Summary of Successful Proposals by State/Organisation for Linkage Projects for funding commencing in 2008

New South Wales	
Macquarie University	4
Southern Cross University	1
The University of New South Wales	18
The University of Newcastle	5
The University of Sydney	18
University of Technology, Sydney	7
University of Western Sydney	4
University of Wollongong	5
New South Wales	**62**
Victoria	
Deakin University	1
La Trobe University	4
Monash University	8
RMIT University	10
Swinburne University of Technology	4
The University of Melbourne	13
University of Ballarat	1
Victoria University	1
Victoria	**42**
Queensland	
Griffith University	7
James Cook University	3
Queensland University of Technology	13
The University of Queensland	25
University of Southern Queensland	2
Queensland	**50**
South Australia	
The Flinders University of South Australia	2
The University of Adelaide	9
University of South Australia	3
South Australia	**14**
Western Australia	
Curtin University of Technology	5
Edith Cowan University	2
Murdoch University	2
The University of Western Australia	12
Western Australia	**21**
Tasmania	
University of Tasmania	5
Tasmania	**5**
Northern Territory	
Charles Darwin University	4
Northern Territory	**4**

Summary of Successful Proposals by State/Organisation for Linkage Projects for funding commencing in 2008

Australian Capital Territory	
The Australian National University	2
University of Canberra	2
Australian Capital Territory	**4**
Total Number of Grants	**202**

Summary of Linkage Projects Proposals for Funding to Commence in 2008

New South Wales

Macquarie University

LP0882453 A/Prof R De Dear; Dr SD White; Dr T Marker; Dr AE Delsante

Approved Project Title **Residential Air Conditioning, Comfort and Demand Response in Australia**
2008 : $ 170,000
2009 : $ 39,323
2010 : $ 25,627
Primary RFCD 3102 BUILDING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Australian Greenhouse Office
Integral Energy
Air-Conditioning and Refrigeration Equipment Manufacturers Association of Australia Inc.

Administering Organisation Macquarie University

Project Summary

Rapid growth in residential air conditioning (AC) ownership will potentially undermine national energy efficiency and greenhouse reduction targets. Furthermore, residential AC is placing a strain on the national electricity system, especially during heat waves when electricity demand peaks. These AC-driven peak loads occur occasionally each summer, but increasing grid capacity to meet them represents a grossly inefficient infrastructure investment. This project will generate Australia's most comprehensive data set on exactly how, when, where, and why residential AC systems are being used. The outcomes will provide a solid platform on which national electricity demand management and AC greenhouse-gas mitigation strategies can be designed.

LP0882270 A/Prof TA Johnston; Dr JM Napier; Mrs K Gilbert; Ms V Dragoje

Approved Project Title **Medical Signbank: sign language planning and development in interpreter-mediated medical and mental health care delivery for deaf Australians**
2008 : $ 36,228
2009 : $ 32,614
2010 : $ 33,964
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

National Auslan Interpreter Booking and Payment Service
Multicultural Health Unit

Administering Organisation Macquarie University

Project Summary

This collaboration between academic linguists, interpreter service providers, health care providers, sign language interpreters, and the Deaf community will improve the recent initiatives to give deaf people equity in their access to health care services. For the first time, deaf people are able to access medical services early and effectively, improving treatment outcomes and, importantly, preventing conditions occurring in the first place or allowing early intervention before they become much more serious and costly to the individual and the community. This project will therefore be of national benefit, as all stakeholders from all over Australia will be able to access the Medical Signbank resource.

LP0882152 Dr RM Spencer; Dr AY Wise; A/Prof MD Fine; Prof RH Fagan; A/Prof K McCracken; Dr R Dowling; A/Prof RL Howitt; Dr K Tannous; A/Prof KH Millard; Ms LM Giacomelli; Mr J McInerney; Ms JT McNeill

Approved Project Title **Community spirit, social transformation, sustainable partnerships: community capacity building in Parramatta**
2008 : $ 126,000
2009 : $ 114,000
2010 : $ 118,275
2011 : $ 215,000

Primary RFCD 3701 SOCIOLOGY
APA(I) Award(s): 1
APDI Dr RM Spencer

Collaborating/Partner Organisation(s)

Parramatta City Council

Administering Organisation Macquarie University

Project Summary

This partnership is at the forefront of developments in the provision of community services. The project will contribute to a growing international field of research focused on developing integrated frameworks for measuring community wellbeing. The community capacity building approach will serve as a best practice model for other Australian municipalities. The indicators are a tool for engaging communities in making informal decisions and developing shared goals; a policy tool for evidence based planning; and a reporting tool to track and communicate progress towards agreed goals and outcomes. The outcomes will be efficient use of available funding for community services and lower cost of provision of social welfare.

LP0882722 Dr V Strezov; Prof PF Nelson; Prof BL Gulson; Dr TJ Evans

Approved Project Title **Thermal and environmental investigation of particle degradation during high temperature processing of iron ores**
2008 : $ 120,000
2009 : $ 120,000
2010 : $ 120,000
Primary RFCD 2907 RESOURCES ENGINEERING

Collaborating/Partner Organisation(s)

Hamersley Iron

Administering Organisation Macquarie University

Project Summary

The proposed project aims to understand particle formation and emissions during high temperature processing of iron ores. The project will lead to improvement of particle emission control from existing iron processing technologies and assist in further improvement of their overall performance achieving increased product output and process economics.

Southern Cross University

LP0882141 Dr RT Bush; Dr P Slavich; Dr SG Johnston; Prof LA Sullivan; Dr ED Burton

Approved Project Title **Impacts of climate change on coastal floodplain wetland biogeochemistry and surface water quality**
2008 : $ 80,000
2009 : $ 84,000
2010 : $ 82,000
Primary RFCD 2603 GEOCHEMISTRY
APDI Dr SG Johnston

Collaborating/Partner Organisation(s)

NSW DPI
Richmond River County Council
Northern Rivers Catchment Management Authority

Administering Organisation Southern Cross University

Project Summary

The most vulnerable Australian landscapes to global warming driven sea-level rise are our low-lying coastal floodplains. Seawater inundation dramatically affects soil chemistry and water quality. Over 74,000 km2 of the low-lying coastal floodplains of Australia contain acid sulfate soils. For these soils, seawater inundation has the potential to greatly enhance the release of acidity, with a high capacity to severely degrade wetlands, estuaries and farmland. This project will directly contribute to our national capacity to assess and manage impacts from climate change, providing greater protection of our coastal floodplains resources.

The University of New South Wales

LP0882720 Prof R Amal; Prof PJ Russell; Prof JJ Gooding; Dr BJ Walsh

Approved Project Title **Numerical Modelling and Experimental Studies to Design and Engineer Nanoparticulate Systems for Bioapplications**
2008 : $ 121,253
2009 : $ 124,442
2010 : $ 125,625
Primary RFCD 2918 INTERDISCIPLINARY ENGINEERING

Collaborating/Partner Organisation(s)

Minomic Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

Project outcomes will enhance Australia's reputation for scientific innovation in the field of bio-nanotechnology. The project will expand the knowledge base in this area and increase Australia's international profile in research on nanomaterials for bio-related applications. The project partners UNSW and Australian company (Minomic), integrating their skills, expertise and facilities to address current limitations in understanding the stability of magnetic nanoparticles in biological fluids. The Australian partners will play a leading role in commercializing new applications for functionalized magnetic nanoparticles. The project will provide an excellent multidisciplinary research environment and training for early career researchers.

LP0882929 Prof MA Bradford; Prof B Uy; Dr G Ranzi; Mr A Filonov

Approved Project Title **Time-Dependent Response and Deformations of Composite Beams with Innovative Deep Trapezoidal Decks**
2008 : $ 87,141
2009 : $ 83,893
2010 : $ 85,154
Primary RFCD 2908 CIVIL ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BlueScope Lysaght

Administering Organisation The University of New South Wales

Project Summary

The construction industry in Australia is introducing efficient and economical long-span trapezoidal profiled steel sheeting for composite flooring systems. Australia is a world leader in the research of composite structures. Composite beams undergo deformations because the concrete creeps and shrinks, and because the slab slips relative to the steel joist. Surprisingly little research has addressed these issues collectively; they are of paramount significance with trapezoidal decks and research is much-needed. This research will investigate the interaction of creep, shrinkage and partial interaction in these composite beams, producing valuable design guidance to keep Australian research and practice at the forefront internationally.

LP0882024 Dr JP Craig

Approved Project Title **Trends in Time: Work, Family and Social Policy in Australia 1992-2006**
2008 : $ 109,576
2009 : $ 113,743
2010 : $ 119,101
Primary RFCD 3705 DEMOGRAPHY

Collaborating/Partner Organisation(s)

Human Rights and Equal Opportunity Commission
Department of Families, Community Services and Indigenous Affairs
Australian Bureau of Statistics

Summary of Linkage Projects Proposals for Funding to Commence in 2008

Administering Organisation The University of New South Wales

Project Summary

This project will contribute to the national priority goal of 'strengthening Australia's social and economic fabric to help families and individuals live healthy, productive, and fulfilling lives', within the National Research Priority of 'promoting good health and well being for all Australians'. It will provide sound new evidence for effective strategies fostering the policy goals of reducing stress on families, maintaining fertility and encouraging women into paid work. Identifying measures that most support men and women to balance work-family commitments, to spend adequate time with their children and social networks, and most facilitate female workforce participation, will promote national wellbeing.

LP0882191 A/Prof AG Dempster; Prof DA Gray; Mr A Tabatabaei Balaei

Approved Project Title **Locating Interference to GPS: Protecting the World's Aircraft Landing Systems**

2008 : $ 176,426
2009 : $ 161,930
2010 : $ 172,130

Primary RFCD 2910 GEOMATIC ENGINEERING

APA(I) Award(s): 2

APDI Mr A Tabatabaei Balaei

Collaborating/Partner Organisation(s)

AirServices Australia

Administering Organisation The University of New South Wales

Project Summary

GRAS is an enormous initiative that is expected to generate billions of dollars in exports for Australia. The equipment developed in this project will protect the system from radio frequency interference. It thus protects these exports, and creates a new exportable product. By protecting this system, it makes air travel safer both in Australia and in the countries that buy this Australian technology.

LP0882860 A/Prof KM Dunn; Dr A Pedersen; A/Prof J Forrest; Dr YC Paradies; A/Prof DF Ip; Prof H Babacan

Approved Project Title **Constructing regionally appropriate anti-racism strategies for Australia**

2008 : $ 62,750
2009 : $ 88,291
2010 : $ 37,639

Primary RFCD 3701 SOCIOLOGY

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Human Rights and Equal Opportunity Commission
Equal Opportunity Commission of South Australia
Victorian Equal Opportunity & Human Rights Commission

Administering Organisation The University of New South Wales

Project Summary

Racism is an international social scourge, and Australia is not immune from its injurious effects. The experience of racism degrades senses of belonging and generates disaffection, leads to ill-health and restrictions of mobility, as well as other social and individual pathologies. Reducing racism will strengthen Australia's social fabric. This project tests the utility of anti-racism templates and does so in rural as well as urban Australia. The templates will be usable by local authorities and NGOs in framing their anti-racism efforts.

LP0882595 Dr L Ge; Dr S Gherardi; Dr A Edirisinghe; Dr AL Mitchell; Dr B Scheuchl

Approved Project Title **Measurement of paddock scale pasture biomass using synthetic aperture radar remote sensing**

2008 : $ 83,648

2009 : $ 83,648
2010 : $ 83,648
Primary RFCD 2910 GEOMATIC ENGINEERING
APDI Dr B Scheuchl

Collaborating/Partner Organisation(s)

Department of Agriculture and Food Western Australia

Administering Organisation The University of New South Wales

Project Summary

To maintain the long-term viability of livestock production, producers and land managers need access to regular, timely and accurate estimates of pasture biomass. Radar remote sensing has the capacity to consistently provide this information at the paddock, farm and catchment scale in a timely manner to assist in tactical and strategic decision making for sustainable pasture and livestock management. Economic analyses undertaken at the farm level have revealed the potential to double farm profit by increasing the utilization of pasture grown. In addition to the socio-economic benefits, the environmental benefits of sustainable land management are paramount in light of the current drought in Australia and the global climate change.

LP0882474 Dr AR Green; Dr IC Piper; Dr A Mahidadia

Approved Project Title **Development of a Multi Threat Risk Assessment Model for Critical Infrastructure Using Scripted Agent Computer Technology**
2008 : $ 51,254
2009 : $ 51,254
2010 : $ 51,254
Primary RFCD 2399 OTHER MATHEMATICAL SCIENCES
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Arup, Risk and Security

Administering Organisation The University of New South Wales

Project Summary

The project will develop a distributed risk network capable of real time assessment of multiple threats to critical infrastructure, which will guide decision making on the appropriate response as the nature of the threat changes. This will assist all stakeholders and allow an integrated response across industry and government agencies. The developed technology will find ready application in other areas where integration of science and technology is required to solve complex problems. For example, risk network technology has application to natural hazards, waste disposal and financial markets while the scripted agent has application to communication technologies and sensor networks.

LP0882002 Dr CC Harb; Dr EH Huntington; Dr GN Milford; Dr SB O'Byrne; Prof BJ Orr; Dr T Spence

Approved Project Title **Molecular Fingerprinting: Forensic Spectroscopy of Trace Gases**
2008 : $ 85,000
2009 : $ 25,000
2010 : $ 45,000
Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Collaborating/Partner Organisation(s)

Australian Federal Police

Administering Organisation The University of New South Wales

Project Summary

Safeguarding Australia from terrorism, crime and invasive diseases is essential to securing our national infrastructure. This project will develop national capabilities in anticipating and responding to critical threats to society. The scientific instrumentation developed from this effort will enhance Australia's potential aid for early detection of explosive and chemical weaponry and also in the analysis of crime scenes. This research will significantly improve our abilities to maintain the operational advantage of Australia's security agencies through

superior capabilities in threat detection.

LP0882630 Prof RE McMurtrie; Prof BA Neilan; Dr DJ Eldridge

Approved Project Title **Is reintroduction of soil foraging animals critical for the restoration of degraded semi-arid woodlands?**
2008 : $ 65,354
2009 : $ 74,454
2010 : $ 56,654
Primary RFCD 2707 ECOLOGY AND EVOLUTION
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Australian Wildlife Conservancy
NSW Department of Natural Resources
Administering Organisation The University of New South Wales

Project Summary

Locally-extinct animals are important, not only for their intrinsic value, but because they are thought to be essential for maintaining and restoring healthy ecosystems. This project will give us valuable insights into how ecosystems may have functioned prior to the loss of native animals, and how ecosystems can be restored when the animals are reintroduced. Our research will provide Australian Wildlife Conservancy with the knowledge they need to continue their reintroductions, and information that encourages land managers to adopt strategies to ensure the survival of reintroduced animals outside of formal reserves.

LP0882620 Prof RB Randall; Dr N Feng; Prof MJ Hoffman; Dr D Ashmore; Prof SD Garvey

Approved Project Title **Diagnostics and Prognostics of Turbine Engine Bearings**
2008 : $ 90,000
2009 : $ 90,000
2010 : $ 90,000
Primary RFCD 2902 AEROSPACE ENGINEERING

Collaborating/Partner Organisation(s)

Rolls-Royce plc
Administering Organisation The University of New South Wales

Project Summary

Rolls Royce are a leading supplier of engines world-wide, but in particular (with respect to this application) to airlines operating in and from Australia, including Qantas, as well as to the Australian armed forces. The methods to be developed will give greater security to the flying public, and to the Defence Forces, allowing them to carry out their role more reliably. Collaboration with Rolls Royce will add prestige to this Australian developed technology, and increase the likelihood of it (and related technology) being used in the Joint Strike Fighter.

LP0882592 Prof V Sahajwalla; Dr R Khanna

Approved Project Title **Recycling waste plastics in aluminium processing: Fundamental investigations of carbon/gas reactions**
2008 : $ 85,000
2009 : $ 90,000
2010 : $ 90,000
Primary RFCD 2913 METALLURGY

Collaborating/Partner Organisation(s)

Rio Tinto Aluminium Ltd.
Administering Organisation The University of New South Wales

Project Summary

This project will be a major step towards tackling the global problem of disposing waste plastics in an environmentally sustainable way, and will improve the efficiency of industrial operations, lowering costs and resource consumption. Our advances will deliver the fundamental science that will enable the aluminium industry to

consume substantial amounts of plastic waste, including plastics that are currently unsuitable for recycling. This technology is likely to make significant contributions towards the development of a sustainable recycling oriented society, to curb global warming, enhancing the international competitiveness of Australian aluminium manufacturing.

LP0882352 Prof PG Saunders; Prof B Cass; Mr GM Redmond; Dr T Ridge; Dr JR Stanley; Ms AC Hampshire

Approved Project Title **Making a Difference: Building on Children's Perspectives on Economic Adversity**

2008 : $ 103,000
2009 : $ 131,000
2010 : $ 128,000

Primary RFCD 3702 SOCIAL WORK

Collaborating/Partner Organisation(s)

Mission Australia
The Smith Family
Office for Children
The Brotherhood of St Laurence
Association of Child Welfare Agencies
Social Inclusion Unit, Department of the Premier and Cabinet, Government of South Australia
Department of Education and Children's Services
Department of Families, Community Services and Indigenous Affairs

Administering Organisation The University of New South Wales

Project Summary

Governments allocate a large volume of resources to address the needs of children. Investigating children's perspectives on the nature and impacts of economic adversity in the family, at school and in the community will provide a better understanding of how policy can make a difference to children's lives. The direct involvement of major government and non-government agencies in the research will strengthen its relevance and impact. The resulting improvements in service design and delivery will generate substantial economic and social benefits in areas that align with the designated national research priorities.

LP0882693 Prof MY Simmons; Dr JN Randall

Approved Project Title **Exploring the Fundamentals of Atomically Precise Manufacturing with Scanning Probe Microscopes**

2008 : $ 65,666
2009 : $ 65,666
2010 : $ 43,486

Primary RFCD 2402 THEORETICAL AND CONDENSED MATTER PHYSICS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Zyvex Corporation

Administering Organisation The University of New South Wales

Project Summary

Over the past five years, Australian researchers have pioneered the development of a new method for fabricating electrical devices in silicon with atomic precision. By partnering with the world leader in nanotechnology manufacturing, these same researchers now have an opportunity to extend Australia's early lead in this area. The proposed research will lead to new capabilities for Australia within the growing field of electro-mechanical devices. It will strengthen and broaden Australia's leadership in atomic-scale device fabrication in silicon. It will assist world-leading Australian researchers to evaluate and prioritise the commercial potential of their technologies.

LP0882447 Dr M Stenzel; Dr SK Jones

Approved Project Title **Degradable hollow microspheres for liver cancer treatment**

2008 : $ 108,090
2009 : $ 100,000
2010 : $ 100,000
Primary RFCD 2505 MACROMOLECULAR CHEMISTRY

Collaborating/Partner Organisation(s)

Sirtex Technology Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

The expected outcome of this multidisciplinary approach is a controlled drug delivery system for the treatment of liver cancer. We aim to increase the understanding of drug release using polymeric microspheres and the influence of the polymer properties on the release kinetics resulting in the tailored drug release for liver cancer treatment. An indepth knowledge in drug delivery can lead to optimised release kinetics leding to an increased patient convenience and life prolonging treatments.

LP0881993 Dr I Takken; A/Prof JC Croke; Dr PN Lane; Dr GJ Sheridan; Dr AA Webb

Approved Project Title **Developing a decision support system for the management of road runoff for water quality protection**
2008 : $ 110,000
2009 : $ 100,000
2010 : $ 80,000
Primary RFCD 2605 HYDROLOGY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Forests NSW
Parks, Conservation & Lands Branch, Dept. of Territory and Municipal Services
Department of Sustainability and Environment
Department of Environment and Conservation
Southern Rivers Catchment Management Authority
Eurobodalla Shire Council

Administering Organisation The University of New South Wales

Project Summary

Multiple stakeholders share a vested and often significant financial commitment to ensure water quality standards. These industries, in turn, are vital to the social and economic sustainability of many rural communities in Australia. Recent climatic trends of increasing drought episodes and related natural disasters such as bushfires are expected to increase the delivery of sediments and associated pollutants to streams. The proposed DSS will allow testing of various management scenarios with respect to road position and layout, thereby providing a planning and management tool, and a method to educate the practitioners involved in environmental management in Australia.

LP0882150 Dr H Timmers; Dr LG Gladkis; Dr JM Scarvell; A/Prof PN Smith

Approved Project Title **Rare isotopes as tracers of prosthesis debris**
2008 : $ 108,000
2009 : $ 108,000
2010 : $ 108,000
Primary RFCD 2499 OTHER PHYSICAL SCIENCES
APDI Dr LG Gladkis

Collaborating/Partner Organisation(s)

Trauma and Orthopaedic Research Unit

Administering Organisation The University of New South Wales

Project Summary

The incidence of knee replacement surgery in Australia is 30,000 per year. Limited by wear debris, the lifespan of knee implants is only 10-15 years and can be much shorter. Due to increasing life expectancy, many patients need

several surgical procedures. As a multi-disciplinary team of materials-, isotope-tracing- and medical-experts, we aim to understand and monitor wear debris in prostheses. Knee replacement surgery alone imposes a high burden of annually half a billion dollars on the Australian health budget. Controlling and reducing wear debris in prosthesis joints would reduce these costs and improve patients' quality of life.

LP0882961 A/Prof R van der Meyden

Approved Project Title **Model Checking Knowledge and Probability in Pursuit-Evasion Games**
2008 : $ 130,000
2009 : $ 125,000
2010 : $ 120,000
Primary RFCD 2802 ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING

Collaborating/Partner Organisation(s)

Defence R&D Canada - Valcartier (DRDC Valcartier)

Administering Organisation The University of New South Wales

Project Summary

The research will produce software enabling modellers to better understand their models in applications including planning under uncertainty, information flow security and systems fault diagnosis. The application studied in this project is military search and rescue mission planning, resulting in greater confidence in mission success. The research is also relevant to emergency response and collision avoidance. The project will support retention of Australian intellectual property with potential for future commercialisation. It will foster linkages between Australian researchers and an international defence alliance partner. Outcomes will be available to Australian Defence through existing Defence research sharing arrangements.

LP0882468 Dr J Wang; Prof FD Foster; Dr L Yang; Dr M Yang; Mr I Geninson

Approved Project Title **Information Content of Order Flows in the Foreign Exchange and Commodities Markets**
2008 : $ 40,000
2009 : $ 35,000
2010 : $ 35,000
Primary RFCD 3402 APPLIED ECONOMICS
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Commonwealth Bank of Australia

Administering Organisation The University of New South Wales

Project Summary

The Australian economy depends heavily on resources and commodities markets. The Australian dollar is the sixth most actively traded currency in the world and is more volatile than all other major currencies except the Japanese yen. The proposed study seeks to improve volatility forecasts and hedging effectiveness for foreign exchange and commodity risks, which will create significant benefits for the Australian economy, corporations, and investors. In addition, the project will enhance investment performance and risk management practice of financial institutions, improving the overall safety of our financial system. It will also foster research culture and increase research capacity of Australian financial institutions.

The University of Newcastle

LP0882841 Prof BZ Dlugogorski; Prof EM Kennedy

Approved Project Title **Novel technology to sensitise emulsion explosives**
2008 : $ 132,000
2009 : $ 122,000
2010 : $ 136,000
Primary RFCD 2906 CHEMICAL ENGINEERING

Collaborating/Partner Organisation(s)

Dyno Nobel Asia Pacific Limited

Administering Organisation The University of Newcastle

Project Summary

The project will develop a new technology for more efficient and safer extraction of minerals. It will extend the application of emulsion explosives to low-temperatures and will eliminate the heating of emulsion blasting agents during transport. Since mining operations are located in regional areas, the project will bring benefits to local and rural communities. The project will also generate new knowledge on the behaviour and stability of three-phase systems that contain very small gas bubbles. In addition to its fundamental importance, this knowledge can be carried over to food and cosmetic industries to facilitate the development of new products.

