Press Release

m2p-labs receives Grant for new Fed-Batch Screening Technology

New BMBF project "Smart Dosing" for the development of intelligent disposables kicked off in collaboration with the partners CEVEC Pharmaceuticals and RWTH Aachen University

Baesweiler/Aachen, 11th July 2011 – The Federal Ministry of Education and Research (BMBF) sponsors the "Smart Dosing" project for the development of intelligent disposables with 900,000 Euros. The project of the companies, m2p-labs GmbH and CEVEC Pharmaceuticals GmbH as well as the Chair of Biochemical Engineering (Prof. Dr. Jochen Büchs) and the Institute of Technical and Macromolecular Chemistry (Prof. Dr. Andrij Pich) of RWTH Aachen University is sponsored within the framework of the BMBF funding programme "KMU-innovativ: Biotechnologie-BioChance" and is spread over three years. A passive fed-batch technology for targeted limited substrate feeding of cells is to be developed within the scope of this project.

The aim of the project is to make the fed-batch process control, which is proven and frequently used in the industry, already available during screening and the early bioprocess development. This guarantees that the selection of the best producers and process conditions is carried out under process-simulated conditions, and hence, any wrong decision making is avoided in the early development stage.

Within the scope of this project, the technology, already patented by Prof. Dr. Jochen Büchs and purchased by m2p-labs, is basically to be designed for microbiological, animal and human cell lines. The participation of CEVEC Pharmaceuticals GmbH guarantees the testing of the technology and their scalability with the highly potent human CAP cells. This cell line promises high product titres and authentic glycosylation especially for complex glycosylated pharmaceutical proteins. Microbiological expression systems such as bacteria or yeasts are tested with the new fed-batch technology and their ability to be scaled up to standard fermenter is checked by m2p-labs and the Chair of Biochemical Engineering.

For m2p-labs, inclusion of this project represents a consistent advancement in the development of its product portfolio. The fed-batch technology to be newly developed can be integrated excellently in the Flowerplate® and CellCulture Plate already being marketed. "If we succeed in establishing the fed-batch control with any substrates in our microtitre plates with the help of the new project, we will demonstrate our technological market leadership once again", describes Dr. Frank Kensy, Managing Director of von m2p-labs, as the opportunities of this project. "This new technology represents yet another milestone in the development of m2p-labs. We provide intelligent tools to our clients in biotechnological, chemical and pharmaceutical laboratories".

"We are very happy about our participation in this project and the very early access to innovative fermentation technology", comments Dr. Gudrun Schiedner, CSO of CEVEC Pharmaceuticals, about the participation in this project. "In particular, the testing of our human CAP clones in micro-scales is very promising and spares us the cumbersome effort with shake flasks and fermenters."

The combination of the different m2p-labs technologies – namely the BioLector®, the Flowerplate® or CellCulture Plate and the RoboLector – facilitates the handling of screening approaches by biotechnological users or high-throughput fermentations. 48 parallel fermentations can be carried out in the BioLector without much effort. The user gains insight into the course of fermentation during the experiments with the online monitoring of important parameters such as biomass concentration, pH and pO_2 values. Those engaged in fundamental research can even observe the expression of fluorescent proteins online.

m2p-labs GmbH

m2p-labs is financed by the High-Tech-Gründerfonds (business start-up fund), the KfW and the Seed Fund Aachen. The biotechnology company is specialised in the development of process solutions for cell culture and microbiology in micro-litre scale. The first marketable development is a unique miniature bioreactor system for high content screening. m2p-labs' special know-how in micro process technology and automation enables the company to offer interested customers contract research or consulting. The company is based in Baesweiler near Aachen, Germany. www.m2p-labs.com

CEVEC Pharmaceuticals GmbH

Based on primary amniocytes CEVEC develops innovative cellular expression systems. With CAP cells for stable and CAP-T cells for transient expression customers are offered a unique expression platform for biotherapeutics from very early development and preclinical evaluation up to clinical phases. CAP cells are most suitable for expression of complex human proteins with authentic glycosylation patterns and full sialylation. Reduced process times, very high expression rates of proteins with authentic posttranslational modification are very unique features of CEVEC's CAP technology. www.cevec-pharmaceuticals.com

RWTH Aachen University

Chair of Biochemical Engineering (AVT.BioVT):

The Chair of Biochemical Engineering was founded 1996 by Prof. Dr.-Ing. Jochen Büchs is part of Aachen Chemical Engineering (AVT) of RWTH Aachen University. Beside the research of new methods for innovative biotechnological processes the characterization and description of shaken cultivation systems as well as the development of modern analysis and control methods for microbial cultivation are the focuses of research of the Chair. The development of the RAMOS technology displays an important contribution for the online analysis in shake flasks. To follow the trend of smaller cultivation systems the BioLector technology for online analysis in microtiterplates was developed at the Chair. www.avt.rwth-aachen.de

Functional and Interactive Polymers (Institute of Technical and Macromolecular Chemistry (ITMC) and DWI at the RWTH Aachen University):

DWI an der RWTH Aachen e.V. has a long-term experience in areas of macromolecular chemistry and surface chemistry. The research areas include functional polymers, self-assembly of macromolecules, methods of controlled polymerization, plasma-assisted chemical surface modification, biomaterials and biofunctional surfaces. The chair of Functional and Interactive Polymers develops new methods for chemical design of colloidal particles with variable dimensions (nano - micro) and architectures. The design of complex materials by self-assembly of colloidal particles is investigated for application in release systems, sensors, catalysts and coatings. www.dwi.rwth-aachen.de

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