News Release

Pharma Solutions: BASF at CPhI Worldwide

- **Pharma ingredients and custom synthesis services for better drugs**
- **High-end intermediates for the pharmaceutical industry**
- **Higher efficiency with BASF catalysts technology**
- **Innovative inorganic specialties**

BASF will be presenting its extensive expertise for supporting pharmaceutical industry customers at "CPhI Worldwide," the "Convention on Pharmaceutical Ingredients and Intermediates" that will take place in Frankfurt, Germany, from September 30 through October 2. The corporate exhibit at Booth 30B04, in Hall 3.0, will bear the motto "Pharma Solutions from BASF." The company develops, produces and markets a broad range of active ingredients and excipients, as well as exclusive custom synthesis services for nearly all segments of pharmaceutical manufacturing.

Custom Synthesis: Tailor-made to customer requirements

BASF produces customized active ingredients and advanced intermediates exclusively and in complete confidence for pharmaceutical companies. 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. All along, BASF uses its unique chemical know-how as well as a broad portfolio of basic

September 3, 2008
P 402/08 e

Meet us at CPhI
Sept. 30 – Oct. 2,.2008
Hall 3.0, Booth 30B04
Messe Frankfurt, Germany

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technologies and differentiation technologies. This includes, for example, phosgene and azide chemistry, asymmetric hydrogenation and low-temperature reactions. In more than 600 cubic meters of flexible multiproduct reactors in Germany, France and Switzerland, all the essential processes can be carried out respecting current good manufacturing practices (cGMP).

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 and a number of other excipients particularly including solubilizers. The product range fulfills all functional and regulatory requirements for the production of tablets, sprays or drops.

As one of the first suppliers worldwide, BASF is also committing itself, voluntarily, to comply with the requirements of cGMP with regard to the manufacture of excipients. At the sites in Ludwigshafen (Germany) and Geismar (USA) production meets the strict quality standards of the United States Pharmacopeia (USP). The excipients made at these sites were certified under the new “USP Excipient Verification Program.” With this commitment to the USP’s stringent requirements, BASF is providing assurance to its customers in the pharmaceutical industry and thus, ultimately, to the patients who take medication. Up until now, the production of pharmaceutical excipients has not been subject to the same strict guidelines as active ingredients.

Active Ingredients: Reliable quality

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

globe can be supplied with products of consistently high quality from a total of six production facilities.

Product properties, including processability of the active ingredients, are constantly being enhanced. For example, BASF has covered the active ingredient in 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.

For more information, go to www.pharma-ingredients.basf.com.

BASF Intermediates focus on pharma

In BASF's Intermediates division, a growing global team of pharmaceuticals experts works to meet the special requirements of this industry. The team supports the growth of its customers at all stages of the market and offers highly dependable supplies. These services include established and newly developed BASF products.

A globe-spanning network of production sites gives maximum flexibility in supplying standard intermediates. 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 by adding chiral aldehydes, ketones, esters and nitro compounds, BASF has developed a new class of enzymes that can be utilized at the industrial scale. These specifically modified biocatalysts, which the company has patented, are called enoate reductases. The asymmetric bioreactions catalyzed by enoate reductases take place at room temperature and standard pressure and, by being highly selective, yield particularly high-quality products. This allows a very efficient process for producing chemically sophisticated chiral molecules of outstanding optical purity.

Apart from chiral and achiral specialties, BASF Intermediates has many other products in its wide-ranging portfolio of more than 600 intermediates that are essential for the pharmaceutical industry. For example, the company manufactures tetrahydrofuran (THF), N-methylpyrrolidone (NMP) and pharma-grade diazabicycloundecene (DBU Pharma) to the excellent quality standards required in the sophisticated production processes of the pharmaceutical industry.