LP0882713 Prof GM Evans; Mr RJ Serje

Approved Project Title **Slag Entrainment and Dispersion in Continuous Slab Casting**

2008 : $ 145,721
2009 : $ 120,868
2010 : $ 115,782
Primary RFCD 2913 METALLURGY

Collaborating/Partner Organisation(s)

BlueScope Steel limited

Administering Organisation The University of Newcastle

Project Summary

Australia's steel industry employs 75,000 people and has an annual turnover in excess of $21 billion. However, it produces less than 8 million tonnes of steel per annum which is approximately 7 percent of the world's production. Australia does not have the economies of scale and to be competitive, must invest heavily in new technology and have best workplace practices to generate products that are superior to low cost competitors. This project is focussed on improving product quality through invention of new equipment which also overcomes current operational practices and creates a safer working environment.

LP0882853 Prof KP Galvin

Approved Project Title **Particle Transport and Separation in High Aspect Ratio Inclined Channels**

2008 : $ 50,000
2009 : $ 100,000
2010 : $ 120,000
Primary RFCD 2906 CHEMICAL ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Australian Coal Research Limited
Anglo Coal Australia

Administering Organisation The University of Newcastle

Project Summary

This project will be of benefit to the Australian coal and mineral processing industries, worth tens of billions of dollars to the Australian economy each year. The objective is to establish new options for the processing of particles as large as 50mm, and smaller than 50 microns in size, and hence significantly extend the operating size range of the Reflux Classifier. The development of new resources, especially those of poorer grade, requires more effective separation technology. Success in this project will significantly benefit the end users of the technology and also contribute to Australia's Mining Services industry.

LP0882285 A/Prof A McCluskey; Prof RB Gasser; Dr JA Sakoff

Approved **The discovery and validation of novel drug classes against parasites with the potential for**

Project Title **major economic impacts**
2008 : $ 250,000
2009 : $ 220,000
2010 : $ 200,000
Primary RFCD 2503 ORGANIC CHEMISTRY
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Genetic Technologies Limited

Administering Organisation The University of Newcastle

Project Summary

This project will develop a quality scientific and technological program in national priority areas, leading to a strong basic research, new concepts and the enhanced international collaborative links; strengthen links between basic and applied research, and academia and industry; develop excellence via pan-Australian collaborations, resulting in a more efficient use of resources in a national and international context; enhance the skills-base in biology, biotechnology and chemistry; increase global visibility with increased investment in Australian science; improve animal welfare and production via improved control of infectious diseases; producing commercial products with benefits to agricultural producers in regional & rural communities.

LP0882869 Dr GJ Suaning; Prof NH Lovell

Approved Project Title **Micromachined electrode arrays for improved performance and manufacturability of cochlear neuroprostheses**
2008 : $ 135,000
2009 : $ 115,000
2010 : $ 110,000
Primary RFCD 2915 BIOMEDICAL ENGINEERING

Collaborating/Partner Organisation(s)

Cochlear Limited

Administering Organisation The University of Newcastle

Project Summary

The cochlear implant for the deaf, and bionic eye for the blind are two devices where Australian researchers possess considerable expertise. Benefit can be had from collaborative research between these non-competing scientific fields. Microelectrodes is an area wherein overcoming the unique requirements of one field offers new opportunities in the other. We aim to enhance Australia's leadership in cochlear implants by applying decade-long research on electrode fabrication techniques for the bionic eye into 3D shapes for the cochlea. Furthermore, we aim to further improve the effectiveness, safety and reliability of the cochlear implant while facilitating increased electrode numbers.

The University of Sydney

LP0882396 Dr RC Appleyard; A/Prof AJ Ruys; Dr Q Li; Prof MV Swain

Approved Project Title **Computer simulation techniques to reduce the incidence of femoral fracture after hip replacement surgery**
2008 : $ 88,987
2009 : $ 47,900
2010 : $ 42,160
Primary RFCD 2918 INTERDISCIPLINARY ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Stryker Pty. Ltd.

Administering Organisation The University of Sydney

Project Summary

Australia's ageing population is driving an increase of 5% to 10% a year in the number of primary total hip replacements. We will move beyond conventional surgical techniques, to deliver the science for an accurate,

reliable computer-based system that is significantly more accurate and reliable. Optimising implant selection criteria to better match patients' activity levels and bone physiology and minimise revision rates; this has major implications for the national health budget and patients' quality of life. Our advances will allow the implementation of improved surgical techniques that minimise the risk of implant related bone failure.

LP0882243 Prof MM Bilek; Prof AS Weiss; Prof DR McKenzie

Approved Project Title **Plasma processes for optimising the performance of surfaces for biomedical applications**

2008 : $ 250,000
2009 : $ 275,000
2010 : $ 270,000
Primary RFCD 2403 ATOMIC AND MOLECULAR PHYSICS; NUCLEAR AND PARTICLE PHYSICS; PLASMA PHYSICS

Collaborating/Partner Organisation(s)

IFC Medical
Cochlear Ltd

Administering Organisation The University of Sydney

Project Summary

Australia faces a number of pressing problems in health care, including an aging population, environmental damage control and national security, which can be addressed, in part, by effectively interface synthetic materials surfaces with biological systems. Examples of technologies relying on such functional interfaces include implantable medical devices and prostheses, enzymatic conversion of chemicals and waste, as well as diagnostic arrays and biosensors. The new understanding of fundamental surface properties driving these interactions, together with the new surface modification processes developed in this project, will drive new technologies in these important areas.

LP0882737 Dr SZ Bosnic-Anticevich; Prof C Armour; Ms M Williamson; Ms JM Mackson; Dr M Stuart

Approved Project Title **Improving asthma device use: Innovative models for inter-professional practice**

2008 : $ 63,000
2009 : $ 165,000
2010 : $ 195,000
Primary RFCD 3801 PSYCHOLOGY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

National Prescribing Service

Administering Organisation The University of Sydney

Project Summary

This project falls within the goals of National Priority 2: promoting and maintaining good health. This project has the potential to affect every individual accessing health care in the Australia. Through its approach to and focus on improving the use of asthma medications this project will impact on: the quality use of medicines and health outcomes for patients. Through its focus on health professional relationships and interdisciplinary approach to community health care it will result in: improved interprofessional relationships and a model of collaboration which has the potential to be implemented on a broad scale in the community.

LP0882312 Dr A Dunn

Approved Project Title **New media, new narratives: Beyond broadcasting**

2008 : $ 23,798
2009 : $ 28,607

Summary of Linkage Projects Proposals for Funding to Commence in 2008

Primary RFCD 4001 JOURNALISM, COMMUNICATION AND MEDIA

Collaborating/Partner Organisation(s)

Australian Broadcasting Corporation

Administering Organisation The University of Sydney

Project Summary

This project investigates the cultural and social implications of the tension between new and traditional media, in a collaborative project with ABC News. It uses a new model of training journalism cadets- often the groundbreakers for the organisational cultural change needed in a world of convergent media-and demonstrates how media organisations can innovate in what they produce, how they produce it, and in their audience relations.The project will also demonstrate the important role of public broadcasting in new media innovation and in building new relationships with audiences.

LP0882983 Prof A Frino; Dr A Lepone; Prof JS Gans; Prof B Nalebuff

Approved Project Title **Understanding market mechanisms to achieve greater efficiency in the Australian residential real-estate market**

2008 : $ 81,184
2009 : $ 71,518
2010 : $ 76,371

Primary RFCD 3402 APPLIED ECONOMICS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Rismark International

Administering Organisation The University of Sydney

Project Summary

This project will provide information to policy-makers, vendors and purchasers, enabling the evolution of an optimal real-estate market, with significant benefits for individuals and the national economy. These benefits will be both short-term (current wealth) and long-term (retirement saving). It will promote Australia as the leader in constructing optimal, efficient real-estate markets, which can be applied to similar real-estate markets around the world. Finally, training a research student will develop research infrastructure in Australia, and be a contribution to producing a generation of specialists who will add to Australia's international standing in financial research and its ability to manage an increasingly complex economy.

LP0882247 Prof DS Grant; Dr RW Hall; Dr NR Wailes; Dr KF Dery

Approved Project Title **Human resource information systems (HRIS) and the strategic significance of the human resource function**

2008 : $ 50,000
2009 : $ 50,000
2010 : $ 50,000

Primary RFCD 3502 BUSINESS AND MANAGEMENT

Collaborating/Partner Organisation(s)

Australian Senior Human Resource Roundtable
Getronics Australia Pty Ltd
CSR Ltd
Baulderstone Hornibrook Pty Ltd
Australian Customs Service

Administering Organisation The University of Sydney

Project Summary

A large number of Australian organisations have invested in computer based HRIS. Used effectively, HRIS can allow HR to realise its strategic potential and to contribute to improved organisational performance. This project will contribute to the national research priority on frontier technologies, by enhancing understanding of the conditions

that allow for smart information use, thereby contributing to the nation's economic competitiveness.

LP0883035 Prof IB Hickie; Dr JM Burns; Dr LA Ellis

Approved Project Title **Understanding and preventing mental health difficulties in young Australian men using the Internet**
2008 : $ 114,140
2009 : $ 116,620
2010 : $ 127,100
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES
APA(I) Award(s): 1
APDI Dr LA Ellis

Collaborating/Partner Organisation(s)

Inspire Foundation

Administering Organisation The University of Sydney

Project Summary

Mental health is a major public health problem in Australia. Young men are particularly vulnerable to suicide, drug and alcohol problems and yet fail to seek appropriate help. The Internet is currently accessed by 85% of Australia's youth and yet very little evidence exists which examines the capacity of the Internet to engage young men and promote help seeking. This project will build an evidence base which explores how innovative on-line strategies and social marketing can effectively promote help seeking behaviour and improve mental health outcomes for young men.

LP0882776 A/Prof JL Irwin; A/Prof E Baldry; Em/Prof T Vinson; Dr S Goodwin

Approved Project Title **Working from the Ground Up: A Participatory Approach to Community Regeneration in Public Housing Neighbourhoods.**
2008 : $ 111,000
2009 : $ 104,000
2010 : $ 122,000
2011 : $ 165,000
2012 : $ 163,000
Primary RFCD 3701 SOCIOLOGY
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Department of Housing
TAFE Equity, Department of Education and Training
Health Promotion Service, Division of Population Health South Eastern Sydney and Illawarra Area Heal

Administering Organisation The University of Sydney

Project Summary

This research will discover approaches, strategies and interventions that contribute to sustainable changes in public housing estates. It will trial interventions and develop quantitative tools. The outcomes of the project will include stronger, more cohesive communities, opportunities for residents to actively participate in their communities, and the development of services through partnerships between the communities and relevant government, non government and private organizations. This will enhance health and wellbeing and increase education and training opportunities for residents.

LP0882748 Prof HL Kendig; Dr YD Wells; Prof MP Wooden; Dr KM O'Loughlin; Prof DA De Vaus

Approved Project Title **Ageing Baby Boomers in Australia (ABBA): Informing Actions For Better Retirement**
2008 : $ 162,194
2009 : $ 136,734
2010 : $ 176,734
Primary RFCD 3701 SOCIOLOGY

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

National Seniors
AARP

Administering Organisation The University of Sydney

Project Summary

The research will improve understanding of baby boomers & inform action to achieve positive outcomes individually & for an ageing Australia. It will: 1)inform baby boomers of ways in which their actions in late middle age can increase the chance of having satisfying healthy lives in retirement; 2)inform employers & governments on key factors enabling people to work longer; 3)challenge stereotypes of baby boomers by showing their variability over the life course & in retirement; 4)provide four researchers with knowledge & expertise in applied, multi-disciplinary research on individual & population ageing; 5)identify baby boomers' expectations for themselves, governments, & the community to guide directions for Australia's response to ageing.

LP0882799 A/Prof TA Langrish

Approved Project Title **Enhancing the Production of Functional Food Powders by Studying Reaction Processes in Spray Dryers**

2008 : $ 31,627
2009 : $ 31,627
2010 : $ 38,627

Primary RFCD 2901 INDUSTRIAL BIOTECHNOLOGY AND FOOD SCIENCES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Lang Technologies Pty Ltd

Administering Organisation The University of Sydney

Project Summary

The project is a key component of a technical development program that has the potential to make a very large contribution to the processing of functional foods resulting in products of high value for nutritional use. The total national crop of cereals, pulses, oil seeds, fruit and vegetables is thirty million tonnes/year. Over three million tonnes/year of waste are produced, containing three million kilogrammes of bioactive compounds, valued at a minimum of $1,000/kg, giving an estimated potential value of $3 billion/year. If only 10% of this potential is captured, then the national benefit would be as high as A$300 million/year.

LP0882801 A/Prof TA Langrish

Approved Project Title **Exploiting Resonance in Improving Dried Timber Quality by Optimizing Cyclic Drying Processes in Solar Kilns**

2008 : $ 35,627
2009 : $ 32,627
2010 : $ 26,627

Primary RFCD 2906 CHEMICAL ENGINEERING

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Australian Choice Timber Supplies Pty Ltd

Administering Organisation The University of Sydney

Project Summary

Maximizing the value of final dried timber is essential for maximizing the economic benefits for Australia. If 10% of one million cubic metres of sawn hardwood timber produced annually in Australia increases its value raised by $500/m3, then the potential direct gain to Australian companies is over A$50 million per year. Multiplier effects include future applications to the drying of foods, where the potential benefit in using solar kilns is a reduction in CO2 emissions of at least a million tonnes of CO2 per year, and a potential cost reduction of A$38 million per year.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882372 Dr CJ Lennings; Prof DT Kenny; A/Prof PJ Armati; Father CK Riley

Approved Project Title **Youth off the streets (YOTS): Rehabilitating at-risk youth and young offenders through responsive service learning programs**
2008 : $ 60,000
2009 : $ 65,000
2010 : $ 65,000
Primary RFCD 3801 PSYCHOLOGY

Collaborating/Partner Organisation(s)

Youth Off The Streets

Administering Organisation The University of Sydney

Project Summary

Young people involved in substance abuse and delinquency are a major economic and social cost to Australia. Although numerous crime prevention strategies have been developed for working with at-risk, homeless, substance abusing and delinquent young people, few have been adequately evaluated and outcomes are poor. Almost none reflect contemporary knowledge in theories of adolescent development. This research will develop an innovative intervention based on Service Learning relevant to other diversion programs within Juvenile Justice and an industry model for long-term sustainable program evaluation. We will also develop an intervention model relevant to other organisations with similar aims and budgetary constraints.

LP0883040 Dr G Macdonald; Dr AF Clarke

Approved Project Title **Indigenous Culture, Heritage and Economy in Rural NSW**
2008 : $ 55,234
2009 : $ 51,254
2010 : $ 64,009
Primary RFCD 3703 ANTHROPOLOGY
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Parkes Shire Council
Bogan River Wiradjuri Aboriginal Corporation

Administering Organisation The University of Sydney

Project Summary

Effective incorporation of Indigenous peoples into Australian social and economic life is a recognised national priority. A meaningful route is through Indigenous cultural heritage, an integral component of Australian identity. Through interdisciplinary pure research, enhanced by applied methodologies, this project will deliver knowledge and training to realise the value of local Indigenous cultural heritage for a rural area. It will culminate in Indigenous people developing roles that contribute directly to Shire and corporate interests. In making a significant contribution to the economic and social well-being of a particular rural area, the project has potential for adoption elsewhere.

LP0882082 Dr LE Semler; Prof P Gay; Dr KJ Flaherty

Approved Project Title **Innovative Approaches to Shakespeare and Literature Research in Australian Universities and Secondary Schools**
2008 : $ 94,592
2009 : $ 94,592
2010 : $ 94,592
Primary RFCD 4202 LITERATURE STUDIES
APDI Dr KJ Flaherty

Collaborating/Partner Organisation(s)

Barker College

Summary of Linkage Projects Proposals for Funding to Commence in 2008

Administering Organisation The University of Sydney

Project Summary
Barker College and the University of Sydney unite in a major research initiative to tackle pressing issues in Australian humanities education with the express purpose of promoting an innovation culture and economy (National Research Priority 3, Goal 5). The project executes groundbreaking research into the teaching and learning of Shakespeare and the literary-critical skills of school and university students. The core research partnership, website and conference together deliver a shared-knowledge approach to determining innovative and effective new models for teaching and learning in the humanities. The project seeks wide participation from, and delivers diverse pedagogical benefits to, all Australian schools and universities.

LP0882054 A/Prof CJ Waldby; A/Prof I Kerridge; Prof L Skene

Approved Project Title **Human Oöcytes for Stem Cell Research: donation and regulation in Australia**
2008 : $ 76,000
2009 : $ 80,000
2010 : $ 59,000
Primary RFCD 3706 HISTORY AND PHILOSOPHY OF SCIENCE AND MEDICINE
APA(I) Award(s): 1
Collaborating/Partner Organisation(s)
Westmead Fertility Services
Administering Organisation The University of Sydney

Project Summary
This study will contribute to the development of workable, ethical guidelines and practices for Australian research oöcyte donation. It will contribute to the protection of women's health and autonomy and the design of sound donation practices and support services. It will contribute to the national and international debate about the ethics of stem cell research, and improve the knowledge base available to regulators and other stakeholders to frame adequate and comprehensive regulation.

LP0883034 A/Prof PA Windsor; Dr ML Sheil; A/Prof PC Wynn

Approved Project Title **Topical and cryoanaesthesia for livestock husbandry**
2008 : $ 160,000
2009 : $ 160,000
2010 : $ 160,000
Primary RFCD 3004 ANIMAL PRODUCTION
APA(I) Award(s): 1
Collaborating/Partner Organisation(s)
Animal Ethics Pty Ltd
Bayer
Administering Organisation The University of Sydney

Project Summary
The livestock industries contribute $15billion annually to Australia's economy, playing a vital role in rural communities. However we must respond to changing demands of our customers, by complementing our competitive disease-free advantage with welfare-conscious production systems. This project will address the threat of growing international demands for improved animal welfare in farming. We will provide research and technical solutions, providing pain mangement products for on-farm use that will reduce animal suffering during routine husbandry interventions. The project offers significant benefits for producers by protecting their industries against the threats of a welfare embargo on our livestock products.

LP0882691 Prof L Zhang; Dr DW Yuen; Dr ZJ Gu

Approved Project Title **Mechanisms of mixed lubrication in rolling**
2008 : $ 112,224
2009 : $ 118,353
2010 : $ 125,475
Primary RFCD 2903 MANUFACTURING ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BlueScope Steel Ltd

Administering Organisation The University of Sydney

Project Summary

Advanced manufacturing is always a major wealth-creating sector in developed economies. To catch up the revolution in rolling industry, Australia must develop her own technologies, train her own professionals of high competence, and thus increase her share in the international market. The proposed research will enhance Australia's record in production-orientated fundamental research in the field of metal rolling, and stimulate the growth of the world-class Australian industry, BlueScope Steel, and train young engineers most needed by the country. The research outcome will bring about long-term benefit to Australia.

LP0882791 Prof L Zhang

Approved Project Title **Non-destructive characterisation of residual stresses for the silicon-on-sapphire technology**
2008 : $ 91,752
2009 : $ 98,476
2010 : $ 99,848
Primary RFCD 2903 MANUFACTURING ENGINEERING

Collaborating/Partner Organisation(s)

Peregrine Semiconductor Australia Pty Ltd

Administering Organisation The University of Sydney

Project Summary

Every sapphire wafer for the fabrication of integrated circuits using the silicon-on-sapphire technology is worth more than a thousand dollars, and the cost grows exponentially with successive processing of circuitry. Early detection and prevention of wafer failure is therefore an economic and quality necessity. The fast, non-destructive method to be developed by the proposed research will enable semiconductor electronics manufacturers to achieve a cost-effective fabrication of integrated circuits by detecting damages in wafers at the very early stage of production.

University of Technology, Sydney

LP0882238 Prof RJ Gibson; A/Prof CR Gibson; Prof J Walmsley

Approved Project Title **Cultural Asset Mapping for Planning and Development in Regional Australia**
2008 : $ 103,000
2009 : $ 110,000
2010 : $ 115,000
2011 : $ 138,000
2012 : $ 120,000
Primary RFCD 3704 HUMAN GEOGRAPHY

Collaborating/Partner Organisation(s)

Regional Arts NSW
Local Government & Shires Association of NSW
Australia Council of the Arts
Canberra Arts Marketing
City of Wodonga
Albury City

Uralla Shire Council
Armidale Dumaresq Council
Wollongong City Council
Central Darling Shire Council

Administering Organisation University of Technology, Sydney

Project Summary

At a time when the environmental, social and industrial bases of regional life are changing markedly, this project examines ways that many areas in Australia might revitalise their economies and communities by engaging in new approaches to the arts and creative activity. For consumers and producers alike, many non-metropolitan regions in Australia offer opportunities for enhanced cultural activity and productivity and quality of life. But these opportunities have not yet been thoroughly observed, described or analysed. This project addresses this serious gap in knowledge and gives policy-makers, planners and regional and rural communities crucial information they need to decide their futures.

LP0882944 A/Prof SP Gudergan; Dr I Lings; Prof JJ Louviere; Prof TM Devinney

Approved Project Title **Strategic Service Innovation: The Role of Heterogeneity in Substantive and Dynamic Capabilities**

2008 : $ 90,000
2009 : $ 80,000
2010 : $ 100,000
Primary RFCD 3506 SERVICES

Collaborating/Partner Organisation(s)

Ruralco/Growforce Australia

Administering Organisation University of Technology, Sydney

Project Summary

This project will provide Australian companies with the tools to conduct a services capabilities audit. This tool will allow them to identify substantive and dynamic service capabilities that they must strengthen or acquire, in order to remain competitive in domestic and global markets, where consumers increasingly differentiate between organisations by value-adding services that they offer. Australia imports over $40Bn worth of services each year. This project has the potential to increase the domestic and international competitiveness of Australian manufacturers and service industries and contribute to the economy by reducing dependence on service imports, and assuring ongoing employment for Australian workers.

LP0882972 A/Prof RR Johnston; Prof RJ Gibson; Prof Dr LY Behrendt; Rev WD Crews; Mr SM Harris

Approved Project Title **New Ways of Doing School: Mixing story and technology to generate innovative learning, social and cultural communities.**

2008 : $ 70,000
2009 : $ 60,000
2010 : $ 70,000
Primary RFCD 3301 EDUCATION STUDIES

Collaborating/Partner Organisation(s)

THE EXODUS FOUNDATION
Sydney Centre for Innovation in Learning (SCIL)

Administering Organisation University of Technology, Sydney

Project Summary

This project brings together academic, social and educational expertise and strong partnership networks of UTS, the Exodus Foundation, and the Sydney Centre for Innovation in Learning. Indigenous and mainstream educators collaborate to develop new perceptions of school and learning through creative mixes of story arts and multimedia technologies. Too often, the imaginations of the disenfranchised young are recruited into antisocial causes. This project seeks to build positive learning and social communities across remote and targeted urban regions, with a specific focus on, but not limited to, Indigenous children. The broad aim is to improve the lived experience of all Australians.

LP0882745 Dr D Liu; Dr S Huang; Prof G Dissanayake; Mr D Pagac

Summary of Linkage Projects Proposals for Funding to Commence in 2008

Approved Project Title **Efficient Strategies for Coordinating Autonomous Vehicles for Maximising Australia's Waterfront Productivity**
2008 : $ 125,000
2009 : $ 120,000
2010 : $ 115,000
Primary RFCD 2903 MANUFACTURING ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Patrick Stevedores Holdings Pty Ltd

Administering Organisation University of Technology, Sydney

Project Summary

This project will lift the productivity of container terminals by enabling the effective deployment of autonomous vehicles in large numbers. The project outcomes of practically deployable and scalable algorithms, realised as live software, will significantly enhance Patrick Stevedores Holdings' world leading technology and the potential of such automation systems to revolutionise material handling around the globe. Beyond the benefits of technology commercialisation, the project will also benefit Australia economically through extending its leading role in developing autonomous systems for material handling, enhancing the frontier technologies for building Australian industries, and alleviating looming capacity constraints.

