

# News Release

# Ashland opens pharmaceutical technical center in Shanghai Senior leaders showcase a state-of-the-art facility

SHANGHAI, CHINA, October 26, 2016 – After one year of construction and a month to fine-tune new equipment, Ashland put on display its Pharmaceutical Technical Center in Shanghai, formally opening the facility today following a major upgrade. The state-of-the-art complex now accommodates all of the scientists and equipment Ashland requires to solve complex challenges for China's producers of solid dosage forms.

Doubling the size of the original complex built in 2008, Ashland is now able to provide a range of pharmaceutical technical services to create and apply specialized chemistry in ways that enable customers to amplify the **efficacy**, refine the **usability**, add to the **allure**, ensure the **integrity**, and improve the **profitability** of their products and applications. These include binding enhancement, disintegration improvement, modified release, solubilisation and film coating in China, to help companies operating in the country to improve the performance of tablets and other solid dosage forms.

Speaking to an audience of more than 80 guests during a dedication ceremony, Ashland's Chairman and Chief Executive Officer, William A. Wulfsohn, expressed the extra value that the company brings to China's pharmaceutical industry with an advanced facility and technical team firmly grounded in science-based solutions.

"The grand opening of Ashland's pharmaceutical technical center is a testament to the demand for our scientists and process engineers who can look at a problem from a molecular perspective and move it all the way to a formulation and manufacturing solution," said Wulfsohn. "It is our sincere hope and expectation that this newly expanded facility will be the site of many comprehensive solutions that further advance the pharmaceutical projects of our customers in China."

Ashland currently operates three pharmaceutical technical centers throughout the world, including one in Wilmington, Delaware (USA), and one in Hyderabad, India. All three facilities operate individually – and in tandem – for the benefit of Ashland's customers working regionally or globally.

## Solving complex problems

One of the major challenges in the pharmaceutical industry is the rise of complex drug molecules that require new approaches to oral drug formulation and manufacturing. Scientists at Ashland's Shanghai facility now use more advanced equipment on site to help customers in Asia enhance the solubility and bioavailability of sophisticated drugs

with novel applications of excipients – the inactive but functional substances that serve as drug delivery systems.

David Neuberger, Vice President of Pharmaceutical, Nutrition and Agricultural Specialties expressed the importance of a full-service laboratory in Shanghai that enables the full and proper use of Ashland's excipients in today's more complicated world of oral drug formulating.

"Understanding excipient technologies and how they work within the context of specific drug molecules is our bailiwick," said Neuberger. "Bringing that specialized expertise to our newly expanded pharmaceutical technical center in Shanghai, and adding the equipment we need to work alongside our customers, is a 'healthy' development for Ashland and China's pharmaceutical industry."

Among the equipment Ashland now has in place at the state-of-the-art facility are granulation, tableting and coating systems. The company also has in place pilot-scale manufacturing methods for continuous processing of oral dosage forms, such as hot-melt extrusion and spray drying of solid dispersions.

"Everything is now in place to perform all critical drug-excipient analysis and relevant trials pertaining to our customers' projects in Asia," added Neuberger.

Ashland, the producer of some of the world's leading brands of excipients, also opened its first excipient production facility on the continent of Asia yesterday. The company is set to produce its Klucel™ HPC, Plasdone™ PVP, and Polyplasdone™ PVPP brands at its Nanjing complex.

For more information about new state-of-the-art pharmaceutical technical center in Shanghai, contact Walter Liu, pharmaceutical R&D manager, Greater China, at wliu@ashland.com, or visit Ashland online at Ashland.com/pharmaceutical.

### **About Ashland**

Ashland Global Holdings Inc. (NYSE: ASH) is a premier, global specialty chemicals company serving customers in a wide range of consumer and industrial markets, including adhesives, architectural coatings, automotive, construction, energy, food and beverage, personal care and pharmaceutical. At Ashland, we are more than 5,000 passionate, tenacious solvers – from renowned scientists and research chemists to talented engineers and plant operators – who thrive on developing practical, innovative and elegant solutions to complex problems for customers in more than 100 countries. Ashland also maintains a controlling interest in Valvoline Inc. (NYSE: VVV), a premium consumer-branded lubricant supplier. Visit ashland.com to learn more.

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