BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

GE Healthcare, A*STAR co-develop innovative medical technologies

04 May 2018 | News

The collaboration taps on Singapore's strengths in research and development, and contributes to the growth of MedTech innovation in Asia and around the world.

GE Healthcare and the Agency for Science, Technology and Research (A*STAR) have announced the co-development of innovative medical technologies that will aid healthcare providers worldwide to deliver faster and more accurate diagnoses, improve treatment strategies, and achieve greater productivity in workflow.

Leveraging GE Healthcare's expertise in medical and information technologies, and A*STAR's capabilities in data analytics and high-performance computing, both parties have developed technological advancements in imaging diagnostics and patient monitoring. These developments are the result of a five-year joint research and development collaboration that was initiated in 2014.

The new technologies have been built into GE Healthcare's products across a range of different patient care equipment and applications, with others in the process of being implemented into GE Healthcare's solutions globally. Some of these innovations are available in GE Healthcare equipment in Singapore, the United States, Europe, China and Japan.

Demand for quality healthcare in Asia is on the rise against the backdrop of an ageing population, a growing middle class, and the prevalence of chronic diseases. The MedTech market in Asia is expected to grow at a compound annual growth rate of 8 per cent, to become the second largest in the world by 2020. Medical innovations are therefore increasingly important to elevate the standards of healthcare and deliver greater value to patients.

Imaging technologies, such as Positron Emission Tomography (PET), Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) scans, are integral to healthcare systems. They help doctors detect, diagnose and monitor medical conditions, from neurological disorders, heart disease to cancer, at their early stages.

One of the new solutions jointly developed by A*STAR and GE Healthcare teams improves the PET scan procedure using high performance computing, enabling quicker scans and shorter waiting time for patients at hospitals and clinics. The feature involves a more streamlined digital PET image reconstruction which results in a reduction of approximately 15 minutes off the existing workflow which would typically take almost 40 minutes to complete. In August 2017, RadLink Asia, a wholly-owned subsidiary of Fullerton Health, invested in the GE Healthcare digital PET/CT scanner that features this improvement.

“After the new digital PET/CT scanner was installed at our flagship diagnostic center last year, we were able to increase our rate of scanning patients by 20 per cent. Technology innovations are key to addressing the rising demand for healthcare in Singapore and Southeast Asia. We are committed to continue investing in technology to deliver world class diagnostic services to our patients and physicians,” said Royston Lek, Country Managing Director of Fullerton Health Singapore.

Other innovations improve image reconstruction algorithms in CT scans which could bring less image distortion and higher quality of scanned images, and include a technological platform that supports decision-making for stroke treatment. The partnership also developed more robust wireless communication technologies to improve remote patient monitoring, which has become increasingly important in ambulatory patient care (See Annex A and B for details).

As part of the collaboration, GE Healthcare and A*STAR are developing a pipeline of digital solutions, including a diagnostic imaging system for Parkinson’s Disease and advanced capabilities for surgery motion tracking.

The expanding partnership is a testament to Singapore’s rich and robust MedTech ecosystem, and strength as a hub for high-tech innovation. From 2000 to 2015, Singapore’s MedTech manufacturing value-add grew from $0.8 billion to $3.5 billion. Singapore is also home to over 60 multinational MedTech companies which engage in activities such as manufacturing, and research and development.

Michael Barber, President and CEO, Molecular Imaging and Computed Tomography at GE Healthcare, said, “Singapore is at the forefront of medical innovation and R&D, and we value the opportunity to work with Singaporean organisations like A*STAR to develop the next generation of healthcare technology. Leveraging both our strengths has not only resulted in new innovations to GE’s solutions, they are helping to address the fast-growing healthcare needs of Southeast Asia and the world.”

Dr Benjamin Seet, Executive Director, Biomedical Research Council (BMRC), A*STAR, said, “Digital technology will disrupt and transform healthcare. Our partnership with GE Healthcare is a clear demonstration of how open innovation can work to develop cutting-edge solutions that have already benefited patients. This not only brings value to our partners, but provides tangible benefits for Singapore’s research, innovation and enterprise (RIE) and healthcare systems.”