

Potent antivirals to combat some of the most serious diseases facing humanity

Investor Presentation August 2024

Nasdaq: COCP www.cocrystalpharma.com



Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the market opportunities for the treatment of acute and chronic viral diseases which are the focus of our programs; our development pipeline; our technology platform's ability to produce viable drug candidates at reduced development timelines and costs; the expected future characteristics and progress of product candidates and development efforts in our clinical programs, including our ongoing Phase 2a study for oral influenza PB2 inhibitor; our ongoing Phase 1 study with 3CL protease inhibitor for coronavirus and norovirus; and a planned Phase 1 study for inhaled influenza PB2 inhibitor; our exploration of other collaboration opportunities including our pursuit of opportunities related to pandemic preparedness, and the expected sufficiency of our cash balance to fund our planned operations.

Forward-looking statements are prefaced by words such as "anticipate," "expect," "plan," "could," "may," "will," "should," "intend," "seem," "potential," "appear," "continue," "future," believe," "estimate," "forecast," "project," and similar words. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. We caution you, therefore, against relying on any of these forward-looking statements. Our actual results may differ materially from those contemplated by the forward-looking statements for a variety of reasons, including, without limitation, the risks arising from interest rate increases in response to inflation, uncertainty in the financial markets, the possibility of a recession and the geopolitical conflict in Israel and Ukraine on our Company, our collaboration partners, and on the U.S., UK, Australia and global economies, our ability to proceed with studies including recruiting volunteers for and procuring or manufacturing materials for such studies by our clinical research organizations and vendors, the results of the Phase 2a and Phase 1 studies referred to above, our and our collaboration partners' technology and software performing as expected and maintenance and protection of related intellectual property rights, financial difficulties experienced by certain partners and our ability to secure and maintain new collaboration partners, the results of any current and future preclinical and clinical trials, general risks arising from clinical trials, receipt of regulatory approvals, regulatory changes, development of effective treatments and/or vaccines by competitors, including as part of the programs financed by the U.S. government, and potential mutations in the viruses we are targeting which may result in variants that are resistant to a product candidate we develop. Further information on our risk factors is contained in our filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2023. Any forward-looking statement made by us in this presentation speaks only as of the date on which it is made. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law.

About Cocrystal Pharma

Applying powerful, proprietary drug discovery platform technology to develop first- and best-in-class broad-spectrum antiviral drugs Advancing programs in high-value antiviral drug targets

- Influenza
- Norovirus
- Coronavirus and respiratory viruses

Drug candidates with clinically validated mechanisms of action

- Effectively cure viral diseases
- Broad-spectrum and potent antiviral activity
- Designed to be effective for emerging variants and existing drug-resistant viruses
- Multiple routes of administration (oral, inhalation, and injectable)

Proprietary drug discovery platform technology

 Unique drug discovery platform technology developed with Nobel Prize-winning technology



- Targeting multibillion-dollar, global markets for the treatment of acute and pandemic viral diseases
- Proprietary structure-based drug discovery platform technology provides opportunity for discovery and development of novel, broad-spectrum drug candidates
- Advancing multiple clinical programs
 - Oral influenza PB2 inhibitor CC-42344 Topline Phase 2a results expected in 2024
 - First-in-class dual oral norovirus and coronavirus protease inhibitor CDI-988 Topline Phase 1 results expected in 2024/early 2025
- Developing multiple discovery programs for respiratory viral diseases
 - Pan-viral protease inhibitors and influenza replication inhibitors
- Additional pandemic preparedness collaboration opportunities being explored
- Seasoned leadership includes experienced management, senior scientists and two Nobel laureates
- Cost-efficient operations and clean capital structure; cash sufficient to fund planned operations

Multiple clinical assets poised to deliver significant growth





Cocrystal's technology platform provides potential for novel drug candidates at reduced development timelines and costs



Provide high-resolution 3D structures of drug target complexed with inhibitor at atomic level



- Urgent health risks with newly emerging pandemic viral outbreaks^{1,2}
 - Significant delay of effective new antiviral therapeutics and vaccine development
 - Challenging issues with current drug discovery approach one-target/one-drug paradigm
- Significant advantages of Cocrystal's pan-viral drug discovery approach
 - Cocrystal's proprietary structure-based drug design platform technology enables simultaneous drug design on the highly conserved regions of multiple viral drug targets
 - First pan-viral clinical drug candidate CDI-988 developed for the treatment of both norovirus and coronavirus infections
 - Facilitates the rapid development and may allow expedited regulatory pathways (fast track and/or breakthrough designation, and emergency use authorization)

¹ Accelerating antiviral drug discovery: lessons from COVID-19 <u>https://www.nature.com/articles/s41573-023-00692-8</u> ² The urgent need for pan-antiviral agents: from multitarget discovery to multiscale design https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7682558/



