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A*STAR leads S$34 M initiative with pharma giants and universities

16 October 2018 | News

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Singapore - To drive the transformation of the local pharmaceutical manufacturing industry and pre-position it for the future economy, the Agency for Science, Technology and Research (A*STAR) has initiated the **Pharma Innovation Programme Singapore (PIPS)** in partnership with the National University of Singapore (NUS); the Nanyang Technological University (NTU Singapore); the Singapore Institute of Technology (SIT); and leading pharma companies GlaxoSmithKline (GSK), MSD International GmbH (Singapore Branch), and Pfizer Asia Pacific Pte Ltd.

The members of PIPS inked a consortium agreement valued at S$34 million on 16 October 2018 at the Industrial Transformation Asia-Pacific trade show. PIPS brings together Singapore's public sector research capabilities and key global players in the pharma industry in a pre-competitive manner to transform the manufacturing operations and technologies of the industry for greater efficiencies.

The pharmaceutical manufacturing industry currently contributes over 3 percent to Singapore’s GDP. There are around 30 pharmaceutical manufacturing facilities in the country employing more than 7,000 people, with a combined output of around S$17 billion worth of products for global markets. Eight of the top 10 pharmaceutical companies in the world have facilities in Singapore, and four of the top 10 drugs by global revenue are manufactured here. Since 2000, the sector’s manufacturing output today has grown by more than 3 times.

However, globally the sector is facing sustained pressures on drug pricing, changing expectations of payors, and mounting competition in emerging markets. It is therefore critical for pharmaceutical manufacturing to look at increasing productivity and operational efficiency through leveraging advances in manufacturing technologies and data analytics.

The PIPS consortium will therefore focus on areas such as continuous manufacturing, bio-catalysis, advanced process control and process analytical technology, digitalisation, and enhanced pharmaceutical operations.

The aim is to raise the bar of pharma manufacturing, including more sustainable manufacturing processes and the speedier production of active pharmaceutical ingredients, which will allow drugs to reach patients' bedsides quicker.

"In pharmaceutical manufacturing today, we are witnessing a global shift towards a diverse mix of specialised drugs produced in low volumes, plus increases in pricing pressures and quality demands. A*STAR is working closely with leading multinationals and local institutes of higher learning through the Pharma Innovation Programme Singapore (PIPS), to meet these new requirements by transforming how drugs are manufactured. Industry 4.0 initiatives such as process automation, smart manufacturing and digitalisation through the Industrial Internet of Things (IIoT) will be test-bedded through PIPS projects. We are providing the platform to build a well-connected pharma manufacturing ecosystem that catalyses collaboration and drives the strategic evolution of pharma manufacturing capabilities in Singapore", said Professor TAN Sze Wee, Executive Director, Science & Engineering Research Council, A*STAR.

PIPS is also engaging extended members including MNCs, LLEs, and SMEs that are technology enablers and can add value to the consortium. These companies will work closely with the innovative pharma companies to build a well-connected pharma manufacturing ecosystem that catalyses collaboration and drives the strategic evolution of pharma capabilities in Singapore.