prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the Commission, the form of warrant agreement that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe the applicable prospectus supplement the terms of the series of warrants being issued, including:

- the offering price and aggregate number of warrants offered;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- the number of shares of common stock exercisable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special United States income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights, limitations or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities upon such exercise, including the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise

specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Governing Law

Unless we provide otherwise in the applicable prospectus supplement, the warrants and warrant agreements will be governed by and construed in accordance with the laws of the State of New York.

Enforceability of Rights by Holders of Warrants

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

DESCRIPTION OF UNITS

We may issue, in one or more series, units consisting of common stock and/or warrants for the purchase of common stock in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The units may be issued under unit agreements to be entered into between us and a unit agent, as detailed in the prospectus supplement relating to the units being offered. The prospectus supplement will describe:

- the designation and terms of the units and the securities comprising the units, including whether and under what circumstances the securities comprising the units may be held or transferred separately;
- a description of the terms of any unit agreement governing the units;
- a description of the provisions for the payment, settlement, transfer and exchange of the units; and
- whether the units, if issued as a separate security, will be issued in fully registered or global form.

While the terms summarized above will apply generally to any units that we may offer, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described above. We will file as exhibits to the registration statement of which this prospectus is a part or will incorporate by reference from reports that we file with the Commission, any form of unit agreement, including any related agreements or certificates, that describes the terms of the particular series of units we are offering before the issuance of the related series of units. The material provisions of the units and any unit agreements are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and related agreements and certificates applicable to the particular series of units that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of units that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete unit agreements and related agreements and certificates that contain the terms of the units.

LEGAL MATTERS

Akerman LLP, Fort Lauderdale, Florida, has rendered an opinion with respect to the validity of the securities covered by this prospectus. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The audited financial statements and management's assessment of the effectiveness of internal control over financial reporting incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated by reference in reliance upon the reports of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the SEC's website at http://www.sec.gov. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at (800) SEC–0330 for further information on the operating rules and procedures for the public reference room.

This prospectus does not contain all of the information included in the registration statement. We have omitted certain parts of the registration statement in accordance with the rules and regulations of the SEC. For further information, we refer you to the registration statement, including its exhibits and schedules. Statements contained in this prospectus supplement and the accompanying prospectus about the provisions or contents of any contract, agreement or any other document referred to are not necessarily complete. Please refer to the actual exhibit for a more complete description of the matters involved.

INCORPORATION OF INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus supplement, 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 a part of this prospectus supplement, except for any information superseded by information in any amendment to this prospectus supplement.

The following documents filed with the SEC are incorporated by reference in this Registration Statement:

(a) The Company's Annual Report on Form 10-K for the year ended December 31, 2022, filed with the Commission on March 15, 2023, and the amendment thereto, filed with the Commission on April 24, 2023.

(b) The Company's Quarterly Reports on Form 10-Q (i) for the quarter ended March 31, 2023, filed with the Commission on May 10, 2023; and (ii) for the quarter ended June 30, 2023, filed with the Commission on August 9, 2023.

(c) The Company's Current Reports on Form 8-K filed on January 23, 2023, January 24, 2023, January 30, 2023 (as amended on April 10, 2023), February 7, 2023, March 7, 2023, March 15, 2023, March 31, 2023, May 9, 2023, May 10, 2023, May 30, 2023, June 1, 2023, June 23, 2023, July 21, 2023, July 28, 2023, August 9, 2023 and August 25, 2023.

(d) The description of the Common Shares filed with the Commission on Form 8-A12B on September 29, 2006, as amended on October 18, 2006.

All other reports and documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items) on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part of this Registration Statement from the date of the filing of such reports and documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document that also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

You may obtain a copy of any of these documents at no cost by requesting them from us or by writing or calling: Catalyst Pharmaceuticals, Inc., 355 Alhambra Circle, Suite 801, Coral Gables, Florida, 33134, Attn: Investor Relations, or by calling (305) 420-3200. Copies of each of these filings are also available for no cost on our website, www.catalystpharma.com, or on the SEC's web site, www.sec.gov.

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 pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

10,000,000 Shares

Common Stock

PROSPECTUS SUPPLEMENT

BofA Securities

Citigroup

Piper Sandler

Cantor

Truist Securities

H.C. Wainwright & Co.

Oppenheimer & Co.