

**Number of Successful Proposals by RFCD Code for Linkage Projects to
Commence in 2007**

230000	MATHEMATICAL SCIENCES	
2302	STATISTICS	1
230000	MATHEMATICAL SCIENCES	1
240000	PHYSICAL SCIENCES	
2404	OPTICAL PHYSICS	2
2499	OTHER PHYSICAL SCIENCES	1
240000	PHYSICAL SCIENCES	3
250000	CHEMICAL SCIENCES	
2501	PHYSICAL CHEMISTRY (INCL. STRUCTURAL)	3
2502	INORGANIC CHEMISTRY	1
2503	ORGANIC CHEMISTRY	1
2504	ANALYTICAL CHEMISTRY	2
2505	MACROMOLECULAR CHEMISTRY	2
2599	OTHER CHEMICAL SCIENCES	1
250000	CHEMICAL SCIENCES	10
260000	EARTH SCIENCES	
2601	GEOLOGY	4
2603	GEOCHEMISTRY	1
2605	HYDROLOGY	1
2606	ATMOSPHERIC SCIENCES	1
260000	EARTH SCIENCES	7
270000	BIOLOGICAL SCIENCES	
2701	BIOCHEMISTRY AND CELL BIOLOGY	5
2702	GENETICS	4
2703	MICROBIOLOGY	5
2704	BOTANY	5
2705	ZOOLOGY	1
2707	ECOLOGY AND EVOLUTION	12
2708	BIOTECHNOLOGY	1
2799	OTHER BIOLOGICAL SCIENCES	2
270000	BIOLOGICAL SCIENCES	35
280000	INFORMATION, COMPUTING AND COMMUNICATION SCIENCES	
2801	INFORMATION SYSTEMS	3
2802	ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING	4
2803	COMPUTER SOFTWARE	2
2804	COMPUTATION THEORY AND MATHEMATICS	1
2805	DATA FORMAT	2
280000	INFORMATION, COMPUTING AND COMMUNICATION SCIENCES	12
290000	ENGINEERING AND TECHNOLOGY	
2901	INDUSTRIAL BIOTECHNOLOGY AND FOOD SCIENCES	1
2903	MANUFACTURING ENGINEERING	1
2905	MECHANICAL AND INDUSTRIAL ENGINEERING	3
2906	CHEMICAL ENGINEERING	5
2907	RESOURCES ENGINEERING	1
2908	CIVIL ENGINEERING	2
2909	ELECTRICAL AND ELECTRONIC ENGINEERING	2
2910	GEOMATIC ENGINEERING	2
2911	ENVIRONMENTAL ENGINEERING	3
2913	METALLURGY	4

**Number of Successful Proposals by RFCD Code for Linkage Projects to
Commence in 2007**

2914	MATERIALS ENGINEERING	3
2915	BIOMEDICAL ENGINEERING	6
2917	COMMUNICATIONS TECHNOLOGIES	4
2918	INTERDISCIPLINARY ENGINEERING	2
2999	OTHER ENGINEERING AND TECHNOLOGY	1
290000	ENGINEERING AND TECHNOLOGY	40
300000	AGRICULTURAL, VETERINARY AND ENVIRONMENTAL SCIENCES	
3002	CROP AND PASTURE PRODUCTION	4
3003	HORTICULTURE	2
3005	VETERINARY SCIENCES	2
3006	FORESTRY SCIENCES	1
3007	FISHERIES SCIENCES	1
3008	ENVIRONMENTAL SCIENCES	6
300000	AGRICULTURAL, VETERINARY AND ENVIRONMENTAL SCIENCES	16
310000	ARCHITECTURE, URBAN ENVIRONMENT AND BUILDING	
3101	ARCHITECTURE AND URBAN ENVIRONMENT	4
3102	BUILDING	1
3199	OTHER ARCHITECTURE, URBAN ENVIRONMENT AND BUILDING	2
310000	ARCHITECTURE, URBAN ENVIRONMENT AND BUILDING	7
320000	MEDICAL AND HEALTH SCIENCES	
3203	MEDICAL BIOCHEMISTRY AND CLINICAL CHEMISTRY	2
3205	PHARMACOLOGY AND PHARMACEUTICAL SCIENCES	1
3207	NEUROSCIENCES	1
3210	CLINICAL SCIENCES	3
3212	PUBLIC HEALTH AND HEALTH SERVICES	12
3214	HUMAN MOVEMENT AND SPORTS SCIENCE	1
320000	MEDICAL AND HEALTH SCIENCES	20
330000	EDUCATION	
3301	EDUCATION STUDIES	3
3302	CURRICULUM STUDIES	2
3303	PROFESSIONAL DEVELOPMENT OF TEACHERS	3
3399	OTHER EDUCATION	2
330000	EDUCATION	10
340000	ECONOMICS	
3402	APPLIED ECONOMICS	4
340000	ECONOMICS	4
350000	COMMERCE, MANAGEMENT, TOURISM AND SERVICES	
3502	BUSINESS AND MANAGEMENT	8
3504	TRANSPORTATION	1
350000	COMMERCE, MANAGEMENT, TOURISM AND SERVICES	9
360000	POLICY AND POLITICAL SCIENCE	
3602	POLICY AND ADMINISTRATION	4
360000	POLICY AND POLITICAL SCIENCE	4
370000	STUDIES IN HUMAN SOCIETY	
3701	SOCIOLOGY	5
3702	SOCIAL WORK	4
3704	HUMAN GEOGRAPHY	2

**Number of Successful Proposals by RFCD Code for Linkage Projects to
Commence in 2007**

3705	DEMOGRAPHY	1
370000	STUDIES IN HUMAN SOCIETY	12
380000	BEHAVIOURAL AND COGNITIVE SCIENCES	
3801	PSYCHOLOGY	2
380000	BEHAVIOURAL AND COGNITIVE SCIENCES	2
390000	LAW, JUSTICE AND LAW ENFORCEMENT	
3903	JUSTICE AND LEGAL STUDIES	2
3904	LAW ENFORCEMENT	5
3999	OTHER LAW, JUSTICE AND LAW ENFORCEMENT	1
390000	LAW, JUSTICE AND LAW ENFORCEMENT	8
400000	JOURNALISM, LIBRARIANSHIP AND CURATORIAL STUDIES	
4001	JOURNALISM, COMMUNICATION AND MEDIA	3
4003	CURATORIAL STUDIES	1
400000	JOURNALISM, LIBRARIANSHIP AND CURATORIAL STUDIES	4
410000	THE ARTS	
4101	PERFORMING ARTS	1
4104	DESIGN STUDIES	1
410000	THE ARTS	2
420000	LANGUAGE AND CULTURE	
4201	LANGUAGE STUDIES	2
4203	CULTURAL STUDIES	1
420000	LANGUAGE AND CULTURE	3
430000	HISTORY AND ARCHAEOLOGY	
4301	HISTORICAL STUDIES	4
4302	ARCHAEOLOGY AND PREHISTORY	2
430000	HISTORY AND ARCHAEOLOGY	6
440000	PHILOSOPHY AND RELIGION	
4401	PHILOSOPHY	1
4402	RELIGION AND RELIGIOUS TRADITIONS	1
440000	PHILOSOPHY AND RELIGION	2
Total Number of Grants		217

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2302 STATISTICS

University of Wollongong

LP0776810 Prof RL Chambers; Prof DG Steel

Approved New methods for small group analysis from sample surveys

Project Title

2007 : \$ 64,250

2008 : \$ 123,000

2009 : \$ 116,250

2010 : \$ 57,500

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Australian Bureau of Statistics

Australian Bureau of Agricultural and Resource Economics

Centre for Epidemiology and Research

Public Health Intelligence

Administering Organisation University of Wollongong

Project Summary

National and state averages of statistics on issues such as unemployment, salinity, drought impact, and health often hide large differences between population sub-groups and between small areas. This local variation needs to be understood so that effective policies can be developed and carried out efficiently and their impact monitored. This project will provide, for the first time, robust and efficient methods for providing information on these variations using data from large-scale national and state surveys. This will lead to significant improvements in the data available for small population groups and small areas, allowing better targeting of policies aimed at addressing local differences.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2404 OPTICAL PHYSICS

The University of Adelaide

LP0776947 Prof TM Monro

Approved Project Title **Low power optical limiting for laser receiver protection**

2007 : \$ 45,000
2008 : \$ 112,500
2009 : \$ 112,500
2010 : \$ 45,000

Collaborating/Partner Organisation(s)

BAE Systems Australia

Administering Organisation The University of Adelaide

Project Summary

This project will place Australia as one of the leaders in the world in both science and technology of soft glass Photonic Band Gap Fibres, which is an enabling field of research with enormous number applications in Medicine, Defence, communication, etc. The project will develop a critical component (receiver protection) for laser range finders, which are widely being used in defence industries, therefore having national benefit in terms of safeguarding Australia. The project will also be an excellent vehicle for educating young physicists and engineers in Australia. This is of national importance in itself due to the current shortage of photonics physicists.

The University of Melbourne

LP0776950 Prof KA Nugent; A/Prof A Roberts; Mr D Marquardt

Approved Project Title **Next generation front projection screens**

2007 : \$ 30,000
2008 : \$ 60,000
2009 : \$ 60,000
2010 : \$ 80,000
2011 : \$ 50,000

Collaborating/Partner Organisation(s)

Herma Projection Screen Technology Pty Ltd

Administering Organisation The University of Melbourne

Project Summary

Consumer electronics is a huge international market and home theatre is one of the most rapidly growing sectors. A critical part of the home theatre system is the projection screen, an area of technology that has seen only incremental development over the last fifty years, or so. In this project we will take some advanced design concepts developed at the University of Melbourne for laser technology and adapt them to the development of novel approaches to improving the brightness and resolution of projection screens. The project will look at the design process and address the manufacturing challenges for novel projection screen technology.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2499 OTHER PHYSICAL SCIENCES

La Trobe University

LP0776839 Dr AG Peele; Dr W Yun; Dr B Arhatari

Approved Project Title **Industrial-strength X-ray Phase Tomography**

2007 : \$ 55,000

2008 : \$ 110,000

2009 : \$ 115,000

2010 : \$ 60,000

APDI Dr B Arhatari

Collaborating/Partner Organisation(s)

Xradia Ltd

Administering Organisation La Trobe University

Project Summary

The unique 3D imaging capability provided as a result of this project will have application to advanced manufacturing as a non-destructive evaluation for materials and micro-components. For instance, the internal structure of aerogels, porous light metals, polymers and carbon fibre based materials can all be imaged at the microscale. Similar benefits flow in health sciences where organic processes can be observed in place and where, for instance, small animals used in research and clinical testing can be inspected internally without having to destroy them, thus allowing for repeated measurements.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Murdoch University

LP0776541 Prof PM May; A/Prof GT Hefter

Approved Redox processes in Bayer liquors
Project Title

2007 : \$ 74,500
2008 : \$ 152,000
2009 : \$ 158,000
2010 : \$ 80,500

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

AMIRA International Limited

Administering Organisation Murdoch University

Project Summary

Alumina, and the aluminium produced from it, are amongst Australia's most important mineral commodities, earning about \$8 billion p.a. in exports. However, ongoing technological improvements are needed for Australian producers to remain globally competitive. This project addresses a key problem in alumina production - the behaviour of organic impurities - which will help to increase industrial productivity and reduce energy consumption. Insights gained from this research will also minimize the environmental and occupational health impacts of various process emissions, making the industry more sustainable.

