

## Bioplatforms Network – NSW Nodes

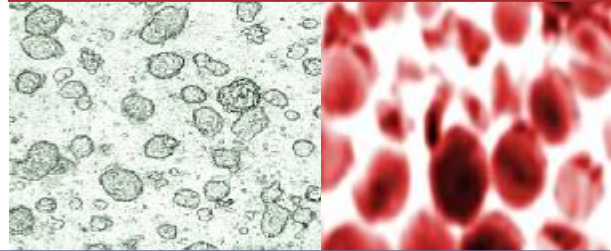
National Collaborative Research Infrastructure Strategy (NCRIS) program

### Bioplatforms Australia

Formed in 2007 and managed through a new co-ordinating body, BioPlatforms Australia (BPA) is a national body that will deliver services in the specialist areas of genomics, proteomics, metabolomics and bioinformatics. The national network of universities and research institutions has a total funding of cash and in-kind contributions of approximately \$158 million from government and universities partners, under the Commonwealth Government's National Collaborative Research Infrastructure Strategy (NCRIS) program. This includes the \$4 million in financial funding from the NSW Government through the Science Leveraging Fund towards the NSW nodes of the network.

### Benefits to Industry

- § Genomics
- § Proteomics
- § Metabolomics
- § Bioinformatics



The benefits for research in Australia include:

- combining resources through a comprehensive national research network;
- affordable access for scientists to state-of-the-art research technology;
- increased communication between scientists; and
- helping Australian scientists remain competitive and world leaders in the international research community



### Objectives

*Research infrastructure that is open to researchers, industry and government*

The objective of this network is to make available research infrastructure for use by researchers, industry and government to advance our understanding of genes, proteins and metabolites, the key building blocks to life on Earth. These advances will have various applications in medical, agricultural, environment and life science research, examples of which could include developing new drugs to combat disease or improving crop varieties.

## Proteomics and Metabolomics

NCRIS investment in proteomics will support research into protein structure and function, with NCRIS and NSW Government funding, it will build on the on the existing capability at the Australian Proteome Analysis Facility (APAF) which is headquartered at Macquarie University.



National NCRIS proteomic partners include: Macquarie University, University of New South Wales, TGR Biosciences (SA); Monash University (VIC) and Queensland Institute of Medical Research (QLD).

Metabolomics and proteomics analysis will be supported by the Bioanalytical Mass Spectrometry Facility (BMSF), located at the University of New South Wales. BMSF is a unique Australian centre of advanced mass spectrometric equipment and expertise underpinning NSW and Australia biomedical research. BMSF is part of the APAF node and NCRIS and NSW Government funding have been allocated to increase capacity in analytical services, method development and clinical trial services.

Research infrastructure includes:

Australian Proteome Analysis Facility	§	Edman N-Terminal Sequencing Capacity
	§	Amino Acid Analysis
	§	Carbohydrate Chromatography
	§	High Performance Liquid Chromatography
	§	High Abundance Protein Depletion Technology
	§	MALDI TOF Mass Spectrometry
	§	Electrospray MS/MS
	§	Q-Trap MS
	§	Electrospray Q-TOF MS
	§	2-Dimensional Electrophoresis
	§	Bioplex Technology
	§	High Throughput Sample Handling Robotics
Bioanalytical Mass Spectrometry Facility	§	Fourier transform MS/MS
	§	LC-MS/MS
	§	Electrospray Q-TOF-MS
	§	2-Dimensional Electrophoresis

Please direct your enquiries for proteomics to Professor Mark Baker (APAF) at [m.baker@proteome.org.au](mailto:m.baker@proteome.org.au)

Please direct your enquiries for metabolomics to Professor Michael Guilhaus (BMSF) at [m.guilhaus@unsw.edu.au](mailto:m.guilhaus@unsw.edu.au)

## Bioinformatics

SLF and NCRIS investments in bioinformatics capability are delivered through the newly formed Systems Biology Centre, headquartered at the University of New South Wales. Its charter is to provide bioinformatics guidance and support to users of the NCRIS funded bioplatforms facilities. Its focus is on issues of experimental design, data analysis and biological contextualisation.

Systems Biology Centre	§	Provides bioinformatics guidance and support to users of the NCRIS funded bioplatforms facilities
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Please direct your enquires to Professor Mark Wilkins at [m.wilkins@unsw.edu.au](mailto:m.wilkins@unsw.edu.au)

## Genomics



Investment in Genomics infrastructure to support gene discovery and genome analysis will be delivered in NSW through:

- Ramaciotti Centre for Gene Function Analysis at the University of New South Wales; and
- The Centre for Plant Conservation Genetics at Southern Cross University

The Ramaciotti Centre, based at the University of New South Wales, was established in 2000 as a focus for the development and application of Functional Genomics in NSW. The Centre is a consortium of five universities and five medical research institutes located in the Sydney/Newcastle region.

Ramaciotti Centre for Gene Function Analysis	§ Provides microarray services
	§ Provides bioinformatics support needed to process the extensive data generated
Centre for Plant Conservation Genetics	§ This node provides platforms for the application of expression profiling for gene discovery and breeding selection, especially in plants.

Please direct your enquiries to Professor Ian Dawes (Ramaciotti) at [i.dawes@unsw.edu.au](mailto:i.dawes@unsw.edu.au)

Please direct your enquiries to Professor Robert Henry (CPCG) at [robert.henry@scu.edu.au](mailto:robert.henry@scu.edu.au)

## Would you like some further information?

### NSW Department of State and Regional Development

For more information about the Department, the NSW Government's economic development agency, please visit : [www.business.nsw.gov.au](http://www.business.nsw.gov.au)

### NSW Office for Science and Medical Research

The Office for Science and Medical Research (OSMR) works with research institutes, universities and businesses to promote growth and innovation in science and medical research to achieve better economic, technological, health and environmental outcomes for NSW. For more information on OSMR, visit: [www.osmr.nsw.gov.au](http://www.osmr.nsw.gov.au)

### NSW Government Statement on Innovation

The NSW Government Statement on Innovation outlines the NSW Government plans to enhance industry innovation as a means of improving productivity and increasing business investment. A copy of the statement can be downloaded from: [www.nsw.gov.au/thankyou.asp?linkid=7119](http://www.nsw.gov.au/thankyou.asp?linkid=7119)

Visit the Department of State and Regional Development's innovation website at: [www.business.nsw.gov.au/innovation](http://www.business.nsw.gov.au/innovation)

### Bioplatforms Australia

For more information on Bioplatforms Australia, visit their website at: [www.bioplatforms.com](http://www.bioplatforms.com)

### National Collaborative Research Infrastructure Strategy (NCRIS)

For information about NCRIS visit the Commonwealth Department of Innovation, Industry, Science and Research (DIISR) at: [ncris.dest.gov.au](http://ncris.dest.gov.au)