

# News Release



## **BASF showcases pharmaceutical solutions along entire value chain at CPhI Japan 2009**

- **Pharma ingredients and custom synthesis services for better drugs**
- **High-end intermediates for the pharmaceutical industry**
- **Innovative inorganic specialties**
- **Tokyo International Exhibition Center (Tokyo Big Sight), April 21-23, Booth D-14**

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Tokyo, Japan – April 20, 2009 – BASF, the world's leading chemical company, will present its extensive expertise to support Japan's pharmaceutical industry across the entire pharmaceutical value chain at CPhI Japan 2009.

"With our comprehensive portfolio and technical expertise at every stage, we provide the support Japanese customers need across the entire value chain," said Mr. Tomoyoshi Naruo, President, BASF Japan.

### **Custom Synthesis: Tailor-made to customer requirements**

BASF's experts offer support throughout the entire drug lifecycle – from kilo laboratory to commercial production, from the early clinical phase to market launch and even when the drug becomes generic. At flexible multiproduct plants in Germany, France and Switzerland, BASF uses its unique chemical know-how as well as a broad portfolio of basic technologies and differentiation technologies. All the essential processes can be carried out respecting current good manufacturing practices (cGMP).

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### **Excipients: Highly functional and innovative**

BASF offers a wide range of high-performance excipients for producing drugs. These include binders and disintegrants from the Kollidon® family, the Kollicoat® coating polymers including Kollicoat® IR, innovative instant-release film coatings registered in Japan and a number of other excipients, particularly including solubilizers.

### **Active Ingredients: Reliable quality**

BASF provides active pharmaceutical ingredients for many therapeutic applications, making it the global leader for the substances caffeine, ibuprofen, pseudoephedrine and theophylline.

Product properties, including processability of the active ingredients, are constantly being enhanced. For example, BASF has developed Ibuprofen DC 85 with a functional particle film. This ensures a more robust formulation during subsequent processing, simplifies production and thus helps to save costs.

### **BASF Intermediates focus on pharma**

BASF has one of the most extensive technology platforms for manufacturing chiral and achiral specialties for the chemical and life science industries. These include classic technologies, for example hydrogenation, hydroamination, ethynylation, vinylation and phosgenation, as well as special technologies like electrochemistry, high-pressure reactions, state-of-the-art biocatalytic processes and the use of ionic liquids. Examples of achiral products are specialty amines, vinyl compounds, chlorcarbonyl derivatives and heterocycles. Under the ChiPros® brand, BASF provides its customers with a wide and growing portfolio of chiral amines, beta-amino acids, amino alcohols, aromatic and aliphatic alpha-hydroxy acids, alcohols and epoxides.

To expand its ChiPros portfolio, BASF has developed a new class of enzymes that can be utilized at the industrial scale. These specifically modified biocatalysts are called enoate reductases. The asymmetric bioreactions catalyzed by enoate reductases take place at room

temperature and standard pressure. By being highly selective, they yield particularly high-quality products. This allows a very efficient process for producing chemically sophisticated chiral molecules of outstanding optical purity.

As the first company to establish an industrial process using ionic liquid, BASF has developed the Basonics portfolio of ionic liquids offering a broad variety of properties. Ionic liquids can be used as reaction media to re-design chemical processes. Depending on the application, they can increase the chemical selectivity and yield, speed up the process. As a result, they can reduce the process cost and waste and hence increase eco-efficiency

### **From lab to launch: Inorganic specialties**

BASF offers its customers an extensive portfolio of inorganic chemicals with a strong focus on reagents for organic synthesis. The wide selections of alcoholates are used as strong bases and catalysts. Boron reagents are increasingly used in pharmaceutical synthesis for highly selective reactions and for the Suzuki cross-coupling chemistry. Boron trifluoride gas and complexes serve as Lewis acid catalysts and Hydroxylamine and its derivatives find wide applications in organic synthesis. These innovative products can increase chemical selectivity and yield, speed up the process, resulting reduced process cost and waste.

BASF continuously works on the expansion of its inorganic specialty portfolio. BASF presents innovative solutions targeted to pharmaceutical, contract research and manufacturing companies. Recent examples include hydroxylamine-O-sulfonic acid, a versatile aminating agent and the protected hydroxylamine derivative O-Benzylhydroxylamine hydrochloride. PEMB (5-ethyl-2-methylpyridine borane), a new reagent for reductive amination adds the benefits of an easy to handle liquid, increased safety as well as reactivity in protic solvents to the well established Calselect STAB product.

BASF recently launched a new line of organozinc halide reagents that are currently not available on large scale. These organometallic reagents undergo Negishi cross-coupling reactions that allow for the synthesis of complex molecules for pharmaceutical and agricultural applications, as well as polymer synthesis. Organozinc halide reagents can react with a variety of organic electrophiles in the presence of transition-metals such as copper, palladium, and nickel. This reactivity, combined with the unparalleled functional group tolerance, will allow access to complicated API structures without the need for protecting functional groups through tedious synthesis steps, increasing overall synthetic efficiency.

#### **About BASF in Japan**

BASF started business in Japan in 1888. BASF Group in Japan consists of seven companies with BASF Japan Ltd as the core. Activity covers five business segments that include Chemicals, Plastics, Functional Solutions, Performance Products and Agricultural Solutions. Main production sites in Yokkaichi (thermoplastic polyurethanes (TPU) and polymer dispersions), Chigasaki (admixtures for concrete, construction chemicals) and Totsuka (coatings). Application technology laboratories in Greater Nagoya Technical Center, serving Japan and Asia with paper chemicals, pigments, functional polymers (dispersions), engineering plastics, and fuel cell application development. In 2008, BASF in Japan achieved sales of 1.5 billion € with 1,500 employees. For further information please visit: [www.japan.basf.com](http://www.japan.basf.com)

#### **About BASF**

BASF is the world's leading chemical company: The Chemical Company. Its portfolio ranges from chemicals, plastics and performance products to agricultural products, fine chemicals and oil and gas. As a reliable partner BASF helps its customers in virtually all industries to be more successful. With its high-value products and intelligent solutions, BASF plays an important role in finding answers to global challenges such as climate protection, energy efficiency, nutrition and mobility. BASF posted sales of more than €62 billion in 2008 and had approximately 97,000 employees as of the end of the year. Further information on BASF is available on the Internet at [www.basf.com](http://www.basf.com).