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## Press release

March 15, 2010

### **EuroBioRef: Merck strengthens biorefineries of the future**

Darmstadt, March 15, 2010 – In early March, the EU research project known as EuroBioRef\* was launched. Over the next four years, 28 partners from 14 countries will jointly develop future-oriented solutions for the energy-efficient conversion of biomass from agricultural feedstock into final commercial products. The objective is to increase the energy and resource efficiency of the European chemical industry. Merck KGaA is playing an important role here. Within the scope of the project, the company is developing a new generation of ionic liquids.

#### **Ionic liquids – a pioneering technology**

Merck has been conducting intensive research in the field of ionic liquids for ten years. Their use in processing biomass is new. New valuable products such as butanol and other higher alcohols are to be extracted from diluted aqueous solutions with the aid of ionic liquids. The process used will have a significantly better energy balance sheet than that of conventional distillation production processes. Ionic liquids are salts that are liquid at temperatures below 100°C. As a result, they increase the efficiency of the processes used to make butanol while lowering the cost.

*\* EuroBioRef is being supported with funding from the European Commission's 7<sup>th</sup> Framework Program (FP7/2007-2013) under contract number 241718.*

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### Building a bridge between industry and research

The EuroBioRef project is bringing together leading European biochemical companies, universities and research institutes to exploit valuable synergies in the development of sustainable biorefinery processes. Investment costs, production times and logistic efforts will be significantly reduced, while raw material and production unit flexibility, reaction and separation performance will be increased. In this way, the economic efficiency of European biorefineries is to be increased by 30% and their energy consumption reduced by 30%. The focus is additionally on the ability to adapt to the infrastructure of local markets in order to minimize risks for investors and to promote the pan-European introduction of new biorefinery processes. "The project builds a much-needed bridge between business and research in order to quickly and readily apply bio-based processes with future potential to develop new, valuable products," emphasized Dr. Michael Schulte, Senior Director Research & Development, Merck KGaA.

More information is available at [www.merck-chemicals.de](http://www.merck-chemicals.de)

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Merck is a global pharmaceutical and chemical company with total revenues of € 7.7 billion in 2009, a history that began in 1668, and a future shaped by approximately 33,000 employees in 61 countries. Merck's success is characterized by innovations from entrepreneurial employees. Merck's operating activities come under the umbrella of Merck KGaA, in which the Merck family holds an approximately 70% interest and shareholders own the remaining approximately 30%. In 1917, the U.S. subsidiary Merck & Co. was expropriated and has been an independent company ever since.