LP0882861 Prof AS Mowbray; Prof GW Greenleaf; Mr P Chung

Approved Project Title **Improving online case law within the constraints of free access through heuristic linking and resulting discovery mechanisms.**
2008 : $ 111,430
2009 : $ 115,163
2010 : $ 150,000
Primary RFCD 3999 OTHER LAW, JUSTICE AND LAW ENFORCEMENT
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Victorian Civil and Administrative Tribunal
High Court of Australia
Federal Court of Australia
Family Court of Australia
Thomson Legal & Regulatory Limited
The Australian Institute of Judicial Administration Incorporated
Justis Publishing Limited

Administering Organisation University of Technology, Sydney

Project Summary

Better interconnections between cases and between cases and other documents, will improve the work of the judiciary, lawyers and legal researchers. Improved speed, accuracy and comprehensiveness of assessment of the legal implications of previous cases should result in better quality client advice and judicial decisions. The general public and business, for whom AustLII is the principal means of accessing law, will also benefit from better understanding of, and easier access to, the interconnections between the sources of law. Free access via AustLII's increasingly comprehensive coverage of Australian Courts and Tribunals means these innovations will be of immediate broad national benefit.

LP0882089 A/Prof HH Ngo; Mr A Listowski

Approved Project Title **Integration of Sponge Based Technology and Membrane Bioreactor: A Sustainable Treatment System for Water Recycling**
2008 : $ 60,000
2009 : $ 60,000
2010 : $ 75,000
Primary RFCD 2908 CIVIL ENGINEERING

Collaborating/Partner Organisation(s)

Sydney Olympic Park Authority

Administering Organisation University of Technology, Sydney

Project Summary

Clean, safe water is becoming scarce in Australia. Recycling water is considered a promising solution to this growing problem. It is therefore important to develop sustainable treatment technologies for it. Integrating sponge-based technology and membrane bioreactor systems will solve the most challenging problem of membrane fouling while producing high quality of recycled water from wastewater. The technology will maximize water resources, minimize waste and increase economic effectiveness and contributes direct benefits to the Nation in particular and to the world as a whole.

LP0882092 Dr I Vanni Accarigi; Dr TI Dreher; Dr D Ghosh; Dr C Ho; Dr AW Mitchell

Approved Project Title **Information and Cultural Exchange: a study of best practices in community building, participation and cultural citizenship through creative practices**

2008 : $ 85,000

2009 : $ 75,000

2010 : $ 65,000

Primary RFCD 4203 CULTURAL STUDIES

Collaborating/Partner Organisation(s)

Information and Cultural Exchange
Arts NSW Department of Arts, Sport and Recreation
Australia Council for the Arts

Administering Organisation University of Technology, Sydney

Project Summary

This study relates to the NRP 2: 'Strengthening Australia's social and economic fabric'. This project offers new approaches to questions of cultural diversity beyond multiculturalism by bringing together the notions of culture and citizenship, thereby reframing the international debate over cultural citizenship within the Australian context. The project places Australia at the leading edge of research on new media, creative practices and citizenship by developing models of 'evaluating evaluation' and benchmarking participation, belonging and cultural citizenship. The research will contribute to improved funding, evaluation and policy priorities for key Arts agencies such as The Australia Council and Arts NSW.

University of Western Sydney

LP0882088 Dr FR Cameron; Prof RI Hodge; A/Prof BM Neilson; Dr J Salazar; Prof JP Conroy; Prof DJ Karoly; Mr S Chan; Ms C Meehan; Ms LJ Kelly; Prof GP Durant; Mr W LaBar; Dr R Sandell

Approved Project Title **Global Citizenship and the Agency of the Museum Sector in Climate Change Interventions**

2008 : $ 174,000

2009 : $ 161,000

2010 : $ 235,000

Primary RFCD 4003 CURATORIAL STUDIES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Powerhouse Museum
Museum Victoria
Australian Museum
Questacon - the National Science and Technology Centre
Liberty Science Center

Administering Organisation University of Western Sydney

Project Summary

Australia plays an important role in the global response to climate change. This project will benefit Australian communities by building capacity to more effectively respond to and make informed decisions about climate

change by looking to the museum sector as change-agents, well-equipped to operate as a global network. It will develop institutional capacity to communicate high-level state of the art knowledge about climate change to produce better informed citizens; provide forums where diverse interests can meet; and produce new avenues for Australian communities to interact and contribute to local and global debates and decision-making on climate change.

LP0882856 A/Prof RJ Leonard; Dr JD Bellamy; A/Prof RL Ollerton

Approved Project Title **Investing and Cashing in Social Capital: Using denominational differences among Christian churches to identify the costs and benefits of different network patterns**
2008 : $ 60,000
2009 : $ 35,000
2010 : $ 30,000
Primary RFCD 4402 RELIGION AND RELIGIOUS TRADITIONS

Collaborating/Partner Organisation(s)

National Church Life Survey (NCLS) Research

Administering Organisation University of Western Sydney

Project Summary

How much do Christian churches contribute to strengthening Australia's social fabric? Do different denominations contribute in different ways, with some more concerned with relationships within the congregation while others are more concerned with reaching out to the wider community, crossing boundaries of age, class, gender, religious affiliation and ethnicity? This project utilises the large National Church Life Survey (NCLS) databases to assess the contribution to social capital of churches across Australia. NCLS Research is the world leader in surveys of church life and this project will form a new basis for international comparisons with the USA, England and New Zealand.

LP0882328 Dr GE Munns; A/Prof WK Sawyer; Mr CR Murray

Approved Project Title **Teachers For a Fair Go: A study of teachers who 'make a difference' to students in poverty.**
2008 : $ 28,000
2009 : $ 135,000
2010 : $ 96,000
Primary RFCD 3303 PROFESSIONAL DEVELOPMENT OF TEACHERS

Collaborating/Partner Organisation(s)

NSW Dept of Education and Training/ Priority Schools Programs

Administering Organisation University of Western Sydney

Project Summary

Restricted educational outcomes are central to entrenched disadvantage in poor communities in both rural and urban Australia. This project directly addresses education's role in equal opportunities for all Australians. It seeks to work with, and inform, Australia's largest educational jurisdiction (the NSWDET) about practices which gain success for its poorest students. The project also applies new ideas around motivation and engagement from within the MeE Framework, developed at the University of Western Sydney. Using teachers as co-researchers also takes forward methodological practices in investigating what makes a difference in the social and academic outcomes of students in poverty.

LP0882603 A/Prof VA Schmied; Dr JH Fenwick; Dr A Sheehan; Mrs FA Saxton; Ms L Passant

Approved Project Title **Establishing Breastfeeding: an analysis of the language and practices used by midwives and lactation consultants when interacting with new mothers**
2008 : $ 37,463
2009 : $ 35,117
2010 : $ 25,627
Primary RFCD 3211 NURSING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

John Hunter Hospital

Campbelltown Hospital
Administering Organisation University of Western Sydney

Project Summary
Breastfeeding confers extensive health benefits for infants and women, and social and economic benefits for Australian society. Studies indicate that although 80 to 90 percent of women initiate breastfeeding, approximately 25% cease within the first six weeks. It is estimated that if the prevalence of breastfeeding at three months post-birth increased from 60% to 80%, a saving of at least $11.5 million would be made to the Australian health system. This study will provide knowledge about the impact of health professionals' practices on women's infant-feeding decisions, identifying effective components of professional support to inform interventions that increase breastfeeding duration

University of Wollongong

LP0882009 Prof NE Dixon; Dr S Billingham

Approved Project Title **New Techniques for Structural Biology and Directed Molecular Evolution**
2008 : $ 25,627
2009 : $ 25,627
2010 : $ 25,627
Primary RFCD 2708 BIOTECHNOLOGY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Bioline Australia Pty Ltd
Administering Organisation University of Wollongong

Project Summary
This PhD program will equip an Australian graduate with advanced training in techniques in molecular genetics and protein chemistry that are currently in high demand by the biotechnology industry, and also provide him/her with direct experience of an industrial R&D laboratory environment. Moreover, it will establish a basis for further collaboration between a leading University-based research laboratory and an established R&D company that will lead to development of new techniques for use in biotechnology in Australia and overseas.

LP0882832 Dr AV Pan; Prof SX Dou; Dr O Mukhanov

Approved Project Title **Development of superconducting leads with ultra-low thermal conductivity for cryoelectronic applications**
2008 : $ 151,000
2009 : $ 141,000
2010 : $ 146,000
Primary RFCD 2914 MATERIALS ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
HYPRES Inc.
Microwave & Materials Designs Pty Ltd
Administering Organisation University of Wollongong

Project Summary
Superconducting systems are revolutionary technologies that have the potential to make a significant impact on society. The development of the new technology of superconducting wiring, which would effectively eliminate heat generation and its transfer to the cryogenic electronics, and its subsequent employment will enable superconductive electronics to become price competitive, significantly outperforming conventional systems. The establishment of this new frontier technology of heat-switch current leads will benefit Australian industries and have a dramatic impact in the future on the field of cryogenic quantum electronics (such as quantum computing), which is currently under profound exploration in Australia.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882430 Dr P Yu; A/Prof R Jayasuriya

Approved Project Title **Introducing computer-based documentation to Residential Aged Care: a multi-method evaluation of success**
2008 : $ 105,627
2009 : $ 100,627
2010 : $ 95,627
Primary RFCD 2801 INFORMATION SYSTEMS
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Warrigal Care
RSL Care
UnitingCare Ageing South Eastern Region
Illawarra Retirement Trust
Aged and Community Services Australia

Administering Organisation University of Wollongong

Project Summary

Improvements to quality and use of evidence-based methods in residential aged-care are restricted due to the very slow adoption of electronic information systems. This research will provide key investors, government, aged care providers and IT vendors, with tools to measure success in introducing IT into this sector. The project will create a platform with the national peak body, to disseminate lessons in successful implementation of computerised systems in residential aged-care, based on studies in two states. The studies will also benefit the international community researching technology adoption, by extending its boundary condition to a novel setting.

LP0882282 Prof C Zhang; A/Prof X Wang; Dr G Wang; Prof T Toyoda

Approved Project Title **Novel methods for enhancing room temperature figure of merit of thermoelectric/thermionic materials for refrigeration applications**
2008 : $ 81,000
2009 : $ 79,000
2010 : $ 87,000
Primary RFCD 2918 INTERDISCIPLINARY ENGINEERING

Collaborating/Partner Organisation(s)

Hydrokinetics Pty Ltd

Administering Organisation University of Wollongong

Project Summary

With global warming and an increased awareness of climate change, devices such as thermoelectric modules can be part of the solution, particularly if their relative power and efficiency can be increased. The aim of this project is to bring together theoreticians, experimentalists, materials scientists, and industrial partners with complementary expertise to develop new techniques and methods for fabricating novel thermoelectric/thermionic materials with high figure of merit, ZT, for solid state refrigeration applications. The success of the project will lead to a 3 to 5 fold increase in the market share of thermoelectric cooler and will have a significant impact on the Australian economy and reduce greenhouse emissions and global warming.

LP0882947 A/Prof SP Zhu; Dr JM Goard; Mr TJ Berry

Approved Project Title **Developing a robust model for pricing inter-related volatility-based financial derivative contracts.**
2008 : $ 35,000
2009 : $ 35,000
2010 : $ 35,000
Primary RFCD 3503 BANKING, FINANCE AND INVESTMENT
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Tibra Capital

Administering Organisation University of Wollongong

Project Summary

Volatility-based financial contracts were developed in the late 1990s to provide an easy way for investors to gain exposure to the future level of volatility and thus provide a means by which they could speculate on its future levels and also hedge unpredictable volatility risk. This would potentially save them from losing vast quantities of money. However these products can only be efficient products for trading and risk management if they are priced correctly. This project will benefit investors by providing empirically viable models that will be able to be easily implemented to provide accurate and fast pricing solutions.

Victoria

Deakin University

LP0882060 Prof RN Shaw

Approved Project Title **Understanding innovative opera attendees: modelling the responsiveness to marketing alternatives in a dynamic subscription market.**

2008 : $ 130,000
2009 : $ 100,000
2010 : $ 85,000
Primary RFCD 3502 BUSINESS AND MANAGEMENT

Collaborating/Partner Organisation(s)

Opera Australia

Administering Organisation Deakin University

Project Summary

Opera performances are valuable components of Australia's performing arts profile, both historically and currently. However, in an increasingly competitive and commercial environment, opera marketers need to understand better how to match potential consumers to the available operas, including inexperienced consumers and unfamiliar or esoteric operas. This research project will inform opera marketers of the major influences in a dynamic opera environment, and provide an improved understanding of how to address market segmentation and product portfolios in an optimal way, so that consumer satisfaction and company profitability are maximised, while encouraging innovation of an international standard and employment opportunities locally.

La Trobe University

LP0882812 Dr HM Cleak; Dr AJ Bickerdike; Prof MJ Schofield

Approved Project Title **The Efficacy of Family Mediation where Family Violence is Present**

2008 : $ 37,186
2009 : $ 46,263
2010 : $ 46,372
Primary RFCD 3903 JUSTICE AND LEGAL STUDIES

Collaborating/Partner Organisation(s)

Relationships Australia Victoria

Administering Organisation La Trobe University

Project Summary

The family mediation model of dispute resolution offers separated couples a cheaper, more empowering method to resolve property and child custody matters. Current government policy encourages family mediation even where a history of violence exists, yet little is known about the safety and effectiveness of this approach. Family violence is experienced by over 20% of the adult female population with far reaching effects on emotional and health status, family stability and child development. There is thus a critical need to determine the safety and wellbeing outcomes of current practice to inform policy development in handling difficult family violence cases.

LP0882351 Prof F Hardman; A/Prof BW Neville; A/Prof R Lewis; Dr J White; Ms PA McCann; Dr KM Hutchison; Mr G Powell

Summary of Linkage Projects Proposals for Funding to Commence in 2008

Approved Project Title **Engaging adolescents in schooling: A longitudinal study of student use of electronic self-assessment tools within advocacy models of student support.**
2008 : $ 90,000
2009 : $ 75,000
2010 : $ 65,000
Primary RFCD 3301 EDUCATION STUDIES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Catholic Education Office, Bendigo
Catholic College Wodonga
Catholic College Bendigo (Yrs 10-12)
Coburg Senior High School
St Augustine's School P-10, Kyabram
Seymour Technical High School
Collingwood College

Administering Organisation La Trobe University

Project Summary

This research investigates the effectiveness of a program of student support directed to reducing adolescent disengagement from learning and early school leaving. There are potentially significant economic and social benefits to the broader Australian community, particularly in country areas and low socio-economic urban areas. Completing school provides young people with a broader range of options for their economic future, promotes social inclusion, and provides greater protection against negative consequences of unemployment, such as isolation, depression, and substance abuse. Enjoyment of schooling increases the ability of young people to develop to their full potential, and lead healthy, productive and fulfilling lives.

LP0882306 A/Prof R Hoye; Dr MG Nicholson; Dr KM Brown

Approved Project Title **Social Glue? The contribution of sport and active recreation to community wellbeing**
2008 : $ 35,000
2009 : $ 29,000
2010 : $ 32,000
Primary RFCD 3704 HUMAN GEOGRAPHY

Collaborating/Partner Organisation(s)

Victorian Health Promotion Foundation

Administering Organisation La Trobe University

Project Summary

Australian federal, state and local governments allocate more than $4,094 million per year to the provision of sport and recreation services, facilities and programs which service more than 5 million regular participants. This funding is, in part, based on the premise that involvement in sport and recreation develops community wellbeing through the facilitation of social inclusion and connectedness. This research will contribute to the development of policies and practices that will enhance the capability of sport and active recreation organisations to contribute to community wellbeing.

LP0882081 Prof TA Murray; Dr PW Davies

Approved Project Title **An Archaeology of Institutional Confinement: the Hyde Park Barracks 1848-1886**
2008 : $ 78,648
2009 : $ 78,648
2010 : $ 78,648
Primary RFCD 4302 ARCHAEOLOGY AND PREHISTORY
APDI Dr PW Davies

Collaborating/Partner Organisation(s)

Historic Houses Trust of NSW

Administering Organisation La Trobe University

Project Summary

This project has three benefits. First, it will help Australians understand more about the history of government care for the sick and the destitute, an issue that strongly resonates in the contemporary community. Second, by focusing on the archaeology of migration we can improve our understanding of its consequences. Third, the visitors to the Hyde Park Barracks Museum will be better able to understand the richness and diversity of the archaeological and historical records of early Australian history. This will enhance the heritage value of archaeological assemblages that present significant challenges to those who seek to display or interpret them.

Monash University

LP0882735 Prof DA Abramson; Dr M Lackmann; Dr M Haase; Dr IS Harper; Dr S Scheck

Approved Project Title **A high throughput Grid based environment for real time bio-medical imaging**

2008 : $ 190,000
2009 : $ 190,000
2010 : $ 190,000
Primary RFCD 2803 COMPUTER SOFTWARE
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Leica Microsystems

Administering Organisation Monash University

Project Summary

Together with Leica, we will build a virtual microscope facility that will provide substantial functionality not currently available in Australia. This facility will have major national and international impact on bio-medical imaging. The software solutions and infrastructure, developed as part of this program will have considerable commercial and strategic value in their own right. One guaranteed avenue for exploitation of the software will clearly be through our industry partner, Leica. Importantly, our proposal consolidates a critical mass of expertise connecting biomedical with computer science, thereby addressing a well-recognised constraint that to date has limited their national and international impact.

LP0882000 Dr PG Betts; Prof D Giles; Dr G Baines; Mr M Fairclough; Dr BF Schaefer

Approved Project Title **Unearthing the Marginal Terranes of the South Australian Craton: Keystone of Proterozoic Australia**

2008 : $ 140,000
2009 : $ 200,000
2010 : $ 90,000
Primary RFCD 2601 GEOLOGY
APDI Dr G Baines

Collaborating/Partner Organisation(s)

Primary Industry and Resources South Australia

Administering Organisation Monash University

Project Summary

This project will investigate the buried geology of vast regions of northern South Australia that is likely to be compatible with rocks that host enormous mineral wealth including the giant Broken Hill and Olympic Dam deposits. We will access these buried rocks using a program of on-shore scientific drilling that will provide the ground truth for multi-million dollar federal and state government funded geophysical data acquisition. Results will help identify prospective mineral belts and determine the processes responsible for their formation.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882083 Dr MJ Dempsey; Prof RW Faff; A/Prof PR Lajbcygier; A/Prof M Veeraraghavan; Dr LS Irlicht; Mr L de Bever

Approved Project Title **An Empirical Examination of Non-Market Capitalisation Weighted Indices in Australia**

2008 : $ 55,000
2009 : $ 55,000
2010 : $ 55,000
Primary RFCD 3503 BANKING, FINANCE AND INVESTMENT
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Victorian Funds Management Corporation

Administering Organisation Monash University

Project Summary

If Australian fund managers switched from capital weighted indices to fundamental weighted indices, due to their greater efficiency, millions of Australians may have more money at retirement and thus reduce the burden on government to supplement their retirement income. Also, providing practical industry directed research, and PhD graduates in portfolio management will enhance both finance academia and industry and improve the quality and breadth of finance practice and research in Australia.

LP0882533 Dr D Liew; Prof MJ Dooley; Prof J Wilson

Approved Project Title **COst-effectiveness analyses of improved adherence to Management PLans among AustralIANS (COMPLIANS)**

2008 : $ 95,000
2009 : $ 102,190
2010 : $ 109,787
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Bayside Health
Roche Products Pty Limited

Administering Organisation Monash University

Project Summary

Chronic diseases are the leading cause of disability in the community and over $34billion is spent each year on health services in Australia treating these diseases. It is hoped that the project will lead to identification of opportunities for cost-effective prevention and treatment of lung and other chronic diseases and that this will lead to more cost-effective deployment of healthcare resources. Improvements in the management and treatment of these diseases will result in an improvement in the quality of life of Australian patients, and their active and productive participation in society for as long as possible.

LP0882953 Dr HJ Netter; Prof EJ Gowans

Approved Project Title **Antiviral compounds to inhibit the replicase of hepatitis C virus.**

2008 : $ 25,627
2009 : $ 25,627
2010 : $ 25,627
Primary RFCD 3299 OTHER MEDICAL AND HEALTH SCIENCES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Avexa

Administering Organisation Monash University

Project Summary

Hepatitis C virus is a major public health problem. There are currently 200,000 infected individuals in Australia and 16,000 new infections every year. There is no specific treatment and current therapy treats a small percentage of patients only, which consists of interferon-alpha and ribavirin. This results in side effects and only a 50% cure rate. This study's outcomes are expected to lead to greater access to treatment and improved therapy resulting in higher cure rates and in a dramatic reduction in the cost of treating patients. A novel therapy will provide considerable benefits for the national biotechnology industry.

LP0882311 Dr AM Walmsley; Prof BC Finnin; Prof JD Hamill; Prof EN Meeusen; A/Prof GD Sanson; Dr SR Webb

Approved Project Title **Plant Cells for Improved Oral Delivery of Vaccines**

2008 : $ 147,561
2009 : $ 147,561
2010 : $ 147,561
Primary RFCD 2708 BIOTECHNOLOGY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Dow AgroSciences LLC

Administering Organisation Monash University

Project Summary

The pharmaceutical industry is ever assessing methods of improved delivery of their valuable vaccines, pharmaceuticals and nutraceuticals. The oral route increases ease of delivery, is less expensive, and has increased patient compliance. It may also allow vaccination of free-ranging animal populations that may otherwise go untreated. Optimizing oral delivery of plant-made, valuable proteins will therefore have broad ramifications to animal and human health industries, enhancing use of existing valuable compounds and creating opportunities for new compounds and user groups including wild and domesticated animals.

LP0882127 Dr PA Webley; Dr GM Forde; Prof X Chen; Dr AF Hoadley; Dr N Moheimani

Approved Project Title **Renewable energy from carbon dioxide: Process engineering to obtain bio-oil from algae.**

2008 : $ 243,044
2009 : $ 213,673
2010 : $ 226,000
Primary RFCD 2901 INDUSTRIAL BIOTECHNOLOGY AND FOOD SCIENCES

Collaborating/Partner Organisation(s)

Energetix (Biofuels Pty Ltd)

Administering Organisation Monash University

Project Summary

The Stern Report (2007)[1] has called for a CO2 REDUCTION BY MORE THAN 80% in 10-20 years to prevent profound changes in the climate over coming centuries. The proposed project will capture CO2 using algae then off-set the capital investment and on-going expenses of the CO2 capture technology by creating high value products from algae (i.e. bio-diesel, livestock feed and purified water). This process aims to be independently profitable regarless of future carbon taxes or carbon trading systems. This project also investigates water purification methods and new livestock feed additives which can help reduce the effects of drought on food producers in rural and regional areas.

LP0882906 A/Prof JC Zhu; Prof H De Cieri; Dr K Hutchings; Prof CT Nyland; Dr J Shen

Approved Project Title **Constructing a Chinese International Human Resource Management System in Regional Australia: The Case of CHALCO (The Aluminum Company of China)**

2008 : $ 80,000
2009 : $ 78,000
2010 : $ 55,000
Primary RFCD 3502 BUSINESS AND MANAGEMENT

Collaborating/Partner Organisation(s)

Aluminium Corporation of China Limited

Administering Organisation Monash University

Project Summary

Australians will benefit from the project for it will: 1) increase the nation's resource base; 2) improve the balance of payments; 3) increase regional development, income and employment; 4) motivate other Chinese firms to invest in Australia; 5) contain social disputation and ensure the interests of multiple stakeholders will benefit from CHALCO's investment; 6) help generate a good industrial relations climate in the region where the refinery is to be sited; and 9) induce the construction of improved regional social infrastructure. It will also enable Australia scholars to become world leaders in the study of Chinese MNC's policies and practices.

