PRESS RELEASE

Research Alliance for the microbial production and application of biopolymers

Zwingenberg, Bönnigheim, Kelheim and Tübingen, 07.11.2013: The four partners BRAIN, the Hohenstein Institute, Kelheim Fibres and rökona, announce the formation of a new research alliance for the biotechnical production and modification of specialty alginates. The aim of the alliance is to establish a sustainable microbial bioprocess for the production of specialised alginate components. The biopolymers should serve a dual purpose: application in high-quality medical product matrices and within the innovative textile industry.

In addition to the Zwingenberg-based biotechnology company BRAIN AG, the research alliance involves the Hohenstein Institut für Textilinnovation gGmbH (Bönnigheim), the world's leading manufacturer of specialty viscose fibres Kelheim Fibres GmbH (Kelheim) and the manufacturer of highly specialised materials for medical technology rökona Textilwerk GmbH (Tübingen).

The biopolymer products will be used in both topical and wound-phase specific dressings, as well as for application-specific modification of matrices in technical textiles. Aside from high purity and more defined material properties of the biopolymer, the advantage of microbial pro-

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duction processes is an improvement in the environmental efficiency of products. Parts of the alliance research project will be co-financed by the Federal Ministry of Education and Research (BMBF) under grant number 013A126 and the acronym AlBioTex.

"Alongside our partners in the alliance, we want to build a high-quality bio-based matrix system and at the same time, a sustainable process in terms of the yield and techno-functionality of the biopolymers", explains Dr. Guido Meurer, Unit Head Microbial Production Technologies at BRAIN. “BRAIN has been an active researcher of innovative, supportive, bioactive substances for use in medical products for several years. These substances are then introduced into appropriate biological matrices and ultimately into modern wound dressings.“

The primary objective of BRAIN, alongside the Hohenstein Institute, is to develop microbial production organisms for application in industrial quantities of biopolymers in appropriate biofermentation processes on an industrial scale. These research results also assist in the common aim of developing innovative nonwoven materials.

"Until now, the variation and optimisation of the material properties of alginate was either not possible at all, or only possible with immense effort. Through the use of biotechnology, a differentiated use of alginates is made possible in the specialised textile field for the first time", says Dr. Timo Hammer, Head of Research in the Department of Hygiene, Environment and Medicine at the Hohenstein Institute, and coordinator of the AlBioTex project.

The partners Kelheim Fibres and rökona Textilwerk participate in the alliance by providing access to high-quality, homogeneous biopolymers. The plan is to develop functional textiles with new properties and to use them in pilot processes.

"The production of high-quality and homogeneous biopolymers is crucial for our functional viscose fibres based on renewable resources.

Various functionalities expand this range of innovative fibre properties for new high-tech applications", says Walter Roggenstein, Head of Research and Development at Kelheim Fibres GmbH.

"The joint research in these two fields, the textile and medical technology industries, is another prime example of the intensification of the biologisation of industries", concludes Dr. Holger Zinke, CEO of BRAIN, the motivation behind the research alliance. "Biological knowledge is the driving force of the bioeconomy and industrial biotechnology is one of its most important fields."

About BRAIN

BRAIN AG is one of Europe's technological leaders in the field of industrial „white" biotechnology. BRAIN identifies and develops innovative products and solutions based on previously untapped biodiversity for its partners and customers in the chemical, pharmaceutical, food and cosmetics industries. BRAIN's proprietary "BioArchive" consists of active biological compounds and is one of the largest archives of its kind. Since its foundation in 1993, BRAIN has entered into over 80 strategic collaborations with nearly all of the relevant companies within the chemical industry, such as BASF, Ciba, Clariant, Evonik, DSM, Genencor, Henkel, Nutrinova, RWE, Sandoz, Schering, Südzucker and Symrise, to name but a few. BRAIN currently employs 110 highly skilled people.
For their groundbreaking industrial biotechnology activities for the sustainable "biologisation of the chemical industry" using nature`s toolbox for industrial processes, BRAIN and its CEO Dr. Holger Zinke received the "Deutschen Umweltpreis 2008" of the "Deutsche Bundesstiftung Umwelt", DBU.

www.brain-biotech.de

About the Hohenstein Institute

Founded in 1946 as a family business, the Bönnigheim-based Hohenstein Institute is the leading independent research and testing facility in the textile sector, with a total of approximately 650 employees and over 40 offices worldwide. Its core competency is the practical research and development of innovative products and processes on one hand, and a wide range of textile testing and certification on the other, which is relied upon by numerous clients from trade and industry as a reliable basis for decisions regarding product development and marketing.
Through the interdisciplinary cooperation of textile engineers, chemists, physicians, biologists and physicists, the Hohenstein Institute is able to offer their customers a comprehensive, customised and complete service along the entire textile value chain, interweaving sectors depending on individual needs, all from a single source - from consultation to research and testing, through to education and training.
Research and development at the Life Science Department of Hygiene, Environment and Medicine is concerned with textile-related health issues. The focus is on the interactions of metals and products with people and the environment.

www.hohenstein.de

About Kelheim Fibres GmbH

Kelheim Fibres is the world's leading manufacturer of specialty viscose fibres. Kelheim combines advanced technology with technical expertise and outstanding customer service. Around 90.000 tons of viscose fibres are produced and tested at the Kelheim plant every year, which are then applied in a variety of product sectors. These high-quality fibres are exported to 44 countries across 5 continents. Innovation is the central focus.
Kelheim Fibres promotes development partnerships with its clients and uses the pilot plant in Kelheim to create perfectly tailored fibres. Manufacturers of various end products - from high-tech clothing, to hygiene products, to specialty paper - rely on these fibres and search alongside Kelheim Fibres for future-oriented solutions.

www.kelheim-fibres.com

About rökona Textilwerk GmbH

The Tübingen-based producer of technical textiles rökona Textilwerk GmbH, has already celebrated its 50th anniversary. Throughout its company history, rökona has evolved from an in-house supplier to an independent and strong company. The automotive sector is the company's largest area of expertise, covering, among other things, car roof liners and wind deflectors for convertibles, as well as shading for glass and sunroofs.
However, the company has a diverse customer base, including sportswear manufacturers, hospitals and interior and furniture designers. Rökona strives for the highest quality: this is demonstrated by numerous long-standing customers worldwide, in the automotive sector in particular, as this market is subject to the strictest specifications. However, leading functional clothing manufacturers also trust the ISO and Öko-Tex certified standards.

www.roekona.de