

News Release

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BASF strengthens biotechnology footprint to enter natural F&F ingredients market

- BASF acquires aroma biotech innovation leader Isobionics
- BASF partners with Conagen, a leader in biotechnology research
- Market entrance with biotech-based natural vanillin, valencene and nootkatone

By acquiring Isobionics, an innovation leader in biotechnology which is serving the global market for natural flavors and fragrances (F&F), and through a cooperation agreement with Conagen, a leader in biotechnology research, BASF enters the market for natural F&F ingredients. Being known as a leading supplier of synthetic aroma ingredients, the company now broadens its portfolio with natural ingredients such as vanillin, nootkatone and valencene. BASF intends to advance the technology for biotech-based aroma ingredients by combining its own R&D excellence and broad market access with the know-how and expertise of Isobionics and Conagen.

"Reflecting the potential of changing consumer habits and the scarcity of natural ingredients, the strengthening of our biotechnology footprint is at the heart of BASF's strategy," says Melanie Maas-Brunner, who leads BASF's Nutrition & Health division.

Acquisition of Isobionics

"The Flavor & Fragrance industry is experiencing an increasing need for natural ingredients," says Julia Raquet, who heads BASF's Aroma Ingredients business. "But fluctuating product quality, availability and sustainability are constant challenges for our customers. By entering the market with biotechnology-based aroma ingredients, we intend to provide our customers with high-quality products to respond to the current market challenges."

"BASF is known for its high-quality standards, traceability and excellent regulatory know-how," says Toine Janssen, founder of Isobionics. "By combining our biotechbased product portfolio and strong development pipeline with BASF's expertise and its global market reach, we can provide the natural aroma ingredients market with even more innovations – and boost our growth."

Isobionics is a biotech-based aroma ingredients company, located in Geleen, the Netherlands. The company develops and produces a wide range of natural ingredients for the F&F market with a focus on citrus oil components such as nootkatone and valencene. Isobionics, with all its employees, will become part of BASF's Aroma Ingredients business.

Cooperation agreement with Conagen

Besides acquiring Isobionics, BASF signed a cooperation agreement with Conagen, a research leader in the field of biotechnology. Through this partnership, BASF will be able to serve the market with natural vanillin, one of the aroma ingredients with the highest market demand.

The natural vanillin that BASF initially markets is based on ferulic acid sourced from rice and therefore named Natural Vanillin F. With its clean vanillin character, Natural Vanillin F is ideal for all flavor applications, such as chocolate, strawberry and caramel, while maintaining an "all-natural" labeling.

Conagen has strong R&D and commercialization capabilities for fermented ingredients. Fermentation is an ancient cultural technique well known from processes like brewing beer and baking bread. It uses microorganisms like e.g. bacteria or fungi to convert one substance into another.

BASF's Nutrition & Health division furthermore recently established a global business unit dedicated to the research and production of enzymes, which can be used as natural processing aids or ingredients for a large variety of applications in food, feed and technical industries.

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About BASF's Nutrition & Health division

BASF Nutrition & Health provides a comprehensive product and service portfolio for the human and animal nutrition, pharmaceutical, ethanol and flavor & fragrance industries. Together with our customers, we play an active role in enhancing the nutrition, health and wellbeing of consumers all over the world. Our products fulfill the highest safety, regulatory and sustainability standards. Our human nutrition solutions include vitamins and carotenoids, plant sterols, lutein and sterol esters, emulsifiers, high-concentrated omega-3 fatty acids, human milk oligosaccharide and peptides. Vitamins and carotenoids also form an important part of our animal nutrition portfolio, as do other feed additives such as trace elements, enzymes and organic acids. We provide the pharmaceutical industry with a broad range of excipients and selected large-volume active pharmaceutical ingredients such as ibuprofen and omega-3 fatty acids. Leveraging our advanced technology, we create high performance industrial enzymes for different markets, such as ethanol production. Furthermore, we offer aroma ingredients such as citral, geraniol and L-menthol. BASF Nutrition & Health operates sites in Europe, North America, South America and in Asia-Pacific. For more information, go to <u>www.basf.com</u>.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 122,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of around €63 billion in 2018. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com.