Queensland University of Technology

LP0776793 Prof JM Bell; Dr WN Martens; Prof Dr RL Frost; Dr GD Will; Dr RJ Brown; A/Prof A Goonetilleke;
Dr M Rasul; Mr DL Gilbert

Approved Novel Nanomaterials for Photocatalytic Water Purification - Science and Application
Project Title

2007 : \$ 62,500
2008 : \$ 125,000
2009 : \$ 125,000
2010 : \$ 62,500

APA(I) Award(s): 1

APDI Dr WN Martens

Collaborating/Partner Organisation(s)

Built Environment Research Unit

C-M Concrete

Administering Organisation Queensland University of Technology

Project Summary

Water is rapidly becoming Australia's most critical natural resource, and there is an urgent need to re-use and recycle water from domestic use (graywater) and industry, as well as utilisation of larger scale harvesting of rainwater. The outcome of this project will be a technology which can remove organic material (biological and non-biological) from water, enabling a greater range of uses of wastewater. This technology will play a significant role in delivering future water security, and developing new industries involved in manufacture and export of water treatment technologies. This project directly addresses the National Priority Research area of water, and international priorities involving greater re-use and recycling of water.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

University of South Australia

LP0776625 Prof RG Horn; Prof SJ Miklavcic; Mr AB Ozerov

Approved Project Title **Evaluating modern printing inks: the behaviour of charged particles in concentrated nonaqueous colloidal dispersions**

2007 : \$ 27,500

2008 : \$ 55,000

2009 : \$ 57,500

2010 : \$ 30,000

Collaborating/Partner Organisation(s)

Research Laboratories of Australia

Administering Organisation University of South Australia

Project Summary

The Partner Organisation in this proposal, Research Laboratories of Australia (RLA) is a small Adelaide-based company which is at the forefront of modern colour printing technology. RLA provides liquid toners to several major international manufacturers of colour printers for use in liquid immersion development processes. This proposal will develop an instrument for characterising the properties of liquid inks, enabling continual R&D improvement of RLA's products. Furthermore, the instrument can be commercialised and marketed worldwide to companies dealing with concentrated colloidal dispersions in a wide range of industries including foods, pharmaceuticals, cosmetics and surface coatings.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2502 INORGANIC CHEMISTRY

Monash University

LP0776957 Dr PC Andrews; A/Prof PC Junk; Prof GB Deacon; A/Prof M Silberstein

Approved Project Title **Development and Testing of Novel Contrast Agents for Diagnostic Imaging**

2007 : \$ 65,000

2008 : \$ 122,500

2009 : \$ 120,000

2010 : \$ 62,500

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Schering AG

Administering Organisation Monash University

Project Summary

Demand for diagnostic imaging in the Australian healthcare system is growing at over 5% per annum. To facilitate imaging, Australia imports radiographic contrast media costing in excess of \$50 million every year. Existing iodine-based agents are not ideal for X-ray absorption in current CT scanners and also cause moderate to severe allergic reaction in around 5% of all patients, sometimes with fatal results. New radiographic media, which give enhanced contrast and provide greater patient comfort and safety are essential. Even a small fraction of the international market would generate millions of dollars in income, support growth and expertise in Imaging Technologies, and provide new markets for Australian mining of rare earth and bismuth metals.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2503 ORGANIC CHEMISTRY

The Australian National University

LP0776242 Prof MG Banwell

Approved Marine Natural Products as Sources of Agrochemicals - The Variolins
Project Title

2007 : \$ 12,813

2008 : \$ 25,627

2009 : \$ 25,627

2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BASF Aktiengesellschaft Global Research Agricultural Products

Administering Organisation The Australian National University

Project Summary

The aim of this project is the identification of new classes of agrochemicals with better pest resistance and environmental profiles. The proposed partnership with a major international chemical manufacturing organization will allow access to state-of-the-art techniques for the screening and development of novel compounds as agents for the control of pests that affect many major agricultural crops relevant to Australia's economy. Australian graduate students will experience the operations of one of the world's biggest chemical manufacturers. The derivation of agrochemicals from marine sources will promote further recognition of the value of marine ecosystems around Australia.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2504 ANALYTICAL CHEMISTRY

RMIT University

LP0776812 Prof PJ Marriott; Prof MJ Adams; Dr PM Wynne; Dr WL Winniford

Approved Project Title **Advanced Separation Technologies and Chemometric Data Processing for Macromolecular Materials and Metabolite Profiling**

2007 : \$ 47,500

2008 : \$ 82,500

2009 : \$ 65,000

2010 : \$ 30,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

SGE International Pty Ltd

The Dow Chemical Company

Administering Organisation RMIT University

Project Summary

The project will develop innovative separation technologies for specialised materials, which could lead the scientific export industry in Australia, with employment benefits to the community. Partner, Dow has links with researchers around the world, and this project will allow Australian researchers to access the network of Dow laboratories and projects and develop a long-term relationship. The analysis methods to be developed will focus on metabolite profiling which has relevance to a broad range of biological monitoring activities from human health, to plant genetics and breeding. New generation polymer materials will be characterised by using the new techniques developed. The methods will be platform technologies for future studies eg. anti-terrorism bio- and chemo-monitoring.

University of Tasmania

LP0776804 Dr MC Breadmore; Dr EF Hilder; Dr RA Shellie; Dr S Pyecroft; Mr NK Fox

Approved Project Title **Probing the Tasmanian Devil Serum Proteome for Preclinical Diagnosis of Devil Facial Tumour Disease**

2007 : \$ 29,813

2008 : \$ 29,813

Collaborating/Partner Organisation(s)

Department of Primary Industries and Water

Administering Organisation University of Tasmania

Project Summary

The Tasmanian Devil (*Sarcophilus harrisii*) is a carnivorous marsupial endemic to the island state of Tasmania, and is found all over the state. Over the past decade, a dramatic decline has occurred in the Devil population in association with the emergence of Devil Facial Tumour Disease (DFTD). This project aims to develop a preclinical diagnostic test for DFTD that will provide vital information for use in developing management strategies to ensure the ongoing survival of the Tasmanian Devil. The benefit to Australia in performing this research rests in the new technology that will be developed and the application of this technology to key areas of national and international significance.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2505 MACROMOLECULAR CHEMISTRY

The Flinders University of South Australia

LP0777033 Dr SR Clarke; Dr MR Johnston; Ms E Markovic

Approved Project Title **XeroCoat: Modifying and Improving a New, Commercial, Anti-Reflective, Non-Fogging Sol-Gel Coating**

2007 : \$ 85,000

2008 : \$ 175,000

2009 : \$ 90,000

APDI Ms E Markovic

Collaborating/Partner Organisation(s)

XeroCoat Pty Ltd

Administering Organisation The Flinders University of South Australia

Project Summary

XeroCoat is commercialising nanotechnology research out of UQ's Physics department. XeroCoat has received much local and international interest in its signature product 'XeroCoat'. The company is rapidly expanding and has established new research facilities with production facilities to be set-up. This will result in high technology, employment growth for Australia. Links with Flinders could see expansion into SA. The company operates in 'Sol-Gel' nanotechnology, which has huge global, academic and commercial interest. However in Australia this technology has only been serviced by Flinders, ANSTO and ANSTO's spin-out company Ceramisphere. The project will help to build a new Australian high tech industry in sol-gel nanotechnology.

The University of Sydney

LP0776672 Dr M Sunde; Dr AH Kwan; Dr JP Mackay

Approved Project Title **Manipulating the self-assembly properties of fungal hydrophobin proteins for the design of novel biological polymers.**

2007 : \$ 22,500

2008 : \$ 40,000

2009 : \$ 32,500

2010 : \$ 15,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BASF Aktiengesellschaft

Administering Organisation The University of Sydney

Project Summary

Hydrophobin-based products will be novel biocompatible and biodegradable products with applications in the fields of medical implants, biosensors, detergents, coatings and pharmaceutical and industrial emulsions. They have the potential to directly improve the lives of all Australians and to be of benefit to the Australian economy and environment. This collaborative research project will enable Australian scientists to gain from working with a multinational company and to acquire skills in the rapidly expanding fields of structural and molecular biology. The University of Sydney will own any intellectual property arising from this work and will benefit from the commercialisation of hydrophobin-based products.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2599 OTHER CHEMICAL SCIENCES

Curtin University of Technology

LP0776766 Dr A Sathasivan; A/Prof A Heitz; Dr CA Joll; Dr JJ Plumb; Dr R Trolie; Mr L Koska

Approved Project Title **Novel Technology for Improving Disinfection Outcomes in Regional and Remote Drinking Water Distribution Systems**

2007 : \$ 24,859

2008 : \$ 49,718

2009 : \$ 49,718

2010 : \$ 24,859

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Water Corporation

Administering Organisation Curtin University of Technology

Project Summary

Climate shifts have led to water supply shortages in many areas of Australia, both in rural and remote regions and in cities. To ease water shortages, transportation of water over long distances is becoming increasingly necessary. A major impediment to transfer of water through long mains is management of the disinfectant: most disinfectants decay too rapidly, leaving consumers at risk of pathogen exposure. Chloramination, the most viable disinfection technology for this purpose, suffers from a process called nitrification which accelerates disinfectant decay. In this project, we are developing an innovative, patented process to prevent nitrification, which will allow safe and effective disinfection of water supplies in long pipelines.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2601 GEOLOGY

James Cook University

LP0776905 Prof NH Oliver; Dr TG Blenkinsop; Dr G Xu; Mr L Feltrin; Mr RD Wilson; A/Prof TD Pham; Mr IJ Holland; Mr F Santaguida

Approved Project Title From exploration to mining: new geological strategies for sustaining high levels of copper production from the Mount Isa district

2007 : \$ 90,000
2008 : \$ 177,500
2009 : \$ 182,500
2010 : \$ 95,000

APA(I) Award(s): 1

APDI Mr L Feltrin

Collaborating/Partner Organisation(s)

Xstrata Copper Exploration Pty Ltd

Administering Organisation James Cook University

Project Summary

Mineral production at the Mount Isa copper and Ernest Henry copper-gold mines is worth more than \$ 1 billion per year and this has underpinned the northern Queensland economy for a number of years. These resources are being depleted at a high rate, and no significant new discoveries have been made in over a decade. This project will provide some of the tools to define new resources for the next generation, ensuring the prosperity of the region and bolstering the Australian economy. The timing is critical given the long lead time between discovery and production (in the order of 5 to 10 years). If successful the research may have major financial impacts at local, regional and national scales. It may also improve mine safety.

Macquarie University

LP0776637 Prof SY O'Reilly; Prof WL Griffin; Dr CJ O'Neill

Approved Project Title Global Lithospheric Architecture Mapping II

2007 : \$ 47,000
2008 : \$ 89,500
2009 : \$ 110,000
2010 : \$ 67,500

Collaborating/Partner Organisation(s)

BHP Billiton

Administering Organisation Macquarie University

Project Summary

The continents have been rifted, or broken up, and collided, or re-assembled, along major zones of weakness many times throughout Earth's history. Boundaries between such continental domains focus large-scale movements of fluids that can produce giant ore deposits. This study will provide new perspectives on the localisation of world-class economic deposits, the Earth resources on which society depends. Innovations in imaging the deep Earth beneath continents, and in numerical modelling, will maintain our high international profile in research relevant to National Priority 1.6 (Developing Deep Earth Resources). Unique 3D geological maps of regions down to 250km will make the composition of deep Earth regions newly accessible to geoscientists and all potential endusers.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

Monash University

LP0776690 A/Prof LN Moresi; Prof MA Sandiford; Dr W Powell; Dr GD Karner

Approved Project Title **Three dimensional computational models of geological basin and hinterland evolution incorporating lithospheric mantle and surface processes**

2007 : \$ 45,000

2008 : \$ 90,000

2009 : \$ 85,000

2010 : \$ 40,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

ExxonMobil Upstream Research Company

Administering Organisation Monash University

Project Summary

Petroleum exploration in deepwater areas offshore Australia is becoming increasingly important as more accessible, shallow water oil reserves near exhaustion. Geological simulation is an important tool for understanding deep water basins where geophysical imaging techniques are less effective. This project will develop 3D computational models relevant to understanding the development and evolution of geological basins and the sediments that fill them. The models will be integrated with available offshore data for potentially prospective Australian basins in the Northwest Shelf and the Southern Australian margin.

The University of Western Australia

LP0776780 Prof TC McCuaig; Prof ME Barley; Dr J Miller; Dr M Fiorentini; Dr SW Beresford

Approved Project Title **Tectonostratigraphic controls on the localization of Archaean komatiite-hosted nickel-sulphide deposits and camps in the Yilgarn Craton**

2007 : \$ 100,000

2008 : \$ 200,000

2009 : \$ 230,000

2010 : \$ 130,000

APDI Dr M Fiorentini

Collaborating/Partner Organisation(s)

St Barbara

BHP Billiton

LionOre Australia (Nickel) Ltd

Administering Organisation The University of Western Australia

Project Summary

Nickel contributes \$2 billion per year to Australia's export income. Currently 80% of that comes from nickel sulphide deposits in regional Australia that are expected to be exhausted within thirty years barring significant new discoveries. Although discovery rates have been declining, as the 'easy' targets have been found, there remains considerable potential for future major discoveries. This project addresses the pressing need for new data and improved exploration techniques to enable industry to target new discoveries. As our nickel mines are located in remote communities such discoveries also have major benefits for regional Australia.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2603 GEOCHEMISTRY

Curtin University of Technology

LP0776265 Prof R Alexander; A/Prof K Grice; Dr AP Murray

Approved **Reduction of risk in exploration for petroleum liquids**
Project Title

2007 : \$ 35,000

2008 : \$ 67,500

2009 : \$ 32,500

Collaborating/Partner Organisation(s)

Woodside Energy Ltd

Administering Organisation Curtin University of Technology

Project Summary

Australia has an urgent need to establish additional reserves of crude oil. A feature of petroleum exploration in recent decades has been discovery of vast reserves of natural gas but an inability to replace our diminishing reserves of crude oil. Clearly new technology is required to enhance our capability to recognise crude oil-prone rather than gas-prone source rocks. The proposed project will establish the fundamental geochemical processes that will support the potential exploration techniques, developed with Woodside Energy Limited support.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2605 HYDROLOGY

The University of Western Australia

LP0776887 Dr DA Reynolds; Dr EH Jones; Mr D Thomas; Dr L Bell; Prof AB Fourie

Approved Project Title **Remediation of Underground Contaminant Source Areas using Nano-scale, Zero Valent Iron and Potassium Permanganate**

2007 : \$ 40,000

2008 : \$ 75,000

2009 : \$ 35,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Golder Associates

Administering Organisation The University of Western Australia

Project Summary

Land in parts of Australia valued in the hundreds of millions of dollars is currently contaminated by organic compounds to levels unsuitable for human health and safety . At many of these contaminated sites, the contamination is present as pure, separate phase oil that is trapped due to geology or other physical reasons. This remaining oil is a long term source of contamination, and is exceptionally difficult to remediate. The proposed research will investigate a novel and highly effective approach to destroying this contamination in the ground, helping to restore the value and utility of the land.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2606 ATMOSPHERIC SCIENCES

