

PRESS RELEASE

Enzymicals AG (Germany) expands enzyme business with (*R*)-selective transaminases – please visit the newly designed homepage of Enzymicals AG

Greifswald, June 21st, 2011 – Enzymicals AG, Germany, brings a spectrum of newly developed (*R*)-selective transaminases as a screening kit to the biotechnology market for broad implementation.

The basis of this technology is a license agreement for global use of these enzymes on a laboratory scale in patented processes of Lonza. Enzymicals has extended its enzyme portfolio by a very interesting class of enzymes which can be used for the synthesis of chiral amines for active pharmaceutical ingredients (APIs), agrochemicals and their chiral intermediates.

Most notably the enzymes contained in our kit show diverse properties, e.g. significant differences in substrate spectrum. This property allows a broad spectrum of applications to be addressed. Theoretically yields of 100% can be attained with the transamination reaction using ketones as substrates which obviates the need for additional chemical steps and expensive disposal of waste streams. The substrate ketones are also easily accessible in the chemical industry.

Process patents for transamination are also included in the licence agreement, which allows Enzymicals AG to carry out customer orientated laboratory testing. Enzymicals will carry out laboratory investigations to define process parameters for customised applications.

The company Enzymicals located in Greifswald (Germany) focuses on the production and sales of fine chemicals and biocatalysts for the synthesis of fine chemicals and process development. Techniques for the recombinant production of (*R*)-selective transaminases have already been developed during the long-term collaboration of Lonza AG and the

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research group of Prof. Uwe Bornscheuer from the Institute of Biochemistry at the University of Greifswald.

The market for chiral active APIs and agrochemicals accessible with this technology is very large at this time. Chiral amines are important building blocks for APIs such as anti-influenza agents or cholesterol blockers. Other applications are for the treatment of diabetes, thyroid dysfunction, ADHD- or Parkinson disease. In the latter case, most of the APIs are derived from the class of L-dopamine-decarboxylase inhibitors.

Chiral amine APIs have a market volume of millions of US-dollars. It is expected that the importance of the (*R*)-enantiomers will increase as they have been difficult to access until now with existing technologies.

Targeted production of (*R*)-enantiomers with a transamination process is ecologically and economically more friendly.

In addition to the launch of (*R*)-selective transaminases Enzymicals AG also expands its catalogue by other enzymes from the class of Baeyer-Villiger-monooxygenases (BVMO) along with screening kits for all available enzyme classes. Kits of each enzyme class contain 50 mg of each enzyme.

Ulf Menyés (CEO of Enzymicals AG) claims: "With the launch of the business with (*R*)-transaminases an important milestone in our future corporate development has been established. They are a valuable addition to our product portfolio, which includes other patented enzymes like PLE isoenzymes, several other esterases and a platform of Baeyer-Villiger-monooxygenases. The launch of the transaminase kits is a logical follow-up to our existing strategic cooperations with BRAIN AG, Zwingenberg, Germany, who have acquired a minority interest of Enzymicals, and the acquisition of proprietary rights for pig liver esterases (PLE) from Evonik AG."

A first portfolio of (*R*)-selective transaminases is now available in the enzyme product catalogue from Enzymicals and will be expanded significantly in the future. Please don't hesitate to visit the newly

designed homepage www.enzymicals.com or to contact Enzymicals directly.

About Enzymicals AG

Enzymicals AG was founded in August 2009 by the research group of Prof. Uwe Bornscheuer (chairman of the Enzymicals AG supervisory board, author and co-author of different books in the field of industrial biotechnology and winner of the BiocatAward2008). The company specializes in the enzymatic production of fine and speciality chemicals and the production and selling of biocatalysts. The interdisciplinary team of biochemists, biologists, synthetic and process chemists is led by Dr. Ulf Menyes (chemist) as chief executive officer (CEO) and Dr. Rainer Wardenga (biologist) as head of research and production (CSO). Within a short period of time, Enzymicals AG has already entered into numerous collaborations with leading corporations within the chemical industry and has established the conditions for production of enzymes and biotechnological syntheses of rare and fine chemicals in kg-scale.

www.enzymicals.com

Images (printing permitted provided source is acknowledged)

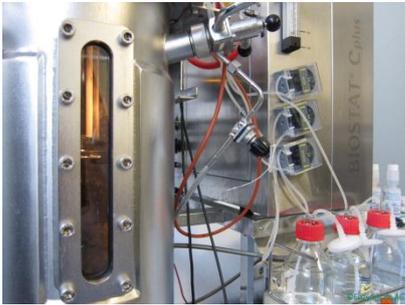


Image 1
A fermenter in Enzymicals AG for the production of enzymes



Image 2
Dr. Ulf Menyes and a coworker discussing a work-up procedure

Images and text are also available at www.enzymicals.com.