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PRESS RELEASE



DASGIP and Groton Biosystems Partner to Offer Complete Closed Loop Solution for Online Monitoring of Bioreactors

Juelich, Germany / Boxborough, MA USA – March 16, 2009 – DASGIP and Groton Biosystems are collaborating to integrate Groton's ARS-M series of online auto samplers with the DASGIP Parallel Bioreactor Systems (DASGIP Control 4.0 OPC Edition). This combination provides multi-vessel autosampler support, online integration of analyzer data, user defined feedback control strategies, and real time nutrient monitoring and control.

With this automated sampling and monitoring system, engineers and scientists can maintain optimum nutrient levels for up to 8 bioreactors. Groton Biosystems and DASGIP have released a joint application note titled "Integration of Automated Reactor Sampler, Bioreactor and Biochemistry Analyzer for Automated Online Real Time Feedback Control" outlining this system.

"Our collaboration with DASGIP offers our customers a valuable PAT nutrient monitoring and control solution that will provide labor savings and yield optimization," said Bill Dinardo, CEO of Groton Biosystems. "The closed loop solution is the launch platform for an intelligent bioreactor control system."

"OPC has become the standard for data exchange in the research driven chemical and pharmaceutical industries. DASGIP is happy to have entered a partnership with Groton as a key supplier for automated sampling devices to provide state-of-the-art solutions for advanced automation and information management", said Dr. Falk Schneider, Executive Vice President and Director of Software Engineering at DASGIP AG.

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The ARS-M Automated Reactor Sampling System connects bioreactors through a patented sterile interface to a variety of analytical instruments - Nutrient Monitors, Cell Counters, HPLC Systems, and the Groton Refrigerated Sample Collector.

The modular ARS-M System provides biotechnology facilities automated sampling of bioreactors or fermenters and permits near real-time, online, hands-free monitoring. The ARS monitors nutrients, proteins, ethanol, organic acids and other analytes in multiple bioreactors and fermentation tanks using Groton Biosystems' unique and proprietary process for automatic sampling, sample preparation, and sample delivery to existing instrumentation.

Using direct OPC communication, DASGIP Parallel Bioreactor Systems support multi-vessel auto-sampling from small-scale bioreactors via the ARS-M with sample transfer to multiple OPC compliant at-line analyzers. Any OPC data can be utilized in user defined functions allowing the implementation of real time nutrient control loops. The added OPC integration, supported by a high level of process automation, amplifies the key benefits of the DASGIP parallel small-scale cultivation system for microbiology and cell culture. The integrated system offers high reproducibility, ease of scale up and increased productivity.

About DASGIP Technology

DASGIP AG develops and manufactures technologically advanced Parallel Bioreactor Systems for the cultivation of microbial and mammalian cells at bench top and pilot scale. Process engineers, scientists and product developers from biotechnological, pharmaceutical and chemical companies as well as research institutions use DASGIP Parallel Bioreactor Systems for their biotechnological processes and benefit from increased productivity, high reproducibility, and ease of scale up, resulting in accelerated product development cycles. DASGIP is located in Juelich (Germany) and Shrewsbury, MA (USA). Information about DASGIP is available at www.dasgip.com.

About Groton Biosystems

Groton Biosystems (Boxborough, Mass.) is a pioneer in providing fermentation and cell culture production companies with leading-edge online monitoring solutions. Groton offers the most cost-effective solutions for monitoring the entire research and manufacturing process. Information about Groton Biosystems is available at www.grotonbiosystems.com.

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