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Cocrystal Pharma Provides Update on its COVID-19 Antiviral Discovery and Development Programs

BOTHELL, Wash., May 03, 2021 (GLOBE NEWSWIRE) -- [Cocrystal Pharma, Inc.](#) (Nasdaq: COCP), ("Cocrystal" or the "Company"), a clinical-stage biotechnology company discovering and developing novel antiviral therapeutics that target the replication machinery of influenza viruses, coronaviruses, hepatitis C viruses and noroviruses, announces progress in developing broad-spectrum antiviral drug candidates that target coronaviruses including SARS-CoV-2, the coronavirus that causes COVID-19. Cocrystal initiated its COVID-19 program in March 2020 and has since expanded the program with additional development and licensing.

"We are aggressively developing novel coronavirus protease inhibitors for COVID-19 prophylactic and therapeutic use," said Sam Lee, Ph.D., President of Cocrystal. "These drug candidates bind to a highly conserved region of the active site of SARS-CoV-2 protease that is required for SARS-CoV-2 viral replication. Our high-resolution x-ray cocrystal structures further confirmed the specific covalent interaction with this conserved region of the proteases of the coronaviruses SARS-CoV-2, SARS-CoV and MERS-CoV viruses.

"We believe that, due to their novel mechanism of action, our protease inhibitors are likely to be effective against new variants of SARS-CoV-2. This may include the recent variants first identified in the United Kingdom, South Africa, Brazil and India, which may be more contagious forms of the virus and may evade immunity produced by vaccines or previous infection," he added.

Lead candidate CDI-45205

In December 2020 Cocrystal announced the selection of CDI-45205 as its lead coronavirus development candidate among a group of protease inhibitors obtained under an exclusive license agreement with Kansas State University Research Foundation (KSURF) announced in 2020.

CDI-45205 showed good bioavailability in mouse and rat pharmacokinetic studies via intraperitoneal injection, and also no cytotoxicity against a variety of human cell lines. The Company recently demonstrated a strong synergistic effect with the FDA-approved COVID-19 medicine remdesivir. Additionally, a proof-of-concept animal study demonstrated that daily injection of CDI-45205 exhibited favorable *in vivo* efficacy in MERS-CoV-2 infected mice. Cocrystal has obtained promising preliminary pharmacokinetic results and is continuing to further evaluate CDI-45205.

"The immediate next steps in the process of advancing this candidate toward clinical development require scale-up synthesis and the subsequent manufacture of several

kilograms of the active pharmaceutical ingredient (API) to support Investigational New Drug (IND)-enabling studies and Phase 1 trials,” said Dr. Lee. “Similar to our influenza CC-42344 program, we are exploring multiple routes of administration of preclinical lead molecules including oral, inhalation and injection. We will also be examining *in vitro* activities of our compounds against the SARS-CoV-2 variants.”

Novel SARS-CoV-2 replication inhibitors

Cocrystal has leveraged its antiviral development expertise by using its proprietary technology and drug discovery platform to launch a second COVID-19 program with additional antiviral compounds developed.

“While we are highly encouraged by preclinical progress with CDI-45205, we continue developing a new class of SARS-CoV inhibitors. We applied our proprietary drug discovery platform technology and high-throughput protein crystallography approach to design new chemical scaffolds to improve *in vitro* potency and pharmacokinetic properties,” explained Dr. Lee. “Lead discovery and optimization are ongoing. We anticipate identifying another SARS-CoV-2 preclinical lead for oral administration this year. In addition to these two SARS-CoV-2 protease programs, we are also developing novel SARS-CoV-2 inhibitors that block viral replication and transcription. Our goal is to rapidly advance multiple SARS-CoV-2 lead molecules to the clinical trial stage.”

“Public health officials are calling for the urgent development of potent antivirals that inhibit the replication cycle of SARS-CoV-2,” said Gary Wilcox, Ph.D., Chairman and Chief Executive Officer of Cocrystal. “Among the significant challenges scientists face is inhibiting viral replication without damaging the inner workings of healthy cells. Cocrystal’s approach to drug discovery could provide a solution for designing antivirals for use against a range of viruses, including coronaviruses, with limited off-target interaction.

“Our established, proprietary drug discovery platform is comprised of computation, medicinal chemistry and x-ray crystallography together with extensive knowledge of viruses and drug targets. This is a far different approach from traditional, empirical, medicinal chemistry approaches that often require iterative high-throughput compound screening and lengthy hit-to-lead processes,” Dr. Wilcox concluded.

About Cocrystal Pharma, Inc.

Cocrystal Pharma, Inc. is a clinical-stage biotechnology company discovering and developing novel antiviral therapeutics that target the replication process of coronaviruses (including SARS-CoV-2), influenza viruses, hepatitis C viruses and noroviruses. Cocrystal employs unique structure-based technologies and Nobel Prize-winning expertise to create first- and best-in-class antiviral drugs. For further information about Cocrystal, please visit www.cocrystalpharma.com.

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the future effectiveness of the protease inhibitors, including against new variants of SARS-CoV-2, our expectations regarding the identification of another SARS-CoV-2 preclinical lead for oral

administration, and the ability of our approach to drug discovery to yield effective antivirals with limited off-target interaction. The words "believe," "may," "estimate," "continue," "anticipate," "intend," "should," "plan," "could," "target," "potential," "is likely," "will," "expect" and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events. Some or all of the events anticipated by these forward-looking statements may not occur. Important factors that could cause actual results to differ from those in the forward-looking statements include, but are not limited to, the risks and uncertainties arising from the impact of the COVID-19 pandemic on the national and global economy and on our Company, including supply chain disruptions and our continued ability to proceed with our programs, including our coronavirus program, our ability to recruit patients into clinical trials, the results of future preclinical and clinical studies, and general risks arising from clinical trials. Further information on our risk factors is contained in our filings with the SEC, including our Annual Report on Form 10-K for the year ended December 31, 2020. Any forward-looking statement made by us herein 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.

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