Queensland University of Technology

LP0776542 Prof L Morawska; Dr NS Holmes; Ms RJ Kennedy; Mr DL Gilbert; Mr AR Fairweather; Mr AC Sharp

Approved Project Title **Optimisation of indoor air quality, thermal comfort and energy usage within buildings located in busy transit oriented urban developments**

2007 : \$ 27,500

2008 : \$ 60,000

2009 : \$ 65,000

2010 : \$ 32,500

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Queensland Government

Administering Organisation Queensland University of Technology

Project Summary

The socio-economic benefits to Australia from the project include (i) a novel holistic modelling tool to building design that maximises indoor comfort and provides acceptable air quality for the inhabitants whilst minimising energy usage in transit oriented urban developments; and (ii) estimation of energy consumption for different building designs and operation with respect to air quality and thermal comfort. The ultimate economic benefit of this research will be a reduction in health care costs and lost productivity as well as reduction of energy used and associated emissions. The research will also place Australia in the forefront of international progress and the race towards better methods for achieving environmental sustainability.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2701 BIOCHEMISTRY AND CELL BIOLOGY

Monash University

LP0776674 Prof J Rossjohn; Dr AF Wilks

Approved Project Title **Rational structure-based drug design of protein tyrosine kinase inhibitors**

2007 : \$ 86,168

2008 : \$ 179,704

2009 : \$ 201,217

2010 : \$ 107,682

Collaborating/Partner Organisation(s)

Cytopia Ltd

Administering Organisation Monash University

Project Summary

This research project is focussed on understanding the physiological roles of a group of enzymes within the cell, as well as developing therapeutics to combat significant diseases. It will achieve this by developing compounds to enzymes that are implicated in the disease process. The research project represents a continuation of a collaboration between academic researchers at Monash University, and an Australian biotechnology company, Cytopia Ltd.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Adelaide

LP0776921 Dr DJ Peet; A/Prof ML Whitelaw; Dr S Klaus; Dr R Bilton

Approved Project Title Characterisation of the oxygen-sensing asparaginyl hydroxylase, FIH-1, and hydroxylase-specific antagonists.

2007 : \$ 40,000

2008 : \$ 80,000

2009 : \$ 80,000

2010 : \$ 40,000

APDI Dr R Bilton

Collaborating/Partner Organisation(s)

FibroGen Inc.

Administering Organisation The University of Adelaide

Project Summary

This research will provide fundamental information on how cells and whole organisms can sense and respond accordingly to oxygen deficiency. This information is fundamental for our understanding of embryo development and adult life in different environments, and central to the diagnosis and treatment of diseases such as stroke, cardiovascular disease, and cancer. This research will contribute to our basic knowledge of these processes, provide invaluable information about the specific genes and proteins involved, and provide direct information about the therapeutic potential of specific drugs or inhibitors designed to target this oxygen response in human disease.

LP0776825 Prof JC Wallace; Dr GK Shooter; Prof RS Norton

Approved Project Title Interactions of Insulin-like Growth Factors and their Binding Proteins with Vitronectin: a structural basis for antagonist design and development

2007 : \$ 50,804

2008 : \$ 101,256

2009 : \$ 50,452

Collaborating/Partner Organisation(s)

Tissue Therapies Ltd

Administering Organisation The University of Adelaide

Project Summary

Tissue Therapies Ltd has shown that a patented combination of three biosynthetic molecules, VitroGroR, can promote tissue repair effectively. This project will use biophysical and biochemical techniques to investigate precisely how these molecules interact, and hence provide a rational basis for future developments and improvements of this exciting new therapeutic strategy. Conversely, this information would also facilitate the development of antagonists to VitroGroR complexes would provide novel opportunities to treat diseases such as cancer and atherosclerosis that involve excessive production of its component molecules.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of New South Wales

LP0776600 Mrs SK Dean; Prof BE Tuch; A/Prof R Lindeman

Approved Project Title Pancreatic Differentiation of Cord Blood Stem Cells using Smart Surfaces

2007 : \$ 53,145
2008 : \$ 105,141
2009 : \$ 103,495
2010 : \$ 51,500

Collaborating/Partner Organisation(s)

BioE Inc

Administering Organisation The University of New South Wales

Project Summary

Cord blood cells obtained at the time of delivery of a baby are a valuable resource that have the potential to develop into many cell types. This Project entails attaching stem cells derived from cord blood to appropriate 3 dimensional smart surfaces, and examining the ability of such cells to develop into insulin-producing cells. An understanding of how to coax stem cells, seeded on to smart surfaces, to develop into mature cells with different functions will enhance our ability to understand how cells develop. As well, it enhance the potential usefulness of cord blood for research purposes.

LP0776293 A/Prof JM Whitelock; Dr MS Lord; Dr SJ McCarthy

Approved Project Title Blood component interactions with polysaccharide biomaterials for vascular applications.

2007 : \$ 20,000
2008 : \$ 47,842
2009 : \$ 54,112
2010 : \$ 26,270

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

HemCon Inc

Administering Organisation The University of New South Wales

Project Summary

Heart disease is the major killer of people in Australia and the Western world. It is due mainly to the blockage of vessels supplying the muscle of the heart with blood and nutrients, which can be replaced or by-passed but the supply of native vessels in the body is limited. Tissue engineering laboratories have been trying to develop blood vessels for this use for many years without significant success. This application plans to understand the molecular signals contained within the sugar sequences used in a commonly used biomaterial chitosan that may be used in the construction of synthetic vascular grafts. If we can understand how blood cells interact with this biomaterial, we may be able to develop a blood vessel in the laboratory.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2702 GENETICS

Southern Cross University

LP0776409 Prof RJ Henry; Mr IH Chivers

Approved Project Title Accelerated Domestication of Australian Grass Species Using Molecular Tools

2007 : \$ 67,446
2008 : \$ 130,882
2009 : \$ 134,172
2010 : \$ 70,736

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Native Seeds Pty Ltd

Administering Organisation Southern Cross University

Project Summary

The development of new food crops from the Australian flora will provide opportunities for new sustainable agricultural and food industries in Australia. The project targets the accelerated domestication of native species with lower tillage and fertiliser requirements, better water use efficiencies and increased salt, shade, frost and/or drought tolerances than the current introduced cereal and fodder crops. This will directly benefit regional Australia. The technologies developed in the project will have wide application to accelerated domestication of other Australian plants (for agriculture and food production in Australia and internationally) and to plants found in other parts of the world.

The University of Melbourne

LP0776735 Prof T Kilpatrick; Prof F Mastaglia; Prof GM Halliday; Ms TF Cowie; Dr JP Rubio; Prof MK Horne; A/Prof CM Sue

Approved Project Title Development of the PD GeneChip: a research and diagnostic tool for Parkinson's disease

2007 : \$ 76,298
2008 : \$ 129,533
2009 : \$ 53,235

Collaborating/Partner Organisation(s)

Millenium Science

The Australian Genome Research Facility

St. Vincent's Hospital

The Royal North Shore Hospital

The Australian Brain Foundation

The Rebecca L Cooper Medical Research Foundation

Administering Organisation The University of Melbourne

Project Summary

The PD GeneChip will provide both social and economic benefits to Australia. It will be a key research platform for Australian scientists, and will facilitate collaboration both within Australia and overseas. It will assist with health care management of PD (Parkinson's disease) patients by providing a cost-effective diagnostic tool and the possibility of predicting the clinical course of disease. This information will provide the basis for tailoring treatment to a patients needs. It is anticipated that marketing of the PD GeneChip within Australia and overseas may produce revenue of at least \$40 million annually.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of New South Wales

LP0776387 A/Prof R Cavicchioli; Dr T Thomas; A/Prof M Guilhaus; Dr MJ Raftery; Prof MS Baker; Dr PM Richardson; Dr N Kyrpides; Dr A Sava

Approved Project Title **Environmental metagenomics, metaproteomics and novel bioactives from microbial communities in Antarctic lakes**

2007 : \$ 85,500
2008 : \$ 172,500
2009 : \$ 177,000
2010 : \$ 90,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

DOE Joint Genome Institute
Novapharm Research (Australia) Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

This program will derive an integrated understanding of microbial ecology which is essential for determining ways of preserving the health of the World's ecosystems. Through this, Australia will remain a world leader in Antarctic biology, strengthening Australia's reputation in technologically innovative scientific programs of global significance, training local scientists in cutting edge genomic biology and fostering the interests of the international community in sciences ranging from microbial ecology to bioprospecting. Novel biodegradable enzymes will be developed to replace harsh chemicals providing environmentally friendly, cheaper and more effective agents for use in medical, biotechnological, industrial and biodefense applications.

The University of Western Australia

LP0776926 Prof G Morahan; A/Prof JD Roberts

Approved Project Title **Establishment of the Australian Cane Toad Genome Program**

2007 : \$ 68,500
2008 : \$ 137,000
2009 : \$ 68,500

Collaborating/Partner Organisation(s)

Department of Environment and Conservation
ISA Technologies
PathWest Laboratory Medicine WA

Administering Organisation The University of Western Australia

Project Summary

The Cane Toad is one of Australia's greatest environmental menaces, and is in the top 100 of the "World's Worst invader species". Over a billion toads infest Northern Australia, and they will soon invade WA and move further into NSW. Their poisons and voracious appetite could make many native mammals, birds and reptiles extinct. The only possibility to eradicate the Toad is by biological control, but there is no known control agent. We will identify the 'Toad's Achilles' heel' against which control agents can be developed. We can do this by identifying every Toad gene. This project forms the first step to this goal by establishing the Australian Cane Toad Genome Program. Toad control will help preserve Australia's unique natural heritage.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2703 MICROBIOLOGY

Charles Darwin University

LP0776402 A/Prof KS Gibb; Prof DL Parry; Dr KA McGuinness; Dr MK Smith; Mr JV Anderson

Approved **Coastal monitoring using metal resistant microbes**
Project Title

2007 : \$ 62,553
2008 : \$ 121,070
2009 : \$ 116,647
2010 : \$ 58,130

Collaborating/Partner Organisation(s)

Department of Business, Economic and Regional Development
Alcan Queensland Research and Development Centre
Xstrata Zinc - McArthur River Mining Pty Ltd
Rio Tinto Aluminium Ltd
Northern Land Council
Department of Natural Resources Environment & the Arts (DNRETA)

Administering Organisation Charles Darwin University

Project Summary

We will develop an early warning, rapid biological assessment (RBA) for sediment toxicity that can be used alongside chemical tests to detect sub-chronic changes in the environment. The assessment will be validated by extensive testing of impacted sediment. We will show how the RBA fits into existing decision trees defined by the Australian and New Zealand Environment and Conservation Council (ANZECC) 2000 Guidelines. The biological tests resulting from this project will be as rapid and straightforward as existing chemical tests, which will facilitate industry acceptance. The project has strong industry involvement from mining companies, the Environment Protection Agency (EPA) and traditional owners. These partners will guide this project and facilitate communication to the wider industry to aid acceptance and uptake.

LP0776399 Prof DL Parry; A/Prof KS Gibb; Prof BA Neilan

Approved **Managing acid mine drainage in northern Australia using microbial mats**
Project Title

2007 : \$ 62,793
2008 : \$ 126,753
2009 : \$ 130,989
2010 : \$ 67,029

Collaborating/Partner Organisation(s)

Department of Business, Economic and Regional Development
Department of Primary Industry, Fisheries and Mines
Zinifex Century Limited
Xstrata Zinc - McArthur River Mining Pty Ltd
Compass Resources NL
Vista Gold Corp

Administering Organisation Charles Darwin University

Project Summary

One of the most difficult environmental issues for the mining industry is acid mine drainage (AMD) that can lead to significant environmental damage. This project aims to identify microbes and characterise their roles in AMD formation in north Australia. We will use our new knowledge to design and trial microbial mats for the treatment of AMD. A successful AMD microbial treatment technology will minimise the risk of acid runoff and metal seepage into rivers and through groundwater. AMD treatment technology we develop in the tropics where we experience the extremes of dry and wet seasons will require only minor modification to operate in temperate climates however the reverse is not true.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The Flinders University of South Australia

LP0776478 Dr JG Mitchell; Prof A Cooper; Dr WF Humphreys

Approved Project Title Development and implementation of biodiversity information for sustainable management of South Australian groundwater

2007 : \$ 42,907
2008 : \$ 85,814
2009 : \$ 85,814
2010 : \$ 42,907

Collaborating/Partner Organisation(s)

Environmental Protection Agency

SA-Water

South Australian Murray-Darling Basin Natural Resources Management Board

South Australian Museum

South East Natural Resources Management Board

Department of Environment and Heritage

Department of Water, Land and Biodiversity Conservation

Commonwealth Department of Environment and Heritage

Administering Organisation The Flinders University of South Australia

Project Summary

Clean potable water is one of the most important resources for human health and a successful economy. Increasingly, subterranean aquifers are used for storage and recovery of water. These aquifers contain dynamic ecosystems, but little is known about species composition or about the importance of the presence of various species for water quality. We will use the latest laboratory techniques and DNA identification methods to provide a template for determining ground water diversity and food web dynamics throughout Australia. This project will lead to a better understanding of how to manage ground water in a sustainable manner.

The University of Western Australia

LP0776593 Dr DV Murphy; Dr PA O'Brien; Dr PL Clode; Dr IR Phillips; Prof D Jones

Approved Project Title Identifying limitations to the establishment of microbial communities and sustainable nutrient cycling in bauxite residue sand under rehabilitation.

