

Summary of Linkage Infrastructure Applications for Funding to Commence in 2006

South Australia

The University of Adelaide

LE0668093 Prof A Cooper; A/Prof MP Schwarz; Prof SC Donnellan

Approved Project Title **Expansion and enhancement of the South Australian Regional Facility for Molecular Ecology and Evolution and the Australian Centre Ancient DNA**

2006 : \$115,000

Primary RFCD 2702 GENETICS

Partner Organisation(s)

The University of Adelaide
The Flinders University of South Australia
South Australian Museum

Administering Institution The University of Adelaide

Project Summary

Provision of dedicated instruments for contemporary and ancient/fragmentary DNA analyses will provide numerous opportunities for innovative research solutions in basic biology, archaeological, agricultural, biomedical, forensic and environmental sciences. No similar combination of facilities currently exists in the Australian region severely curtailing and jeopardising the quality of current and proposed research programs. The facilities will underlie innovative approaches to research in National Research Priorities 1 and 4 - An Environmentally Sustainable Australia and Safeguarding Australia

LE0668294 Prof SD Tyerman; Dr BN Kaiser; Prof MA Tester; Prof A Bacic

Approved Project Title **Isotope Ratio Mass Spectrometry Facility for Nitrogen and Water Analysis in Plants**

2006 : \$110,000

Primary RFCD 3002 CROP AND PASTURE PRODUCTION

Partner Organisation(s)

The University of Adelaide
The University of Melbourne
The Australian Centre For Plant Functional Genomics

Administering Institution The University of Adelaide

Project Summary

Continual improvement to agricultural plant production is key to maintaining future sustainable growth in Australian agriculture. Our respective research teams are focussed on improving how plants utilise both nitrogen and water. Many questions remain with respect to where, how and when plants use and or access these important nutrients. The proposed facility will enable plant scientists to begin in-depth analysis of both nitrogen transport mechanisms and the ability to model root development and water allocation in crop species. This research will ultimately lead to improved knowledge on how plants respond to their environment and where modifications can be made to generate sustainable crops suited to Australian agriculture.

LE0668520 Prof AG Williams; A/Prof MA Buntine; Dr PD Coddington; A/Prof DB Leinweber; Dr FA Vaughan; Dr CA Abbott; Prof JH Bowie; Prof MI Bruce; Prof DE Catcheside; Prof GC Dandy; Dr J Denier; Prof GB Fincher; A/Prof AR Gerson; Prof CH Hansen; Prof P Langridge; Prof WD Lawrance; Prof SF Lincoln; Dr GF Metha; Prof TM Monro

Approved Project Title **South Australian Supercluster Facility**

2006 : \$560,000

Primary RFCD 2506 THEORETICAL AND COMPUTATIONAL CHEMISTRY

Partner Organisation(s)

The University of Adelaide
South Australian Partnership for Advanced Computing (SAPAC)
The Flinders University of South Australia
University of South Australia

Administering Institution The University of Adelaide

Project Summary

This project will maintain and build on existing excellence and strength in areas ranging from computational chemistry, bioinformatics, and plant functional genomics through to water resources management, fluid dynamics and novel fibres and materials for photonics. It will enable the development of cutting edge computational tools and techniques and will maintain and grow strong international links. It will produce graduates of the highest quality able to use advanced computing to solve real-world problems. The training provided and the tools and techniques developed will bring major economic benefits and provide excellent links to Australian industry.