



Media Release

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Bioelectronics research boosted by new NICTA laboratory

To support the development of an advanced bionic eye and to consolidate Australia's leadership in bioelectronics research, NICTA, Australia's ICT Research Centre of Excellence, is establishing a bioelectronics laboratory in Melbourne.

"We are founding the NICTA Bioelectronics Laboratory to address the many research opportunities and challenges raised by the convergence of biology and electronics," said NICTA CEO Dr David Skellern. "We are particularly interested in developing exciting next-generation technologies using our expertise in the design of extremely low-powered wireless systems." These future technologies will support the development of intelligent systems to remotely monitor patient health and treat a variety of disorders. The laboratory will be located at NICTA's Victoria Research Laboratory premises.

The NICTA Bioelectronics Lab will include advanced software tools for nano-scale electronic circuit design and equipment to test the performance of devices. "We are excited that the Bioelectronics Lab will allow us to meet our commitment to our partners in the Bionic Vision Australia (BVA) consortium to develop a tiny, wireless retinal implant for the bionic eye," said Professor Stan Skafidas, leader of NICTA's bionic eye research and head of the NICTA Bioelectronics Lab. "This project will demonstrate the critical role advanced electronics will play in developing this breakthrough biomedical technology."

"The collaboration between biology and electronics is capable of developing new and disruptive technologies that will benefit everyone," Professor Skafidas added. "In the future, our new lab will also have the capacity to develop a range of diagnostic tools, such as a 'lab on a chip', which will have applications across many fields of medicine." 'Lab on a chip' is a microchip that can perform chemical analysis of biological systems, such as blood.

NICTA Victoria Research Laboratory Director Professor Rob Evans welcomed the announcement. "The Bioelectronics Laboratory will make many important contributions to innovation and new technology development. It will also train the future generation of bioengineers, who will help maintain Australia's leadership in medical research."

Today's announcement coincides with the *2010 BIO International Convention* in Chicago, where the Governor of Victoria, Professor David de Kretser AC, is leading a consortium of Victorian investors and biotechnology companies. NICTA is represented at the event.

The first project that the NICTA Bioelectronics Laboratory will support is the development of the electronics for the second prototype retinal implant device being developed by BVA, a consortium of research institutes that received \$42 million in funding from the Australian Government for the development of a bionic eye. NICTA aims to develop a device containing over 1,000 electrodes which will operate wirelessly and be ready for first human implant in 2014. The other members of the BVA are the University of Melbourne, the University of New South Wales, the Bionic Ear Institute, and the Centre for Eye Research Australia.

About NICTA

National ICT Australia Ltd (NICTA), Australia's Information and Communications Technology (ICT) Research Centre of Excellence, is developing technologies which will meet the current and future needs of the community in fields which will lead to large economic, social and environmental benefits for Australia. NICTA has five laboratories around the country. Since NICTA was founded in 2002, it has created four new companies, developed a substantial technology portfolio of patent applications and continues to supply new talent to the ICT industry through the NICTA-enhanced PhD program.

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