



For Immediate Release

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Snapdragon Chemistry and Shimadzu Announce Collaboration to Enable Automated Biopharmaceutical Process Development

The strategic collaboration will provide solutions for advancing API manufacturing.

WALTHAM, MA (July 7, 2021) – Snapdragon Chemistry and Shimadzu Corporation have agreed to enter a strategic collaboration to jointly support pharmaceutical and chemical industries by providing advanced solutions for improved efficiency in chemical synthesis.

The companies have complementary core technologies which, when combined, can produce unique and useful solutions. The strategic collaboration aims to help chemical manufacturing processes become more cost effective, safer and easier. As the first step, the companies fully integrated automated process sampling with Ultra-High Performance Liquid Chromatography (UHPLC) in a compact footprint appropriate for real-time process analytics. This will drastically shorten the time and cost needed to optimize synthetic conditions without requiring human intervention. The system consists of the Sample Relay System (SRS), Snapdragon's proprietary solution for automated at-line chromatography; EasySampler, Mettler Toledo's sampling device; and Nexera FV, Shimadzu's flow vial UHPLC system providing both sensitivity and specificity not currently available from traditional spectroscopic Process Analytical Technologies.

Snapdragon uses the SRS technology with its proprietary software platform for AI applications, such as autonomous algorithm-driven process optimization for continuous and batch bioprocesses. The combination of SRS, EasySampler, and Nexera FV results in real-time UHPLC, a powerful technique that enables monitoring of reaction kinetics and product quality attributes for accelerated process development.

The partnership brings Snapdragon's expertise in continuous manufacturing and IoT technology to one of the world's largest manufacturers of analytical instrumentation and environmental monitoring equipment. Shimadzu is a \$4B multinational corporation with major divisions in medical diagnostics, aerospace/industrial, and analytical instruments.

"We could not be more excited about this partnership with Shimadzu to bring our innovative SRS solution to market," says Snapdragon Chemistry President/CEO Matthew Bio. "Shimadzu's reputation for excellence and innovation in the scientific field is world-renowned making them a natural partner to introduce this technology."

"Partnering with Shimadzu enables Snapdragon to access an incredibly information-enrich chromatographic data set that is ideal for applying machine learning tools in chemical process development and product quality control in advanced biopharmaceutical manufacturing," says Snapdragon Chief Scientific Officer Eric Fang.

"Online liquid chromatography has been the ultimate, long sought-after Process Analytical Technology tool, but technical challenges made a general solution elusive. Snapdragon Chemistry's Sample Relay System (SRS)

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solves this problem through the use of sophisticated technology and creative design that finally enabled this breakthrough, and we are excited about the opportunities this partnership will provide us,” says Masayuki Nishimura, Director of New Strategy Department, at Shimadzu Scientific Instruments, Inc., a fully owned U.S. subsidiary of Shimadzu Corporation.

About Snapdragon Chemistry

Snapdragon Chemistry is a chemical technology firm providing services to the pharmaceutical and fine chemical industries. Snapdragon’s headquarters, R&D, and manufacturing facilities are located in Waltham, MA.

About Shimadzu Corporation

Based in Kyoto and established in 1875, Shimadzu produces world-class analytical and measuring instruments, medical systems, vacuum, and industrial machinery, hydraulic equipment, aircraft equipment, and optical devices. Shimadzu collaborates and partners with corporations, researchers, and institutions to provide solutions to societal challenges in clinical medicine, food safety, and the environmental/energy industries.