April 12, 2022

# Codexis and Molecular Assemblies Announce Results of First Collaboration on a Proprietary High Performing DNA Polymerase to Supercharge Fully Enzymatic DNA Synthesis

*Molecular Assemblies has pioneered Fully Enzymatic Synthesis™ (or FES™) technology with an in-process purification step to overcome the length, purity, and accuracy limitations of the current chemical DNA synthesis method*

*The collaboration between Molecular Assemblies and Codexis leveraged Codexis' CodeEvolver® technology to develop a high performing enzyme to enable Molecular Assemblies' Fully Enzymatic Synthesis and Key Customer Program start in late 2022*

REDWOOD CITY, Calif. and SAN DIEGO, April 12, 2022 (GLOBE NEWSWIRE) --Codexis, Inc. (Nasdaq: CDXS), a leading enzyme engineering company enabling the promise of synthetic biology, and Molecular Assemblies, Inc., a pioneer in the field of enzymatic DNA synthesis, today announced an update on their partnership to engineer enzymes to deliver differentiated solutions for the enzymatic synthesis of DNA. Using a highly evolved DNA polymerase, developed by Codexis, to enable its Fully Enzymatic Synthesis™ (or FES™) technology, select companies and institutions will be able to access a Key Customer Program that is slated to begin later this year.

The Fully Enzymatic Synthesis technology developed by Molecular Assemblies employs a template-independent DNA polymerase, terminal deoxynucleotidyl transferase (TdT), which has the ability to synthesize much longer DNA sequences with fewer errors in an aqueous solution. Naturally occurring TdT has many limitations to commercial use. In order to accelerate innovation for the field, Molecular Assemblies and Codexis partnered in 2020 to engineer an enzyme to deliver differentiated and cost-effective solutions for the fully enzymatic synthesis of DNA.

John Nicols, Codexis' President and CEO, said, "The successful completion of this first collaboration with Molecular Assemblies has resulted in a highly evolved version of TdT polymerase that delivers unparalleled coupling efficiency and speed at elevated temperatures. We believe the ability to exclusively deploy this proprietary enzyme will significantly differentiate Molecular Assemblies' Fully Enzymatic Synthesis technology from not only other emerging players but also the current industry-standard phosphoramidite chemistry method."

"Not only did the enzyme performance surpass expectations, but the collaboration with Codexis has also been phenomenal, and we look forward to continuing to advance our relationship," said Michael J. Kamdar, President and CEO of Molecular Assemblies.

“Participants in our upcoming Key Customer Program, which will launch later this year, will be the first to benefit from this highly enhanced TdT polymerase. With our FES technology, we have the ability to generate long, pure, accurate DNA to accelerate innovation in many fields, such as CRISPR gene editing technologies, next generation sequencing, and the assembly of genes for numerous synthetic biology applications.”

Scientists at Molecular Assemblies have developed a Fully Enzymatic Synthesis technology that produces highly pure, sequence-specific DNA on demand. This two-step proprietary process uses aqueous non-toxic reagents, requires minimal post-synthesis processing, and can scale to longer DNA sequences. FES technology was specifically designed by Molecular Assemblies to overcome the limitations of the current decades-old chemical DNA synthesis process, known as the phosphoramidite method. Due to the limitation of current chemistries, genes are routinely assembled using short pieces of DNA. With longer, purer pieces of synthetic DNA, FES technology from Molecular Assemblies is designed to streamline synthetic biology applications and meet significant customer demand for faster turnaround times and reduced error rates.

Starting later this year, Molecular Assemblies will kick off a Key Customer Program to provide select researchers priority access to long, custom oligonucleotides synthesized with its FES technology. This program is expected to enable researchers to accelerate their research for gene editing including CRISPR technologies, next generation sequencing (NGS), and gene assembly applications. Key Customers will also be able to provide feedback to shape the future of enzymatic DNA synthesis.

At the Built with Biology Conference on Thursday at 2:30 p.m. PT, William J. Efcavitch, Ph.D., Chief Scientific Officer and cofounder of Molecular Assemblies, and Mathew Miller, Principal Scientist at Codexis, will be speaking in a breakout session, called “Breaking the Barrier to Long, High Purity Synthetic DNA.” They will also be discussing the partnership between Codexis and Molecular Assemblies, co-development of the proprietary TdT enzyme, and how it enables FES technology.

**About Molecular Assemblies**

Molecular Assemblies, Inc. is a private life sciences company developing an enzymatic DNA synthesis technology designed to power the next generation of DNA-based products. The company’s patented enzymatic method, based on making DNA the way nature makes DNA, produces long, high quality, sequence-specific DNA reliably, affordably, and sustainably. Molecular Assemblies’ Fully Enzymatic Synthesis™ (or FES™) technology will enable the reading and writing of DNA for many industries, including industrial synthetic biology and precision medicine, as well as emerging applications of DNA for data information storage, nanomachines, and bio-based electronics. Molecular Assemblies is headquartered in San Diego. For more information, please visit www.molecularassemblies.com.

**About Codexis**

Codexis is a leading enzyme engineering company leveraging its proprietary CodeEvolver® platform to discover and develop novel, high performance enzymes and novel biotherapeutics. Codexis enzymes have applications in the sustainable manufacturing of pharmaceuticals, food, and industrial products; in the creation of the next generation of life science tools; and as gene therapy and biologic therapeutics. The Company’s unique performance enzymes drive improvements such as: reduced energy usage, waste

generation and capital requirements; higher yields; higher fidelity diagnostics; and more efficacious therapeutics. Codexis enzymes enable the promise of synthetic biology to improve the health of people and the planet. For more information, visit 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 prospects for Codexis' first collaboration with Molecular Assemblies. 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 products or the products of its customers 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 February 28, 2022, 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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Source: Codexis, Inc.