Pandemic and Seasonal Influenza Program



Pandemic and Seasonal Influenza: A Major Global Health Concern

- 1 billion cases, 3-5 million severe illnesses and up to 650,000 deaths worldwide annually¹
- Not well managed with currently approved vaccines having only 40-60% effectiveness²
- On average ~8% of the U.S. population contracts influenza each season³
- Influenza is responsible for ~\$10.4 billion in direct costs for hospitalizations and outpatient visits for adults in the U.S. annually
- Only influenza A causes pandemic flu and is responsible for majority of seasonal influenza infections¹
- Potential emerging pandemic influenza A strains and drug-resistant strains against approved influenza antivirals, Tamiflu[®] and Xofluza [®]
 - Tamiflu has long history of drug resistance⁵
 - Xofluza has shown emergence of drug resistant mutations⁶
- ¹ World Health Organization (WHO) (March 2019): <u>https://www.who.int/news-room/fact-sheets/detail/influenza-(seasonal)</u>
- ² Center for Disease Control and Prevention (CDC): Vaccine Effectiveness: How Well Do Flu Vaccines Work?: <u>https://www.cdc.gov/flu/vaccines-work/vaccineeffect.htm</u>
- ³ CDC Seasonal Flu Microsite
- ⁴ CDC: Make It Your Business to Fight the Flu
- ⁵ ScienceDaily (March 2014) Tamiflu-resistant influenza related to mutations in genome: <u>https://www.sciencedaily.com/releases/2014/03/140331114237.htm</u>
- ⁶ NEJM Journal Watch (September 2018) A Promising Drug for Influenza?: <u>https://www.jwatch.org/na47413/2018/09/12/promising-drug-influenza</u>



Influenza Development Programs Focused on Therapeutic and Prophylactic Replication Inhibitors

Clinical assets for pandemic and seasonal influenza

Oral PB2 inhibitor CC-42344

- Ongoing Phase 2a study
- Potent broad-spectrum activity
- Inhibits activity in the avian influenza A (H5N1) PB2 protein
- Favorable safety profile and tolerability
- Potential for best-in-class

Inhaled PB2 inhibitor CC-42344

- Ongoing GLP toxicology study
- Potent broad-spectrum activity
- Superior pulmonary exposure
- Potential for both prophylactic and therapeutic treatments

Promising Early-Stage Programs

Replication inhibitors

Discovery ongoing

- Potent broad-spectrum activity against influenza A and B strains
- Novel mechanisms of action



CC-42344 Binds to Highly Conserved Active Site of Influenza A PB2 Protein

Cocrystal proprietary drug discovery platform technology





CC-42344 Shows Potent Antiviral Activity in Influenza-Infected Human Lung Epithilium

Uninfected human bronchial airway epithelia



Cells are killed by H1N1 virus, and most cilia are destroyed Influenza A H1N1 infection No CC-42344

- Favorable safety profile: No toxicity in CC-42344treated human lung epithelium
- Showed potent antiviral activity in influenza A (H1N1)-infected human lung epithelium
- Inhalation formulation development is completed



- Favorable safety profile
- Potent, broad-spectrum activity against pandemic and seasonal strains
- High barrier to resistance
- Oral CC-42344: Phase 2a topline results expected in 2024
- Oral CC-42344: FDA feedback provides improved clarity on regulatory path and requirements for oral CC-42344 Phase 2b trial
- Inhaled CC-42344: Superior pulmonary pharmacology: high exposure and long halflife, EC50 >5,000-fold by 4 days post-single administration





Norovirus and Coronavirus Program Overview

Norovirus Infection: No Approved Treatments or Vaccines Available



CDC: Norovirus Disease in the United States https://www.cdc.gov/norovirus/burden.html



- Highly contagious virus that causes symptoms of acute gastroenteritis including nausea, vomiting, stomach pain and diarrhea
 - Transmissible by infected person, contaminated food or water, or touching contaminated surfaces
- Major cause of gastrointestinal illness in closed and crowded environments including hospitals, nursing homes, childcare facilities, military facilities and cruise ships
- Each year, norovirus is estimated to cost \$60 billion dollars worldwide due to healthcare costs and lost productivity
- GII.4 noroviruses have caused the majority of recent norovirus outbreaks worldwide

CDC: Norovirus Disease in the United States <u>https://www.cdc.gov/norovirus/burden.html</u> National Foundation for Infections Diseases <u>https://www.nfid.org/infectious-disease/norovirus/</u>



Cocrystal Viral Protease Inhibitors Block the Essential Replication Process





First-in-Class Dual Protease Inhibitor CDI-988 for Treatment of Norovirus and COVID infections

CDI-988, pan-viral protease inhibitor



CDI-988, pan-viral protease inhibitor



Cocrystal structures of Pandemic Norovirus and SARS-CoV-2 with CDI-988

- Developed using Cocrystal's proprietary drug discovery platform technology
- Binds to a highly conserved region required for viral proteases
- Exhibits pan-viral antiviral activity against pandemic norovirus and coronavirus strains
- Demonstrated a favorable safety profile
- Phase 1 study ongoing