2007 : \$ 60,107
2008 : \$ 122,070
2009 : \$ 136,176
2010 : \$ 147,507
2011 : \$ 73,294

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Alcoa World Alumina Australia

Administering Organisation The University of Western Australia

Project Summary

Australia is the world's largest producer of bauxite. The process of refining bauxite to aluminium generates 2 t of residue for every 3 t of bauxite, creating a major residue management issue. Rehabilitation of residue disposal areas is critical for reducing impacts on the environment and surrounding community and ultimately aims to create a sustainable ecosystem following closure of the facility. This research will provide a detailed understanding of the establishment of microbial communities and the factors controlling the survival and functioning of microorganisms in bauxite residue sand. The outcomes will aid the development of improved protocols and strategies for bauxite residue rehabilitation in Australia and internationally.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

University of Wollongong

LP0776711 Prof MJ Walker; Dr S Djordjevic

Approved Project Title **Defining domains within Mycoplasma hyopneumoniae surface proteins that interact with host extracellular matrix: efficacy testing of candidate vaccines in swine**

2007 : \$ 54,000

2008 : \$ 108,000

2009 : \$ 108,000

2010 : \$ 54,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

NSW Department of Primary Industries

Administering Organisation University of Wollongong

Project Summary

Over 90% of Australian commercial pig production facilities are affected by Mycoplasma hyopneumoniae, the causative agent of swine enzootic pneumonia. This disease causes economic losses in Australia of over \$20 million per annum and up to \$1 billion per annum in major swine rearing countries worldwide. This project will determine the protective efficacy of new generation vaccines against M. hyopneumoniae, which aim to block the colonisation process and prevent disease .

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2704 BOTANY

Murdoch University

LP0776740 A/Prof GE Hardy; Em/Prof JA McComb; Dr PA O'Brien; Dr IJ Colquhoun

Approved Project Title **Long-term survival of Phytophthora cinnamomi in black gravel soils on mining leases in the jarrah (Eucalyptus marginata) forest**

2007 : \$ 12,813
2008 : \$ 25,627
2009 : \$ 25,627
2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Alcoa World Alumina Australia

Administering Organisation Murdoch University

Project Summary

Approximately 41% of the 5750 plant species in Western Australia are susceptible to *Phytophthora cinnamomi* a pathogen recognised as a key threatening process to Australia's biodiversity by the Federal Government. This project will enhance our understanding of how the pathogen survives in soil and tolerant plant species. It will determine how the pathogen is able to survive long-term as dormant propagules and how this dormancy can be broken. This project will be relevant to managers of natural ecosystems and to the horticultural industries throughout Australia and will assist in developing effective ways to manage this ecologically devastating plant pathogen.

LP0776970 Prof MG Jones; Prof JL Dale

Approved Project Title **Combinatorial controlled gene expression delivering crops resistant to nematodes**

2007 : \$ 40,000
2008 : \$ 80,000
2009 : \$ 80,000
2010 : \$ 40,000

Collaborating/Partner Organisation(s)

Dardin Agri Holdings Australia Pty Ltd / AZTECH Group of Companies

Administering Organisation Murdoch University

Project Summary

Root-knot nematodes cause US\$130 billion crop losses worldwide pa, and at least AUS\$ 450 pa in Australia. Current control methods involve fumigation, chemicals (mainly carbamates and organophosphates), natural plant resistance and biological control. The fumigants (eg methyl bromide) are being phased out because they damage the ozone layer, most of the non-fumigants are being banned because of environmental damage and persistence in groundwater, and biological control has had limited success. These problems are addressed in this project with development of synthetic plant resistance to nematodes, which will benefit horticultural and broadacre farming by reducing pathogen losses and improving quality.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

The University of Melbourne

LP0776737 Prof PY Ladiges; Dr DJ Cantrill

Approved Project Title **Molecular phylogeny and biodiversity of the plant family Rutaceae: evidence for Australian-New Caledonian biogeography**

2007 : \$ 32,500

2008 : \$ 65,000

2009 : \$ 65,000

2010 : \$ 32,500

Collaborating/Partner Organisation(s)

Royal Botanic Gardens, Melbourne

Administering Organisation The University of Melbourne

Project Summary

The results will contribute biological evidence for geological models of the evolution of New Caledonia and the Southwest Pacific region. Analyses will also contribute to improvement of methods and data interpretation in the field of historical biogeography. The molecular phylogeny will be the foundation for a new predictive classification of Australian Rutaceae at the level of tribes and genera. Improved phylogenetic classification underpins the delivery of biodiversity research, goods and services in Australia. Outcomes of improved taxonomy include species identification for ecological studies, identification of rare species, geographic areas of high conservation value and plants for horticulture.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

The University of Western Australia

LP0776252 Prof JT Lambers; A/Prof GE Hardy; Dr PM Finnegan; Dr SJ Barker; A/Prof B Dell; Dr PA O'Brien; Dr M Tibbett; Dr G Yan; Dr S Barrett; Dr IJ Colquhoun; Dr BL Shearer; Mr N Sibbel; Dr MA Smith; Mr Z Spadek

Approved Project Title **Susceptibility to Phytophthora cinnamomi and sensitivity to phosphorus in native Australian plants: why are they linked?**

2007 : \$ 79,000
2008 : \$ 154,000
2009 : \$ 161,000
2010 : \$ 183,500
2011 : \$ 97,500

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Department of Environment and Conservation

Alcoa World Alumina Australia

Worsley Alumina Pty Ltd

Dardin Agri-Holdings (Australia) Pty. Ltd. - a subsidiary of The Aztech Group Companies

Tiwest Pty Ltd

BHP Billiton Ravensthorpe Nickel

Chemistry Centre WA

Western Power

Administering Organisation The University of Western Australia

Project Summary

Phytophthora cinnamomi is the cause of "Phytophthora dieback", recognised by the Federal Government as a major threat to Australia's biodiversity. This project will enhance our understanding of interactions between species belonging to two iconic Australian plant families (Proteaceae and Myrtaceae) and this serious threat. This understanding will underpin the development of new chemicals to be used in combating the pathogen. In addition, it will provide molecular markers for phosphorus insensitivity and Phytophthora resistance that will be vital for Australia's horticultural industry as well as for the successful rehabilitation of minesites in areas suffering from "Phytophthora dieback".

LP0776951 Prof SB Powles; Dr KW Dixon; Dr DJ Merritt

Approved Project Title **A novel method of broad-acre weed seedbank management using a naturally occurring germination stimulant**

2007 : \$ 43,872
2008 : \$ 91,135
2009 : \$ 97,551
2010 : \$ 50,288

Collaborating/Partner Organisation(s)

Botanic Gardens and Parks Authority

Administering Organisation The University of Western Australia

Project Summary

The discovery of a novel butenolide that promotes seed germination has potential to provide significant economic benefits for Australia's agricultural sector, providing a vehicle to move towards minimum-weed agricultural systems achieved through broad-acre stimulation of the weed seedbank. Our aim is for butenolide to promote uniform release of weed seed dormancy, increased germination, and greater synchrony in early stage seedling growth and thus more effective knock-down following herbicide applications.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2705 ZOOLOGY

The University of Adelaide

LP0776833 Prof AD Austin; Dr JT Jennings; Mr MF Purcell; Dr NA Schellhorn

Approved Project Title **Systematics and coevolution of insect herbivores on casuarinas: testing phylogenetic congruence for selection of plant biocontrol agents**

2007 : \$ 31,000

2008 : \$ 71,000

2009 : \$ 82,500

2010 : \$ 42,500

Collaborating/Partner Organisation(s)

USDA_ARS Australian Biological Control Laboratory

South Australian Museum

Administering Organisation The University of Adelaide

Project Summary

The casuarinas (sheoaks) are a significant component of the Australian floral landscape. Associated with them are many co-evolved insects, some of which may prove useful as biocontrol agents against Casuarina weeds. Using morphological taxonomy combined with a novel molecular approach, we will compare the co-evolution of psyllids, scale and gall insects, and weevils with that of the casuarinas. This project will have significant implications for conservation and regeneration of casuarinas in the Australian context and the selection of specific biocontrol agents against casuarinas as environmental weeds.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2707 ECOLOGY AND EVOLUTION

Griffith University

LP0776651 Dr F Sheldon; Prof AJ Boulton; Dr AA Webb; Dr RG Smith

Approved Project Title **Forestry effects on headwater ecosystem health: a multi-catchment experiment**

2007 : \$ 12,813
2008 : \$ 25,627
2009 : \$ 25,627
2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Forests NSW

Administering Organisation Griffith University

Project Summary

Most catchments in southern Australia have been logged historically. Increasingly, native forest harvesting occurs in regrowth or drier areas. Although foresters have empirical data on ecological effects of harvesting in pristine or wetter catchments, little exists for drier regrowth areas, hampering effective management to minimize impacts on stream ecosystem health. This project will supply ecological data on stream ecosystems to supplement 4 years of hydrological data collected by Forests NSW from 5 experimental catchments. Results will provide a firmer scientific basis for ecologically sustainable harvesting in this forest type, with flow-on benefits to our national economy, biodiversity, and environment.

James Cook University

LP0776927 Dr L Schwarzkopf; A/Prof RA Alford

Approved Project Title **Are frogs in fragmented lowland rainforest especially susceptible to both disease and climate change?**

2007 : \$ 16,666
2008 : \$ 32,908
2009 : \$ 32,483
2010 : \$ 16,241

Collaborating/Partner Organisation(s)

Powerlink Queensland

Administering Organisation James Cook University

Project Summary

On a world scale, amphibian declines have been especially severe in Australia. Major causes of amphibian declines here are disease and habitat destruction. Our project will significantly advance our knowledge of frogs in coastal lowland rainforest. These frogs are a key to understanding the evolution of disease resistance to the amphibian disease fungus, and they are also likely to experience severe impacts from climate change. Thus, studies in this region will allow us to better understand the mechanisms responsible for frog declines in Australia. Also, this project will be useful to industries constructing infrastructure in rainforest, allowing an assessment of the impacts of works on already stressed frog populations.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

Macquarie University

LP0776758 Dr MR Leishman; A/Prof LA Hughes; Dr PO Downey

Approved Project Title **Invasive plant species and climate change in Australia: predicting the threat and projecting the future**

2007 : \$ 37,883

2008 : \$ 94,378

2009 : \$ 117,764

2010 : \$ 61,270

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Environment and Conservation

Administering Organisation Macquarie University

Project Summary

The interaction between climate change and invasive pest species poses a significant threat to Australia's biodiversity. The need for research on both the independent impacts of climate change and invasive species, as well as their interaction, has been clearly identified by both national and state governments, and is identified as a priority under the National Biodiversity and Climate Change Action Plan (2004-2007). The proposed research will assess exotic plant species' responses to climate change, identify potential hotspots of invasion, and provide a risk assessment framework to enable prioritization of exotic plant management under future climate.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

Monash University

LP0776494 Prof RC Mac Nally; Dr RM Thompson

Approved Project Title **The importance of dispersal in maintaining biodiversity of aquatic plants in landscapes**

2007 : \$ 55,000
2008 : \$ 110,000
2009 : \$ 110,000
2010 : \$ 55,000

Collaborating/Partner Organisation(s)

Parks Victoria
 National Herbarium of Victoria, Royal Botanic Gardens
 Department of Sustainability and Environment
 Department of Sustainability and Environment
 West Gippsland Catchment Management Authority
 Australian Ecosystems
 Gippsland Coastal Board
 East Gippsland Catchment Management Authority

Administering Organisation Monash University

Project Summary

Aquatic plants improve water quality and provide habitat for aquatic animals, which underpin industries such as tourism and commercial fisheries critical to economies in regional areas and across Australia. Preserving plant biodiversity of aquatic ecosystems is vital to preserve these benefits. Dispersal plays a critical role in maintaining plant biodiversity and requires understanding at landscape scales. This project will identify appropriate approaches for the conservation of plant biodiversity in aquatic ecosystems through an improved understanding of the contribution of wind, water and waterbirds in the dispersal of aquatic plants. This project will also identify water flow regimes that promote a diverse and sustainable aquatic flora.

