

Autodisplay Newsletter

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Multidisciplinary biotechnology project AELMON

Germany's Federal Ministry of Education and Research (BMBF) has approved funding for a project of a consortium of Autodisplay Biotech GmbH, Phytowelt Greentechnologies, DECHEMA and the Westphalian Wilhelm's University Muenster named AELMON ("Artificial Electron transfer and plant mono-oxygenases as basis for innovative catalytic systems."). The project will create the basis for the exploitation of plant enzyme systems in industrial production. The scientific justification for this project is the desire for an enhanced industrial use of plant enzymes of the P450 family. These enzymes, which have been well known for their outstanding features for a long time, have not been accessible for economic exploitation in industrial synthesis.

Original press release: http://www.autodisplay-biotech.com/12_03_21_AELMON_Pressemitteilung_en.pdf

Synthetic potential of P450 monooxygenases

Germany's Federal Ministry of Education and Research (BMBF) has granted a project within the Cluster CLIB 2021, in which the synthetic potential of P450 monooxygenases will be investigated by Autodisplay Biotech GmbH and the research group of Prof. Dr. Joachim Jose at the Institute of Pharmaceutical and Medicinal Chemistry at the Westfälische Wilhelms University in Munster. The aim of the granted project is the development of a modular screening system for the identification of new synthesis routes through cytochrome P450 monooxygenases (P450). After successfully displaying active P450 enzymes and the still required accessory proteins on the surface of *E. coli*, the resulting whole cell biocatalysts are to be applied for the identification of new synthesis routes and thereby improve the biocatalytic potential of the P450 enzymes.

Original press release: http://autodisplay-biotech.com/AB_P450_Pressenotiz_E_06-12.pdf

Conversion of lignocellulosic biomass into sugars

Bacterial surface display of cellulolytic enzymes provides an attractive alternative approach towards a competitive production of biofuels. Cellulolytic enzymes immobilized on the surface of *E. coli* by the proprietary Autodisplay technology do not need to be purified for application and have direct access to the cellulosic substrate. In addition, immobilization facilitates the recovery and reuse of the enzymes. Until now, construction of a catabolizing cellulose *E. coli* strain has not been successful due to its poor ability of enzyme secretion. Autodisplay could be an answer to this problem by presenting enzymes as immobilized "tools" on the cell surface of *E. coli* with high density. Autodisplay Biotech is currently working to produce a first set of lignocellulosic biomass converting biocatalysts in laboratory scale and first hydrolysis results and data will be available at the beginning of Q4 of 2012.

Other News

Biocat 2012: Autodisplay Biotech will present a poster at the 6th International Congress on Biocatalysis 2012 in Hamburg from September 2-6, 2012.

More information: <http://biocatconference.de/2012>

CIB Partnering Conference: Autodisplay Biotech will present the technology and co-operation opportunities at the CIB Partnering Conference in Frankfurt on September 20, 2012.

More information: <http://www.cib-frankfurt.de>

EFIB Conference: Autodisplay Biotech will talk on the financing and support of new start-up companies in the bio-based economy at the European Forum for Industrial Biotechnology in Dusseldorf on October 17, 2012.

More information: <http://www.efibforum.com>