RMIT University

LP0882780 Dr SA Bekessy; Dr MA McCarthy; Dr BA Wintle

Approved Project Title **Biodiversity planning in the urban fringe: multiple actors, multiple conservation actions, multiple uncertainties**

2008 : $ 150,000
2009 : $ 135,000
2010 : $ 145,000
Primary RFCD 2707 ECOLOGY AND EVOLUTION
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Sustainability and Environment
Hume City Council
Port Phillip and Westernport Catchment Management Authority
Stockland
Mornington Peninsula Shire
Parks Victoria

Administering Organisation RMIT University

Project Summary

Accelerating urbanisation in Australia is considered one of the greatest threats to biodiversity, with over 50% of threatened species occurring in urban fringe areas. Conservation planners in the urban fringe lack tools that can simultaneously prioritize multiple conservation actions by multiple actors and reconcile complicated tradeoffs. This project addresses the important gap between conservation theory and real world practice, providing tools for managers to develop optimal strategies given real-world constraints. It will result in better theories and models for designing and evaluating conservation policy and plans to ensure good biodiversity outcomes. Results will be generalisable to any complex conservation planning scenario.

LP0882475 Dr S Charlesworth; Dr IG Campbell; Dr MP Baird

Approved Project Title **A Regional Perspective on Work & Family Balance and Changes in Employment Regulation**

2008 : $ 50,000
2009 : $ 115,000
2010 : $ 65,000
Primary RFCD 3701 SOCIOLOGY

Collaborating/Partner Organisation(s)

Industrial Relations Victoria
Regional Development Victoria

Administering Organisation RMIT University

Project Summary

Work/family balance is a focus of significant attention at the community, national and international level. This project will generate new knowledge about the ways in which employment regulation directly and indirectly impacts on employee work/family balance outcomes within different regional and industry contexts. A growing body of

research recognises the linkages between employment regulation and effects on child and parent well-being and health, labour force supply and economic outcomes. However, little is known about how geographical location shapes work/family balance. The research will thus contribute to improved understandings and to better social policy at the local, state and federal levels.

LP0882346 Prof EM Grierson; Dr P Samartzis; Dr KE Macarow; Prof G Jelinek; A/Prof AW Dent; Dr T Weiland

Approved Project Title **Designing sound for health and wellbeing**

2008 : $ 40,000
2009 : $ 32,800
2010 : $ 30,000

Primary RFCD 4199 OTHER ARTS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

St Vincent's Hospital - Melbourne

Administering Organisation RMIT University

Project Summary

Up to 5 million Australian Emergency patients per annum may benefit from research to be conducted by composers and musicians from the School of Art, RMIT University and medical practitioners and clinical health psychologists based in the Emergency Department at St. Vincent's Hospital - Melbourne. Researchers will investigate whether soundtracks and musical compositions developed for Emergency patients can lower levels of anxiety. Outcomes from the study could lead to reductions in patients' stress and unnecessary nursing and medical attention - all of which could lead to less anxiety in Emergency patients and potential savings in Hospital budgets.

LP0882872 Mr LJ Harvey; A/Prof DL Forrest; Prof RJ Barrett

Approved Project Title **The spatial ensemble: scaling instrumental resonance and morphology for spatialised performance**

2008 : $ 76,881
2009 : $ 76,881
2010 : $ 76,881

Primary RFCD 4101 PERFORMING ARTS

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

ELISION
Judith Wright Centre for Contemporary Art

Administering Organisation RMIT University

Project Summary

This project will lead to a series of new cultural experiences for Australian audiences based on extended instrumental research integrated with new sound spatialisation techniques. The project will ensure that industry partner ELISION's contribution to Australian culture for over 20 years via innovative performances, installations, broadcasts and recordings is reinforced by new research with flow-on effects to their other relationships and activities. The interim and final outcomes of this partnership will lead to a model for university-arts research collaborations that will be tested in international contexts, thus ensuring a wider exposure for Australian cultural research.

LP0882877 Prof PW James; Prof MB Steger; Mr PD Phipps

Approved Project Title **Globalizing Indigeneity: Indigenous Cultural Festivals and Wellbeing in Australia and the Asia-Pacific**

2008 : $ 80,000

2009 : $ 75,000
2010 : $ 25,627
Primary RFCD 4203 CULTURAL STUDIES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Telstra Foundation Limited

Administering Organisation RMIT University

Project Summary

Indigenous communities in Australia (and elsewhere) suffer from extreme disadvantage. Northern Australia and many other places in the region, face a demographic time-bomb of alienated, self-destructive and culturally-disoriented youth. This manifests as violence in places like Wadeye, Palm Island and Port Moresby. Cultural festivals are one of the few consistently positive spaces for indigenous communities to assert a more constructive view of themselves both intergenerationally, and as part of their struggle for respect as distinct cultures in the broader national community. Cultural festivals also provide a rare space for novel intercultural accommodations to be negotiated on indigenous terrain.

LP0882035 Dr HC Lingard; Ms VE Francis

Approved Project Title **Fluctuating demands and unexpected events: An action research approach to improving work-family interaction in project-based construction work**
2008 : $ 58,000
2009 : $ 105,000
2010 : $ 80,000
Primary RFCD 3102 BUILDING

Collaborating/Partner Organisation(s)

Industrial Relations Victoria
Contexx Pty Ltd
Baulderstone Hornibrook

Administering Organisation RMIT University

Project Summary

Construction workers, who comprise 8.5% of Australia's workforce, are a high risk group for work-family conflict (WFC), which is linked to negative outcomes for individuals, families and organizations. The construction industry is facing a skills shortage but remains unattractive to young workers and those with family/care responsibilities. The research will help the construction industry to re-think cultural expectations about work hours and design jobs that reduce WFC and promote work-family interaction. The research will help the industry improve its ability to attract and retain a diverse workforce and contribute to a reduction in the social and economic costs of WFC.

LP0882013 Prof L Padgham; A/Prof MD Winikoff; Dr L Cavedon; Dr BF Kelly; Dr F Zambetta; Dr RB Wesson

Approved Project Title **A Framework for Adaptive Extensible Personae for Interactive Toys**
2008 : $ 110,000
2009 : $ 100,000
2010 : $ 100,000
Primary RFCD 2802 ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING

Collaborating/Partner Organisation(s)

XSiVE Pty Ltd.

Administering Organisation RMIT University

Project Summary

This project will be of benefit in that it will facilitate the development of quality toys, based on sound psychological foundations. These toys will have a long life since they can be extended over time, growing with the child. There is also potential to be used for children with psychological difficulties, and applications in health and aged-care. This project will provide opportunities for Australian business, and will also help to keep Australia at the forefront in the area of intelligent agent technology. It is an example of a project that helps create a culture of innovation in

Australian industry.

LP0882234 Prof L Padgham; Dr AC Lucas

Approved Project Title **Complex Decision Making in Intelligent Agent Systems**
2008 : $ 70,000
2009 : $ 75,000
2010 : $ 50,000
Primary RFCD 2802 ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING

Collaborating/Partner Organisation(s)

Agent Oriented Software

Administering Organisation RMIT University

Project Summary

This project will bring benefit in that it will increase the ability of autonomous computer systems to make complex decisions in dynamic environments. As the use of intelligent autonomous technology is increasing, from smart air-traffic control systems to personal digital assistants to internet software agents, there is also increased demand for more sophisticated reasoning. This is showing in a range of applications such as autonomous vehicles and equipment, scheduling and resourcing, and business processing. This project will contribute to provide such capabilities to existing technology. It will also assist the Australian Partner Organisation to stay at the forefront internationally in this fast moving area.

LP0882413 Prof JY Tu; Dr C Cheung; Dr S Lo; Prof RK Yuen; Dr GH Yeoh

Approved Project Title **Development of an Integrated Platform for Performance-Based Safety Assessment**
2008 : $ 78,648
2009 : $ 78,648
2010 : $ 78,648
Primary RFCD 2802 ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING
APDI Dr C Cheung

Collaborating/Partner Organisation(s)

Dynamics Energy Technologies Pty Ltd
Arch & Fire Professional (International) Limited

Administering Organisation RMIT University

Project Summary

Building fires are the cause of major fatalities and injuries amongst all types of accidental fires in Australia. With significant advancement in numerical simulation technique, computer models are becoming acceptable tools for fire safety designs. Nonetheless, these methods still suffer from large amount of manual inputs and lengthy computational times. This research project will address the prevalent deficiency in many of these computer models and develop a novel and innovative design methodology. The success of this project will revolutionize the computational tools for the industry realizing a convenient, robust and time-saving integrated platform catering for increasing future market demand.

LP0882883 Prof RW Watts; Mr M Salvaris; Ms L Basser; Prof SD Weir; Prof MH Rioux

Approved Project Title **Auditing the Victorian Charter: Australian and international perspectives on applied human rights**
2008 : $ 60,214
2009 : $ 68,000
2010 : $ 65,779
Primary RFCD 3701 SOCIOLOGY

Collaborating/Partner Organisation(s)

Helen Macpherson Smith Trust
VCOSS
Australian Bureau of Statistics
Human Rights Law Resource Centre
Administering Organisation RMIT University

Project Summary
This project is a detailed legal, government and policy case study of the most important human rights initiative in recent Australian history. It will provide research and new knowledge in key areas of human rights: the operation of human rights Bills, links between human rights and social disadvantage, education and community attitudes, and strategic government implementation. The project will develop a new policy tool (a national Audit) to monitor, plan and strengthen human rights in government and the community, and contribute to better social wellbeing and stronger democracy in Australia.

Swinburne University of Technology

LP0882156 Prof M Gu; Dr D Morrish; Mr K Poetter

Approved Project Title **Spectroscopy of complex and biological micro-objects for biosensing applications**
2008 : $ 78,648
Primary RFCD 2708 BIOTECHNOLOGY
APDI Dr D Morrish
Collaborating/Partner Organisation(s)
Genera Biosystems Pty Ltd
Administering Organisation Swinburne University of Technology

Project Summary
The optically based test for specific DNA binding resulting from the conclusion of this project is of great potential benefit to all Australians as DNA is the building block of all living organisms. The technique developed and resulting biosensor will provide an invaluable tool for the determination and analysis of specific DNA reactions. The general technique developed for the genetic targeting of specific DNA reactions makes the detection of diseases and toxins like Chlamydia and anthrax, for example cheap, quick and accurate, keeping Australian's healthy, and strengthening national security.

LP0882252 Prof JD Langan-Fox

Approved Project Title **Air Traffic Controller Competencies and Selection**
2008 : $ 100,000
Primary RFCD 3502 BUSINESS AND MANAGEMENT
Collaborating/Partner Organisation(s)
Airservices Australia
Administering Organisation Swinburne University of Technology

Project Summary
This project targets a National Priority area Safeguarding Australia, Priority Goal: Critical Infrastructure. The partner organization Airservices Australia is a key player in the effective operation of the Australian aviation industry which is a critical and strategic component of the national transport infrastructure. Air Traffic Controllers (ATCs) provide the nation with aviation services that require them to perform all tasks without error. The project will help develop the standards of excellence of Australian ATCs, contribute to internationalizing Australian human factors literature, develop the knowledge and skills of the Airservices staff and research team, and assist RAF and civil ATC collaboration.

LP0882960 Prof CK Stough

Approved Project Title **Does Emotional Intelligence predict final year academic results and student retention in secondary schools?**
2008 : $ 58,000
2009 : $ 43,000

2010 : $ 42,000
Primary RFCD 3801 PSYCHOLOGY

Collaborating/Partner Organisation(s)

Balwyn High School
Anglican Church Grammar School
Girton Grammar School
Eltham College of Education
Presentation College Windsor

Administering Organisation Swinburne University of Technology

Project Summary

Over the past 30 years the completion of the final year of secondary school education has become increasingly important, with a shift towards the requirement of higher levels of education throughout the Australian labour market. As a consequence, early school leavers are three times more likely to be unemployed than those students that complete Year 12 or post-secondary education. The proposed study will examine the role of emotional intelligence (EI) in academic performance at Year 12 and school retention in secondary schools. The results of the study will help schools develop evidence-based strategies to best retain students and help students maximise their academic potential.

LP0882422 Prof IR Young; Dr AV Babanin

Approved Project Title **A Global Satellite Altimeter Database for Ocean Engineering Applications**
2008 : $ 100,000
2009 : $ 70,000
2010 : $ 70,000
Primary RFCD 2912 MARITIME ENGINEERING
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

MetOcean Engineers Pty Ltd

Administering Organisation Swinburne University of Technology

Project Summary

Australia is a maritime nation with major shipping activities, offshore facilities and a very significant percentage of its population living near the coast. As such, it is critical that engineers can accurately predict ocean wave conditions. This project will bring together more than 20 years of satellite observations of the ocean into a single database. This database will represent a major resource for the nation, significantly enhancing our understanding of ocean wave conditions. The research projects associated with the database will provide an understanding of the ocean wave climate, oceanic extremes, tropical cyclone conditions and nearshore ocean design parameters.

The University of Melbourne

LP0882034 Prof AF Christie; Dr CM Dent

Approved Project Title **'The fingers of the powers above do tune the harmony of this peace': Australia and the Harmonisation of Patents**
2008 : $ 70,000
2009 : $ 70,000
2010 : $ 60,000
Primary RFCD 3901 LAW
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

IP Australia
Institute of Patent and Trade Mark Attorneys of Australia

Administering Organisation The University of Melbourne

Project Summary

Patent law is central to the key economic aim of encouraging an innovative culture. The harmonisation of patent

systems around the world means Australian law will change. There is a significant risk that, without effective lobbying, the reforms will only reflect the needs and interests of the dominant economies, like the US. This project, with its comparative analysis of the patent examination process, will explore the ways in which this integral part of the patent system may be improved. This research will lead to proposals for reform that are in line with the interests of Australia's unique economy.

LP0882276 A/Prof S Dey; Dr B La Scala; Prof IM Mareels; Dr LS Irlicht; Mr L de Bever; Mr S Bone; Mr A Randall

Approved Project Title **Robust Optimal Asset Liability Management via Stochastic Control Theory**

2008 : $ 51,254
2009 : $ 51,254
2010 : $ 51,254
Primary RFCD 2301 MATHEMATICS
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Victorian Funds Management Corporation

Administering Organisation The University of Melbourne

Project Summary

The Australian federal and state governments are strongly exposed to the Australian and international investment markets, either directly or through entities such as the Future Fund, state-owned insurers and superannuation schemes. Additionally, the investment pool represented by individual Australian's superannuation savings managed by non-government organisations is significant. Robust and effective management of these assets in order to meet future liabilities of these funds are essential to a stable Australian economy. This research has the potential to be a key component of reliable investment management, helping make Australia an important investment hub.

LP0882700 Dr LB Joubert; Dr KA Brock; A/Prof D Ames; Mr SJ Vale; Dr KD Hill

Approved Project Title **From rehabilitation to recovery after stroke : a model to optimise consumer and carer involvement.**

2008 : $ 25,627
2009 : $ 25,627
2010 : $ 25,627
Primary RFCD 3207 NEUROSCIENCES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

St Vincent's Health

Administering Organisation The University of Melbourne

Project Summary

The National Research Priorities include 'ageing well, ageing productively'. Within this priority, it is necessary to be inclusive of those who have ongoing disabilities and/or chronic disease. This project aims to facilitate healthy lifestyles and community involvement in a group who have significant barriers to achieving their potential. The high incidence of depression and poor quality of life in stroke survivors and their carers emphasises the need to enhance wellness in these people. The study will develop a model for promoting recovery and community reintegration in stroke survivors, with the goal of enabling stroke survivors and their carers to actively participate in the community and pursue personal goals.

LP0882363 A/Prof Y Kashima; Dr S Durkin; Dr M Wakefield

Approved Project Title **Influence of Narrative Content and Context of Anti-smoking Public Health Messages**

2008 : $ 43,517
2009 : $ 44,417
2010 : $ 44,417
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

Summary of Linkage Projects Proposals for Funding to Commence in 2008

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

The Cancer Council Victoria

Administering Organisation The University of Melbourne

Project Summary

By improving the effectiveness of public health campaigns such as those aimed at smokers, we can inform people about healthier ways of living, and encourage them to adopt healthier life style choices. This should reduce the risk of life style diseases such as cancer, stroke, and heart attack. This project will contribute to the promotion and maintenance of good health in the Australian community by facilitating preventive health care and help to reduce the medical cost not only to those who may fall victim to the diseases, but also to their families, communities, states, and Australia as a whole.

LP0882114 A/Prof M Kraimer; A/Prof S Seibert; Dr LD Sargent

Approved Project Title **An evidence based approach to developing human and social capital in organisations**

2008 : $ 68,000
2009 : $ 68,000
2010 : $ 68,000

Primary RFCD 3502 BUSINESS AND MANAGEMENT

Collaborating/Partner Organisation(s)

Deloitte

Administering Organisation The University of Melbourne

Project Summary

A social and economic issue facing Australian organisations is the skills shortage and the retention of qualified professionals and managers. Our research informs this issue by examining the mechanisms for developing and engaging managerial employees in Australian organizations. These types of strategies can help reduce the 'brain drain' out of Australia. Moreover, it should increase the capability of businesses to attract Australians back --'brain gain.' Organizational strategies based on human and social capital development will also strengthen the social fabric of Australian society by building knowledge capabilities and enhancing well-being.

LP0882300 Prof TL McCormack; Mr GJ Boas

Approved Project Title **Australia's Post World War II War Crimes Trials: A systemic and comprehensive Law Reports Series**

2008 : $ 73,531
2009 : $ 73,531
2010 : $ 73,531

Primary RFCD 3901 LAW

Collaborating/Partner Organisation(s)

Australian War Memorial
Australian Defence Force

Administering Organisation The University of Melbourne

Project Summary

The publication of the project's Law Reports Series will, in effect, constitute the official history of this extensive Australian war crimes trial experience - in itself, an important national benefit. However, ready access to the previously buried historical primary source material also has profound potential for contemporary application. The proliferation of new international criminal tribunals with a concomitant explosion of case law has created a hunger for access to past judicial precedent. Reliance on the results of this project in war crimes trials around the world is guaranteed.

LP0882627 Prof JH Rubinstein; Dr MN Brazil; Prof DA Thomas

Approved Project Title **Rapid optimisation in underground mining network design**

2008 : $ 53,554
2009 : $ 61,716
2010 : $ 64,516
Primary RFCD 2301 MATHEMATICS
APA(I) Award(s): 2
Collaborating/Partner Organisation(s)
AMIRA International
Administering Organisation The University of Melbourne

Project Summary
This project represents a major advance in the problem of optimising the infrastructure of underground mines and providing powerful planning tools for management. The software tools we are developing will prove important to the mining industry because of their accuracy, flexibility and generality. Not only can they be used for benchmarking in the design of specific mines, but they also provide a reliable method for testing the cost-benefit of emerging technologies. This is an important project for ensuring that Australia's mining industry remains efficient and internationally competitive. Given our economic dependence on mineral resources, it will also benefit Australia as a whole.

LP0882174 Dr LD Sargent; A/Prof WG Harley

Approved Project Title **Aged care in crisis? The effects of work organisation on nurse, resident and organisational outcomes**
2008 : $ 45,000
2009 : $ 45,000
Primary RFCD 3502 BUSINESS AND MANAGEMENT
Collaborating/Partner Organisation(s)
Australian Nursing Federation (Victoria Branch)
Administering Organisation The University of Melbourne

Project Summary
Given the rapidly ageing Australian population and critical nurse retention issues in aged care, this program of research will have significant national benefit. First, assessing the interactive effects of work stressors and high performance work practices on employee strain and turnover will be particularly important in terms of developing strategies for employee retention. Second, by examining across time the links between work stressors and high performance work practices on one hand and resident outcomes on the other, the research will have important implications for ensuring older people receive quality care and live with dignity in Aged care.

LP0882176 Prof KC Stacey; Dr HL Chick; Dr VA Steinle

Approved Project Title **Supporting personalised learning in secondary schools through the use of specific mathematics assessments that reveal thinking.**
2008 : $ 75,000
2009 : $ 75,000
2010 : $ 70,000
Primary RFCD 3302 CURRICULUM STUDIES
Collaborating/Partner Organisation(s)
Department of Education
Administering Organisation The University of Melbourne

Project Summary
This project will improve numeracy standards in secondary schools, by assisting teachers to personalise the teaching of each student. Through detailed research, the project will develop sophisticated assessments that clearly reveal students' mathematical thinking. On-line diagnosis will suggest teaching activities that can bring about desired conceptual changes. The effectiveness of the resources will be thoroughly tested, for impact on student achievement and the mathematics teaching skills of teachers, especially those working out-of-field. Rural schools will have equal access to these resources. Good numeracy provides the foundation for life-long learning, employment satisfaction and the economic competitiveness of Australia.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882140 Prof LS Sterling; Dr K Taveter; Dr KG Joshi

Approved Project Title **Agent-Based Simulation - New Approaches for Design and Prototyping**

2008 : $ 36,127
2009 : $ 36,127
2010 : $ 36,127
Primary RFCD 2801 INFORMATION SYSTEMS
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Jeppesen

Administering Organisation The University of Melbourne

Project Summary

The project will improve the capacity of Australian companies to bring products to market more quickly where there are complex trade-offs between interacting actors. The simulation guidelines will help understand interaction in complex systems and the identification of important factors in the air traffic domain. The research will also preserve the leading position of Australian technology for high quality simulations of air traffic control. The new methods will help Australian SMEs using agent technology, of which there are several.

LP0882686 A/Prof FJ Vazquez-Abad; Prof D Dufresne; Dr M Menabde; Prof A van den Nouweland

Approved Project Title **Understanding cycles in mineral commodity price, a market model with uncertainty**

2008 : $ 77,000
2009 : $ 75,000
2010 : $ 88,000
Primary RFCD 3402 APPLIED ECONOMICS

Collaborating/Partner Organisation(s)

BHP Billiton

Administering Organisation The University of Melbourne

Project Summary

Mining accounts for more than 8% of Australia's GDP, and almost 50% of Australia's total merchandise exports. Understanding phenomenological mechanisms for price fluctuations and using our dynamic price model can help determine better timing of investments in mining infrastructure. This knowledge will help Australia benefit from the upside of commodity 'cycles', super or not. The market model that will be developed in this project can be used to assist in better planning for commodity cycle upside, improving the overall efficiency of capital utilisation in the long term.

LP0882159 Dr AM Wierenga; Prof JG Wyn; Dr JR Guevara; Prof AE Gough; Ms SJ Dyer

Approved Project Title **Youth-led learning: local connections and global citizenship**

2008 : $ 97,000
2009 : $ 97,000
2010 : $ 89,000
Primary RFCD 3701 SOCIOLOGY
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Plan International (Australia)

Administering Organisation The University of Melbourne

Project Summary

Focussing on social connections across racial and religious boundaries, the project directly addresses two areas of immediate national concern: young peoples' wellbeing, and Australia's relationship with its neighbours. The project will generate a new model of sustainable partnership across NGOs and learning institutions to provide youth-led, global education programs for school-aged youth, promoting learning from a local basis about global issues. In

creating this shared evidence base the project will benefit two industry sectors (NGOs and Education) and facilitate the development of effective processes toward young people's greater participation in social life.

LP0882157 Prof CJ Wilson; A/Prof D Phillips; Dr J Miller; Dr MA Kendrick

Approved Project Title **Controls on Gold Mineralisation in Central Victoria: Towards New Exploration Models.**

2008 : $ 130,000
2009 : $ 140,000
2010 : $ 140,000
Primary RFCD 2603 GEOCHEMISTRY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

GeoScience Victoria, Department of Primary Industries
Perseverance Corporation Limited
Ballarat Goldfields (Lihir Gold Limited)
Bendigo Mining NL

Administering Organisation The University of Melbourne

Project Summary

The proposed project will develop and evaluate new exploration models with implications for gold exploration and mining/investment in Victoria. The frontier research techniques to be employed will ensure that Australian geoscience remains at the forefront of international research. This project will also provide unprecedented research training opportunities for the next generation of Australian Earth Scientists. As prospective gold terranes are located in regional Australia, enhanced exploration and mining activity in future years may have significant economic and infrastructure benefits for rural and regional communities.