BASF has expanded its offer for the chemical intermediate THF, a valuable solvent for pharmaceutical applications, specifically for its pharma customers in Europe. The package is marketed under the heading “THF Solutions.” In addition to “THF Pharma,” the package comprises a THF grade with an even lower water content (“THF Pharma super dry”) and a new initiative aimed at taking back used THF (“THF life-cycle solution”). High-purity THF is especially well suited for use in those new and complex water-sensitive reactions occurring frequently in the production of active pharmaceutical ingredients.

A selection of customized services completes the pharma offer of BASF’s Intermediates division. Examples include support in the implementation of REACH, quality management audits, help with

toxicological and analytical questions, and even with product safety issues.

For more information, please go to http://www.basf.de/intermediates.

Catalysts for environmental and chemical applications

With its Catalysts division, BASF is one of the world's leading suppliers of environmental and process catalysts. The company offers exceptional expertise in the development of technologies that protect the air, produce fuels and ensure efficient production of a wide variety of chemicals, plastics and adsorbents.

This year's focus is on two environmentally friendly catalysts from BASF's NanoSelect technology platform: the lead-free Pd-based NanoSelect LF 100 and NanoSelect LF 200 catalysts. Characterized by similar activity and selectivity in specific hydrogenation reactions, these new heterogeneous catalysts are an environmentally compatible alternative to Lindlar catalysts. The new BASF catalysts are also designed to achieve significant cost savings by using approximately 10-times lower amounts of precious metals.

BASF continually develops new intelligent solutions based on the latest catalyst technologies for its customers. The company delivers these "Enabling Technologies" to the fine chemical, pharmaceutical and agrochemical markets to make its customers more successful in their dynamically changing environments. The portfolio of enabling technologies, including precious metal and base metal hetero- and homogeneous catalysts and metal scavenging materials, is continuously strengthened by focused R&D and licensing of new technologies.

For more information, please go to www.catalysts.basf.com.

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, including alkali metals for reductions, alcoholates used as strong bases and catalysts, boron trifluoride and a wide range of liquid boron trifluoride complexes that serve as Lewis acid catalysts, borane chemicals for highly selective reductions and hydroborations, new boron products that support the rapidly growing chemistry technology known as Suzuki coupling, as well as hydroxylamine and its derivatives which are used for organic synthesis.

Driven by customers' needs BASF continuously works on the expansion of its inorganic specialties portfolio and presents innovative solutions targeted at pharmaceutical as well as contract research and contract manufacturing companies. Recent examples of new product launches include hydroxylamine-O-sulfonic acid, a versatile aminating agent, O-benzylhydroxylamine hydrochloride as well as a new reagent for reductive amination in protic solvents, 5-ethyl-2-methylpyridine borane (PEMB).

Recently, BASF launched a new line of commercial scale organozinc halide reagents – made under an exclusive license from Rieke Metals, Inc. of Lincoln, Nebraska, USA – at the Organic Process Research & Development (OPRD) Conference held on June 23-26 in Montreal, Canada.

These organometallic reagents undergo cross-coupling reactions that allow for the synthesis of complex molecules for pharmaceutical and agricultural applications, as well as polymer synthesis.

Organometallic compounds such as Grignard reagents are well-established and widely used as intermediates in organic synthesis, but due to their high reactivity, they previously have shown limited ability to possess desirable functional groups. With the addition of the organozinc halide reagents, BASF is now able to offer new solutions for carbon-carbon bond cross-coupling reactions that are currently not available on a large scale.

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.

BASF also provides regulatory support and pharmaceutical development services. Providing full analytical support, BASF has the facilities to generate all the relevant safety and toxicology parameters. The services the company offers thus help its customers to be more successful.

For more information, please go to www.inorganics.basf.com.

About BASF

BASF is the world's leading chemical company: The Chemical Company. Its portfolio ranges from oil and gas to chemicals, plastics, performance products, agricultural products and fine chemicals. 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 has more than 95,000 employees and posted sales of almost €58 billion in 2007. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (AN). Further information on BASF is available on the Internet at www.basf.com.