



Codexis Announces the Publication with Merck of an Efficient Enzymatic Cascade Process for Synthesis of Investigational Anti-HIV Agent, Islatravir

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REDWOOD CITY, Calif., Dec. 05, 2019 (GLOBE NEWSWIRE) -- Codexis, Inc. (NASDAQ: CDXS), a leading protein engineering company, announces the publication with Merck, known as MSD outside the United States and Canada, of a paper in the prestigious peer-reviewed journal *Science*, detailing the development of a novel, highly efficient enzymatic cascade for the production of Merck's investigational nucleoside reverse transcriptase translocation inhibitor, islatravir.

The publication (<https://science.sciencemag.org/content/366/6470/1255>) describes the optimization, using Codexis' proprietary CodeEvolver[®] protein engineering platform, of five enzymes for the synchronized synthesis of a complex pharmaceutical candidate in very few steps, starting from simple raw materials. The process demonstrates the utility of engineered enzymes in coordinated cascades to perform highly complex chemistry for previously difficult-to-produce molecules. Merck and Codexis collaborated on the engineering of the enzymes to enable the efficient synthesis of the Active Pharmaceutical Ingredient (API). Codexis is now supporting Merck in the supply of enzymes for production of the API for late-phase clinical studies.

"The synthesis of nucleoside analogs via traditional chemistry methods can be particularly difficult and inefficient," said Kevin Campos, associate vice president, Chemistry, Merck Research Laboratories. "By combining our strength in innovative route design with Codexis' protein engineering expertise, we have been able to develop an efficient process for the production of this candidate anti-HIV agent."

"We are very excited to build on our longstanding collaboration with Merck, who licensed our CodeEvolver[®] technology platform in 2015 and continues to be a foundational customer for the future growth of our business. With this exciting program, we have jointly pushed the frontier of what is possible with protein engineering and proven that many enzymes can be orchestrated to perform difficult, sequential chemical transformations in a commercially relevant setting," said John Nicols, Codexis' CEO and president. "In essence, this work demonstrates that the concept of metabolic pathways as we know them, inside cells, can now be realized for the industrial-scale synthesis of non-natural molecules using isolated enzymes in a chemical plant."

About Codexis, Inc.

Codexis is a leading protein engineering company that applies its proprietary CodeEvolver[®] technology to develop proteins for a variety of applications, including as biocatalysts for the commercial manufacture of pharmaceuticals, fine chemicals, food ingredients, and for use in molecular diagnostics applications, as well as industrial and therapeutic enzymes. Codexis' proven technology enables improvements in protein performance, meeting customer needs for rapid, cost-effective and sustainable manufacturing in multiple commercial-scale implementations of biocatalytic processes. For more information, see www.codexis.com.

Forward-Looking Statements

To the extent that statements contained in this press release are not descriptions of historical facts regarding Codexis, they are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, including Codexis' expectations regarding the ability of its CodeEvolver[®] protein engineering platform to develop enzymes that can be orchestrated to perform difficult, sequential chemical transformations in a commercially relevant setting. You should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties and other factors that are, in some cases, beyond Codexis' control and that could materially affect actual results. Factors that could materially affect actual results include, among others: Codexis' dependence on its licensees and collaborators; Codexis' dependence on a limited number of products and customers; and potential adverse effects to Codexis' business if its customers' products are not received well in the markets. Additional information about factors that could materially affect actual results can be found in Codexis' Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on March 1, 2019 and Form 10-Q filed with the SEC on November 6, 2019, including under the caption "Risk Factors" and in Codexis' other periodic reports filed with the SEC. Codexis expressly disclaims any intent or obligation to update these forward-looking statements, except as required by law.

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