12 July 2017

# NEWS RELEASE

**Innomech develops pilot-scale production system for Aston Particle Technologies**

Automation consultancy GB Innomech (Innomech) has designed and developed a pilot-scale production system for Aston Particle Technologies (APT) that will help the company accelerate the commercialisation of its innovative dry particle coating technology for use within the pharmaceutical industry.

APT is developing a one-step particle engineering technology to enable 'challenging' active pharmaceutical ingredients to be dry powder coated onto carrier particles: without needing heat, solvents or pressure. Target applications for this processing technology breakthrough include the development of new dry powder inhaler formulations, improving the solubility of poorly water-soluble drugs, and developing taste-masking solutions for bitter-tasting drugs.

Innomech has designed the new easy-to-use system to process up to two kilograms of pharmaceutical powders which is a 100-fold increase on the capacity of APT's existing lab-scale, proof of principle equipment. The system provides a fluidised environment for particle contact and adsorption of cohesive material over coarse particles without the need for solvent and heat. Pressure and temperature sensors, and an ultra-efficient heat exchanger are used to monitor and maintain the required process conditions.

A touchscreen integrated with a recipe-based control system allows operators to quickly and easily call up and store the required process conditions for specific production batches. The system has been designed for easy cleaning and maintenance by minimising the surfaces and gas flow paths that come into contact with pharmaceutical powders, and it uses a HEPA filtration system to ensure operator safety.

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"Innomech is the perfect system development partner for Aston Particle Technologies because of its extensive knowledge and experience in developing equipment for use in pharmaceutical and medical device manufacturing environments. The company's new pilot-scale system will allow us to demonstrate the scalability of our technology and to carry out further process development studies for a range of pharmaceutical applications," said Professor Afzal Mohammed, CTO and founder of Aston Particle Technologies.

APT is a spin-out from The School of Pharmacy at Aston University that was founded in 2016 with seed investment and a major Innovate UK grant. The company's CEO Dr Ian Smith, who is also one of its three founders, previously led the inhalation and device product development groups at both Glaxo and Pfizer. He also helped to found and lead the Cambridge-based drug delivery company Meridica, which specialised in the development of inhaler and intranasal technologies, and was subsequently bought by Pfizer, one of the world's five largest pharmaceutical companies.

**Notes to editors:**

**About GB Innomech**

GB Innomech (Innomech) specialises in automating highly complex and labour-intensive manufacturing processes to maximise outputs, improve product quality and boost business performance. The company works with major international manufacturers in sectors such as pharmaceuticals, medical devices and environmental, as well as earlier-stage businesses looking to bring breakthrough technologies or products to market.

Innomech has a growing market reputation for solving the toughest of manufacturing problems by the early identification and management of risk, often cross-fertilising technologies and techniques from a range of industry sectors. All projects from initial feasibility studies through to building production-scale machines are conducted to high specification pharmaceutical industry standards and are designed to comply with GAMP5, FDA and other international standards.

The company was founded in 1990, is based at The Innovation Centre in Witchford, north of Cambridge and was awarded The Queen's Award for Enterprise 2009 to recognise its sustained growth in international markets.

For additional information about GB Innomech please visit or contact:

- www.innomech.co.uk
- Press enquiries to Simon McKay on +44 (0)1353 741075 or email to simonmckay@innomech.co.uk
- All other enquiries to Adrian SC Brown at Innomech on +44 (0)1353 667394

**About Aston Particle Technologies**

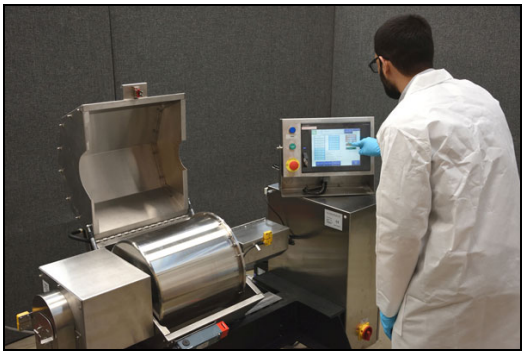
Aston Particle Technologies is a spin-out from the School of Pharmacy at Aston University and was founded in 2016 with seed investment together with an Innovate UK grant.

The company is developing a cost-effective, one-step particle engineering technology that uses a novel dry powder coating technique to process drugs without the use of solvents, heat or pressure. The company's patented technology enables 'guest' particles to adhere onto the surface of 'carrier' particles, and is being developed to deliver enhanced particle properties for challenging drugs (eg heat or moisture sensitive) without compromising their innate properties.

Target applications include: improved dry power inhaler formulations; increasing the solubility of poorly water-soluble drugs; taste-masking solutions; and developing materials with enhanced functionalities.

For further information see: www.astonparticletechnologies.com

**Photographs**
Print quality JPEGs of the images below have been attached to the original email or are available on request from Simon McKay (details above). Alternative images can be supplied.



1 Innomech's new pilot-scale production system for Aston Particle Technologies (APT) features a touchscreen recipe-based control system so operators can easily and quickly call up and store the required process parameters for specific production batches of pharmaceutical powders.

2 The new pilot-scale production system can process up to 2 kilograms of pharmaceutical powders which will enable APT to demonstrate the scalability of its technology and to carry out further process development studies for a range of pharmaceutical applications.


3 This image shows key staff from APT taking delivery of their new pilot-scale production system that will help the company to accelerate the commercialisation of its innovative dry particle coating technology for use within the pharmaceutical industry.
The image shows [from the left]: Professor Afzal Mohammed, CTO and founder; Dr David Wyatt, chief operating officer; Dr Eman Dahmash, chief scientific officer and founder; and Jasdip Koner, senior researcher at APT with Dr Peter Woods, engineering and programme manager at Innomech.

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