



Bio21 Institute Update

A quarterly review of highlights and news

Issue 6, June 2010



Message from the Director, Professor Tony Bacic.

In recent months, the Bio21 Institute has made major advances in terms of our organisational and research governance. We welcome to the role of Deputy Director Professor Malcolm McConville, a current member of the Institute's Management Advisory Committee and research group leader with the Department of Biochemistry and Molecular Biology. Working closely with the members of the Institute's Management team, Malcolm will help deliver our strategic and operational plans.

Following the Institute's establishment of three key themes to help focus our research efforts, we are pleased that Malcolm has also agreed to take on the role of Associate Director of the Structural Biology research theme. Alongside Malcolm, we also welcome, Dr Spencer

Williams as Associate Director for the Chemical Biology theme and Professor Paul Mulvaney as Associate Director Nanobiotechnology. These appointments will help steer our research directions and outcomes that reflect University, National and State research priorities.

In June, a new centre based at Bio21 - The Victorian Centre for Aquatic Pollution Identification and Management - will focus on research into aquatic pollution in our waterways. Led by Professor Ary Hoffmann and Dr Vincent Pettigrove, researchers from the University's Zoology Department will work with partner organisations Melbourne Water, Department of Primary Industries (Vic), EPA Vic and RMIT, to tackle these environmental issues.

On an international front, we have strengthened our links with Korea's Centre for Biopharmaceutical Research and Human Resources Development at Soon Chun Hyang University with the signing of a Memorandum of Understanding. The non-binding agreement will facilitate cooperation in areas mutually beneficial to the centres.

The Bio21 Institute was pleased to host an important event to celebrate the contribution of philanthropists Sir Russell and Lady Grimwade. In recognition of their significant contribution towards the construction of the original Biochemistry and Molecular Biology Building and their support for the funding of the Grimwade Research Fellowship, laboratories located in the Department of Biochemistry and Molecular Biology section at Bio21 have been officially named "The Grimwade Research Laboratories".

Finally, we are excited to have been successful in our bid to manage the Australian Government's TechNyou Outreach Program, a program which clearly aligns with our own commitment to community engagement. Tony



Prestigious awards go to Chemists @ Bio21. Congratulations to the School of Chemistry's Professor Tony Wedd and Professor Mark Rizzacasa for receiving top Royal Australian Chemical Institute's (RACI) awards. Professor Tony Wedd has been awarded the Burrows Medal, the prestigious Inorganic Award of the RACI. Tony will be presented with the Burrows Medal at the upcoming 39th International Conference on Coordination Chemistry in Adelaide and will give the plenary lecture to the conference. Professor Mark Rizzacasa has been awarded the AJ Birch Medal for 2010. The AJ Birch Medal is the premier award of the Organic Division of the RACI. Mark will be presented with the Birch Medal at the upcoming RACI 2010 Convention in Melbourne. [Read more](#) about research groups at Bio21 Institute.

Images: (L) Professor Tony Wedd (R) Professor Mark Rizzacasa

New research centre to revolutionise waterway pollution management. The Victorian Centre for Aquatic Pollution Identification and Management (CAPIM) was officially launched by The Hon. Gavin Jennings, Minister for Environment, Climate Change and Innovation at Bio21 Institute. The centre will take a novel approach to tackling aquatic pollution in Victoria's inland waters and estuaries with its main research centre located at the Institute. The University of Melbourne, with CAPIM Research Director Professor Ary Hoffmann and CEO Dr Vincent Pettigrove, will lead the centre with experts from Melbourne Water, Department of Primary Industries (Vic), Environment Protection Authority (Vic), and RMIT. Research activities will include identifying pollutants and potential pollution hot spots, identifying sources and impacts of pollutants, developing and deploying mitigation strategies and ongoing monitoring of the waterways. CAPIM will receive \$2.94 million of Victorian Science Agenda Investment Funding over three years from 2010, with additional funding being contributed by partners Melbourne Water, DPI Victoria and EPA Victoria. [Read more](#)



Image: Chief Minister of Johor with Institute Director Professor Tony Bacic

International delegations visit Bio21. The Institute was pleased to host a number of distinguished guests and delegations as part of their international visits to the University of Melbourne. They included the Chief Minister of Johor, Malaysia, accompanied by a senior delegation of industry and business leaders, Senior Executives of the University of Birmingham and the High Commissioner of the Republic of Singapore, His Excellency Mr Albert Chua. Guests were briefed on the Institute's vision and objectives and were hosted on tours of our centre. A key focus of the High Commissioner's visit was to meet Singaporean students at Bio21. Students from both Biochemistry and Molecular Biology and the Dental Science CRC were able to talk about their studies and experiences.

