

PRESS RELEASE

Raising Efficiency within Biotechnological Steroid-Production:

BRAIN and Bayer Schering Pharma Co-operate

Zwingenberg and Bergkamen, February 02, 2010: BRAIN AG, an European leader in white biotechnology and the global top 10 pharmaceutical corporation Bayer Schering Pharma AG co-operate in the field of production process optimisation of steroid compounds. The goal of the collaboration is the energy-efficient and thus sustainable fermentative production of steroid compounds using optimised microbial production strains taking plant derived raw materials as starting material.

Plants and their containing steroidal components represent an economic and sustainable source of pharmaceutical raw material and intermediates. Today, for further optimisation of the steroidal intermediates, besides chemical methods more and more microbial processes as whole cell biocatalyst reactors are being used.

Within the strategic collaboration published today, existing production processes will be optimised using highly developed micro-organisms. With these so-called "designer bugs" it is the goal, to achieve a higher yield by a reduced energy input. This will lead to an increase of efficiency in the production process coupled to a reduction of the output of green house gases.

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„On a long term as a company we can only be successful, when our economic action is in line with the social interests of man and the ecological needs of our period“, stated Dr. Wolfgang Plischke, responsible for innovation, technology and environment within the managing board of Bayer AG. „Here the optimisation of our production processes to better energy efficiencies is the focus of our research and development activities. Within the complete corporation through the optimisation of our processes we expect a reduction of the green house gas emissions of round about 10 percent“.

“The industrial use of biotechnologically optimised micro-organisms will help us to improve the processes for the conversion of steroidal intermediates and to save resources“, says Dr. Simone Kardinahl, head of microbiological production und development within the Bergkamen plant of Bayer Schering Pharma AG. „The collaboration with BRAIN supports and accelerates our own development activities within this segment“.

„Modern molecular biology technologies within the field of Systems Biology enable us to selectively take action on the genome of existing production strains. Here single, the overall product yield limiting genes will be substituted or modulated. It is the goal of the collaboration to enable and to use these “designer micro-organisms“ in the production process for more efficient conversions of steroidal intermediates“, says Dr. Jürgen Eck, CTO of BRAIN AG. “For BRAIN the expansion of the collaboration with the leading industrial partner Bayer Schering Pharma AG is a continuation of the strategic co-operation business with globally successful partners.“

About BRAIN AG

BRAIN AG is an industrial “white” biotech company which discovers and develops novel bioactive natural compounds and proprietary enzymes for its partners and customers in the chemical and pharmaceutical industries, as well as the food and cosmetics industries. With its unique approach to the discovery and production of new biological compounds and biocatalysts, the company achieves creative solutions by harnessing nature’s untapped biodiversity. Its success is built on its proprietary BioArchive comprising millions of genes, proteins and metabolic pathways from microbial isolates and metagenome libraries. Since its foundation in 1993, BRAIN has entered into over 60 strategic collaborations with nearly all the relevant companies within the chemical industry as e.g. BASF, Ciba, Clariant, Evonik Degussa, DSM, Genencor, Henkel, Nutrinova, RWE, Sandoz, Schering, Südzucker and Symrise, to name but a few. Currently, BRAIN employs 80 highly skilled people. For his groundbreaking industrial biotechnology activities for a sustainable „biologisation of the chemical industry“ using nature’s toolbox for industrial processes, BRAIN CEO Dr. Holger Zinke received the “Deutschen Umweltpreis 2008” of the “Deutsche Bundesstiftung Umwelt”, DBU.

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About Bayer Schering Pharma

Bayer is a global enterprise with core competencies in the fields of health care, nutrition and high-tech materials. Bayer HealthCare is a subgroup of Bayer and is among the world’s foremost innovators in the field of pharmaceutical and medical products. The subgroup has four operating divisions: Animal Health, Bayer Schering Pharma, Consumer Care and Medical Care. This subgroup’s mission is to research, develop, manufacture and market innovative products that improve the health of people and animals throughout the world.

Bayer Schering Pharma is one of the ten largest specialty pharmaceutical companies in the world. They market their products in more than 100 countries, and in 2008 generated sales of over €10.7 billion. Approx. 38,000 members of staff currently work for Bayer Schering Pharma around the globe. The company concentrates research and business activities on four areas: Diagnostic Imaging, General Medicine, Specialty Medicine and Women’s Healthcare. Bayer Schering Pharma perches on innovations and wants to be globally leading with novel products in special markets. Thus Bayer Schering Pharma contributes to the medical progress and intends to improve the quality of life of man.

www.bayerscheringpharma.de

Photographs



Automated optimisation of biocatalytically active micro-organisms of the BRAIN-BioArchive using the ORCA-System.

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Aerial photograph of the Bayer Schering Pharma site Bergkamen, where the microbial steroid production is located.

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Please find the pictures and the text also on www.brain-biotech.de.