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Biobot Surgical builds on robotics

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To overcome the limitations of minimally-invasive surgery and to enhance the capabilities of surgeons, late Prof Ng Wan Sing, founder and head of the Computer Integrated Medical Intervention Laboratory of the Nanyang Technological University in Singapore, embarked on a research to develop a minimally-invasive surgical robot for prostate biopsy in 2001.

Later, he was joined by Prof Christopher Cheng of Department of Urology, Singapore General Hospital, to develop iSR'obot. They completed its prototype unit in 2004 and started undertaking clinical tests on the prototype, BioXbot, in 2006. Dr Li Deli joined the partnership as a principal research fellow in the project. With the objective of taking the product to the market in 2007, Dr Li along with late Prof Ng Wan Sing founded Biobot Surgical (BBS), as a company specializing in research and development, manufacturing and supply of minimally-invasive surgical robotics. BBS' technologies are the result of its founders' combined experience of over 16 years in engineering and designing urological devices and robotics.
The company received the BioSpectrum Asia Pacific Biosience Industry Emerging Company of the Year Award for 2012.

The iSR'obot is a generic intelligent digital surgical platform that lays the foundation for surgical automation. BBS has developed an ambitious technology roadmap to develop various surgical applications from this platform, and is currently in research collaboration with various local and overseas research institutions and hospitals. Out of the many exciting products developed in BBS, iSR'obot Mona Lisa is the first robot to hit the market.

BBS received a grant from SPRING, Singapore under Technology Enterprise Commercialization Scheme to aid application and commercialization of BioXbot, commercially known as iSR'obot Mona Lisa. "So far, we have invested over $3.97 million," says Mr Yap Chew Loong, CEO, Biobot Surgical, who joined the company in November 2011.

The patented technologies for the iSR'obot Mona Lisa are shared among Singapore Health Services (SingHealth), Nanyang Technologies and BBS. The techologies are fully licensed to BBS on a worldwide basis. In 2010, with investments from Zicom Group and key private investors, BBS commenced its route to commercialization.

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The iSR'obot Mona Lisa has obtained regulatory approvals from Health Sciences Authority (Singapore), Food and Drug Administration (US), Therapeutic Goods Administration (Australia), CE Mark (Europe) and Bureau of Pharmaceutical Affairs (Taiwan). However, more clinical trials are being undertaken to enhance and strengthen the reliability and aesthetic design of the product over the next nine months before BBS is ready to initiate market launch and to enter series production.

Sharing his thoughts on the future plans for the company, Mr Yap says, "We are currently focusing on working with SGH clinicians to complete clinical trials and product improvement over the next nine months. We are looking at market launch by early 2013.