Bio21 Industry member, Sienna Cancer Diagnostics, receive \$200,000 to help commercialize innovative cancer diagnostic test. Sienna, received one of 21 Commercialisation Australia grants. The funding will help the company accelerate development of their telomerase diagnostic tests. Sienna aims to provide faster, non-invasive, inexpensive and reliable tests for a range of different cancer indications. Based on the telomerase work of 2009 Nobel Laureate and University of Melbourne alumna, Professor Elizabeth Blackburn, Sienna are working toward licensing their technology in 2011, and offering a product to the global market in 2012. Sienna's offices and laboratories are located in the Bio21 Institute's Business Incubator – a facility setup to nurture smaller and emerging biotech companies providing them with resources that aim to enhance their operations and capabilities, access to state-of-the-art technologies and technical expertise, and a mutual network of research expertise fostering collaborations and sharing. [Read more.](#)



Students tour Bio21's Electron Microscopy Unit. University of Melbourne Science Masters students visited the Institute's Electron Microscopy (EM) Unit for a tour as part of the subject "Microscopy for Biological Sciences". The visit complemented the lecture delivered by Unit Manager, Dr Eric Hanssen on 3D EM. The 48 students, split into two groups, were shown the potential of the unit's EMs – nano fabrication for the Nova dual beam, surface observation for the Quanta environmental scanning and 3D electron microscopy for the Tecnai F30 cryo transmission. Over two and half hours, students were introduced to each microscope with some students being lucky enough to "pilot" a microscope. Students and staff enjoyed the experience and the Unit eagerly awaits the next

batch of Master students. [Read more](#) about the EM Unit and other Platform Technologies at Bio21 Institute.

Image: EM Unit Manager Dr Eric Hanssen with Masters students

Successful tender announcement for TechNyou Outreach Program. Bio21 Institute was successful in their tender to manage the Australian Government's TechNyou Outreach Program for the next 18 months. "The Bio21 Institute has an ongoing commitment to community engagement and the opportunity to facilitate this important community program is a logical fit with our own goals and activities," explains Professor Tony Bacic, Bio21 Institute Director. TechNyou is an initiative of the Australian Government's Department of Innovation, Industry, Science and Research (DIISR) to provide information to the Australian public on emerging technologies such as bio- and nanotechnologies. TechNyou provides balanced and factual information on the science and associated issues, along with opportunities for the public to engage with scientists and other experts on the potential uses for these technologies. [Read more.](#)



Probus group visit to Bio21. The Institute in conjunction with TechNyou was pleased to host members from Glenferrie's Probus Club. Probus is an association of active retirees who join together in clubs, providing them with opportunities to keep their minds active, expand their interests and to enjoy the fellowship of new friends.

During their visit the group learnt about our research and visited facilities including the EM and Mass Spectrometry hosted by facility managers, Drs Eric Hanssen and Nick Williamson. They also heard from Paul Mulvaney on the work of the Centre for Nanoscience and Technology and Shayne Bellingham on research related to neurodegenerative diseases. [Read more](#) about TechNyou.

Image: The Probus Group with Mass Spectrometry & Peptide Synthesis Manager, Dr Nick Williamson

Bio21 researchers receive Australian Academy of Science (AAS) research program grants. Dr Bryan Fry, Associate Professor Andy Hill (Department of Biochemistry and Molecular Biology) and Dr George Khairallah (School of Chemistry), were among sixty-nine Australian scientists awarded grants to undertake international collaborative research under the AAS International Science Linkages – Science Academies Program. The program supports international collaboration with partners on leading edge science and technology. Their respective projects and destinations are: Dr Fry – Temperature specific adaptations of Antarctic octopus venoms at the University of Hamburg, Germany, Associate Professor Hill – Investigating the role of the prion protein as a receptor for Abeta oligomers at the University of Padova, Italy and Dr Khairallah – Gas-phase uni- and bi-molecular studies on metallic and organometallic systems at the Université Pierre et Marie Curie, France.