

MEDIA RELEASE

29 October 2014

A*STAR'S INSTITUTE OF MICROELECTRONICS AND SINGAPORE BIOMICRO TO DEVELOP A FIRST-OF-ITS-KIND, IMPLANTABLE WIRELESS BLOOD GLUCOSE MONITORING SENSOR DEVICE

New device will allow diabetics to conveniently and accurately monitor their blood glucose levels without the daily invasive tests.

Singapore – A*STAR's Institute of Microelectronics (IME) and local biotechnology firm Singapore Biomicro Pte Ltd today announced they are collaborating to develop a new wireless blood glucose monitoring device that will dramatically improve the lives of those afflicted with diabetes.

Blood glucose monitoring is an integral part of successful diabetes management to prevent or delay the onset of long-term diabetes-associated complications such as heart disease, kidney failure and nerve damage.

However, to monitor their blood glucose levels, diabetics currently have to contend with the hassle and discomfort of daily finger-prick blood tests.

The A*STAR-Biomicro partnership aims to eliminate this routine by developing an implantable blood glucose monitoring device. Once surgically implanted into the patient, it will automatically monitor and transmit readings wirelessly to an external reader.

This collaboration will allow Singapore Biomicro to tap on IME's expertise in integrated circuits, sensor interfaces, wireless charging and connectivity technologies to develop the device.

Specifically, IME's capabilities are integral to the development of an application-specific integrated circuit (ASIC) or microchip that will enable ultra-low power signal acquisition and highly-efficient wireless data transmission.

IME will also work with Singapore Biomicro on the integration of the ASIC with glucose sensors and miniaturised antennas to build a functional prototype of the implantable wireless blood glucose sensor device.

According to statistics from the Diabetic Society of Singapore, one in nine Singaporeans aged 18 to 69 are afflicted with diabetes, which translates to approximately 11.3% of the local population, or more than 400,000 people.

“Technology advancements, coupled with increasing adoption of wireless healthcare devices are optimising patient care. It is encouraging to see Singapore companies capitalising on this market potential and to improve the lives of diabetics globally. Singapore Biomicro’s research partnership with IME will help pioneer a new approach to blood glucose monitoring and improve the quality of life for diabetics,” said Prof. Dim-Lee Kwong, Executive Director of IME.

“This collaboration between Singapore Biomicro and IME will create a world-class diabetes monitoring system. We are confident that the partnership will lead to significant breakthroughs in device development for blood glucose monitoring that will have an important impact on healthcare service around the world,” said Mdm Long Qiongzhen, Chairman of Singapore Biomicro.

For more information, please contact:

Jessica Sasayiah
Senior Officer, Corporate Communications
Institute of Microelectronics, A*STAR
Tel: +65 6770 5376
Email: sasayiahj@scei.a-star.edu.sg

Dr. Geoffrey Lim
Chief Financial Officer
Singapore Biomicro
10 Anson Road,
22-14 International Plaza, Singapore 079903
Tel: +65 62215989
Fax: +65 62213565

About the Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is Singapore's lead public sector agency that fosters world-class scientific research and talent to drive economic growth and transform Singapore into a vibrant knowledge-based and innovation driven economy.

In line with its mission-oriented mandate, A*STAR spearheads research and development in fields that are essential to growing Singapore’s manufacturing sector and catalysing new growth industries. A*STAR supports these economic clusters by providing intellectual, human and industrial capital to its partners in industry.

A*STAR oversees 18 biomedical sciences and physical sciences and engineering research entities, located in Biopolis and Fusionopolis, as well as their vicinity. These two R&D hubs house a bustling and diverse community of local and international research scientists and engineers from A*STAR's research entities as well as a growing number of corporate laboratories.

For more information on A*STAR, please visit www.a-star.edu.sg.

About the A*STAR Institute of Microelectronics (IME)

The Institute of Microelectronics (IME) is a research institute of the Science and Engineering Research Council of the Agency for Science, Technology and Research (A*STAR). Positioned to bridge the R&D between academia and industry, IME's mission is to add value to Singapore's semiconductor industry by developing strategic competencies, innovative technologies and intellectual property; enabling enterprises to be technologically competitive; and cultivating a technology talent pool to inject new knowledge to the industry. Its key research areas are in integrated circuits design, advanced packaging, bioelectronics and medical devices, MEMS, nanoelectronics, and photonics.

For more information about IME, please visit www.ime.a-star.edu.sg.

About Singapore Biomicro Pte. Ltd

Singapore Biomicro Pte. Ltd. is oriented for the development and marketing of bio-medical related monitoring and treatment systems and the services. Its engineering team includes a group of experts and scientists in electronic engineering field, bio-medical system design and manufacturing field. After a number of years of research and development, its transdermal implantable glucose monitoring system has completed 3-year tests in UCHC in US and now we are working with Abbott, UCHC to bring the fully implanted glucose monitoring system, "Glucochip" to the real world.