University of Ballarat

LP0883029 Prof ME Westbrooke; Dr SP Cook; Dr FP Graz; Dr SK Florentine

Approved Project Title **Demonstrating the impacts of ground tank closure on biodiversity and landscape function in southeast Australian rangelands**

2008 : $ 100,000
2009 : $ 50,000
2010 : $ 60,000
Primary RFCD 2707 ECOLOGY AND EVOLUTION
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Lower Murray Darling Catchment Management Authority
NSW National Parks and Wildlife Service

Administering Organisation University of Ballarat

Project Summary

Despite incentives for improving biodiversity outcomes in pastoral landscapes pastoralists are resistant to strategic tank closure. Research will monitor the effects of total-closure, partial-closure and fencing of ground tanks on biodiversity. Results of research will be built into a model to assist land managers in decision making. The research will be conducted in conjunction with land management authorities thus outcomes can be readily passed on to relevant user groups. The project will aid in the adoption of sustainable land management practices in relation to total grazing pressure and biodiversity. The research within arid woodland and shrubland communities is applicable to a large area of Australia's rangelands.

Victoria University

LP0882329 Prof J Zeleznikow; Prof TM Sourdin; Dr BD Abrahams; Dr AR Lodder

Approved Project Title **Developing negotiation decision support systems that promote constructive relationships following disputes**

2008 : $ 104,275
2009 : $ 104,275
2010 : $ 104,275
Primary RFCD 2801 INFORMATION SYSTEMS
APA(I) Award(s): 1
APDI Dr BD Abrahams

Collaborating/Partner Organisation(s)

Relationships Australia - Queensland Branch
Victoria Body Corporate Services Pty Ltd
Administering Organisation Victoria University

Project Summary

The development of negotiation support systems that focus upon complying with notions of equity, rather than mere integrative bargaining, will lead to more durable outcomes, meaning negotiated settlements will not be discarded and constantly re-litigated. Our development of appropriate systems will provide disputants with information and knowledge that will lead to the continuation of constructive relationships following disputes and reduce the magnitude and extent of conflicts. This will lead to significant cost savings in the administration of justice as well as reduced legal fees. It will result in more harmonious communities - especially in families and body corporates.

Queensland

Griffith University

LP0882566 Dr RA Brown; Dr EW Hirst; Dr AF Woods; Dr DA Heck

Approved Project Title **The development of a values approach to school renewal**
2008 : $ 75,000
2009 : $ 79,000
2010 : $ 75,000
Primary RFCD 3301 EDUCATION STUDIES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Edmund Rice Education, St Francis Xavier Province
Administering Organisation Griffith University

Project Summary

The Development of a Values Approach to School Renewal Project will provide evidence-based strategies and tools that facilitate the development of economic values education policies and programs that promote effective school renewal and reform. We will develop formative and evaluative tools that allow schools to focus on the development of the whole person so as to assist students to incorporate a values dimension into their everyday economic and social choices, thus promoting student health and well-being in a holistic sense. This project will assist in strengthening Australia's social fabric and help families and individuals live healthy and fulfilling lives.

LP0882189 Dr M Conrick; A/Prof J Soar; A/Prof TE Yuginovich; Prof PR Croll; Mr FH Whittaker

Approved Project Title **Minimising the inappropriate and unnecessary hospital admissions of frail older people.**
2008 : $ 143,718
2009 : $ 104,603
2010 : $ 107,963
Primary RFCD 3211 NURSING
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Nexus Online Pty Ltd
Queensland Health
Administering Organisation Griffith University

Project Summary

The health system will continue to experience massive pressures in both fiscal and human resource terms. Older patients present with multiple, complex conditions and tend to be admitted because clinicians often do not have the time to explore other options. This project will develop and evaluate a unique and robust model for minimising inappropriate hospital admissions through rapid assessment of suitability for home care and complete referral information for safety and quality.

LP0882175 Prof LK Frazer; Prof JM Giddings; Dr SK Weaven

Approved Project Title **Towards Resolution of Franchising Conflict**
2008 : $ 52,000
2009 : $ 50,000
Primary RFCD 3502 BUSINESS AND MANAGEMENT

Collaborating/Partner Organisation(s)

Australian Competition & Consumer Commission

Administering Organisation Griffith University

Project Summary

Franchising is a major sector in the Australian economy with annual turnover greater than $128 billion. Some 35% of franchisors report being involved in substantial disputes with franchisees. This project will investigate the causes of conflict in franchising relationships. Benefits will include a predictive model to identify where conflict is likely to occur in franchising conditions, thereby allowing participants the opportunity to address conflict before it escalates into dispute. Case studies and recommendations will inform participants and regulatory authorities so as to prevent conflict escalating. This will create a more 'level playing field' for participants and improve financial security for all stakeholders.

LP0882894 A/Prof R John; Dr PR Teasdale; Dr DT Welsh; Ms KP Catterall

Approved Project Title **Development of redox-mediated microbial assays for the rapid characterisation and assessment of wastewater, wastewater treatment processes and recycled water**
2008 : $ 50,000
2009 : $ 50,000
2010 : $ 50,000
Primary RFCD 2504 ANALYTICAL CHEMISTRY

Collaborating/Partner Organisation(s)

Gold Coast Water

Administering Organisation Griffith University

Project Summary

With SE Qld on Level 5 water restrictions the need to reduce our demand on drinking water by increasing our reliance on recycled water is now urgent. To achieve this we need to ensure that the quality of our recycled wastewater is of a suitable and reliable standard. This project will assist the water industry in this endeavour by the developing monitoring techniques that can rapidly characterise and assess the effectiveness of wastewater treatment processes and the quality of the water derived from them. These methods will provide early warnings of potential 'upsets' in treatment plants that would otherwise result in poor quality effluents that would need to be discharged as waste rather than be recycled.

LP0882137 Dr DA Keen

Approved Project Title **Engaging to learn: Increasing the engagement of children with autism in learning activities**
2008 : $ 55,300
2009 : $ 55,000
2010 : $ 57,500
Primary RFCD 3301 EDUCATION STUDIES

Collaborating/Partner Organisation(s)

AEIOU

Administering Organisation Griffith University

Project Summary
This research addresses the ARC national research priority of promoting and maintaining good health and well being for all Australians by enabling children with autism and their families to lead more productive and fulfilling lives. Children with autism are amongst the most challenging of all students for educators. Improving educational outcomes by engaging these children in learning, the aim of this research, is critical if these children are to achieve their full potential. This will benefit the Australian community by increasing independence, reducing barriers to inclusion, and improving the quality of life for children with autism and their families.

LP0882066 A/Prof E Kendall; A/Prof SW Baum; Dr H Muenchberger; Dr T Yigitcanlar; Ms DM Cowan

Approved Project Title **Coalitions for Community Health: A Community-based Response to Chronic Disease**
2008 : $ 240,531
2009 : $ 115,343
2010 : $ 92,227
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Queensland Health
Administering Organisation Griffith University

Project Summary
This project will provide a methodology for assisting communities to address chronic disease more effectively. It will improve the services available to people with chronic disease by facilitating local planning and delivery processes through collaboration and partnership across all sectors. The methodology will enable communities to access complex statistical and spatial data to use in their planning and decision making about chronic disease and will, therefore, improve service systems.

LP0882032 Prof Dr H Schippers; Prof Dr JA Craik; Mr C Bowen

Approved Project Title **Places for art: redefining the dynamics of performance and location in Australia**
2008 : $ 93,000
2009 : $ 77,000
Primary RFCD 4101 PERFORMING ARTS

Collaborating/Partner Organisation(s)
Australia Council for the Arts
Arts Queensland
Administering Organisation Griffith University

Project Summary
The project will deliver a research model connecting quantitative data to audience perceptions, choices and influences; seven in-depth case studies informing and elucidating this model; and a user-friendly template to replicate this research in other places and disciplines. In this way, it will provide policy makers, funding bodies and arts organisations with practical tools to address drivers for change in the way the arts are experienced in contemporary Australia. This has the potential of widening engagement with the arts for more Australians, and contributing to their sense of wellbeing.

James Cook University

LP0882335 Prof NR Anderson; Prof CJ Lankshear; Ms S Bernhardt

Approved Project Title **Girls and Information Communication Technology (ICT) Career Pathways: Tackling the Upper Middle School 'Turn Off'**
2008 : $ 30,000

2009 : $ 30,000
2010 : $ 30,000
Primary RFCD 3301 EDUCATION STUDIES

Collaborating/Partner Organisation(s)

ThoughtWare Australia P/L
Technology One Corporation

Administering Organisation James Cook University

Project Summary

This project aims to develop strategic responses to factors associated with girls forming such negative perceptions of Information Communication Technology during their upper middle school years that they overwhelmingly reject Information Communication Technology as an option for advanced study and future careers. This project will contribute towards Australia's National Research Priority 3 of building and transforming frontier technologies to maximize creative, technological capability by collaboratively developing a strategic model for responding to factors identified as 'turning girls off Information Communication Technology'.

LP0882235 Dr DR Jerry; Dr JJ Taylor

Approved Project Title **Linking genes with the phenotype - creation of a genetic linkage map for the silver-lipped pearl oyster Pinctada maxima.**
2008 : $ 130,000
2009 : $ 130,000
2010 : $ 130,000
Primary RFCD 3007 FISHERIES SCIENCES

Collaborating/Partner Organisation(s)

Atlas South Sea Pearl

Administering Organisation James Cook University

Project Summary

R&D undertaken in this project will increase our fundamental understanding of the role genetics plays in production of a premium quality cultured South Sea pearl. When utilised in future selective breeding programs aimed at improving pearl quality traits the information generated will allow Australian pearling companies to be more productive and to maintain a competitive advantage over their rivals. Many rural communities are dependent on pearling companies for their economic prosperity and community identity. Consequently, positive growth of the pearl industry as a result of the proposed R&D will greatly benefit the economic and social wealth of these rural populations.

LP0882628 Prof CN Johnson; Dr BC Congdon; Dr JR Butler

Approved Project Title **Ecology, impacts and management of wild dogs in urbanising coastal landscapes of the wet tropics, Queensland**
2008 : $ 95,425
2009 : $ 84,094
2010 : $ 85,048
Primary RFCD 2707 ECOLOGY AND EVOLUTION
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Far North Queensland Natural Resource Management
Cairns City Council
Council of the Shire of Cardwell
Skyrail Rainforest Foundation

Administering Organisation James Cook University

Project Summary

All management agencies and local governments in north Queensland identify wild dogs as a significant threat and a complex problem for management, and are in the process of developing wild dog management plans. However, these plans tend to be reactive and short-term, because too little is known to develop effective long-term

management strategies. This project will provide a sound basis for the development of such strategies. The results of the study will also inform wild dog management in many other parts of Australia that face similar problems.

Queensland University of Technology

LP0882338 A/Prof DJ Anderson; Prof P Yates; Dr J Jones; Dr NM Byrne; Dr JA Barr

Approved Project Title **Developing a novel method for delivering a behavioral intervention for decreasing morbidity in women with a chronic disease: a randomized controlled trial.**
2008 : $ 61,961
2009 : $ 61,740
Primary RFCD 3801 PSYCHOLOGY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Northside Health Service District

Administering Organisation Queensland University of Technology

Project Summary

Currently there are 209.8 deaths from heart, stroke and vascular diseases per 100 000 of the Australian female population each year, with the rates being considerably high in the elderly female population. Despite the potential benefits of behavioural strategies to prevent morbidity in women with chronic disease, studies to date have not targeted women who already have a chronic disease in a clinical setting. This research study will address this, helping postmenopausal women who have chronic disease change negative health behaviours and increase physical activity and self efficacy, improve quality of life and decrease blood pressure, obesity and tobacco use.

LP0882087 Dr MA Campbell; Prof SM Kift; Prof D Butler; Prof PT Slee; Dr BA Spears; Mr AE Knott; Ms FM McNamara; Mr DC Ford

Approved Project Title **Cyber bullying: An evidence-based approach to the application and reform of law, policy and practice in schools.**
2008 : $ 95,000
2009 : $ 45,000
2010 : $ 45,000
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

Collaborating/Partner Organisation(s)

Macrossans Lawyers
Queensland Independent Education Union
Queensland Teachers' Union
Brisbane Girls Grammar School
Brisbane Catholic Education
Queensland Chapter of Australian and New Zealand Law Association
Emil Ford & Co - Lawyers

Administering Organisation Queensland University of Technology

Project Summary

In better understanding the issue of cyber bullying and emerging jurisprudence, this study will guide schools on policies and practices that will assist and protect victims, educate all students and families towards electronic discourse and help schools avoid liability and keep them out of court. Outcomes could also inform teacher education programs and professional development programs at the university level for educators. These understandings will inform the development of intervention and prevention strategies and potential reform of the existing laws and policies. The study will support the development of safe, ethical educational environments, both physical and virtual, where all students are free to learn.

LP0882292 A/Prof JD Davey; Dr JE Freeman

Approved Project Title **Developing Contemporary Driving Risk Assessment Tools to Improve Fleet Safety**
2008 : $ 78,648
2009 : $ 79,648

2010 : $ 78,648
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES
APDI Dr JE Freeman
Collaborating/Partner Organisation(s)
Q Fleet
Administering Organisation Queensland University of Technology

Project Summary
The development of effective driving risk management tools will provide valuable insight into methods to reduce a significant community and national problem, as work-related road crashes cost Australia $15 billion a year. Importantly, the project has the potential to benefit both urban and rural areas of Queensland and Australia, as road crashes are a national problem. The research study also has the potential to create business cost savings from reductions in productivity loss and medical expenses, as well as flow through to the general population in terms of better (a) fleet management, and (b) driver attitudes and behaviour.

LP0882432 A/Prof JD Davey; Prof M McGregor-Lowndes; Ms SA Newnam

Approved Project Title **Fleet safety in the nonprofit sector**
2008 : $ 78,648
2009 : $ 78,648
2010 : $ 78,648
Primary RFCD 3504 TRANSPORTATION
APDI Ms SA Newnam
Collaborating/Partner Organisation(s)
Uniting Church
Administering Organisation Queensland University of Technology

Project Summary
This project offers three unique opportunities. First, this research will improve the safety of work-related drivers within the nonprofit sector by implementing a multilevel fleet safety program addressing the key aspects that influence driving behaviour. Second, this research will address the safety of those volunteering their services through nonprofit agencies by developing regulatory frameworks to protect them from personal civil liability. Third, through achieving successful safety outcomes, this research will reduce the unnecessary costs associated with work-related crashes in a sector least able to afford such services.

LP0882891 Dr WO Doherty; Dr H Yu; Dr CM Fellows; Mr GM Pope

Approved Project Title **Effect of cane sugar juice composition on scaling rate and scale composition in sugar mills**
2008 : $ 30,000
2009 : $ 30,000
2010 : $ 30,000
Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)
APA(I) Award(s): 1
Collaborating/Partner Organisation(s)
Sugar Research Limited
Administering Organisation Queensland University of Technology

Project Summary
The Australia sugar industry produces 1100 GWh of renewable electricity annually, abating ~1.1 M tonnes of CO2-equivalent of greenhouse gases. This can be increased if the juice evaporation performance, which largely determines the energy efficiency of the sugar factory, can be improved through reduced fouling of evaporators. This project will investigate the effect of juice composition on fouling of sugar factory evaporators so that a model to predict scale type and scale propensity can be developed. This will enable the development of better scale control strategies, resulting in reduced energy usage and reduced usage of the hazardous and polluting chemicals required to remove scale.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882650 Prof GJ FitzGerald; Dr PJ Aitken; Dr K McKenzie; Prof E Kozan; Ms VC Tippett; Mr DA Eeles; Mrs A Miller; Mr JP Higgins

Approved Project Title **Emergency Health Services: Demand and service delivery models**

2008 : $ 125,043
2009 : $ 118,617
2010 : $ 163,898

Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Qld Ambulance Service

Administering Organisation Queensland University of Technology

Project Summary

Congestion of emergency health services is causing considerable community concern regarding Australia's capacity to manage daily health emergencies and to respond to major incidents and disasters. The service models developed in this project will provide the basis for policy and service initiatives which will address the growing demand for emergency health services more efficiently and effectively and thus meet community expectations. Improved services will result in improved community health and wellbeing. This project will also develop the research capacity of Australia through training of key individuals who will lead future research and development of emergency health services in Australia.

LP0882637 A/Prof A Goonetilleke; Dr GA Ayoko; Dr T Yigitcanlar; Adj/Prof EC Thomas; Ms KI Macintosh

Approved Project Title **Adaptation of Water Sensitive Urban Design (WSUD) to Climate Change, Changing Transport Patterns and Urban Form**

2008 : $ 90,000
2009 : $ 90,000
2010 : $ 90,000

Primary RFCD 2911 ENVIRONMENTAL ENGINEERING

Collaborating/Partner Organisation(s)

Gold Coast City Council
Queensland Transport

Administering Organisation Queensland University of Technology

Project Summary

This research will (a) provide guidance on future adaptations of stormwater quality infrastructure, (b) provide better scientific understanding of pollutant movements in urban systems and (c) provide methodology to 'future proof' infrastructure design against the pressures of climate change and urban population growth. Project outputs will (a) enable water-sensitive urban designs to be applied reliably and (b) minimise the cost of re-building assets before the end of their design life due to climate change. The ultimate benefit is the reduction in water pollution from roadways leading to improved human and ecosystem well-being of urban communities.

LP0882614 Dr DK Gramotnev; A/Prof PM Fredericks; Dr AV Rode; Dr V Otieno-Alego; Dr KP Kirkbride

Approved Project Title **A new nano-sensor technology for the detection and identification of residual vapours of explosives, drugs and chemicals in the air**

2008 : $ 50,000
2009 : $ 50,000
2010 : $ 75,000
2011 : $ 105,000

Primary RFCD 2404 OPTICAL PHYSICS

Collaborating/Partner Organisation(s)

Forensic Services, Australian Federal Police
National Institute of Forensic Science

Administering Organisation Queensland University of Technology

Project Summary

Fighting terrorism and crime is one of the most important and difficult tasks that requires substantial human and technological resources. This project will help to address this enormous problem by developing a new optical sensor technology for the detection and identification of traces of chemicals, explosives, drugs and biological agents. It will develop a laboratory prototype of this sensor that is expected to have superior sensitivity and operational capabilities. Thus it will noticeably contribute to practical law enforcement, air quality and environmental monitoring, counter-terrorism, air safety, border security and customs service. It will also lead to further development of nano-optics and nanotechnology in Australia.

LP0882458 Prof BC Haseman; Prof DE Stewart; Dr EA Parker; Dr A Hickling-Hudson

Approved Project Title **Sexual health promotion in Papua New Guinea: a community capacity-building approach using drama-based experiential learning methods.**
2008 : $ 92,655
2009 : $ 87,921
2010 : $ 80,380
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

Collaborating/Partner Organisation(s)

Advetntist Development and Relief Agency (ADRA) Australia Ltd
Marie Stopes International Australia
Administering Organisation Queensland University of Technology

Project Summary

The Australian government is committed to developing a secure and prosperous Papua New Guinea. A major constraint to PNG's prosperity is the HIV/AIDS epidemic, fuelled by a generalised Sexually Transmitted Infection (STI) epidemic. This project will build the capacity of local PNG personnel to implement, evaluate, and further develop, effective interventions based on established experiential learning modalities. Learnings from this landmark study will also provide vital information for policy makers and funding bodies in Australia and other nations, to establish more effective strategies for improving the health and wellbeing of young people and preventing the spread of STIs and HIV/AIDS.

LP0882274 Prof GN Hearn; Dr M Foth; Dr B Bajracharya; Prof KM Mallan

Approved Project Title **Remembering the Past, Imagining the Future: Embedding Narrative and New Media in Urban Planning**
2008 : $ 105,000
2009 : $ 100,000
2010 : $ 95,000
Primary RFCD 4001 JOURNALISM, COMMUNICATION AND MEDIA
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

The Hornery Institute
Noosa Council
Noosa District State High School
Administering Organisation Queensland University of Technology

Project Summary

This project supports new media creativity and literacy in two Australian communities. It helps people participate in the urban planning process. It assists in improving a sense of belonging and fosters human talent and socio-cultural values favourable to creativity and innovation. By empowering people to bring about change within their local community, the project re-invigorates a more contemporary interpretation of community values in a knowledge society. Australia's capacity to interpret and engage with its urban environment is also enhanced by raising our awareness of the socio-cultural background, heritage and future aspirations of local community members.

LP0882093 Dr K McKenzie; Mrs S Walker; Prof MP Dunne; Dr JA Fraser

Approved **Improving the measurement and surveillance of child abuse in Queensland**

Project Title
2008 : $ 28,000
2009 : $ 40,000
2010 : $ 28,000
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

Collaborating/Partner Organisation(s)

Department of Child Safety
Queensland Health
Abused Child Trust

Administering Organisation Queensland University of Technology

Project Summary

Estimates of the prevalence of child abuse suggest 10-20% of children are affected, with financial costs to the community around $5 billion annually, and extensive health and social consequences. Despite these enormous costs, research into risk factors and prevalence of child abuse has been hampered by poorly validated statistics. The use of routine hospital data for the identification of child abuse cases offers an efficient nationally standardised data source to improve the precision of child protection departmental responses through routine monitoring and audits of linked health and child protection data. Improvement of data will inform identification, intervention and prevention strategies.

LP0882544 Prof L Morawska; Dr ZD Ristovski; Dr GA Ayoko; Dr NS Holmes; Prof L Ferreira; Prof MR Moore; Mr DJ Grosse; Ms JA Rossner

Approved Project Title **Quantification of Traffic Generated Nano and Ultrafine Particle Dynamics and Toxicity in Transit Hubs and Transport Corridors**
2008 : $ 108,000
2009 : $ 160,000
2010 : $ 130,000
2011 : $ 87,000
Primary RFCD 2911 ENVIRONMENTAL ENGINEERING
APA(I) Award(s): 4

Collaborating/Partner Organisation(s)

Queensland Transport

Administering Organisation Queensland University of Technology

Project Summary

The socio-economic benefits to Australia will include (i) new knowledge for the multiparameter assessment of nano and ultrafine particles, pollutants in the centre of current scientific, medical and policy debates (ii) a breakthrough in the scientific understanding of traffic generated particles in the urban atmosphere (iii) determining the toxicological impact of these particles on biological systems. The ultimate economic benefit will be improved urban design to lower human exposure to ultrafine particles, thus reducing health care cost and productivity losses. The research will also place Australia at the forefront of international progress towards better methods for achieving environmental sustainability.

LP0882162 Prof DP Thambiratnam; A/Prof AC Tan; Dr TH Chan

Approved Project Title **Monitoring and Maintaining the Structural Health of Bridges Using Vibration Characteristics**
2008 : $ 73,000
2009 : $ 73,000
2010 : $ 73,000
Primary RFCD 2909 ELECTRICAL AND ELECTRONIC ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Brisbane City Council
Queensland Main Roads Department

Administering Organisation Queensland University of Technology

Project Summary

Bridges form an important part of our physical infrastructure system and in Queensland alone there are nearly 3000 bridges with an annual maintenance cost in excess of 20 million dollars and a replacement value in excess of 2 billion dollars. It is necessary to ensure that these bridges function safely and efficiently at all times. Bridge failure will cause disruption to normal lives and expensive repairs. Towards this end, this project will develop an innovative structural health monitoring system to monitor and maintain the structural health of our bridges. The project outcomes will have immediate applications in Australia and overseas with economic and social benefits to the community.

The University of Queensland

LP0882517 Prof TJ Brailsford; Dr JT Alcock; Prof SF Gray; Mr BR Parmenter; Dr M Malakellis

Approved Project Title **The Management of Asymmetric Risk in a Modern Investment Portfolio**

2008 : $ 100,000
2009 : $ 90,000
2010 : $ 130,000

Primary RFCD 3403 ECONOMIC HISTORY AND HISTORY OF ECONOMIC THOUGHT

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Tactical Global Management Ltd

Administering Organisation The University of Queensland

Project Summary

Due to compulsory superannuation legislation, the future lifestyle of all Australians is dependent upon the successful management of investment funds. A large component of funds management is risk management. This project will generate practical management tools to enable portfolio managers to significantly enhance their risk-management strategies. A direct link between risk management and performance drives funds managers to carefully manage their risk exposure. Any developments that reduce the risk of a portfolio will ultimately enhance portfolio returns. Higher returns on superannuation investments will result in an improved future standard of living for all Australians.

