OnePump Fluid Dispensing System Cuts Drug Production Costs

University of Maryland Baltimore

Manufacturing today's pharmaceuticals is a tricky business; the drugs are expensive and extremely fragile thus requiring extremely accurate mixing and dispensing with an eye on cost. A team of researchers at the University of Maryland, Baltimore County (UMBC) and Scientific Products & Systems, Inc. (SP&S) joined forces to engineer a liquid dispensing system platform never before seen in the bio/pharma markets. SP&S is currently marketing its core "OnePump" technology to a variety of markets that rely on precision fluid-handling capabilities.

An initial scientific collaboration between a team of researchers at UMBC, headed by Dr. Muniswamappa Anjanappa, and David Bach, CEO/CTO of SP&S, led to a jointly developed technology and an exclusive license in 2003. A graduate student researcher at UMBC was later hired by SP&S. The company is located in a business incubator affiliated with the university.

> *The company's goal is to provide proprietary precision fluid handling tools to the pharmaceutical, bioscience, dental, cosmetic and specialty chemistry industries, globally.*

Key applications include positive piston and peristalsis technologies, which use a piston to force material through a syringe or a tube, respectively. SP&S offers its customers a range of dispensing units based on the patented OnePump™ technology.

With the packaging equipment industry's increased emphasis on ultra-high accuracy, automated and modular low cost systems, the OnePump™ offers unique flexibility allowing users to handle fluid dispensing on the lab bench, in clinical trials and pilot operations, and on full manufacturing lines. In addition, the SP&S OnePump™ has been proven and validated by several of the United States' largest pharmaceutical manufacturers.

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