LP0776322 Dr PJ Sunnucks; Dr JQ Radford; Dr JE Melville; Dr LG Joseph; Dr GR Newell

Approved Project Title **How much habitat and what configuration maintains natural levels of connectivity in southeast Australian native birds?**

2007 : \$ 92,066
2008 : \$ 185,681
2009 : \$ 146,547
2010 : \$ 52,932

Collaborating/Partner Organisation(s)

Museum Victoria
 Department of Sustainability & Environment
 Department of Primary Industries
 Parks Victoria
 North Central Catchment Management Authority
 Goulburn Broken Catchment Management Authority

Administering Organisation Monash University

Project Summary

Maintenance of biodiversity is fundamental to ecologically sustainable development. This project will deepen our understanding of the consequences of landscape change for native birds and enhance our national capacity to integrate nature conservation and agricultural production. We will contribute to sustainable use of rural landscapes by providing land managers with greater understanding of (1) how and why landscape change affects bird species diversity and persistence, (2) which components of the landscape can most effectively be manipulated to enhance population survival, and (3) estimating the long-term effects of habitat fragmentation on the population structure and function of species.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The Flinders University of South Australia

LP0776604 Dr DA Driscoll; Mr M Bedward; Prof Dr RA Bradstock; Prof CM Bull; Prof SC Donnellan; Dr MK Henderson; Dr DA Keith; Dr S Kleindorfer

Approved Project Title **Spatial-dynamic models to identify optimal fire mosaics, based on demography, dispersal and fire responses of plants, birds and reptiles**

2007 : \$ 55,000
2008 : \$ 115,000
2009 : \$ 120,000
2010 : \$ 100,526
2011 : \$ 40,526

APA(I) Award(s): 4

Collaborating/Partner Organisation(s)

Department for Environment & Heritage

South Australian Museum

Native Vegetation Council

Department of Environment and Conservation NSW

Administering Organisation The Flinders University of South Australia

Project Summary

Inappropriate fire regimes threaten native species with extinction. The threat is higher in cleared landscapes where habitat is isolated and recolonisation unlikely. Furthermore, climate change is predicted to increase the frequency of intense bushfires. To meet the priority goals Sustainable Use of Biodiversity, and Responding to Climate Change, landscape-scale fire management is essential. We will use simulation models based on detailed biological data and fire-behaviour to explore large-scale and long-term consequences of alternate fire management policies. Our project will enable fire mosaics to be implemented that maintain biodiversity and will identify effective fire management responses to climate change, and habitat fragmentation.

The University of Melbourne

LP0776462 Dr RA Mulder; A/Prof PO Dunn; Prof SC Donnellan

Approved Project Title **Conservation genetics of the threatened Malleefowl**

2007 : \$ 22,500
2008 : \$ 37,500
2009 : \$ 30,000
2010 : \$ 15,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

South Australian Museum

Nature Foundation SA Inc

Department of Sustainability and Environment

Malleefowl Preservation Group

Administering Organisation The University of Melbourne

Project Summary

This project will provide national benefit at four levels. First, our comprehensive genetic analysis will provide our industry partners with vital information for sustainable management of the Malleefowl. The research findings will also enrich educational and ecotourism activities in rural Australia. The publication and popular dissemination of our findings will enhance Australia's international profile as a leader in conservation genetics research. Finally, our research will promote undergraduate and postgraduate education by providing cutting-edge training and research opportunities for young scientists.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of New South Wales

LP0776273 A/Prof IM Suthers; Dr MD Taylor; Dr LJ Baumgartner

Approved Project Title **Establishing an ecological basis for stocking density of Australian bass in freshwaters: Experimental field tests of a general numerical model**

2007 : \$ 12,559

2008 : \$ 25,118

2009 : \$ 25,118

2010 : \$ 12,559

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

NSW Department of Primary Industries

Administering Organisation The University of New South Wales

Project Summary

Large numbers of the Australian public go fishing, particularly in rivers and impoundments. Angling in these waterways provides a strong source of income for rural and regional communities. The stocking of native fish to support inland angling also sustains much of the aquaculture industry in western NSW and Queensland. This study will develop an optimal approach to stocking Australian bass which is relevant for other stocked freshwater species, and will allow stocking to be undertaken in an environmentally responsible manner. This will both enhance the outcome of investment of public funds in stocking, and enhance the recreational fishing experience that is so important to rural regional communities.

The University of Queensland

LP0776851 Dr SW Salisbury; Dr MC Lamanna; Dr Z Luo

Approved Project Title **Small vertebrates from the Albian-Cenomanian of Queensland - testing hypotheses of provincialism among Australia's mid-Cretaceous dinosaur faunas**

2007 : \$ 30,000

2008 : \$ 57,500

2009 : \$ 57,500

2010 : \$ 30,000

Collaborating/Partner Organisation(s)

Isisford Shire Council

Carnegie Museum of Natural History

Land Rover Australia

Administering Organisation The University of Queensland

Project Summary

This project will add to our knowledge of Australian dinosaurs and the world they inhabited. Dinosaurs are often the means through which many people, especially children, are introduced to science. This project has the potential to greatly enhance this attraction to science, using the results of research on Australian dinosaurs. It has direct links with a number of national and international museum exhibitions, and in western Queensland the results will be incorporated into a newly developed regional interpretive centre in Isisford. The enormous social and economic benefits linked to this initiative will open up numerous opportunities for local businesses, and increase the appreciation for science and exploration in outback areas.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Sydney

LP0776647 Prof R Shine

Approved Project Title **Understanding and reversing the habitat shifts that have endangered the broad-headed snake**

2007 : \$ 91,530
2008 : \$ 182,530
2009 : \$ 187,000
2010 : \$ 204,000
2011 : \$ 108,000

Collaborating/Partner Organisation(s)

NSW Dept Environment & Conservation
Australian Reptile Park
Zoos Victoria
Forests NSW

Administering Organisation The University of Sydney

Project Summary

Extinction rates for vertebrate species are higher in southern Australia than almost anywhere else in the world, and saving endangered taxa is critical to biodiversity conservation. To do this effectively, researchers need to understand the processes that threaten wild populations, and to develop novel solutions to those problems in close collaboration with wildlife management authorities and other stakeholders. This project will build such an understanding and collaboration, focusing on an endangered snake species. We propose ambitious landscape-scale field experiments that will simultaneously test hypotheses on threatening processes, and restore habitat quality to reverse population declines.

University of Canberra

LP0776987 Dr S Sarre; Dr WS Osborne

Approved Project Title **Metapopulation and habitat quality: towards an integrated approach to the conservation of an endangered grassland lizard**

2007 : \$ 20,000
2008 : \$ 40,000
2009 : \$ 40,000
2010 : \$ 20,000

Collaborating/Partner Organisation(s)

Canberra International Airport

Administering Organisation University of Canberra

Project Summary

Our research will provide the basis upon which the grassland earless dragon can be removed from its endangered status and provide a template for the future science based management of other endangered species. Australia will gain through this project by reducing its risk of losing yet another species through inappropriate management.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

University of Technology, Sydney

LP0776360 Dr BP Kelaher; Dr MJ Bishop; Dr WA O'Connor

Approved Project Title **Ecological impacts of QX Oyster disease and its management strategies**

2007 : \$ 14,813

2008 : \$ 29,627

2009 : \$ 29,627

2010 : \$ 14,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Hornsby Shire Council

NSW DPI (Fisheries)

Administering Organisation University of Technology, Sydney

Project Summary

QX disease is responsible for mass mortality of oysters, and, as a result, economic and job losses. QX disease also threatens ecosystem services provided by wild oysters, such as biodiversity enhancement and fish production. This project will provide estuarine managers with information about how proposed QX management solutions will impact wild oyster populations and vital ecosystem services. It will also contribute to training of early career researchers in strategies to ensure the sustainable use of Australia's biodiversity. As QX outbreaks appear to be increasing, this research and training is urgently needed to underpin management to ensure long-term sustainability of valuable estuarine resources.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2708 BIOTECHNOLOGY

The University of New South Wales

LP0776759 Prof BA Neilan; Dr SA Murray; Prof GM Hallegraeff

Approved Project Title **Uncovering the genetic basis for saxitoxin production in Australian marine and freshwater systems: novel molecular tools for management.**

2007 : \$ 41,465

2008 : \$ 83,780

2009 : \$ 80,839

2010 : \$ 38,524

APDI Dr SA Murrav

Collaborating/Partner Organisation(s)

Diagnostic Technology

NSW Department of Primary Industries

NSW Food Authority

Department of Health and Human Services, Tasmania

Primary Industries and Resources SA

Administering Organisation The University of New South Wales

Project Summary

In Australia, toxic algal blooms have had a devastating impact on marine and freshwater resources. In collaboration with a biotechnology company, this project will use an innovative method to design a molecular genetic tool to monitor, research and potentially mitigate the effects of saxitoxin production on water supplies and aquaculture industries. In working with monitoring authorities throughout Australia, we will produce a specific, sensitive and cost-effective technology that will ultimately be applicable worldwide.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2799 OTHER BIOLOGICAL SCIENCES

The University of Melbourne

LP0776778 Dr BM Ahmed; Dr GI Brodie; Prof P Vinden; Mr CY Adam; Dr MV Jacob; Dr GS Woods

Approved Project Title Investigate control of in-situ termite and decay protection and control using microwave technologies

2007 : \$ 78,133

2008 : \$ 139,592

2009 : \$ 123,679

2010 : \$ 141,220

2011 : \$ 79,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Citipower and Powercor Australia

PCT International Pty Ltd.

Redcentre

Administering Organisation The University of Melbourne

Project Summary

Australia has a very substantial investment in timber structures for example 11,000 km of timber bridges, railway sleepers, power poles and dwellings. Timber losses each year due to fungal, termite and other insect degradation, is very significant. The use of organochlorine compounds for ground poisoning and remedial treatment has been discontinued due to environmental, health and safety concerns. Less toxic chemicals are less effective, require more regular inspection and don't address fundamental concerns associated with environment issues. This project will provide the community a cheap automated alarm system indicating when remedial treatment is required and a non-chemical technology for sterilising infected structures.

The University of Queensland

LP0776336 Dr S Schmidt; Prof AJ Lowe; Dr PM Schenk; Prof C Critchley; Dr JD Nichols

Approved Project Title Accelerated breeding for a changing environment: genomic and physiological profiling of newly generated polyploid trees

2007 : \$ 75,000

2008 : \$ 160,000

2009 : \$ 180,000

2010 : \$ 95,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Bio Adapt International

Administering Organisation The University of Queensland

Project Summary

Global climate change threatens the health and productivity of forests and plantations. Because tree breeding is slow, elite trees cannot be adapted rapidly to new environments. A new procedure for accelerated tree breeding has been developed by the industry partner. The procedure, termed polyploidisation, increases DNA content and produces novel traits that can improve plant growth and resilience. Polyploidisation is a natural force in plant evolution and its routine application for tree breeding has much potential. Using diverse approaches, we will investigate how newly synthesised polyploid tree species perform under heat and drought stress.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2801 INFORMATION SYSTEMS

Monash University

LP0776783 A/Prof L Churilov; Prof GI Webb; Dr D Neiger

Approved Project Title **Integrated Intelligent Decision Support for Field Design and Management of Census Operations in Australia**

2007 : \$ 45,059
2008 : \$ 85,118
2009 : \$ 80,118
2010 : \$ 40,059

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Australian Bureau of Statistics

Administering Organisation Monash University

Project Summary

This project contributes to a more reliable and accurate measurement of the number and key characteristics of Australian people by supporting a more efficient and effective field design and management of the Census operations. As the Census provides a snapshot of Australia and is crucial to communities, private institutions and all levels of government in the planning of services and facilities, this project not only addresses the research priority of smart information use, but also contributes to strengthening Australia's social and economic fabric. This project will also train highly qualified IT specialists critical to Australia's scientific and industrial development, thus increasing our competitiveness in information technology R&D.

Queensland University of Technology

LP0776795 Prof PR Grace; Dr EA Miller; Dr CI Wilson; Dr GS Hamilton; Ms JA Summerville; Mr M Hefferan; Dr A Plank; Mr M McFarlane

Approved Project Title **Growing Sustainable Regions: Developing a Rural Statistical Sustainability Framework**

2007 : \$ 55,000
2008 : \$ 107,500
2009 : \$ 100,000
2010 : \$ 47,500

Collaborating/Partner Organisation(s)

Stanthorpe Shire Council

Condamine Alliance

Chinchilla Shire Council

Department of Primary Industries & Fisheries

Administering Organisation Queensland University of Technology

Project Summary

Given the challenges facing rural and regional Australia, it is essential that communities and decision-makers have the information and resources to make informed and sustainable decisions. While there is a plethora of data that can provide this evidence-base, it is often complex, disorganised and inaccessible to those who need it. Hence, to facilitate smart information use, this research develops and implements a Rural Statistical Sustainability Framework and decision support modelling tool that integrates environmental, economic and social data into a single user-friendly source. This will provide a platform for evidence-based decision-making that will lead to a sustainable future for rural and regional Australia.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Sydney

LP0777027 Dr X Wang; A/Prof M Fulham

Approved Project Title Automated 3-Dimensional Biomedical Registration for Whole-body Images from Combined PET/CT Scanners

2007 : \$ 13,813

2008 : \$ 27,627

2009 : \$ 27,627

2010 : \$ 13,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Royal Prince Alfred Hospital

Administering Organisation The University of Sydney

Project Summary

This project will aid rapid assimilation of very large medical imaging datasets from different imaging devices, and will have clinical applications in diagnosis and treatment and improve patient care. The research, when extended to protein registration, will facilitate analysis of DNA and advance research in bioinformatics and biotechnology. The research could also be used for target recognition, mosaic construction, content-based retrieval, in remote sensing and multimedia. Benefits to Australia include the provision of a readily adaptable image registration program for patient care (e.g., early detection of cancers, dementia), cutting-edge research, high-quality training for students, and encouraging international research collaboration.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2802 ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING

Deakin University

LP0776826 Prof S Nahavandi; Dr D Creighton

Approved Project Title **Enabling secure and competitive air cargo systems**

2007 : \$ 43,155
2008 : \$ 84,292
2009 : \$ 73,255
2010 : \$ 32,117

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Deneb Australasia Pty Ltd

Administering Organisation Deakin University

Project Summary

This research will make a valuable contribution towards raising security levels in Australia. Methodologies and tools that enable rapid modelling, analysis and ongoing decision making support will enable the Australian air cargo industry to efficiently implement emerging screening technologies, whilst remaining competitive.