LP0882371 Prof JJ Cooper-White; Prof GI Anderson; Dr T Eindorf; Prof P Ghosh; Dr S Gronthos; Dr A Zannettino

Approved Project Title **Intelligent scaffolds and methods for repair of osteochondral defects**

2008 : $ 109,851
2009 : $ 96,390
2010 : $ 102,613

Primary RFCD 2915 BIOMEDICAL ENGINEERING

Collaborating/Partner Organisation(s)

Mesoblast

Administering Organisation The University of Queensland

Project Summary

Osteoarthritis (OA) produces articulation of bone against bone resulting in extreme pain and disability. Of all musculoskeletal disorders, osteoarthritis has the greatest social and economic implications worldwide. By 2030, it is projected that 9.3% of the adult population will suffer from arthritis, significantly affecting their quality of life and overall productivity. A tissue engineered product capable of repairing osteochondral defects that does not require revision over time but becomes fully integrated with the host tissue will have significant benefits. It will improve patient activity and quality of life, and significantly reduce current health care costs associated with osteoarthritis sufferers.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882095 A/Prof D Edwards; Dr SM Grimmond

Approved Project Title **Developing technology for the cost effective de novo sequencing and analysis of complex genomes**
2008 : $ 290,000
2009 : $ 270,000
2010 : $ 280,000
Primary RFCD 2702 GENETICS
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Bayer BioScience N.V.

Administering Organisation The University of Queensland

Project Summary

Applying the latest scientific advances supports society directly through promoting a knowledge based economy, as well as indirectly through securing agricultural productivity and improved biomedical applications. Establishing these methods places Australia at the forefront of genomics technology with direct applications for Australian biomedical and biotechnology industries. Maintaining agricultural production in an unreliable environment remains a national challenge, both for rural and urban communities. This sequencing technology will provide a detailed understanding of crop genome structure and lead to the development of crops that are better suited to the Australian climate, supporting a sustainable agricultural industry.

LP0882233 A/Prof JA Fuerst; Prof PN Shaw; Dr JN Hooper

Approved Project Title **Diversity of Salinispora actinobacteria producing pharmaceutically relevant natural products from Australian marine sponges**
2008 : $ 25,627
2009 : $ 25,627
2010 : $ 25,627
Primary RFCD 2703 MICROBIOLOGY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Queensland Museum

Administering Organisation The University of Queensland

Project Summary

By investigating the distribution of marine microbial resources relevant to drug discovery, we will directly contribute to ARC's Research Priority I - An Environmentally Sustainable Australia Priority Goal and the Priority Goal 'Sustainable use of Australia's biodiversity'. We will determine sources of marine bacteria and their genes useful for discovery of new natural products for treatment of human diseases. We will do this by understanding where new strains of Salinispora bacteria may be isolated and how they are distributed in association with Australian marine sponge fauna, and by determining the distribution and chemical and genetic diversity of novel marine Salinispora bacteria.

LP0882618 Prof RG Gilbert

Approved Project Title **Controlled nutrient release for more efficient agricultural water use and reduced environmental insult**
2008 : $ 77,690
2009 : $ 80,329
2010 : $ 82,368
Primary RFCD 2505 MACROMOLECULAR CHEMISTRY

Collaborating/Partner Organisation(s)

CSBP Limited

Administering Organisation The University of Queensland

Project Summary

We will create a completely new type of coating for fertilizer granules. Clays that adsorb and slowly release phosphates and/or other nutrients will be exfoliated with cationic organic reagents to produce organoclay nanoparticles of greatly increased surface area. These will be polymerized with current and novel monomers to form nanocomposites, encasing the clay in a water-swellable matrix by polymerization; this will enable both slow water perfusion and strong binding to the granules. The polymer and nanoclay properties will be tuneable to release targeted nutrients at an optimal rate for uptake by crops, reducing nutrient seepage into the environment.

LP0882068 Prof PF Green; Dr GJ Ridley; Prof CB Ferguson; Dr PJ Coram

Approved Project Title **InformationTechnology (IT) Audit Methodologies in the Australian Public Sector: Addressing Mandatory Requirements of International Standards**
2008 : $ 47,647
2009 : $ 32,098
2010 : $ 25,827
Primary RFCD 3501 ACCOUNTING, AUDITING AND ACCOUNTABILITY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

CPA Australia
Institute of Chartered Accountants in Australia
Tasmanian Audit Office

Administering Organisation The University of Queensland

Project Summary

The primary benefit occurs in relation to National Research Priority 3: Frontier Technologies for Building and Transforming Australian Industries, notably Priority Goal 'Smart Information Use', as it will enable more sophisticated and accurate assessments of current IT audit methodologies. In turn, these improvements will enable more effective IT audits by government audit offices in Australia, bringing reduced risk and increased efficiency to organisations subject to audit, as well as increasing conformance with the new accounting and auditing standards. Furthermore, all Australian citizens, (the indirect clients of public sector audit services), will benefit from well-managed program-delivery systems.

LP0882135 Dr NL Jimmieson; Dr SL Restubog; Dr G Sutton

Approved Project Title **Promoting high-performing multidisciplinary health care teams: An examination of the antecedents and consequences of psychological safety**
2008 : $ 80,000
2009 : $ 90,000
2010 : $ 48,000
Primary RFCD 3801 PSYCHOLOGY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Queensland Health

Administering Organisation The University of Queensland

Project Summary

Australian health care services are faced with an increasing burden of complex disease and changing demographics which require identification of new models of care. By promoting effective teams, this research aims to empower both organisations and their employees to contribute to a process of continuous improvement that identifies best-practice solutions for all Australian hospitals. Overall, findings will help strengthen Australia's social and economic fabric by providing reliable and valid research evidence regarding ways to promote effective health care teams.

LP0882794 Prof GF King; Prof PF Alewood

Approved Project Title **Development of environmentally-friendly insecticides for the Australian livestock industry**
2008 : $ 149,987

2009 : $ 144,773
2010 : $ 144,868
Primary RFCD 3004 ANIMAL PRODUCTION

Collaborating/Partner Organisation(s)

Venomix Inc.

Administering Organisation The University of Queensland

Project Summary

Many insects and other arthropods are serious pests of Australian livestock. Australian farmers spend about $300 million per annum on insecticides and acaricides, while Australian consumers spend more than $100 million annually on insecticides for use on pets and around the home and garden. Unfortunately, many of these arthropod pests have developed resistance to chemical insecticides. This aim of this research program is to develop a new generation of environmentally-friendly natural products that can be used to control arthropod pests on farms and around the home and garden.

LP0882316 Dr JM Lanyon; Prof PK Pollett; Dr JR Ovenden; Mr D Broderick

Approved Project Title **Animal movement between populations deduced from family trees - a test case on dugongs in southern Queensland.**
2008 : $ 75,000
2009 : $ 75,000
2010 : $ 75,000
Primary RFCD 2702 GENETICS
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Queensland Department of Primary Industries and Fisheries
Sea World
Consolidated Rutile Ltd

Administering Organisation The University of Queensland

Project Summary

This project responds to a national research priority by developing new methodology that will assist with the management and protection marine and terrestrial biodiversity in Australia and worldwide. It aligns with the requirements of the Australian community and our industry partners by contributing to plans for the long-term use of ecosystem goods and services, ranging from fisheries to ecotourism. The outcomes will provide data on dugong movements between protected areas on the eastern Australian coast. This information is currently unattainable but is indispensable for the lasting security of this culturally and ecologically significant mammal.

LP0882340 Prof MF Lavin; Prof J de Jersey; Dr LW Guddat; Dr M Trabi; Mr A Baker

Approved Project Title **Pre-clinical evaluation of snake venom proteins with therapeutic potential**
2008 : $ 260,535
2009 : $ 250,699
2010 : $ 277,299
Primary RFCD 3205 PHARMACOLOGY AND PHARMACEUTICAL SCIENCES
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

QRxPharma Pty Ltd

Administering Organisation The University of Queensland

Project Summary

Australia harbors some of the most toxic snakes in the world. Their venoms contain a range of substances that are designed to rapidly immobilize and kill their prey. These include agents that lead to enhanced blood clotting; excess bleeding. We have isolated and characterized a large number of the components involved over the last several years. The aim here is to carry out pre-clinical trials in animal models to test the efficacy of three proteins as anti-bleeding agents and investigate several other novel components. The ultimate outcome will be the

development of novel drugs that will have application in the treatment of human disorders.

LP0882681 Prof GM Lu; Dr S Qiao; Dr BC Peters; Dr MJ Kennedy; Ms Q Hu

Approved Project Title **Porous Silica-Based Nanocapsules for Targeted and Controlled Release of Biocides**
2008 : $ 182,038
2009 : $ 173,727
2010 : $ 172,416
Primary RFCD 2918 INTERDISCIPLINARY ENGINEERING
APA(I) Award(s): 1
Collaborating/Partner Organisation(s)
DPI&F
Administering Organisation The University of Queensland

Project Summary
The project will lead to significant advances in nanotechnology and agrichemical biocide applications. A highly efficient insect control technology will be developed, that will be cost-effective with the ability for targeted control and release of biocides. The encapsulation technology will reduce the total usage and costs of biocides thus benefit the environment in terms of reduced environment pollution and enhanced ecological safety.

LP0882090 Dr CA McAlpine; Dr JR Rhodes; Dr GS Baxter; Dr B Price; Dr AJ Bradley; Dr DH Lunney; Dr LM Seabrook
Approved Project Title **The conservation of widely distributed species: implications of differences between western and eastern koala populations**
2008 : $ 190,000
2009 : $ 129,902
2010 : $ 139,902
Primary RFCD 2707 ECOLOGY AND EVOLUTION
APA(I) Award(s): 2
APDI Dr LM Seabrook
Collaborating/Partner Organisation(s)
Australian Koala Foundation
South West Natural Resource Management Inc.
New South Wales Department of Environment and Climate Change
Administering Organisation The University of Queensland

Project Summary
Koalas are an iconic species in Australia, generating $2.5 billion in tourist income alone. This project will be a first to test cross-regional variations in koala-habitat relationships, with implications for conservation of other species occupying broad geographical ranges. It will also predict the effect of future climate change on western koala populations living at the margin of their ecological tolerances. It will provide regional natural resource management bodies and state conservation agencies with a sound ecological framework to conserve western koalas in the long term. Regional communities will benefit from involvement by incorporating new conservation knowledge into sub-catchment and property management planning.

LP0882320 Dr NA McMillan; Dr JR Morrison; Dr GR Leggatt; Dr W Gu

Approved Project Title **The Role of RNA interference in the induction of immune responses**
2008 : $ 108,875
2009 : $ 108,875
Primary RFCD 3202 IMMUNOLOGY
Collaborating/Partner Organisation(s)
Benitec Ltd
Administering Organisation The University of Queensland

Project Summary

Our work will allow us to understand a new means by which to alert the immune system to the presence of cancer cells using a new technology called RNA interference. This will hopefully lead to new investment in biotechnology products based on RNA interference, improved treatments for cancers and better health for Australians

LP0882939 Dr PJ Murray; Dr JB Gaughan; Prof J Billingsley

Approved Project Title **Individual animal management for grazing beef cattle.**
2008 : $ 201,441
2009 : $ 176,441
2010 : $ 186,441
Primary RFCD 3004 ANIMAL PRODUCTION
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Bengalla Pastoral Holdings Pty Ltd
RPM Rural Products
Administering Organisation The University of Queensland

Project Summary

This research will significantly improve the ability of the Australian beef pastoral industry to stay competitive in the world market whilst improving animal welfare standards for the industry. Labour shortages in rural and regional areas of Australia are a major problem to the grazing industry. This research will not only help address the shortfall in unskilled labour but will provide the tools for addressing many human and animal welfare issues associated with cattle handling.

LP0882549 Dr RS Pappu; Prof TB Cornwell; Dr K Doherty; Mr DA Cavalchini

Approved Project Title **Examining the impact of marketing communications on brand image, brand equity and behaviour outcomes**
2008 : $ 23,058
2009 : $ 33,000
Primary RFCD 3502 BUSINESS AND MANAGEMENT

Collaborating/Partner Organisation(s)

Australian Red Cross Blood Service
Administering Organisation The University of Queensland

Project Summary

The results would help charities in brand building activities through improved marketing communications. For example, the Australian Red Cross Blood Service (ARCBS) can understand how to improve their brand equity (e.g. improving loyalty, enhancing brand awareness levels, achieving higher perception of quality as well as enhancing brand image) in their donor markets. Increased commitment from the donors is likely to result in benefits such as more blood donations for this charity organisation. This would mean better services provided by ARCBS which would mean promoting and maintaining good health among the Australian public.

LP0882574 Prof V Rudolph; Dr P Massarotto; A/Prof SD Golding; Dr M Gasparon; Prof SK Bhatia

Approved Project Title **Flue Gas and CO2 Geosequestration in Surat and Bowen Basin Coals**
2008 : $ 247,327
2009 : $ 308,095
2010 : $ 229,799
Primary RFCD 2906 CHEMICAL ENGINEERING
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Stanwell Corporation Limited

Institute of Geology, Geochemistry of Petroleum & Coal of University of Aachen
Origin Energy Ltd
Santos
Thiess Pty Ltd
Administering Organisation The University of Queensland

Project Summary
Climate change considerations require that CO2 emissions to atmosphere be severely reduced. This is best done in the short term by permanently storing the CO2 underground. Amongst the cheapest and safest options are to use coal seams, which then release valuable methane. The market value of this extra methane is ~$9billion and this reduces the cost of sequestration from ~$56 to $25/t CO2. Coal has a very strong affinity for CO2, so flue gas stream from power stations can be injected directly, eliminating the need for equipment to capture the CO2, providing savings of ~$500million for each large power station.

LP0882412 Prof TK Saha; Dr R Majumder; A/Prof ZY Dong

Approved Project Title **Optimum location of FACTS devices with advanced control scheme for improving the security of complex power grid**
2008 : $ 51,254
2009 : $ 51,254
2010 : $ 51,254
Primary RFCD 2909 ELECTRICAL AND ELECTRONIC ENGINEERING
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Powerlink Queensland
Administering Organisation The University of Queensland

Project Summary
Prevention of blackouts is one of the highest priorities of the electricity industry. One of the fundamental reasons for the recent blackouts in long transmission network is inter-area oscillations. Queensland's long transmission network is a vital part of the Australian electricity grid and is vulnerable to inter-area oscillations. There is a need for a comprehensive approach to investigate the effect of inter-area oscillation that contributes to blackouts. Focussing the Queensland network, this project will provide a complete assessment tool for the optimum location of FACTS devices with modern and advanced control schemes in improving the security of complex interconnected power-grid.

LP0882479 A/Prof PA Strooper; Dr DA Carrington

Approved Project Title **Model-driven development and verification of railway interlocking control logic**
2008 : $ 60,346
2009 : $ 60,000
2010 : $ 58,000
Primary RFCD 2803 COMPUTER SOFTWARE

Collaborating/Partner Organisation(s)
Union Switch and Signal Pty Ltd
Administering Organisation The University of Queensland

Project Summary
Railway interlockings are an essential and safety-critical part of all rail infrastructure. The results of the proposed project are intended to reduce the cost of the development and improve the quality of railway interlockings control logic. This will contribute to safer and more cost-effective rail transport in Queensland, Australia and internationally. This project has the potential to improve both development and V&V capabilities for organisations that plan to use model-driven architecture (MDA) for safety-critical systems. While the industrial usage of MDA is currently in its infancy, forecasts predict that MDA will fundamentally change software development practice, especially in developed countries like Australia.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882898 Prof SM Taylor; Dr TM Woodruff

Approved Project Title **Establishment of Therapeutically Relevant Animal Models and Markers for Crohn's Disease**
2008 : $ 110,590
2009 : $ 110,590
Primary RFCD 3005 VETERINARY SCIENCES

Collaborating/Partner Organisation(s)

Protagonist Pty Ltd

Administering Organisation The University of Queensland

Project Summary

Crohn's disease is a devastating life long disease, affecting 0.5% of the world population. There is urgent economic and social need to develop new and better drugs to treat the symptoms and underlying cause of this debilitating disease. Social benefits include the improved quality of life of sufferers that positively impacts society. Economic benefit includes income derived from commercialisation of research outcomes and the contribution this project makes to high value employment in the biotechnology sector.

LP0882187 Dr SM Tweedy; Prof Dr Y Vanlandewijck; Prof B Abernethy

Approved Project Title **Evaluating the impact of neuromusculoskeletal impairment on athletic performance**
2008 : $ 148,000
2009 : $ 160,000
2010 : $ 57,000
Primary RFCD 3214 HUMAN MOVEMENT AND SPORTS SCIENCE

Collaborating/Partner Organisation(s)

Australian Sports Commission
International Paralympic Committee
Australian Paralympic Committee

Administering Organisation The University of Queensland

Project Summary

Sufficient physical activity is required for good health. Competitive sport is a culturally significant physical activity in Australia and the prospect of participating in fair competition is known to drive participation. In Paralympic sport, fair competition is enabled by classification, which aims to minimise the impact of impairments on competition outcome. Unfortunately classification methods are not evidence-based, reducing confidence in the process and discouraging participation. This project will inform the development of the first evidence-based classification system, creating the possibility that, in the future, the prospect of truly fair competition may motivate sports participation among Australians, regardless of disability.

LP0882046 Prof A Whiteford; Dr MF Hilton; Dr G Waghorn; A/Prof JE Pirkis; Prof PA Scuffham

Approved Project Title **Mental-health intervention and non-urban detection screen project**
2008 : $ 214,280
2009 : $ 130,835
2010 : $ 61,453
2011 : $ 35,343
Primary RFCD 3402 APPLIED ECONOMICS
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Queensland Police Service
National Australia Bank
Rio Tinto trading as Technological Resources Pty Ltd

Department of Human Services, Victorian Government
Queensland Department of Education, the Arts and Training
Department of Child Safety, Queensland Government
Australia and New Zealand Banking Group Limited (ANZ)
BP Australia Pty Ltd

Administering Organisation The University of Queensland

Project Summary

If, as expected, there is a positive return-on-investment to employers for mental health screening and early intervention, employers will adopt these methodologies. This eases the burden on the public health system. Early intervention reduces hospitalisations and the psychiatric medications prescribed resulting in decreased MBS and PBS spending. Intervention for mental health decreases transitions into unemployment, sickness or disability benefit reducing the societal burden of mental health. Maintaining individuals in employment also increases tax revenue. Increase in employee's productivity serves to increase gross domestic product. The employees, their families, and community's quality of life will improve.

LP0882551 Prof AK Whittaker; Dr I Blakey; Dr H Liu; Dr PA Zimmerman

Approved Project Title **Double Exposure Photoresists for the 32 and 22 nm Lithographic Nodes**

2008 : $ 315,000
2009 : $ 192,500
2010 : $ 242,500
Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

SEMATECH

Administering Organisation The University of Queensland

Project Summary

The semiconductor industry is one of the largest world-wide, with annual revenue of $220B and employing over 1.5M people around the world. This project provides a unique opportunity for development within Australia of significant expertise in the field of double exposure lithography. The novel photoactive polymeric films to be developed are expected to support the next generation of microchips. A major outcome of this project will be establishment of Australia as a world-leader in this rapidly expanding field. Furthermore the technology can be applied broadly to many printing technologies.

LP0882016 Prof Z Yuan; Prof J Keller; Prof RE Melchers; A/Prof RM Stuetz; Dr PL Bond; Dr M Valix; Mr JR Witherspoon; Prof W Verstraete; Prof PA Vanrolleghem; Dr J Steyer; Dr HA Bustamante; Prof IH Suffet

Approved Project Title **Optimal management of corrosion and odour problems in sewer systems**

2008 : $1,325,357
2009 : $1,350,580
2010 : $1,059,309
2011 : $ 676,106
2012 : $ 245,451
Primary RFCD 2911 ENVIRONMENTAL ENGINEERING
APA(I) Award(s): 10

Collaborating/Partner Organisation(s)

Brisbane City Council (Brisbane Water is a business unit with BCC)
CH2M HILL
Gold Coast Water
SA Water
South East Water Limited
Sydney Water Corporation
United Water
Water Corporation

Administering Organisation The University of Queensland

Project Summary

Pollutants in wastewater undergo complex changes in sewers, leading to the production and release of odorous and corrosive compounds. Despite major efforts and expenditure by water utilities to mitigate these problems, odorous emissions from sewers are still commonly occurring in urban areas. Furthermore, the value of public assets is significantly diminished due to sewer corrosion, costing hundreds of millions of dollars a year in Australia alone. This project is a major joint effort by the Australian water industry and world-leading scientists to generate advanced knowledge and develop effective technologies for optimal odour and corrosion management in sewers, delivering large social, environmental and economic benefits.

LP0882957 Prof X Zhou; Prof JL Hunter; Prof Y Zhang; Dr S Sadiq; Dr EG Abal

Approved Project Title **Data Enhancement, Integration and Access Services for Smarter, Collaborative and Adaptive Whole-of Water Cycle Management**
2008 : $ 96,881
2009 : $ 76,881
2010 : $ 96,881
Primary RFCD 2801 INFORMATION SYSTEMS
APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

South East Queensland Healthy Waterways Partnership
Administering Organisation The University of Queensland

Project Summary

The project provides a valuable opportunity to make significant impact on water resource management and create community partnerships that will go well beyond the lifetime of the project. The project is expected to contribute to improved water quality and healthier ecosystems. In turn, the scientifically rich research environment will benefit all involved. It will demonstrate the capability of the Australian researchers in addressing complex problems in data integration and quality. In particular there will be far reaching benefits of research training for associated PhD students and staff.

LP0882419 Dr J Zhu; Prof GM Lu

Approved Project Title **Development of a Novel One Step Process for Gas Conversion to Liquid**
2008 : $ 180,000
2009 : $ 160,000
2010 : $ 160,000
Primary RFCD 2906 CHEMICAL ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Eden Energy Ltd
Administering Organisation The University of Queensland

Project Summary

Australia has a rich natural gas reserve, most of which is in remote locations. This project will lead to a new technology to use the remote gas that would be flared into the atmosphere, thus benefiting both Australian economy and green house gas reduction. It will also reduce the risk of relying on importing oil from Overseas thus contributing to Australia's energy security. In addition, while crude-based oil emits SOx, NOx and particulates etc into air, the liquid fuels from gas are pure and burns cleanly thus also contributing to air pollution control.

University of Southern Queensland

LP0882055 Dr AP Cater-Steel; Prof MA Toleman

Approved Project Title **A performance measurement framework for IT service management to improve crucial IT infrastructure in private and public sector organisations.**
2008 : $ 27,097
2009 : $ 33,727
2010 : $ 30,627

Primary RFCD 2801 INFORMATION SYSTEMS
APA(I) Award(s): 1
Collaborating/Partner Organisation(s)
Queensland Health
itSMF Australia
Administering Organisation University of Southern Queensland

Project Summary
Queensland Health and itSMF recognise there is a need to transform the crucial IT infrastructure of Australian industries by disseminating frontier technologies such as ITIL. This project addresses the complex interactions of benefits, performance metrics and methods to enable CIOs and IT service managers to measure and realise the benefits of improved IT service management. The outcomes of this project will compel organisations to implement practices and processes that significantly reduce risks. The large public and private investment in IT infrastructure will be more wisely managed and maintained and Australian organisations will benefit through more effective use of productivity-enhancing technology.

