

Life Science research to benefit as global genomics specialist formalises ties with sandstone universities

Brisbane will today (eds: Friday, May 26) become home to the world's most advanced genomics sequencer – a machine that will help unlock secrets to save the reef, improve grain production, refine medical diagnostics and safeguard the health of elite athletes.

Developed by Chinese global genomics giant BGI, the first [BGISEQ-500 genomics sequencers](#) to arrive in the southern hemisphere will operate from the company's new Australian headquarters at the Queensland Institute of Medical Research at Herston.

This morning a special on-site ceremony is marking the official launch of BGI's first southern hemisphere genomics laboratory, the unveiling of its cutting-edge sequencer plus the formalising of critical research partnerships with two of the country's leading universities, University of Queensland and University of Melbourne.

Ahead of the event, BGI's Executive Vice-President, Duncan Yu, said BGI Australia's research would be "focused on health, medicine, environment and agriculture, due to the plentiful resources in the country, and with the strong support from our partners and integration of our expertise".

"We have made significant progress with local partners – such as QIMR, The University of Queensland, Griffith University, James Cook University, The University of Melbourne and The University of Western Australia – on topics including cancer treatment, biodiversity, infectious disease and millet breeding," Mr Yu said.

"With the opening of our Brisbane laboratory, we look forward to building more extensive collaborations with Australian organisations to advance further innovation and deliver valuable outcomes."

Professor Robin Gasser, Director of Research at the University of Melbourne's Veterinary School, said he was delighted with the agreement with BGI being signed today: "We're very excited about the consolidating our co-operation and collaborations, which we initiated in 2009, and are focused on translating –omics research into new and improved tools to control parasitic diseases." The two parties aim to build a comprehensive, world-class program and joint-centre in infectious diseases. The relationship will also include a network of international partners as well as educational exchanges between BGI and the university.

The University of Queensland Centre for Advanced Imaging's Director, Professor David Reutens, said the research collaboration with BGI was unique and was set to boost the centre's research, development and commercialisation.

"It will combine anatomical imaging data from Australia's first ultra-high field 7T MRI with whole genome sequencing data from participants who have intractable focal epilepsy," Professor Reutens explained. "By using this approach, we aim to develop early diagnostic tools for this debilitating disease and for range of other clinically significant disorders.

"Strong industry collaborations such as this mean that world-class CAI research has a better chance of being commercialised and contributing to advances in medicine around the world."

Earlier this week, QIMR Berghofer Medical Research Institute Director and CEO Professor Frank Gannon welcomed the opening of BGI Australia's laboratory.

"BGI is a world leader in the field of genomics," Professor Gannon noted. "We are very pleased to have their Asia-Pacific headquarters based at QIMR Berghofer and we look forward to collaborating with them on cutting-edge research into precision medicine and genome sequencing."

– 2 –

In late 2016, BGI Australia and QIMR signed a [memorandum of understanding](#) for genomics research that will facilitate both precision medicine and education exchanges.

Much of the projects to flow from all of BGI Australia’s arrangements with leading research and industry teams will utilise its new BGISEQ-500 sequencer.

From a small slide containing a sample of genetic material from any living organism – for example, coral, millet, animal or human tissue – this device can provide a complete genetic map that allows BGI scientists to identify the important characteristics hidden inside DNA.

According to BGI Australia’s director, Dr Bicheng Yang, the BGISEQ-500 will analyse genetic materials more accurately, flexibly, effectively and at a lower cost.

“We know from our years of experience in applying sequencing technologies that these features are of great value to the research and medical communities when assessing sequencing capability,” Dr Yang explained.

Dr Yang and Mr Yu are this morning welcoming Queensland’s Health Minister, Cameron Dick, the Consul for Science and Technology, the Consulate General of China in Brisbane Mr Anming Feng and more than 100 guests plus invited media to BGI’s new facility for its celebrations.

Attendees learn about BGI’s:

- infrastructure and capability to “store, read and write” genomic resources for beneficial human health, agriculture, biodiversity and conservation
- contributions to decoding more than 70 per cent of the genetic codes for major crops
- completion of more than 2 million prenatal genetic tests globally
- international work on sequencing the SARS virus and participating in Ebola research
- prospects for increased employment in Queensland
- mutually beneficial partnerships and scientific and research projects that will benefit Australia.

BGI Australia already has four genomics research agreements in place – with Griffith University (sports health and recovery), James Cook University (marine biology and biodiversity), Sterhr Group (aquaculture sustainability) and the University of Western Australia (agriculture).

While BGI’s global headquarters are in the busy south-eastern Chinese metropolis of Shenzhen, the company operates in more than 100 countries with more than 5000 employees and has, to date, processed more than 1 million research samples and almost 5 million clinical samples.

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News eds: Media information kit and photographs available if required.

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