Improved efficiency in air cargo facilities and distribution hubs will help maintain and improve productivity and reduce time to market, despite increased security screening and rising fuel prices placing greater cost overheads on logistics networks.

This research will have international application and create valuable high technology export for Australia.

Queensland University of Technology

LP0776400 A/Prof A Josang; Dr JJ Vayssière; Mr J Haller; Mr S Indrakanti

Approved Project Title **Web Services Reputation Management**

2007 : \$ 40,157
2008 : \$ 79,434
2009 : \$ 74,276
2010 : \$ 35,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

SAP Australia Pty Ltd

Administering Organisation Queensland University of Technology

Project Summary

This project directly supports the National Research Priority 4: Safeguarding Australia. More specifically, it aims at creating mechanisms that will make it more difficult to use the Internet as a platform for launching attacks against the business processes of Australian organisations that provide and consume Web services. At the same time this will stimulate the establishment of high quality WS markets. As direct social benefit of this research, Australian organisations will be able to integrate the best quality Web services as part of their business processes, and thereby avoid being negatively impacted by low quality and deceptive Web services.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

RMIT University

LP0776235 Dr M Lech; A/Prof NB Allen

Approved Project Title **Diagnosis of depressive disorder and risk for depression in adolescents using acoustic speech analysis**

2007 : \$ 39,006

2008 : \$ 76,506

2009 : \$ 72,500

2010 : \$ 35,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

ORYGEN Resarch Centre

Administering Organisation RMIT University

Project Summary

Depression is the most common mental health problem in young people in Australia. Early diagnosis can minimise the disturbance of typical functioning and development of social and academic skills. Current assessment techniques consume significant time in urgent clinical situations, where an immediate assessment of risk is required. An automatic diagnostic system will provide an important objective indicator giving an immediate quantitative assessment of the mental state of a patient. The quantitative measure given by the diagnostic system proposed will give physicians and therapists an improved metric by which they can gauge the effectiveness of various treatments in reducing depression and suicidality.

The University of Queensland

LP0776417 Dr MR Gallagher; Dr JP Connor; Prof J Wiles; Dr CT Kennedy

Approved Project Title **Detecting and Understanding Dysfunctional Anomalies in Queensland Healthcare Databases**

2007 : \$ 20,083

2008 : \$ 41,369

2009 : \$ 43,280

2010 : \$ 21,995

Collaborating/Partner Organisation(s)

Queensland Health (Clinical Practice Improvement Centre)

Administering Organisation The University of Queensland

Project Summary

Healthcare systems are large complex organizations that are required to function effectively and efficiently. As the main healthcare provider of the state, Queensland Health faces significant challenges in managing the complexity of its operations. This project will use visualization and data mining techniques to support Queensland Health in effective utilisation of its information and communications technology. Through the analysis, detection and prediction of anomalies in the system, the project will contribute to improvements in patient outcomes and efficiency of the Queensland healthcare system.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2803 COMPUTER SOFTWARE

Queensland University of Technology

LP0776344 Prof CJ Fidge

Approved Project Title **Information Security Evaluation of Embedded Computer Software**

2007 : \$ 20,000
2008 : \$ 40,000
2009 : \$ 40,000
2010 : \$ 20,000

Collaborating/Partner Organisation(s)

The Defence Signals Directorate

Administering Organisation Queensland University of Technology

Project Summary

Safeguarding classified electronic communications is of major national importance. This research, into security evaluation of computer software, is supported by the Defence Signals Directorate, which verifies the security of communications devices used by Australia's government and armed forces. As such devices become increasingly sophisticated, traditional security evaluation techniques have become unacceptably difficult and costly. Hardware evaluation techniques, based on tracing paths through circuitry diagrams, have proven unsuitable for software evaluations. Consequently, devising new tools and techniques for information security evaluation of embedded computer software is essential for preserving Australia's national security.

The University of Melbourne

LP0776986 Dr R Buyya

Approved Project Title **A Novel Software System for .NET-based Enterprise Grid Computing**

2007 : \$ 44,093
2008 : \$ 89,639
2009 : \$ 88,546
2010 : \$ 43,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Microsoft Pty Limited

Administering Organisation The University of Melbourne

Project Summary

This ARC Linkage project, in partnership with Microsoft, aims to develop a novel Grid computing platform that enables organisations to effectively harness various IT resources and allocate them for different applications depending on their demands and priorities. The project outcomes will revolutionise the computing field by enhancing the productivity of software engineering for enterprise applications and accelerate their execution on enterprise Grids.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2804 COMPUTATION THEORY AND MATHEMATICS

The Flinders University of South Australia

LP0776237 A/Prof RR Huilgol; Dr R Zheng; Dr Z You

Approved Project Title **Viscoplasticity, Solidification and Non-Isotropic Heat Transfer in Injection Moulding**

2007 : \$ 41,250

2008 : \$ 81,675

2009 : \$ 40,425

Collaborating/Partner Organisation(s)

Moldflow Pty Ltd

Administering Organisation The Flinders University of South Australia

Project Summary

The development of new software for use by the plastics industry will maintain Australia's position at the forefront of research contributing to improved production in this extremely important manufacturing sector. The application of this research by Melbourne's Moldflow, already the world's leading supplier of injection moulding software, will consolidate its position and enable it to increase further its market share, with consequential employment and other economic flow-on benefits to Australia. This project also increases the quantum of industry relevant scientific research, contributing to the enhancement of the national profile in exporting Australian products to world markets.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2805 DATA FORMAT

Queensland University of Technology

LP0776838 Prof CA Boyd; Dr JM Gonzalez Nieto; Dr CF Steketee; Dr PS Montague; Dr DA Kuhlman

Approved Project Title Practical Identity-Based Cryptography: Efficient and Secure Elliptic Curve Pairings

2007 : \$ 46,000

2008 : \$ 87,000

2009 : \$ 82,000

2010 : \$ 41,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Motorola Australia Software Centre

Administering Organisation Queensland University of Technology

Project Summary

Bilinear pairings on elliptic curves are a new cryptographic tool and allow novel and improved applications in information security. For example, they have been proposed as a substitute of existing public key infrastructures, an essential element in electronic commerce and a secure Internet. The research will lead to an increase in fundamental knowledge in the area of practical implementation and secure applications of pairings. The results will benefit all users of electronic communications who require security for their information. This includes the financial industries, government, commerce and domestic users. It will also support many new product opportunities aligned with Motorola's business markets.

RMIT University

LP0776260 Prof KJ Horadam; Prof LM Batten; A/Prof S Boztas; Dr TD Ebringer; Mr J Kaminski

Approved Project Title Analysis and classification of malicious code

2007 : \$ 60,258

2008 : \$ 115,017

2009 : \$ 107,017

2010 : \$ 52,258

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

CA

Administering Organisation RMIT University

Project Summary

Malicious software such as viruses and worms directly attacks the security, privacy and integrity of Australian e-commerce, large databases and communication channels. The recent uptake of malicious software by organised crime has made finding effective countermeasures more urgent. Around 80% of the malicious code in circulation is disguised in some way. This significantly increases the difficulty of automated detection and delays analysis. Automated classification and de-obfuscation technologies are a precondition to applying more sophisticated detection heuristics. The project will be instrumental in safeguarding Australia by protecting critical infrastructure and defending us from online organised crime and information warfare.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2901 INDUSTRIAL BIOTECHNOLOGY AND FOOD SCIENCES

University of South Australia

LP0776588 Dr MC Barnes; Dr V Jiranek; Dr PR Grbin; Mr AS Yap

Approved Project Title **Evaluation of High-Power Ultrasound as an Innovative Tool for Sanitation, Colour/Flavour Extraction and Fermentation Enhancement in Wine Making**

2007 : \$ 80,000

2008 : \$ 165,000

2009 : \$ 175,000

2010 : \$ 90,000

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

CAVITUS PTY LTD

Administering Organisation University of South Australia

Project Summary

The multibillion-dollar wine industry forms a significant part of the Australian economy especially in regional areas. The application of high power ultrasound (HPU) to the cleaning and disinfection of wine barrels as well as for the enhancement of wine through improved fermentation and extraction of flavours and colours from grapes will have significant benefits to this industry. It is essential that Australia also capitalise on the benefits that this technology can provide in improved processing and products, lower costs, reduction in environmental pollution, water re-use and replacement of "dirty" energy. In this way the impact on this industry will help cement Australia's position in the world wine market long into the future.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2903 MANUFACTURING ENGINEERING

University of Technology, Sydney

LP0776312 Dr D Liu; Prof G Dissanayake; A/Prof QP Ha

Approved Project Title **A Robotic System for Steel Bridge Maintenance**

2007 : \$ 75,000

2008 : \$ 132,500

2009 : \$ 115,000

2010 : \$ 57,500

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

NSW Roads and Traffic Authority (NP, RM & TM Directorate)

Administering Organisation University of Technology, Sydney

Project Summary

This research will bring enormous benefits to Australian community by significantly reducing the environmental impact of civil infrastructure maintenance operations, and improving the working conditions of maintenance workers by minimising their exposure to dust containing hazardous materials. Bridges are a key link that supports rural communities. Besides the 426 steel road bridges in NSW, many hundreds steel road/rail bridges and other steel infrastructure in Australia need regular paint stripping and repainting. Australia will gain significant economic and health benefits from commercialising the advanced technologies developed by this project, and become a world leader in developing autonomous systems for infrastructure maintenance.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2905 MECHANICAL AND INDUSTRIAL ENGINEERING

The University of Western Australia

LP0777039 Prof Dr J Pan; Dr KD Do; Dr PL O'Neill

Approved **The Acoustic, Control and Aerodynamic Aspects of the Entecho Hoverpod**
Project Title

2007 : \$ 70,000
2008 : \$ 140,000
2009 : \$ 140,000
2010 : \$ 70,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Entecho Pty. Ltd.

Administering Organisation The University of Western Australia

Project Summary

The development of small aerial vehicles, both manned and unmanned is a growing market in the aviation industry. This market sector has the potential to provide cheap, environmentally friendly transport solutions for the defence purposes, law enforcement agencies and emergency and recreational vehicles. This project serves to enhance Australia's position in this market by helping a local company develop its technology in a cost effective and timely manner. The progress made in the three research aspects will also advance areas of science and technology with practical applications other than aerial vehicles.

University of South Australia

LP0776969 Prof WY Saman; Dr F Bruno; Dr M Belusko; Mr KR Anderson; Dr DW Yarbrough

Approved **Advancing the Thermal Insulation Performance of Australian Roofing Systems**
Project Title

2007 : \$ 17,500
2008 : \$ 35,000
2009 : \$ 17,500

Collaborating/Partner Organisation(s)

Air-Cell Innovations Pty Ltd

R & D Services, Inc

Administering Organisation University of South Australia

Project Summary

To reduce the environmental impact of houses, state governments have mandated performance requirements on the energy efficiency of buildings. This research will develop advanced design techniques for the application of insulation in buildings, improving their performance. This will increase the efficiency of new buildings reducing Australia's greenhouse gas emissions. Furthermore, the peak power demand from residential buildings will reduce, decreasing the need to upgrade our electrical infrastructure. The research will enable more cost effective insulation solutions to be developed in the building industry and increase employment in the insulation industry.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

University of Technology, Sydney

LP0776980 A/Prof N Zhang; Dr DW Yuen; Dr ZJ Gu

Approved Project Title **Development of a Mathematical Model for Chatter Prediction in Multi-Stand Cold Flat Rolling Mills**

2007 : \$ 25,000
2008 : \$ 50,000
2009 : \$ 50,000
2010 : \$ 25,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BlueScope Steel Ltd

Administering Organisation University of Technology, Sydney

Project Summary

On the one hand, this project will make a significant contribution to the field of study on dynamics of complex mechanical systems and on the other hand, directly assist the Australian steel industry in further improving quality and productivity and thereby maintaining its competitive edge in the international marketplace. The project will benefit the nation and community in:

- (i) advanced steel manufacturing technology enabling higher rolling speed, production in more advanced thin gauge rolling, and prevention of production breakdowns caused by mill chatter;
- (ii) strengthened competitiveness of the local steel industry resulting in increased exports and employment;
- (iii) enhanced regional economy resulting from improved technologies.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2906 CHEMICAL ENGINEERING

The University of Melbourne

LP0776373 Prof GW Stevens; A/Prof DB Gore; Dr I Snape

Approved Project Title **Development of in Ground and on Site Technologies for Low Cost Metal Remediation of Remote Contaminated Sites**

2007 : \$ 53,500

2008 : \$ 109,000

2009 : \$ 121,500

2010 : \$ 66,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

PANalytical Spectris Australia Pty Ltd

Veolia Environmental Services Pty Ltd (formerly Collex Pty Ltd)

Administering Organisation The University of Melbourne

Project Summary

Australia has taken a leading role internationally in promoting environmental awareness and is committed to both tackling existing pollution and mitigating future hazards. The clean-up of contaminated Australian, Antarctic and sub-Antarctic sites is seen as a national priority and research into in-situ technologies is central to meeting established remediation goals. Successful development of a low-cost in-ground remediation scheme will provide vital protection for remote Australian, Antarctic and sub-Antarctic areas. It will also do much to cement Australia as a global leader in environmental protection, offering as it does a generic remote regions metal contamination remediation solution.