- Phase 1 trial with orally administered CDI-988
 - Expected to serve as Phase 1 trial for norovirus and coronavirus Phase 2 advancement
 - Randomized, placebo-controlled, double-blind, single-ascending dose/multiple-ascending dose trial
 - Conducted in healthy volunteers in Australia
 - Evaluate safety, tolerability, PK and effect of food
- Planned Phase 2 study design for CDI-988
 - Norovirus human challenge study
 - Change in symptoms and viral load as study outcome measure



Norovirus and Coronavirus Development Programs

Clinical assets for pandemic and epidemic norovirus and coronavirus

Oral pan-norovirus and pan-coronavirus Protease inhibitor, CDI-988

- Potential dual indications: norovirus and coronavirus
- Ongoing Phase 1 study
- Discovered by proprietary structure-based platform technology
- Potent antiviral activity against pandemic strains
- Gastrointestinal targeting activity
- Potential for both prophylactic and therapeutic treatments

Promising Early-Stage Programs

Replication inhibitors

- Discovery ongoing
- Potent broad-spectrum activity
- Novel mechanisms of action



Seasoned Leadership

Management		Scientific Advisory Board		
Sam Lee, Ph.D. Co-Chief Executive Officer & President	— • ø	Roger Kornberg, Ph.D. Chairman of the Board, Chairman of the Scientific Advisory Board	 Professor Stanford University School of Medicine Nobel Laureate 	
25+ years of anti-infective drug discovery research experience, including HCV and influenza antivirals; played key role in early	Zydelig	Michael Levitt, Ph.D. Member	 Professor Stanford University School of Medicine Nobel Laureate 	
development of phosphoinositide 3- kinase (PI3K) delta inhibitor, Zydelig		Baek Kim, Ph.D. Member	 Director of Center for Drug Discovery Emory University 	
James J. Martin, MBA, CPA Co-Chief Executive Officer & Chief Financial Officer 25+ years of finance and management experience including providing financial leadership to commercial-stage, publicly traded health science companies	VBI VACCINES	Bob Lehman, Ph.D. Member	 Professor (Emeritus) Stanford University School of Medicine 	
		Gary Schoolnik, M.D. Member	 Professor (Emeritus) Stanford University School of Medicine 	
		Roland Strong, Ph.D. Member	Professor Fred Hutchinson Cancer Research Center	
	<u>NiMS</u>	Christophe Verlinde, Ph.D. Member	 Professor (Emeritus) University of Washington 	



Experienced Board of Directors

Roger Kornberg, Ph.D. Co-founder, Chairman of the Board & Chairman of the Scientific Advisory Board	 Nobel Laureate in Chemistry - the process by which genetic information from DNA is copied to RNA Welch Prize – highest award granted in the field of chemistry in the U.S. Leopald Mayer Prize – highest award granted in the field of biomedical sciences from the French Academy of Sciences 			
Steve Rubin Vice Chairman	 EVP-Administration & Director of OPKO Health, Inc. Former SVP & General Counsel of IVAX Corporation; SVP & General Counsel of Telergy Inc. 			
Phillip Frost, M.D. Co-founder & Director	 Chairman & CEO of OPKO Health, Inc. Former Chairman of Teva Pharmaceuticals; Chairman and CEO of IVAX Corporation – sold for \$7.4 billion Board of Regents of Smithsonian Institution; Board of Trustees of University of Miami; Trustee of Scripps Research Institutes 			
Fred Hassan Director	 Chairman of the investment firm Caret Group; Director of global private equity firm Warburg Pincus LLC Former Chairman & CEO of Schering-Plough – acquired by Merck Former Chairman & CEO of Pharmacia Corporation; senior positions at Wyeth & Sandoz Pharmaceuticals 			
Anthony Japour, M.D. Director	 President, CEO & Director of iTolerance Former CEO of AdvancedDx Biological Laboratories-USA; Medical Director of ICON plc Former with Elite Health Medical Group specializing in infectious diseases 			
Richard C. Pfenniger, Jr. Director	 Director of OPKO Health, GP Strategies Corporation & Asensus Surgical, Inc. Former Chairman, CEO & President of Continucare Corporation; CEO & Vice Chairman of Whitman Education Group. Former COO, SVP-Legal Affairs & General Counsel of IVAX Corporation 			



Coronavirus

- Issued patents in U.S. and major countries
- Pending U.S. provisional applications

Pandemic Influenza A

- PB2 (influenza A inhibitor)
 - Pending applications in PCT and Taiwan
 - Pending U.S. provisional applications

Influenza A/B

- Influenza A/B inhibitor
- Pending applications in U.S. and worldwide

Norovirus

- Issued patents in U.S. and major countries
- Pending U.S. provisional applications

HCV NS5B (NNI)

- Issued patents in U.S.
- Pending applications in U.S. and worldwide
- Pending U.S. provisional application



Financial Snapshot

	~\$18 Million Market cap1		34,000 Average 3 month daily share volume ¹		
\$18.1 Million Cash/equivalents as of June 30, 2024		10.2 Million Common shares outstanding		10.3 Million Fully diluted shares	
		 Clean balance No preferr No debt Cash sufficient planned operation 	sheet red shares t to fund tions		



¹ Yahoo Finance (August 12, 2024)

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