

Summary of Linkage Infrastructure, Equipment and Facilities Proposals

Western Australia

The University of Western Australia

LE0882893 Prof CA Atkins; Dr OK Babourina; Dr BC Baer; Dr PL Clode; Dr KW Dixon; Prof SA Dunlop; Dr H Eubel; Dr L Filgueira; Dr MR Kilburn; Prof SP Klinken; Prof JJ Kuo; A/Prof NG Laing; Prof PJ Leedman; Dr M Ludwig; A/Prof DJ Macey; Prof AH Millar; Dr F Pixley; Dr M Saunders; Prof K Siddique; Prof Dr K Sivasithamparam; A/Prof TG St Pierre; Prof RC Thompson; Prof JM Whelan; A/Prof MH Zheng; Dr M Ziman

Approved Project Title **A cryopreparation facility for Western Australia**

2008 : \$ 260,000

Primary RFCD 2701 BIOCHEMISTRY AND CELL BIOLOGY

Partner Organisations & Collaborating Organisations

The University of Western Australia

Murdoch University

Edith Cowan University

Administering Organisation The University of Western Australia

Project Summary

Western Australia is home to a number of world-leading biological and biomedical research groups and some of the best microscopy facilities in the country. Establishing a world-class cryopreparation facility in WA will enable local researchers to remain at the forefront of their research fields and will serve to attract additional high profile international scientists and students to WA. Significant research advancements in areas such as genetic muscular diseases, nerve regeneration, parasitic infection in humans, crop optimisation and tolerance to environmental conditions, and animal growth and reproduction, will result from the establishment of such a facility.

LE0882792 Prof DG Blair; Prof J Munch; Prof DE McClelland; Dr L Ju; Dr C Zhao; A/Prof PJ Veitch

Approved Project Title **High Power Laser, Test Masses, Digital Control System and Vacuum System for High Optical Power Interferometry Experiments**

2008 : \$ 600,000

Primary RFCD 2499 OTHER PHYSICAL SCIENCES

Partner Organisations & Collaborating Organisations

The University of Western Australia

The University of Adelaide

The Australian National University

Administering Organisation The University of Western Australia

Project Summary

Gravitational waves are expected to offer humanity a completely new spectrum with which to study the Universe. Australia has been a pioneer in the quest to open up this new spectrum. This project will allow Australia to play a key role in a world-wide project which aims for the first time to enable gravitational waves to be detected from black holes and neutron stars throughout the universe. It will give Australia access to developed technologies, and will be a major boost to physical science research and education.

Summary of Linkage Infrastructure, Equipment and Facilities Proposals

LE0882866 Prof AH Millar; Prof SM Smith; Prof CL Raston; Prof RN Martins; Prof LW Simmons; Prof JK Olynyk; Prof GA Stewart; Prof PJ Leedman; Prof LD Beazley; Prof JM Whelan; A/Prof PV Attwood; Dr A Vrieling; Prof CS Bond; Prof SA Dunlop; Dr AJ Bakker; Dr PG Arthur; Prof GC Yeoh; Dr JL Heazlewood; Dr BC Baer; Dr H Eubel; Dr NL Taylor; Dr G Verdile; Dr PG Besant; Dr KL Swaminatha-Iyer; Dr PM Finnegan; Dr M Ludwig

Approved Project Title MALDI Imaging and Protein Analysis Facility for WA

2008 : \$ 470,000

Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Partner Organisations & Collaborating Organisations

The University of Western Australia

Edith Cowan University

Administering Organisation The University of Western Australia

Project Summary

Mass spectrometry as a tool for analytical research can be coupled to imaging of tissues to provide an important bridge between biochemical, cell biology and physiological sciences. These are competitive research areas that need the latest in speed, accuracy and sensitivity. Strategic placement of such infrastructure in locations of research strength is vital to allow hand-on use that promotes excellence, innovation and creative exploration of the limits of such tools to answer pressing questions in biology and chemistry. WA students and researchers will gain new opportunities in an arena of MALDI imaging in biological research and intact protein analysis for structural studies.

LE0882634 Prof CL Raston; Dr VK Pareek; Prof CS Bond; A/Prof PC Burcham; A/Prof HT Chua; Dr GR Flematti; Dr L Gao; Dr KL Swaminatha-Iyer; Dr L Lim; Dr M Makha; Dr M Norret; Dr M Polomska; A/Prof P Price; Dr RI Price; A/Prof TG St Pierre; Dr SG Stewart; Dr DA Wild; Prof GC Yeoh; Prof E Bakker; Dr DH Brown; Prof R De Marco; Prof JD Gale; Dr Q Li; Dr X Lou; Prof MO Tade; Dr S Wang; Prof K Wright

Approved Project Title Integrated Process Intensification Facility

2008 : \$ 220,000

Primary RFCD 2503 ORGANIC CHEMISTRY

Partner Organisations & Collaborating Organisations

The University of Western Australia

Curtin University of Technology

Administering Organisation The University of Western Australia

Project Summary

The new equipment will provide a unique facility for process intensification (PI). No other techniques are capable of controlling features of nano-particles (size, shape, agglomeration, phases and defects) under continuous flow, which is essential for applications in nano-technology. There are unique capabilities of PI in chemical synthesis, including drug development and drug discovery. Overall, applications of PI cover health care products, device technology, and more, for the benefit of the community at large. The facility will foster a more innovative research culture and provide excellent research training at the highest international level, and will provide a platform to foster greater links with industry.