The University of New South Wales

LP0776243 Dr FP Lucien; Ms KJ Mate; Prof RP Burford

Approved Project Title **Carbonate binding: an ecologically sustainable alternative to cement**

2007 : \$ 36,625

2008 : \$ 70,625

2009 : \$ 68,000

2010 : \$ 34,000

Collaborating/Partner Organisation(s)

Ove Arup Pty Ltd

BOC Limited

Administering Organisation The University of New South Wales

Project Summary

Carbonate binding is a frontier technology that promises a new generation of advanced materials for applications in construction. Precast concrete accounts for a large and increasing portion of total concrete usage. Precast materials made by carbonate binding would offer several advantages over conventional precast concrete. The energy savings of a low temperature process with negligible greenhouse gas emissions would contribute immensely to the goal of an environmentally sustainable Australia. The reduced hardening period would offer substantial increases in productivity to manufacturers.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Queensland

LP0776636 Prof IT Cameron; Prof PM Sanderson; Prof KM Hangos

Approved Project Title **A multiscale-multifunctional approach to advanced diagnosis and operator performance in complex process systems**

2007 : \$ 57,000
2008 : \$ 118,000
2009 : \$ 115,000
2010 : \$ 54,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BlueScope Steel Ltd

BP Refinery (Bulwer Island) Pty Ltd

Administering Organisation The University of Queensland

Project Summary

Major process system failures and subsequent poor diagnosis continues to produce significant company disruption, environmental damage, injury and possible loss of life. The benefits of this work will be reduced impacts and risks. This work will provide a new integrated approach with structured tools and diagnostic designs for process industries. It should have direct impacts on company performance through improved diagnosis, more timely response and hence reduced likelihood of major accidents. It will help to improve overall risk management practice in the process industries with less impact on people, property and environment, thus improving operational performance. Local communities will be direct beneficiaries of these reduced risks.

The University of Sydney

LP0776860 A/Prof VG Gomes; Mr AF Kirby

Approved Project Title **New dispersants for improved agrochemical and allied formulations**

2007 : \$ 53,869
2008 : \$ 110,773
2009 : \$ 117,023
2010 : \$ 60,119

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Huntsman Corporation Australia Pty Ltd

Administering Organisation The University of Sydney

Project Summary

This project will deliver substantial benefits for national regional communities and the environment through improved agrochemical dispersion, and reduced pesticide and water use. This project will deliver improved products for agrochemicals and animal food, bringing significant agricultural advantages to Australia. This will help Huntsman with cutting-edge technologies in manufacturing agrochemical and related products for the national and global markets. We will provide advanced training for postgraduate and research personnel that will be sought-after by the agrochemical and allied industries.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

The University of Western Australia

LP0776928 Dr EF May; Prof DL Trimm; Prof MA Trebble; A/Prof RD Trengove

Approved Project Title **Increased liquified natural gas (LNG) production efficiency through nitrogen and carbon dioxide capture using high-pressure cryogenic adsorption onto tailored nanopore substrates**

2007 : \$ 55,000

2008 : \$ 100,000

2009 : \$ 76,500

2010 : \$ 31,500

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 less greenhouse gases than oil or coal. It will contribute to the harnessing of some of Australia's largest gas reserves, like the Gorgon field, which are contaminated with large amounts of CO₂ and are not yet economically viable. The removal of N₂ from natural gas will reduce the cost of producing LNG which is the only method Australia can use to access global gas markets. The new adsorbent materials developed for this work may enhance other research programmes attempting to capture and sequester CO₂ from industrial flue gases.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2907 RESOURCES ENGINEERING

The Australian National University

LP0777012 Prof MA Knackstedt; Prof B Gurevich; Prof SA Shapiro

Approved Computational Rock Physics
Project Title

2007 : \$ 37,500

2008 : \$ 73,500

2009 : \$ 36,000

Collaborating/Partner Organisation(s)

ExxonMobil Upstream Research Co.

Administering Organisation The Australian National University

Project Summary

Knowledge of the quantitative relationships between rock and fluid properties, and seismic characteristic is necessary to improve the determination of fluid saturation and accurately monitor recovery of oil and gas. The proposed project aims to develop these relationships by teaming up two Australian-based experts in 3D seismic image analysis and theoretical rock physics, with a global company at the forefront of the industry. Developing these relationships will be a cutting edge research achievement, will directly impact on exploration, interpretation and production decisions within the oil and gas industry in Australia and globally, and greatly advance Australia's reputation as a leader in petroleum research services and training.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2908 CIVIL ENGINEERING

The University of Melbourne

LP0776842 Prof CS Fraser; Prof PM Charles

Approved Project Title Traffic Incidents: Reducing the Impacts

2007 : \$ 60,000
2008 : \$ 120,000
2009 : \$ 120,000
2010 : \$ 60,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Victoria Police
Queensland Main Roads
Queensland Police Service
Brisbane City Council
Transurban Ltd
PTV Asia-Pacific Pty Ltd
Intelematics Australia Pty Ltd
Dept. of Emergency Services - Qld Ambulance Service

Administering Organisation The University of Melbourne

Project Summary

Road congestion due to traffic incidents in major urban areas adversely affects traveller safety and travel reliability, and is a significant cost burden to industry and the community in social, environmental and economic terms. This project will investigate the impact of traffic incidents, with the aim being to produce outcomes that contribute to more efficient traffic management, and specifically to reducing the incident duration. Outcomes will include the development of decision support tools to aid in policy and operational responses, as well as the development of faster and more comprehensive accident reconstruction based on spatial information technology.

The University of New South Wales

LP0776347 Dr SJ Khan; A/Prof RM Stuetz; Dr A Baker; Dr MV Storey

Approved Project Title Fluorescence as a tool for sensitive detection of failures in recycled water treatment and distribution systems

2007 : \$ 80,000
2008 : \$ 135,000
2009 : \$ 110,000
2010 : \$ 55,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Sydney Olympic Park Authority
Sydney Water Corporation
Gold Coast City Council (Gold Coast Water)
Melbourne Water
South East Water Limited
City West Water Limited
Yarra Valley Water Limited
Water Corporation

Administering Organisation The University of New South Wales

Project Summary

Water reuse is emerging as a key strategy for the conservation of drinking water supplies around Australia. Accordingly, there is a need for fast, reliable, affordable and highly sensitive means of ensuring the reliability of treatment processes and final water quality. This research aims to meet such needs by providing new tools based on fluorescence analysis. These tools are to be implemented for online monitoring of treatment performance and for the identification of accidental contamination of drinking waters by recycled water. The enhanced ability to ensure both recycled water quality and drinking water quality will have public health and environmental benefits as well as protecting public confidence in water recycling systems.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2909 ELECTRICAL AND ELECTRONIC ENGINEERING

Queensland University of Technology

LP0776898 Prof A Ghosh; Prof GF Ledwich; Prof PJ Wolfs

Approved Project Title **Development of Reliability Driven Rural Electricity Supply**

2007 : \$ 47,000
2008 : \$ 94,000
2009 : \$ 91,500
2010 : \$ 44,500

Collaborating/Partner Organisation(s)

Ergon Energy Queensland Pty Ltd

Administering Organisation Queensland University of Technology

Project Summary

Australia is sparsely populated with SWER systems covering a large part of the rural supply. It is expected that a portion of the population will move to some areas of semi-urban/rural areas as the cost of housing and land will be cheaper in these regions. This will result in the development of new townships. In addition the growth in air conditioners and other electrical goods is leading to a rise in consumption per customer which is occurring across all parts of the country not just in 'green change' areas. With this scenario in mind, the aim of this project is to plan for rural electricity supply that can have a defined reliability, with a potential for a performance that can be designed to approach that of urban centers.

The Australian National University

LP0777007 Prof JS Williams; Dr JE Bradby

Approved Project Title **Low temperature fabrication of silicon-based thin film transistors (TFTs) for flat panel displays - an entirely new approach**

2007 : \$ 55,000
2008 : \$ 100,000
2009 : \$ 45,000

Collaborating/Partner Organisation(s)

WRiota Pty Ltd

Administering Organisation The Australian National University

Project Summary

This project represents an entirely new approach to low temperature crystallization of amorphous silicon, and its application to TFT fabrication in flat panel displays, and involves a partnership with the Australian high-tech company, WRiota. The research is in a field of high national priority, namely nanotechnology, since the technology is based on materials modification at the nanoscale by nanoindentation. This project will further provide valuable opportunities for a number of research students and ECRs to gain experience in both the industrial and academic worlds and skills needed for Australia's nanotechnology workforce.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2910 GEOMATIC ENGINEERING

RMIT University

LP0776656 Dr SD Jones; Dr JG Ferwerda; Dr GJ Fitzgerald; Dr GJ O'Leary; Dr RK Belford

Approved Project Title **Water and nutrient stress detection in broad acre crops using remote sensing**

2007 : \$ 57,000
2008 : \$ 108,500
2009 : \$ 101,500
2010 : \$ 50,000

Collaborating/Partner Organisation(s)

Victorian Department of Primary Industries

Administering Organisation RMIT University

Project Summary

The national benefit of the remote sensing of water and nutrient levels in crops comes from improved agricultural practice; leading to cost savings, reduced water usage and reduced pollution. This benefit will arise since irrigation and fertiliser application can be exactly tailored to the measured needs of broad-acre crops. In Australia, water is a scarce resource. Reducing consumption by irrigators will have significant downstream benefits. By remote measurement of nutrient variation within paddocks, fertiliser applications can be optimised. Minimum excess fertiliser will then be present and this will minimise runoff and potential downstream water pollution.

The University of New South Wales

LP0776483 A/Prof AG Dempster; Dr RC Bryant; Mr EP Glennon

Approved Project Title **Assisted GPS and Advanced Positioning For Emergency Services**

2007 : \$ 25,627
2008 : \$ 51,254
2009 : \$ 51,254
2010 : \$ 25,627

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Signav Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

Many volunteers have lost their lives fighting bushfires in Australia. Fires are becoming more numerous and more fierce. Some of those firemen could have been saved if better information was available: where they were, where the firefront was and how it was progressing. This project aims to save lives by solving part of this problem: locating and reporting the position of the remote firefighter by making GPS work reliably under trees. This will also make search and rescue operations safer and more efficient. The technology can transfer readily into the location-based services market which is set to boom in the next decade. This project helps maintain momentum in Australia's world-class but small positioning industry.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2911 ENVIRONMENTAL ENGINEERING

RMIT University

LP0776870 Prof F Roddick

Approved Project Title **Enhancing the productivity of wastewater desalination**

2007 : \$ 17,559
2008 : \$ 30,372
2009 : \$ 25,627
2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Melbourne Water

Administering Organisation RMIT University

Project Summary

Climate change is causing reduced rainfall over much of populated Australia. New technology to enable membrane desalination of wastewater treatment effluent will be developed to provide secure reliable water supplies for Australian (and international) urban and regional communities. Application of the technology to Western Treatment Plant at Werribee will provide up to 10 gigalitres/year of recycled water to the local agricultural, business and tourism precincts. The economy, community and environment will benefit due to reduced use of potable, river and ground water. Wide application of this technology to wastewater and brackish water will lead to similar benefits and an environmentally sustainable Australia.

The University of Western Australia

LP0776571 Dr A Ghadouani; Prof GA Codd; Prof GN Ivey; Prof K Havens

Approved Project Title **Production, Fate and Transport of Cyanobacterial Toxins in Waterways**

2007 : \$ 65,178
2008 : \$ 125,178
2009 : \$ 135,000
2010 : \$ 75,000

Collaborating/Partner Organisation(s)

Water Corporation

Administering Organisation The University of Western Australia

Project Summary

Australian waterways are under severe pressure from both large variation in precipitation patterns and various sources of contamination. In particular, the management of algal blooms costs Australians hundreds of millions of dollars a year. Through the use of a unique approach this project will provide the necessary information for a science based decision making strategies to eradicate, as much as possible, algal blooms and to reduce the risk of severe injuries to the public, livestock and the environment, resulting from contamination waterways by algal toxins.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

University of Technology, Sydney

LP0776705 Dr JK Kandasamy; Prof S Vigneswaran; Dr HK Shon; Mr A CHANAN

Approved Project Title Cost effective in-line filtration system to improve water quality in rainwater tanks

2007 : \$ 12,813
2008 : \$ 25,627
2009 : \$ 25,627
2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Kogarah Council

Administering Organisation University of Technology, Sydney

Project Summary

This research will provide the basis for developing an affordable and innovative water treatment solution for domestic rainwater collection systems. The main elements of this research are:

- . Provision of a cost -effective submerged membrane operated under gravity to provide water of potable standard.
- . Establishing an adaptive membrane cleaning system using the concept of volume control.
- . Characterisation protocol of membrane fouling and stored rain water.
- . Sizing of a permeate tank for storing treated water through demand management.

This project will increase the use of rainwater tanks, helping available water resources to go further.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2913 METALLURGY

Deakin University

LP0776913 Prof PD Hodgson; Dr BF Rolfe; Dr W Yan; Dr GL Kelly

Approved Project Title **Reducing tool wear through novel surface treatments and improved lubrication**

2007 : \$ 62,500
2008 : \$ 145,000
2009 : \$ 140,000
2010 : \$ 57,500

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

BP Australia Ltd.