LP0882065 A/Prof R Gururajan; Prof V Popovic; Dr DV Kerr; Mrs AM Scott; Mr C Moloney; Prof C Kesavan

Approved Project Title **Remote patient assessment using digital stethoscope for telehealth systems in Australia**
2008 : $ 139,854
2009 : $ 162,254
2010 : $ 176,754
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES
APA(I) Award(s): 2
Collaborating/Partner Organisation(s)
Queensland Statewide Telehealth Services
Australian Center for Rural & Remote Evidence Based Practice
RMK Engineering College
Administering Organisation University of Southern Queensland

Project Summary
The direct saving will be about $15 600 per individual patient. Indirect cost reductions will significantly minimise travel for patients, national savings in transport infrastructure costs, greenhouse gases emissions and all the other undesirable consequences of either private or public transport travel for patients and/or specialist physicians. Other indirect benefits include incidental learning by staff working with patients in the remote location through the remote link. Other advantages include happier patients as they will not need to leave their home and loved ones as often. This can be translated into national benefits through reduction in anxiety and less stressful patients.

South Australia

The Flinders University of South Australia

LP0882596 Dr M Ginic-Markovic; Prof JG Matisons; Prof N Petrovsky; Dr PD Cooper

Approved Project Title **Nanotechnology-Enhanced Vaccines: New inulin bioconjugates to defeat global pandemic threats**
2008 : $ 45,000
2009 : $ 45,000
2010 : $ 45,000
Primary RFCD 2505 MACROMOLECULAR CHEMISTRY
Collaborating/Partner Organisation(s)
Vaxine Pty Ltd
Administering Organisation The Flinders University of South Australia

Project Summary
Inulin-based adjuvants have the potential to revolutionise the vaccine arena; man's critical first line of defence against infectious disease. Any breakthrough in developing completely safe new adjuvants, will therefore be of major global significance, and will play a vital role in the maintenance of global health for decades. New and

completely safe vaccine adjuvants are a vital step in the development of improved vaccine technology in the 21st century. This project addresses two National Research Priorities, Namely Promoting and Maintaining Good Health and Safeguarding Australia. On commercialization, this will then be an important Australian contribution towards protecting the nation against any future pandemic outbreaks.

LP0882597 Dr CE Lenehan; Dr JS Quinton; Dr P Jones; Prof A Pring; Mr A Durham

Approved Project Title **Chemical Fingerprinting for Geological and Geographical Provenancing of Ochre Minerals used by Australian Aboriginals**
2008 : $ 50,000
2009 : $ 50,000
2010 : $ 50,000
Primary RFCD 2504 ANALYTICAL CHEMISTRY

Collaborating/Partner Organisation(s)

South Australian Museum
Artlab Australia
Administering Organisation The Flinders University of South Australia

Project Summary

Aboriginal peoples have used ochre in their most meaningful cultural interactions. This usage is reflected in other cultures, but the richness and complexity of the Australian evidence is unique. This partnership of analytical and surface chemists with the museum curators and conservators provides an ideal opportunity to utilize a range of techniques for the unambiguous provenancing of ochre from an artefact, artwork or an archaeological site. The result will be a greatly enriched understanding of the way in which Aboriginal Australians interacted with one of this country's key resources and should yield fresh conclusions about this country's cultural past.

The University of Adelaide

LP0882675 Dr P Bi; A/Prof P Ryan; Prof JE Hiller; Prof D Roder; A/Prof G Han

Approved Project Title **Changing disease patterns amongst migrants: a focus on the National Health Priority Areas**
2008 : $ 25,627
2009 : $ 25,627
2010 : $ 25,627
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

SA Department of Health
Migrant Resource Centre South Australia
Administering Organisation The University of Adelaide

Project Summary

The proposed project will make significant practical and scientific contributions to Australians, especially to the health of the migrant population. It is particularly important to the aged migrant population, the people from disadvantaged socioeconomic groups and those with language barriers. The study results will provide a more complete and updated picture of migrant health in Australia. Such important information is necessary to Federal and State departments in their policy making and resource allocation. The study results will be disseminated to local migrant community and migrant service organisation for their health promotion and health education campaigns.

LP0882399 A/Prof DF Callen; Prof HA Morris

Approved Project Title **Determining the regulation of vitamin D metabolism.**

2008 : $ 92,000
2009 : $ 92,000
2010 : $ 92,000
Primary RFCD 2701 BIOCHEMISTRY AND CELL BIOLOGY

Collaborating/Partner Organisation(s)

Institute of Medical and Veterinary Health Sciences

Administering Organisation The University of Adelaide

Project Summary

The proposed project will lead to a better understanding of factors that influence the biological function of vitamin D. This will impact in several areas of human health and will provide new avenues for the development of preventative approaches and treatment of cancer. This project is based on the use of 'Frontier Technologies' that will be applied to elucidate basic biological questions.

LP0882109 A/Prof SD Connell; Dr BD Russell; Dr CF Gurgel

Approved Project Title **Forecasting change in subtidal habitats: connecting local pollution with global climate in temperate Australia.**
2008 : $ 98,656
2009 : $ 98,758
2010 : $ 98,698
Primary RFCD 2707 ECOLOGY AND EVOLUTION

Collaborating/Partner Organisation(s)

Department for Environment and Heritage
Abalone Industry Association of SA Inc.

Administering Organisation The University of Adelaide

Project Summary

The current narrow focus of management on local and contemporary environmental conditions (e.g. water quality) has indeterminate outcomes in the face of climate change. This proposal seeks to forecast marine habitats under realistic scenarios of climate change and continuing local population growth and activity. This information provides managers with information needed to understand the consequences of current policy and debates about its improvement.

LP0882622 Prof A Cooper

Approved Project Title **Developing new methods to retrieve and analyse preserved genetic information**
2008 : $ 135,000
2009 : $ 130,000
2010 : $ 130,000
Primary RFCD 2702 GENETICS

Collaborating/Partner Organisation(s)

National Geographic Society
Forensic Science South Australia
Australian Federal Police
National Institute of Forensic Sciences

Administering Organisation The University of Adelaide

Project Summary

This project will position Australia at the leading edge of research into preserved DNA, and will use innovative molecular biology approaches to develop a range of new forensic, archaeological and medical applications. It will build Australian knowledge and scientific capacity by developing core expertise and training personnel in areas important for biosecurity, customs and quarantine, forensics/counter-terrorism, and studies of climate change. It will also create and foster research innovation in molecular biology with spin-offs for evolution, archaeology, medical and conservation biology research, and will also encourage involvement with the rapidly expanding field of genomics and bioinformatics.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882394 Dr MS Gold; A/Prof AJ Braunack-Mayer; A/Prof P Ryan; Prof CA Gericke; Prof JJ McNeil; Dr CJ Freemantle; Prof CJ thomson; Dr EE Roughead; Dr LK Taylor; Prof E Elliott; Dr DR Filby; Dr JP Buttery

Approved Project Title **Can and should we link data at a national level? Vaccine safety surveillance: A case study**

2008 : $ 165,154
2009 : $ 146,254
2010 : $ 142,824

Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

NSW Department of Health
Australian Paediatric Surveillance Unit (APSU)
Department of Health SA
Royal Children's Hospital

Administering Organisation The University of Adelaide

Project Summary

This project provides many benefits for the community, exploring the legal and ethical issues around consent for data linkage, convening Citizens' Juries to weigh the evidence and make recommendations. It addresses National Research Priorities: Promoting and Maintaining Good Health and Safeguarding Australia as well as National Collaborative Research Infrastructure Strategy priorities. It uses vaccine safety surveillance as a case study to evaluate the effectiveness of data linkage (through linking Commonwealth immunisation data to state hospital data) and the methodologies and lessons learnt from cross jurisdictional data linkage can be transferred to other areas.

LP0883050 Prof GJ Hugo; Dr B Craig

Approved Project Title **The development and testing of a theory of the processes that shape material culture diversity using a New Guinea dataset**

2008 : $ 70,000
2009 : $ 60,000

Primary RFCD 3703 ANTHROPOLOGY

Collaborating/Partner Organisation(s)

OK Tedi Mining Limited
South Australian Museum

Administering Organisation The University of Adelaide

Project Summary

Australian museums hold approximately 150,000 artefacts from the Pacific. Estimates of overseas holdings suggest another 500,000. From these collections, objects are selected for research or exhibition based on restricted themes. No attempt has yet been made to utilise these collections in a comprehensive way to maximise their research potential. This has now been done for the north-central region of New Guinea and the available information provides the opportunity to develop a theory of the processes that bring about diversity of material culture. Such a theory would be of international significance for ethnologists and archaeologists and add value to publicly-funded collections.

LP0882492 Prof MJ McLaughlin; Dr DJ Chittleborough; Dr GM Hettiarachchi; Dr JK Kirby

Approved Project Title **Explaining the interactions between drought and fertiliser use efficiency using tracing and imaging techniques**

2008 : $ 90,584
2009 : $ 81,584
2010 : $ 76,584

Primary RFCD 3001 SOIL AND WATER SCIENCES

Collaborating/Partner Organisation(s)

South Australian Grains Industry Trust

Administering Organisation The University of Adelaide

Project Summary

With climate change, Australian agriculture is faced with periods of increasing drought and changing rainfall patterns. At the same time, Australian farmers are faced with increasing costs of fertiliser inputs (their largest variable input cost), yet have little information on how they should change their nutrient management programs to suit the changing climatic conditions. This project aims to determine the effect of drought and rainfall patterns on the efficiency of fertiliser use by crops, through examination of the effects of soil moisture conditions on the interaction between soil and added fertilisers.

LP0882754 Prof GJ Nathan; A/Prof RM Kelso; Dr PA Kalt; Prof J Mi; Mr RJ Truce; Mr JW Wilkins

Approved Project Title **Aerodynamic enhancement of the capture of fine particle emissions and gaseous pollutants by sorbents**

2008 : $ 250,000
2009 : $ 150,000
2010 : $ 150,000
Primary RFCD 2918 INTERDISCIPLINARY ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Indigo Technologies Group Pty Ltd.

Administering Organisation The University of Adelaide

Project Summary

Fine particulate emissions alone, and just within Australia's four largest cities, are estimated to be responsible for some 1600 deaths annually, and are a leading cause of asthma and other lung disease. Hence the economic and social benefits of greatly reducing fine particulate emissions is enormous. Similar benefits can be expected to arise from the enhanced capture of SOx, NOx and heavy metals. Many of these pollutants also contribute to the greenhouse effect, so the international exploitation of the technology will also help to mitigate climate change. Should suitable sorbents be developed for CO2 capture, the technology will also enhance carbon capture and storage.

LP0882494 Dr ES Scott; Prof O Schmidt; Dr M Rowney; Dr PR Grbin; Prof DK Taylor; Dr TJ Wicks

Approved Project Title **Control of foliar diseases in horticulture using milk components: widening applicability through understanding mechanisms**

2008 : $ 107,351
2009 : $ 105,571
2010 : $ 104,421
Primary RFCD 3003 HORTICULTURE
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

MG Nutritionals, Murray Goulburn Co-operative Co. Ltd
Temple Bruer Wines
Organic Crop Protectants Pty Ltd
Transgrain Technologies

Administering Organisation The University of Adelaide

Project Summary

Fungal diseases, such as powdery mildew and Botrytis grey mould, have the potential to cause considerable losses in horticultural crops. Chemical fungicides, some of which are broad-spectrum biocides potentially harmful to human health, are applied routinely in disease management. Milk and whey, which can damage powdery mildew fungi, offer alternatives to conventional fungicides. Identification of the components of milk which damage fungi, and their mechanisms of activity, will facilitate the development of environmentally sustainable strategies for management of fungal diseases in Australian horticulture. This will have particular benefits for personnel who

regularly apply fungicides in glasshouses.

University of South Australia

LP0882719 Prof NR Choudhury; A/Prof WM Skinner; Dr TB Issa; Mr BH Jonshagen

Approved Project Title **Novel Nanostructured Polymeric Membranes for Energy Storage Applications**

2008 : $ 110,000
2009 : $ 140,000
2010 : $ 120,000
Primary RFCD 2599 OTHER CHEMICAL SCIENCES

Collaborating/Partner Organisation(s)

ZBB Technologies Ltd

Administering Organisation University of South Australia

Project Summary

The project will bring the following significant benefit to the Australian community and economy:1. Energy and Environmental benefit: will provide the nation with renewable energy storage solution, with zero emission and urban pollution2. Global Standing: will position Australia as global leader in sustainable energy storage technology through ZBB's novel battery system development.3. Intellectual property: will deliver the nation a strong intellectual property (IP) position in the frontier technology4. Training: will train junior researcher and a high quality graduate in an emerging and multidisciplinary area of research with commercial turnover of more than $1000 million in Australia

LP0882548 Prof CA Prestidge; Prof HJ Griesser; Dr TC Vaithianathan; Mr C Nicholls

Approved Project Title **Novel biodiagnostic platforms for human metabolites.**

2008 : $ 149,799
2009 : $ 138,799
2010 : $ 138,799
Primary RFCD 2999 OTHER ENGINEERING AND TECHNOLOGY

Collaborating/Partner Organisation(s)

Citech Research Pty Ltd

Administering Organisation University of South Australia

Project Summary

The innovative biosensor technologies developed in this project will be utilised at first by Australian athletes, enabling them to better monitor physiological conditions during training and thereby help maintain international competitiveness. Real-time sensing of lactate and other metabolites in athletes using advanced biomaterials coupled to frontier telemetry protocols for remote sensing will be extendable to bio-diagnostic needs in human health care and have significant social and economic benefits. Australia's international position in the application of interfacial science and nanomaterials for outcomes in biomedical engineering will be strengthened.

LP0882784 Prof BM Sharp; Dr JT Romaniuk; Prof R East

Approved Project Title **How viewers learn about new TV programs: the influence of TV promotions and Word-of-mouth**

2008 : $ 61,000
2009 : $ 93,000
2010 : $ 51,254
Primary RFCD 3502 BUSINESS AND MANAGEMENT
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Network 10

Administering Organisation University of South Australia

Project Summary

Television viewing is one of the major pastimes of Australians. Improving the quality of programming and reducing ineffective promotional efforts will enhance the life of most of our population. Keeping and building audiences will improve the long-term viability of free-to-view television model, which allows quality television to be accessible to all. More efficiently marketing local programs improves return on investment and export potential, as Australian ratings signal to overseas buyers the likely success of the program in their markets. Finally, program promotions provide a valued social purpose as they are used by viewers to choose what to watch. This research seeks to improve the utility of this service.

Western Australia

Curtin University of Technology

LP0882227 Prof BJ Fraser; Dr JM Aldridge

Approved Project Title **Outcomes-focused Learning Environments, Affective Outcomes and Achievement Standards in Senior School Classes in Western Australia**

2008 : $ 75,000
2009 : $ 75,000
2010 : $ 75,000
Primary RFCD 3301 EDUCATION STUDIES

Collaborating/Partner Organisation(s)

Curriculum Council of WA

Administering Organisation Curtin University of Technology

Project Summary

Given the controversy in the media about outcomes-focused education and the acute lack of research into its implementation and effectiveness, this research is timely and useful. It could have far-reaching implications for educational systems about how to effectively create outcomes-focused learning environments and whether educational standards are being maintained. It will provide information about how teachers can use action research, involving feedback from students, to guide the improvement of learning environments. Training opportunities will be provided for one Master's and two doctoral students.

LP0882550 A/Prof A Heitz; Prof RI Kagi; Dr CA Joll; Prof U von Gunten

Approved Project Title **Advanced water treatment technologies to minimize the formation of emerging disinfection by-products in potable and reuse water**

2008 : $ 140,000
2009 : $ 120,000
2010 : $ 110,000
Primary RFCD 2504 ANALYTICAL CHEMISTRY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Water Corporation
GHD

Administering Organisation Curtin University of Technology

Project Summary

Disinfectant management and disinfection by-products are of concern to water utilities, water treatment researchers and consumers worldwide. The project will make a world-class contribution to these issues, through use of state-of-the-art equipment and developed technologies. Sophisticated characterization of disinfection by-product precursors, especially poorly defined less volatile species, will provide insights into the relationship between their chemical structures and behaviour in treatment processes, benefiting all water utilities. The project will inform new drinking water guidelines and assist water utilities to balance the competing requirements of maintaining effective pathogen barriers versus disinfection by-product control.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882680 Prof GI Metternicht; Dr IW Watson; Dr PE Novelly; Dr BE Norton; Mr TP Robinson; Mr G Beeston

Approved Project Title **PLAGA: Pastoral Lease Assessment using Geospatial Analysis**

2008 : $ 158,000
2009 : $ 121,500
2010 : $ 153,500
2011 : $ 95,000
Primary RFCD 3008 ENVIRONMENTAL SCIENCES
APA(I) Award(s): 1
APDI Mr TP Robinson

Collaborating/Partner Organisation(s)

Department of Agriculture and Food, Western Australia
SpecTerra Services Pty Ltd
Administering Organisation Curtin University of Technology

Project Summary

This project improves the capacity of Natural Resource Management (NRM) and land administration agencies to record, monitor and communicate changes in land condition across the large spatial scales characteristic of rangelands. Pastoralists also benefit through improved capacity to promote, defend, understand and if necessary change their management activities on the basis of scientific data. By further developing and operationalising this new approach to rangeland monitoring in a project integrating human extension expertise, specifically prepared monitoring products, and the associated software, the project will confirm the benefits that satellite technology can provide to land administrators and the grazing industry in monitoring and sustainably managing rangelands.

LP0882958 Dr VK Pareek; Prof GM Evans; Prof MO Tadé; Dr Q Li

Approved Project Title **Coarse-Grid Eulerian-Eulerian Multiphase Model for Fluid Catalytic Cracking Unit**

2008 : $ 85,000
2009 : $ 80,000
2010 : $ 80,000
Primary RFCD 2906 CHEMICAL ENGINEERING
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BP Refinery Pty Ltd
Administering Organisation Curtin University of Technology

Project Summary

A fluid catalytic cracking (FCC) unit is an important refinery unit operation responsible for about 45% of total petrol production. The aim of this study is to improve the petrol production efficiency of Australian refineries thus allowing our country not only to maintain its self-sufficiency but also to permit lucrative exports. This will be done by optimising the performance of the FCC unit through novel computational fluid dynamic simulations. The outcomes of this study will enable refiners to produce cleaner fuel (e.g., fuel with less sulphur) and decrease air pollution from the FCC unit (in the form of CO and particulates) thus helping Australia to preserve its diverse and relatively pollution-free environment.

LP0882806 Prof DA Stehlik; Prof LI Chenoweth; Dr D McAuliffe; Dr C Tilbury

Approved Project Title **Pathways to better practice: developing human resources in child protection services for Indigenous communities in Western Australia and Queensland.**

2008 : $ 93,345
2009 : $ 96,080
2010 : $ 99,245
Primary RFCD 3702 SOCIAL WORK

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

W.A. Department for Community Development
Qld. Department of Child Safety

Administering Organisation Curtin University of Technology

Project Summary

This study addresses the serious and escalating problem of providing child protection services to Indigenous children and their families in rural and remote areas. Service delivery to rural and remote environments in Australia is a high cost exercise and, to date, little research has been conducted to understanding the complex nature of professional (non-medical) interventions in communities with high proportions of Indigenous families and children. The study, conducted across two states, will contribute to national benefit in 3 key areas: the health and wellbeing of Indigenous children; skills shortage in rural areas and intergenerational change in professional disciplines.

Edith Cowan University

LP0882673 Dr JE Cockram; Dr PR Flatau; Prof M Rapley; Ms SJ Harris

Approved Project Title **Support services for people with intellectual disability: the cost of meeting and not meeting the need**
2008 : $ 60,000
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

Collaborating/Partner Organisation(s)

Developmental Disability Council of WA
National Council on Intellectual Disability
Activ Foundation
Nulsen Haven
i.d.entity.wa
Intework
Lady Lawley Cottages Australian Red Cross

Administering Organisation Edith Cowan University

Project Summary

Presently, governments in Australia operate in the absence of rigorous empirical data on the real cost of providing and not providing the support that people with intellectual disability need in order to participate in the life of our community. This research will provide unique information which will be of value to governments as they assess policy frameworks and budget priorities associated with the provision of support services that people with intellectual disability and their families need. The contribution this research will make to government decision making will ultimately benefit all people with intellectual disability, their families and our community.

LP0882482 A/Prof CP Newhouse; Dr PJ Williams; Prof MW Hackling; Prof RG Oliver; A/Prof C Lim; Dr JE Pagram; Dr D Penney; Dr RE Waugh; Ms R Naughton

Approved Project Title **Investigating the feasibility of using digital representations of work for authentic and reliable performance assessment in senior secondary school courses.**
2008 : $ 75,000
2009 : $ 75,000
2010 : $ 75,000
Primary RFCD 3301 EDUCATION STUDIES

Collaborating/Partner Organisation(s)

Curriculum Council of Western Australia

Administering Organisation Edith Cowan University

Project Summary

Nationally, school curricula are increasingly focused on performance outcomes, such as technology literacy, because of the need for a highly skilled workforce. The study aims to provide credible assessments of these outcomes to ensure that they become an integral part of the delivered curriculum and in so doing better meet the needs of a diverse set of students and enhance school retention with the ensuing economic and social benefits to

the students and society. A capacity to conduct reliable assessments around agreed standards will also further the national curricula consistency agenda.

Murdoch University

LP0882687 Prof RJ Hobbs; A/Prof GE Hardy; Dr BA Wilson; Dr KN Armstrong

Approved Project Title **Understanding successional processes to maintain vertebrate populations in production landscapes**
2008 : $ 99,267
2009 : $ 122,307
2010 : $ 150,000
2011 : $ 94,279
2012 : $ 91,414
Primary RFCD 3008 ENVIRONMENTAL SCIENCES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Alcoa World Alumina Australia
Department of Environment and Conservation
Molhar Pty Ltd

Administering Organisation Murdoch University

Project Summary

This project will develop principles that will help maintain biodiversity across production landscapes and provide national benefits by furthering the ability of resource extraction industries to conduct their activities in areas of conservation value, while maintaining those values. By providing greater confidence in the ability of land managers to balance the needs of resource extraction and social benefits, such as conservation, recreation, water management and tourism, the project will have important community benefits. Given the high level of endemism in the jarrah forest, this project will also help maintain biodiversity and will provide a critical national benefit.

LP0882671 Prof MG Jones; Dr KW Dixon; Dr R Jones; Dr KA Seaton

Approved Project Title **Assessing plant virus threats to indigenous Western Australian flora: implications for biodiversity, conservation, ecosystem reclamation and the wildflower industry.**
2008 : $ 85,000
2009 : $ 85,000
2010 : $ 85,000
Primary RFCD 2704 BOTANY

Collaborating/Partner Organisation(s)

Department of Agriculture and Food WA
Botanic Gardens and Parks Authority
Alcoa World Alumina Australia
Worsley Alumina Pty Ltd
Saturn Biotech Pty Ltd

Administering Organisation Murdoch University

Project Summary

Australia's unique flora is a valuable asset, not only in terms of aesthetic value, ecotourism, commercial floriculture, the environment and rural communities, but also in relation to water quality, a sink for carbon, and a source for novel medicinal chemicals. The threat posed by plant viruses to native flora has largely been ignored, but with global climate change, virus infection will become increasingly important. This study will document the role of plant viruses in the sustainability of Australia's floral heritage and industries, and develop strategies to limit virus spread through plant nurseries, rehabilitation of degraded ecosystems and conservation of threatened species.

The University of Western Australia

LP0882769 Prof D Andrich; Dr S Humphry

Approved Project Title **Maintaining a precise, invariant unit in state, national and international educational assessment**
2008 : $ 120,000
2009 : $ 120,000
2010 : $ 150,000
Primary RFCD 3301 EDUCATION STUDIES

Collaborating/Partner Organisation(s)

Curriculum Council of Western Australia
Pearson Testing & Assessment Australia
Administering Organisation The University of Western Australia

Project Summary

School achievement testing is a high stakes activity for state and national governments, not just for school students. Significant educational policy decisions turn on comparisons of test results over time, and among states and nations. These decisions rest on assumptions about the validity and precision of national testing. In particular, current measurement systems assume that assessment scales have common units. Empirically, it is clear that many factors can compromise this assumption, making it rarely justified. This study will serve the national interest by building the theory and technology necessary to solve this problem.

LP0882350 Dr TD Colmer; Dr EJ Veneklaas; Dr K Shepherd; Dr G Barrett

Approved Project Title **Ecophysiology of stem succulent halophytes subject to changes in salinity and water availability: distinguishing natural dynamics from potential mine-related impacts**
2008 : $ 104,286
2009 : $ 104,286
2010 : $ 104,286
Primary RFCD 2704 BOTANY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Fortescue Metals Group Ltd
Department of Environment and Conservation (WA Herbarium)
Administering Organisation The University of Western Australia

Project Summary

This project contributes to the National Research Priority of an environmentally sustainable Australia. The project will underpin management strategies of vegetation in saline lakes/marshes; wetlands of national importance to biodiversity. Understanding the vegetation at the Fortescue Marshes will provide vital base-information for the future, and have flow-on benefits for improved strategies for revegetation of saline lands. Improvement of the publicly available Herbarium database on samphire species will also enable improved species identifications for conservation and/or rehabilitation efforts. The project will train a PhD student in an industry-relevant research area that is currently in high demand.

LP0882078 Prof JL Cordery; Dr LL Hughes

Approved Project Title **Managing work systems to promote employee engagement and business unit outcomes**
2008 : $ 78,648
Primary RFCD 3502 BUSINESS AND MANAGEMENT
APDI Dr LL Hughes

Collaborating/Partner Organisation(s)

St George Bank Ltd
Administering Organisation The University of Western Australia

Project Summary

This project will lead to the identification of specific people management practices that can be implemented within

business units in order to promote both positive business outcomes and improvements in employee psychological well-being through increased employee work engagement. Given that research has already demonstrated significant positive business and psychological benefits arising from work engagement, the results of the study have the potential to identify practical pathways towards generating significant economic, social and psychological benefits for employers and employees, at the level of the organisation, the community and, by extrapolation, the nation.

LP0882579 Dr PF Grierson; Dr CK Macfarlane; Mr S Vlahos; Dr L McCaw

Approved Project Title **Fire management of complex rehabilitated forests - quantifying and understanding spatial variability of forest structure and fuels**

2008 : $ 160,000
2009 : $ 170,000
2010 : $ 135,000
Primary RFCD 3006 FORESTRY SCIENCES

Collaborating/Partner Organisation(s)

Worsley Alumina Pty Ltd
Department of Environment & Conservation, WA

Administering Organisation The University of Western Australia

Project Summary

Up to 5 million ha of forest is burnt by bushfire in Australia in severe fire years. The cost of fire suppression in 2002/3 in WA was in excess of 12 million dollars. Consequently, development and application of technologies and knowledge for enhancing fire management and reducing wildfire risk is of high priority and substantial economic, social and environmental benefit. The opportunity to conduct experimental fires across a complex landscape will enable calibration and development of technologies not previously possible. This research will define the way prescribed fire is used to integrate young rehabilitated forest into management of the broader landscape and develop more cost-effective tools for fire management.

LP0882875 Dr SM Heath; A/Prof JF Fletcher; Dr JH Hogben; Prof DV Bishop

Approved Project Title **Parents as Partners: Getting children off to a healthy start in literacy**

2008 : $ 50,920
2009 : $ 50,500
2010 : $ 23,990
2011 : $ 26,900
2012 : $ 21,200
Primary RFCD 3801 PSYCHOLOGY

Collaborating/Partner Organisation(s)

Department of Education and Training Western Australia

Administering Organisation The University of Western Australia

Project Summary

Our nation is best served by children getting off to a healthy start in literacy. However, almost one in six children fails to do so. This group has reduced academic and vocational options, increased social, emotional and mental health problems, higher youth unemployment, and is significantly over-represented among offenders. The nation bears the costs of these problems through reduced productivity and expenditure on unemployment benefits, social programs, mental health services, and incarceration. This project targets both these sources of loss to the nation by utilising a hitherto untapped community resource: Training parents of preschoolers to develop critical pre-literacy skills in their children at home before they begin to fail.

LP0882884 Dr JM Hodgson; Prof KD Croft; Dr M Considine; Dr SC Tan

Approved Project Title **Identification of Australian-bred apple and plum varieties with enhanced health attributes**

2008 : $ 45,200
2009 : $ 65,000
2010 : $ 45,000
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

Collaborating/Partner Organisation(s)

Department of Agriculture and Food Western Australia

Administering Organisation The University of Western Australia

Project Summary

Improved prevention could save Australia $4 billion annually in health care costs, mainly in the area of cardiovascular disease. A higher flavonoid intake has been estimated to reduce the risk of cardiovascular disease by about 20%. Apples are important sources of flavonoids in the diet. The proposed project involves collaboration between the Department of Agriculture and Food Western Australia and the University of Western Australia. The aim is to identify progeny of both the apple and plum breeding programs that have elite levels of flavonoids and to demonstrate health benefits of a high-flavonoid apple. This could lead to significant benefits to Australian horticulture and to population health.

LP0882519 Dr EF May; Dr M Kandil; Prof MA Trebble; A/Prof RD Trengove; Dr K Marsh

Approved Project Title **Fundamental Data and Thermodynamic Modelling for Cryogenic LNG Fluids to Improve Process Design, Simulation and Operation**
2008 : $ 150,000
2009 : $ 140,000
2010 : $ 100,000
Primary RFCD 2906 CHEMICAL ENGINEERING
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Chevron Australia Pty Ltd

Administering Organisation The University of Western Australia

Project Summary

This research will contribute to a more environmentally sustainable Australia because it will promote the use of natural gas as a fuel supply which produces significantly fewer greenhouse gases than oil or coal. This project will improve the ability of engineers to reliably simulate LNG production plants as well as test new processes and technologies with the potential to increase efficiency or revenue. Consequently, the level of over-engineering and, thus, the capital and operational costs of such plants will decrease. This in turn will promote the development of Australian gas reserves, particularly for those fields currently on the margins of economic viability.

LP0882537 Dr CA Musca; Prof L Faraone; Dr EP Smith; Dr D Lofgreen; Mr G Nancarrow

Approved Project Title **Development of an advanced semiconductor characterisation capability for infrared focal plane array applications**
2008 : $ 194,178
2009 : $ 177,350
Primary RFCD 2909 ELECTRICAL AND ELECTRONIC ENGINEERING
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Raytheon Vision Systems
Raytheon Australia

Administering Organisation The University of Western Australia

Project Summary

Australian access to world leading technology in state-of-the-art infrared detectors is key to future advanced systems for defence surveillance and sensing, mineral exploration, biomedical instrumentation, precision agriculture, environmental monitoring and homeland security. This project will ensure that Australia contributes to an integral component required in the development of these technologies allowing early access to future systems. It will also enable Austarlia to play a leading role in setting the research directions for infrared materials that will place Australian research at the forefront in this area.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0882690 A/Prof JA Plummer; A/Prof EL Ghisalberti; Dr EL Barbour; A/Prof J Bohlmann

Approved Project Title **Elucidation of genetic and physiological factors controlling biosynthesis of sesquiterpenoids in sandalwood, Santalum spp.**

2008 : $ 105,000
2009 : $ 105,000
2010 : $ 105,000
2011 : $ 84,950
Primary RFCD 2708 BIOTECHNOLOGY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Forest Products Commission

Administering Organisation The University of Western Australia

Project Summary

Plantation sandalwood removes pressure from natural populations and is a profitable long term investment. Australia is in a highly competitive position with regards to market supply but this cannot be taken for granted. This research seeks to understand the complex biology of sandalwood using the latest genomic and molecular technologies. This knowledge will be applied through directed, marker-assisted tree selection and improved plantation management. Ultimately we are developing a highly advanced production system with which Australia can lead Sandalwood production. Sandalwood plantations use a variety of native perennial hosts, increase biodiversity, help manage underground water resources and address carbon sequestration demands.

LP0882758 Prof SB Powles; Dr M Walsh; Mr T Ambe

Approved Project Title **Defining the evolutionary processes of resistance to the new mode of action herbicide, pyroxasulfone**

2008 : $ 95,000
2009 : $ 95,000
2010 : $ 95,000
Primary RFCD 3002 CROP AND PASTURE PRODUCTION

Collaborating/Partner Organisation(s)

Kumiai Chemical Industry Co., Ltd.

Administering Organisation The University of Western Australia

Project Summary

The sustainability of the Australin grains industry is threatened by the continuing evolution and widespread expansion of herbicide resistant weed populations across the crop production regions. The resulting loss in herbicide efficacy is forcing producers away from the environmentally friendly practices of stubble retention and reduced tillage in an effort to control herbicide resistant weed populations. This research is aimed at conserving a novel mode of action herbicide with efficacy on resistant Lolium rigidum populations. The success of this project will inevitably lead the pesticide industry to adopt this approach for future product development.

LP0882914 Prof CL Raston; Dr R Jachuck

Approved Project Title **Application of process intensification on rotating surfaces (PIRS) in organic synthesis**

2008 : $ 25,627
2009 : $ 25,627
2010 : $ 25,627
Primary RFCD 2503 ORGANIC CHEMISTRY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

NanoDynamics Inc.

Administering Organisation The University of Western Australia

Project Summary

Process intensification technologies in the form of SDP and RTP are new to Australia and present many opportunities for carrying out the synthesis of organic compounds. They have remarkable versatility in being able to control chemical reactions with greater selectivity than using classical batch technology, at the same time allowing access to new compounds. Moreover, the technologies embrace the principles of green chemistry in minimising the generation of waste, while operating under continuous flow which is destined to be more attractive to industry. This is likely in the fine chemicals sector, and in drug discovery. The project will provide first-rate research training and promote Australian science.

LP0882775 Prof SM Smith; A/Prof EL Ghisalberti; Dr KW Dixon

Approved Project Title **Investigation of the metabolism, molecular targets and environmental fate of the seed germination stimulant, butenolide**

2008 : $ 110,000
2009 : $ 105,000
2010 : $ 115,000
2011 : $ 120,000
2012 : $ 125,000

Primary RFCD 2503 ORGANIC CHEMISTRY

Collaborating/Partner Organisation(s)

Botanic Gardens and Parks Authority
Worsley Alumina Pty Ltd
Iluka Resources
Extension Hill/Mt Gibson Iron
Alcoa World Alumina

Administering Organisation The University of Western Australia

Project Summary

The potent germination stimulant, known as butenolide, is expected to provide substantial benefits for improving seed germination and seedling vigour of many plant species used in agriculture, land restoration and rehabilitation. Currently, little is known about the stability, persistence and distribution of the butenolide in natural environments and the mechanism of seed dormancy breaking. This study now provides a unique opportunity for Australian research to establish a world-leading position in understanding the processes that regulate seed dormancy, particularly in relation to post-mining land rehabilitation. The research findings will also have wider application in plant conservation, weed control and crop production.

Tasmania

University of Tasmania

LP0882042 A/Prof SC Battaglene; A/Prof BF Nowak; Dr JM Cobcroft; Dr MR Brown

Approved Project Title **Reducing skeletal malformations in cultured marine fish using gene expression, improved nutrition and advanced system operation**

2008 : $ 150,000
2009 : $ 150,000
2010 : $ 145,000

Primary RFCD 3007 FISHERIES SCIENCES

APDI Dr JM Cobcroft

Collaborating/Partner Organisation(s)

Department of Primary Industries and Water
Huon Aquaculture Company
Skretting Australia
Nutra-Kol
Clean Seas Tuna Ltd

Administering Organisation University of Tasmania

Project Summary

Reducing malformations in farmed fish will benefit the Australian economy and society by providing greater quantities of cheaper, higher quality fish. Increased farmed fish production, currently worth ~$300 million p.a., will increase exports and decrease imports (currently ~50% of all Australian consumed fish). To benefit are the important regional farming operations in QLD, NSW, SA, NT, TAS and WA. In particular, the largest industry in Tasmania will profit by having a viable new species to farm (striped trumpeter) reducing risk due to climate change and global oversupply of salmon. Another important benefactor will be the rapidly expanding yellowtail kingfish industry.

LP0882048 Prof DM Bowman; Dr FH Johnston; A/Prof GG Morgan; Dr OF Price

Approved Project Title **Understanding the health effects of landscape burning and biomass smoke in Australian towns and cities**

2008 : $ 140,000
2009 : $ 110,000
2010 : $ 110,000
2011 : $ 80,000
Primary RFCD 3006 FORESTRY SCIENCES

Collaborating/Partner Organisation(s)

Department of Health & Human Services
Department of Tourism, Arts and the Environment
Department of Environment and Conservation
Tasmania Fire Service
NSW Department of Health
Department of Health, Western Australia
Department of Environment and Conservation

Administering Organisation University of Tasmania

Project Summary

Bushfires are increasingly affecting Australian towns and cities directly and indirectly from episodes of severe air pollution. An approach to manage bushfires is to reduce fuel loads by setting planned fires under stable weather conditions, yet this strategy is controversial because of community concerns about ecological sustainability and negative health impacts from smoke. The relative importance of air pollution from planned and unplanned bushfires vs. wood heaters, agricultural burning and other sources of air pollution will be determined. Our study will enable evidence-based bushfire smoke management, help formulate national air quality standards and shape policies regarding biomass smoke and bushfire management.

LP0882797 A/Prof RD Julian; Prof RD White; Prof CP Roux; Dr HA Sibly; Mr A Ross; Mr P Woodman; Mr RJ Hayes; Mr T Purton; Dr J Robertson; Ms KA Davey; Prof P Margot

Approved Project Title **The Effectiveness of Forensic Science in the Criminal Justice System**

2008 : $ 129,284
2009 : $ 142,426
2010 : $ 135,159
2011 : $ 159,100
2012 : $ 103,360
Primary RFCD 3904 LAW ENFORCEMENT
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Victoria Police
National Institute of Forensic Science
Australian Federal Police

Administering Organisation University of Tasmania

Project Summary

Policing plays a major role in combating crime in the community, reassuring and assisting persons affected by crime so that they can continue, or return, to enjoying their lives. Forensic science is increasingly relied upon by law

enforcement to solve crime, and by the judicial system to prosecute offenders. However, the value and impact of forensic science has yet to be established. Through a comprehensive examination of forensic science usage in the criminal justice system in Victoria and ACT, this research will develop an evidence-based best-practice model for using forensic science efficiently and effectively. This will benefit the Australian community through the achievement of better and more cost effective criminal justice outcomes.

LP0882355 Dr TW Lewis; A/Prof BF Yates; Dr DE Richardson; Prof GB Garnier

Approved Project Title **Reduced water usage in the Australian pulp and paper industry through novel process chemistry**
2008 : $ 55,000
2009 : $ 55,000
2010 : $ 50,000
Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Collaborating/Partner Organisation(s)

Norske Skog Paper Mills (Australia) Ltd

Administering Organisation University of Tasmania

Project Summary

Norske Skog Paper Mill operates two paper mills on major rivers in Australia. For these mills to reduce water consumption greater recycling of the process water is needed which results in a build-up of detrimental substances that will affect paper machine performance and efficiency. The knowledge gained from this project will help the paper mills to find strategies to control the build-up of the detrimental material and deal with it in such a way that the process water can be recycled and the paper mills can reduce water consumption.

LP0882497 Prof JH Walker; Dr EE Stratford; Dr AL Robinson; Dr P Orpin; Ms KC Boyer; Ms J Carty; Ms P Marsh; Ms AJ Daly

Approved Project Title **Community Engagement for Productive Ageing: Models to support rural healthy ageing through the maintenance of community involvement and contribution**
2008 : $ 87,848
2009 : $ 93,448
2010 : $ 108,648
Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES
LIF Award(s): 1

Collaborating/Partner Organisation(s)

Tasmanian Council of Social Services
Department of Health & Human Services Tasmania

Administering Organisation University of Tasmania

Project Summary

Governments at all levels are concerned about the looming social and economic challenges flowing from an ageing population. At present, ageing services are largely focussed on caring for the frail dependent aged. Yet, ultimately, the key to meeting the ageing challenge will lie in how successful we are in supporting our healthy independent aged to stay contributing and productive members of their community. By developing evidence-based interventions that focus on preventing social disengagement before it occurs, the project provides a cost effective approach to ensuring that Australia's rapidly growing aged cohort remain social assets and do not become social burdens.

Northern Territory

Charles Darwin University

LP0882367 Prof B Campbell; Dr PJ Whitehead

Approved Project Title **Does monitoring and evaluation improve joint management? The case of national parks in the Northern Territory**
2008 : $ 125,000

2009 : $ 105,000
2010 : $ 100,000
Primary RFCD 3009 LAND, PARKS AND AGRICULTURE MANAGEMENT

Collaborating/Partner Organisation(s)

Northern Land Council
Central Land Council
Northern Territory Department of Natural Resources, Environment and the Arts

Administering Organisation Charles Darwin University

Project Summary

Joint Indigenous/government management is to be mainstreamed in 30 national parks and reserves in the Northern Territory over the next few years including some of Australia's iconic natural wonders. This project will identify how participatory monitoring and evaluation enhances the realisation of benefits from joint management, how it can be done cost effectively, and how it can be scaled up from six pilot areas to areas across the NT and Australia wide. The project will build capacity of Indigenous Traditional Owners to participate in monitoring and evaluation for improved management and livelihood outcomes for the benefit of not just the residents of these natural areas, but for all Australians.

LP0882478 Prof KA Christian; Prof RS Seymour; Dr GJ Webb

Approved Project Title **Digestive Physiology of Crocodilians: Towards an Improved Diet and Feeding Regime for Use by the Farming Industry**
2008 : $ 94,000
2009 : $ 88,000
2010 : $ 70,000
Primary RFCD 3004 ANIMAL PRODUCTION

Collaborating/Partner Organisation(s)

Wildlife Management International
Northern Territory Research & Innovation Board

Administering Organisation Charles Darwin University

Project Summary

Crocodile farming promotes the sustainable production and consumption of crocodile products without harming natural populations. The industry grosses over $15 million per year in Australia and $200 million worldwide. Costs associated with transporting and storing food are the single largest expense that crocodile farms have. Increases in the efficiency of converting food into growth will have positive economic benefits to the industry. Efficiencies can be produced by (1) increasing food absorption, (2) decreasing the energetic costs of digestion, and (3) producing a new food that is less expensive to ship and store. This project will directly address the first two of these and will lay the foundation for the development of the third.

LP0882428 A/Prof TS Lea

Approved Project Title **Exploring the myth of the single solution: an anthropological study of housing maintenance and infrastructure issues in Australia**
2008 : $ 25,000
2009 : $ 21,028
Primary RFCD 3703 ANTHROPOLOGY

Collaborating/Partner Organisation(s)

Healthabitat

Administering Organisation Charles Darwin University

Project Summary

Indigenous housing is a core challenge for improving Australia's social and economic fabric. Urgent issues of amenity, maintenance and responsibility remain unresolved. By documenting what is involved in taking a difficult yet successful intervention model for targeting small-scale repairs and maintenance to scale in Australia, the research will shed critical light on: the complexities of program replication and effect; the social and political context such programs operate within; the characteristics required for sustained reform. It will also add an Australian contribution to a growing international field: namely, the anthropology of policy, aid and development.

LP0882670 A/Prof TS Lea; Prof LM Barclay; Dr KA Senior

Approved Project Title **The invisible parents project - exploring the barriers to effective parental and community involvement in three Northern Territory Schools**
2008 : $ 62,000
2009 : $ 60,000
2010 : $ 60,000
Primary RFCD 3301 EDUCATION STUDIES
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

The Smith Family

Administering Organisation Charles Darwin University

Project Summary

Education outcomes in the Northern Territory, particularly for Indigenous students, lag far behind those of other Australians, to the point that the situation can be considered a national emergency. This research program will explore ways to improve parental involvement. This will inform the Smith Family's efforts to undertake early intervention for children who are at risk of education failure. It will provide benefits to the rural and regional communities who feed schools in Darwin and Katherine and provide national benefits through making a significant contribution of anthropologically-informed knowledge on the determinants of successful school outcomes.

Australian Capital Territory

The Australian National University

LP0882714 Prof JS Dryzek; Dr L Carson; Dr SJ Niemeyer; A/Prof JF Hartz-Karp; Prof I Marsh; Mr LA Belgiorno-Nettis

Approved Project Title **Creating and Analysing a Citizens' Parliament: Exploring the Public's Deliberative Capacity**
2008 : $ 108,501
2009 : $ 145,567
2010 : $ 37,507
Primary RFCD 3601 POLITICAL SCIENCE
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

New Republic Foundation Limited

Administering Organisation The Australian National University

Project Summary

This project will contribute to public understanding of Australia's institutions of government, and to debates about possibilities for their reform. It will also demonstrate the contributions to governance that large-scale forums composed of typical citizens could make. In so doing, the project will illuminate the possibilities for more effective citizen participation and public consultation in Australia's democracy. The project will develop applied expertise on these issues, and solidify Australia's standing as a leader when it comes to innovative democratic reform.

LP0882985 Dr SL O'Connor

Approved Project Title **Bayini, Macassans, Balanda and Bininij: A Case Study of Indigenous Cultural Heritage Management and Tourism in West Arnhemland Northern Territory**
2008 : $ 77,800
2009 : $ 72,200
2010 : $ 80,000
Primary RFCD 4302 ARCHAEOLOGY AND PREHISTORY
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of the Environment and Water Resources
Bushfires Northern Territory

Administering Organisation The Australian National University

Project Summary

Contact between cultures is a defining theme in history and is especially relevant to contemporary Australia. The timing of contact between South East Asians and Europeans with Aboriginal communities in Arnhem Land is of great historical significance to Australia. This knowledge will enhance the national heritage registration efforts for cultural heritage places in the region. Conservation efforts will be undertaken for the first time for these potentially world heritage significant Indigenous cultural heritage places. Indigenous communities will potentially make significant economic gains from developing sustainable land management and cultural tourism initiatives through the results and skills obtained from his project.

University of Canberra

LP0883041 Prof AM Harding; A/Prof LJ Brown

Approved Project Title **Population Ageing, Health Status and Health Outlays: Assessing Impacts and Policy Options During the Next 40 Years**

2008 : $ 25,627
2009 : $ 25,627
2010 : $ 25,627

Primary RFCD 3705 DEMOGRAPHY

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Health and Ageing

Administering Organisation University of Canberra

Project Summary

This project will enable the Commonwealth and Australia to develop the modelling infrastructure that will allow them to assess the future distributional consequences of the far-reaching human capital and health reforms that are likely to be on the policy agenda during the next few decades. The project will also place Australia at the forefront internationally in the construction of dynamic microsimulation population models, particularly including the simulation of health status and health services. This technology will improve public policy in Australia and be able to be exported to our Asia-Pacific neighbours in the near future.

LP0882179 Dr D Tait; Dr P Reddy; Prof GW Brawn; Prof WT Sarre; Prof Dr DJ Rickwood; A/Prof DA Blackman; Dr GK Missingham; Ms AM Wallace; Dr KH Auty

Approved Project Title **Enhancing court safety by managing people, places and processes.**

2008 : $ 100,000
2009 : $ 80,000
2010 : $ 90,000

Primary RFCD 3903 JUSTICE AND LEGAL STUDIES

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Western Australian Department of the Attorney-General
Family Court of Australia
Courts Administration Authority
Myriad Consultants
PTW Architects
Connleywalker Pty Ltd
Magistrates Court of Victoria
Lyons Architects

Administering Organisation University of Canberra

Summary of Linkage Projects Proposals for Funding to Commence in 2008

Project Summary

Australia will be better protected 'from terrorism and crime' by having safer courts. High-profile criminal cases can be managed more expeditiously, vulnerable participants will be able to take part more confidently in justice processes, while Australian society more generally will be protected by having courts that provide effective responses to crime while maintaining openness and respect for law. In providing a holistic analysis of safety needs and responses, the study also provides an empirial foundation for developing 'smart information uses', ensuring that surveillance and screening technologies complement court design and training policies to create environments that are physically and psychologically safe.