Ford Motor Company of Australia Ltd.

HARD Technologies Pty. Ltd.

Tooling Australia

Administering Organisation Deakin University

Project Summary

High strength steels can be used to make vehicles lighter and safer but forming them into parts requires large forces. This can lead to problems with tool wear and poor surface finish. This project will lead to improved understanding of what makes a lubricant effective and how to design a tool surface to reduce wear. This new knowledge will lead to improved tool designs and products. The competitiveness of the Australian automotive manufacturing industry will be improved and there will be benefits for the local tooling industry, especially in the competition for overseas markets.

RMIT University

LP0776721 A/Prof DR Swinbourne; Prof MA Reuter; Mr R Matuszewicz

Approved Project Title **Innovative thermodynamic process control - the key to sustainable metal use**

2007 : \$ 12,813
2008 : \$ 25,627
2009 : \$ 25,627
2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Ausmelt Limited

Administering Organisation RMIT University

Project Summary

Large amounts of electronic goods such as computers and mobile phones are discarded each year in Australia. They contain both valuable and toxic metals so dumping them as landfill is unacceptable. Australia has a smelting method which could be adapted to reprocess this waste to recover the valuable metals, returning them for reuse. It would also safely handle the toxics. This project will determine the appropriate smelting strategies and control methods. As a result, transportation of toxic materials overseas will be eliminated, environmental hazards will be reduced and our sustainable use of metals will be increased.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of New South Wales

LP0776712 Dr RP Zou; Mr ZY Zhou; Dr DJ Pinson; Dr P Zulli

Approved Project Title Model studies of the flow and thermal behaviour of non-spherical particles in fluid bed reactors

2007 : \$ 44,500
2008 : \$ 83,024
2009 : \$ 77,049
2010 : \$ 38,524

APDI Mr ZY Zhou

Collaborating/Partner Organisation(s)

BlueScope Steel

Administering Organisation The University of New South Wales

Project Summary

The Australian steel industry has a turnover of around \$11 billion (5% of total manufacturing), being a largest manufacturing sector in Australia. Iron ore sintering and blast furnace ironmaking are two important processes in an integrated steel works. This project aims to understand and model the particle-fluid flow and thermal behaviour of non-spherical particles in the two processes, formulating strategies for improving the process control and productivity and energy saving. The research outcomes (theory/model/understanding) are useful to fluid bed reactors which are widely used in mineral/metallurgical/chemical industries. Their application can improve the competitiveness of the steel and other industries in Australia.

The University of Queensland

LP0776764 Prof PC Hayes; A/Prof E Jak; Prof AD Pelton

Approved Project Title Fundamental experimental and modelling studies of slag/matte/metal/gas systems in support of sustainable copper smelting and converting technologies

2007 : \$ 110,000
2008 : \$ 217,500
2009 : \$ 210,000
2010 : \$ 248,000
2011 : \$ 285,000
2012 : \$ 139,500

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

BHPBilliton (Olympic Dam Operations)

Xstrata Copper Mount Isa Mines

Xstrata Technology

Rio Tinto Technology

Administering Organisation The University of Queensland

Project Summary

Australia is in the midst of a sustained increase in demand for its mineral resources that is leading to expansion in production and major capital investments across the industry sector. Most of the primary production of copper metal in Australia takes place through the use of high temperature smelting technologies. New technologies and significant changes to existing smelting technologies are currently underway; driven by the need to improve both productivity and environmental performance. This research partnership will provide important fundamental information about the complex chemistries of these high temperature processes. This project will assist these process improvements and will provide competitive advantage to Australian industry.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2914 MATERIALS ENGINEERING

Monash University

LP0776702 Dr FG Collins; Prof M Forsyth; A/Prof JG Sanjayan

Approved Project Title **Securing Longevity of Reinforced Concrete Infrastructure Through Enhanced Cathodic Protection Design**

2007 : \$ 20,000

2008 : \$ 39,000

2009 : \$ 36,000

2010 : \$ 17,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Maunsell Australia

Administering Organisation Monash University

Project Summary

The sustainability of Australia's extensive maritime infrastructure is impaired by corrosion, causing ongoing rehabilitation and reduced service life. Cathodic protection (CP) is most widely used to restore corrosion-damaged concrete, however the design principles are debated and uncertainty exists on how ongoing performance should be monitored. Australian Industry will benefit from: (i) Less expenditure and disruption to operations of key infrastructure; (ii) More sustainable maritime infrastructure requiring less labour, time and capital expenditure on inspection, testing, maintenance and rehabilitation works; (iii) Availability of experts with advanced training in CP of reinforced concrete; (iv) Update Australian CP Standard AS 2832.5-2002

Queensland University of Technology

LP0776643 Prof JM Bell; Dr H Wang; Dr GD Will; Dr H Desilvestro

Approved Project Title **Efficient Dye-Sensitised Solar Cells: New Cathodic Materials and Systems**

2007 : \$ 55,000

2008 : \$ 120,000

2009 : \$ 125,000

2010 : \$ 60,000

APA(I) Award(s): 1

APDI Dr H Wang

Collaborating/Partner Organisation(s)

Dyesol Ltd

Administering Organisation Queensland University of Technology

Project Summary

Accelerating the uptake of renewable energy through new and diverse sources is critical to Australia's commitment to sustainable future, and Australia's energy security. This project will address key issues in commercially emerging Dye Solar Cell (DSC) technology, which has been accepted as a credible avenue to cost effective solar electricity. To date, significant development both in industry and Academia, has resulted in Australia's leading and often pioneering position in this field. The project will maintain and enhance this position through both scientific and commercial outcomes, including opening up new markets for flexible DSC and exporting products and technological solutions through commercial activities of the Partner Organisation.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

RMIT University

LP0776931 A/Prof DG McCulloch; Prof ED Doyle; Dr SJ Dowey; Dr MZ Jahedi

Approved **Designing the Next Generation of High Performance Cutting Tools**

Project Title

2007 :	\$ 57,500
2008 :	\$ 107,500
2009 :	\$ 95,000
2010 :	\$ 117,500
2011 :	\$ 72,500

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Sutton Tools Pty Ltd

Administering Organisation RMIT University

Project Summary

In order for Australian manufacturers to improve their global competitiveness in the production of manufactured goods it is essential to have access to cost effective high performance cutting tools. This project seeks to meet this challenge by exploiting new pathways in the development of advanced metallic-based vapour deposited coatings. This new approach will provide a much needed opportunity for value adding in the economically significant area of tribological coatings for industrial components. The outcomes of this project will directly impact on the ability of Sutton Tools, an Australian owned company, to sustain and expand its export markets while adding more broadly to the competitiveness of Australia's manufacturing industry.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2915 BIOMEDICAL ENGINEERING

Deakin University

LP0776751 Dr T Lin; Dr Y Zhao; Prof X Wang; A/Prof MA Kirkland

Approved Project Title **Three-Dimensional Polymer Fibre Scaffolds with Functional Nano-structured Surface**

2007 : \$ 57,500
2008 : \$ 115,000
2009 : \$ 115,000
2010 : \$ 57,500

Collaborating/Partner Organisation(s)

Cygenics, Ltd

Administering Organisation Deakin University

Project Summary

The Partner Organisation to this research, CyGenics Ltd, is a world leader in cell biotechnology. A key challenge faced by the CyGenics and other biotech companies is the provision of tissue scaffolding materials that have the right three-dimensional macroscopic structure plus a suitable nano-structured surface micro-environment, similar to the natural extracellular matrix. This joint project combines expertise in polymer fibres, surface engineering and cell culture to tackle the key challenge. The outcome will help position the local polymer fibre and cell culture industries at the forefront of tissue scaffolding materials research and development.

Queensland University of Technology

LP0776309 Prof MA Schuetz; Dr S Mishra; Dr G Chen; Prof SM Perren

Approved Project Title **Understanding the biomechanical effects of fixation strategies to improve the technology of fracture management**

2007 : \$ 50,000
2008 : \$ 95,000
2009 : \$ 90,000
2010 : \$ 45,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Synthes Australia Pty Ltd

Administering Organisation Queensland University of Technology

Project Summary

Severe limb trauma is the leading cause of disability to people of wage-earning age, and 150,000 Australians are hospitalised with fractures each year. Beyond the direct costs to the nation of \$1000 million annually, temporary and permanent loss of limb functionality have a significant impact on productivity and quality of life. The computational models developed in this project will address critical gaps in the knowledge of fracture healing and the influence of different fixation devices. The project outcomes will provide a basis for tailoring fixation technologies for more reliable outcomes and minimised risk of non-union and complications, and thereby reducing physical impairment and the socio-economic burden of fractures.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

RMIT University

LP0776730 A/Prof DK Kumar; Prof X Yu; A/Prof NM McLachlan; A/Prof RK Begg

Approved Project Title Building a Smart Diagnostic System for Low Back Ailments

2007 : \$ 21,311
2008 : \$ 42,527
2009 : \$ 42,289
2010 : \$ 21,072

Collaborating/Partner Organisation(s)

Medec Ltd

Administering Organisation RMIT University

Project Summary

This research will develop an early back ailment diagnostic system that will reduce the recurrence of low back pain, and hence reduce the cost to the health system. This is significant to the community from prevention of pain, to the health care system that spends billions of dollars combating this modern day ailment and towards the industry where the low back pain is the single largest reason for sick leave in Australia. It will also give rise to employment of skilled technical people and an opportunity to increase high-value exports from Australia.

The University of Queensland

LP0776463 Prof S Crozier; Dr F Liu; Mr E Weber; Dr S Junge

Approved Project Title Transceive Phased Arrays for Parallel Imaging in High Field Magnetic Resonance Microscopy.

2007 : \$ 100,000
2008 : \$ 205,000
2009 : \$ 210,000
2010 : \$ 105,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Bruker BioSpin MRI GmbH

Administering Organisation The University of Queensland

Project Summary

This project will contribute to the development of a new generation of Magnetic Resonance Imaging systems that provide new and innovative features capable of significantly increasing the resolution and /or speed of imaging. The economic benefit of being a developer of this technology is clear and significant. These new systems will enhance the efficiency and power of clinical diagnostic testing. Specifically, the enabling of molecular imaging will enhance the study of many more disease states and rapid assessment of new in vivo therapeutic agents. The side-stream benefit to biomedical research and development in Australia is therefore substantial.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

The University of Sydney

LP0776813 Prof DR McKenzie; Dr NL James

Approved Project Title **Hermetic bonding of biomedical polymers for cardiac-assist devices**

2007 : \$ 80,000
2008 : \$ 165,000
2009 : \$ 170,000
2010 : \$ 85,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Ventracor Ltd
 Raymax Applications Pty Ltd

Administering Organisation The University of Sydney

Project Summary

The use of a polymeric ventricular assist device will bring a much better quality of life to patients with end-stage heart failure. The project will address the remaining challenge, the creation of a hermetic polymer seal, enabling the development of a small, light and highly efficient heart pump. The project has the potential to improve the lives of many Australians as our demographic profile shifts towards older people. Patients with advanced heart failure will live longer, with a higher quality of life. It will assist heart failure sufferers to remain productive members of our community, because many people who use the device will be fit to return to work.

LP0776938 A/Prof AJ Ruys; Dr Q Li; Dr W Li; Dr P Carter; A/Prof SK Warfield

Approved Project Title **Cochlear Implants: Identifying Current Paths through Computational Modelling of MRI Data**

2007 : \$ 19,555
2008 : \$ 35,364
2009 : \$ 31,618
2010 : \$ 15,809

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Cochlear Ltd.

Administering Organisation The University of Sydney

Project Summary

The Cochlear implant is an Australian invention (first prototype 1978), leading to the formation of Cochlear Ltd. to commercialise it. Cochlear Ltd. has now delivered implants to over 60,000 people in 70 nations across the world. Copycat companies have arisen overseas, but Cochlear Ltd. remains the market leader, due to their commitment to ongoing R&D. The present project involves magnetic resonance imaging and finite element analysis to study the current leakage pathways in the cranial cavity for the purpose of optimizing the design and placement of the return electrode. The obvious benefit of this is longer battery life. Better understanding of current leakage over other intracranial nerves is the other anticipated benefit.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2917 COMMUNICATIONS TECHNOLOGIES

Edith Cowan University

LP0776734 Prof K Alameh; Mr MR Fisher

Approved Project Title **Automated photonic multi-spectral weed discrimination sensor for precision agriculture**

2007 : \$ 45,000
2008 : \$ 82,500
2009 : \$ 72,500
2010 : \$ 35,000

Collaborating/Partner Organisation(s)

Weed Control Australia Ltd

Administering Organisation Edith Cowan University

Project Summary

Australian farmers spend over \$800 million yearly on herbicides. The proposed technology can reduce herbicide usage by 80% (i.e. over \$640 million p.a. saving) and improve crop yields by 30%. Precision application of herbicides, fertilisers and nutrients to weeds and crops has both economic and environmental benefits which will increase farm profits and boost Australia's export sales. Reduced chemical loads on ecosystems will benefit the environment and reduced chemicals in the food chain will benefit the health of Australians. This development will put Australia at the cutting edge of precision spray technology and has numerous spin-off applications in many sectors.

Monash University

LP0776796 Dr NC Karmakar; Dr I Brown

Approved Project Title **Radio Frequency Wireless Monitoring in Sleep Apnoea (Particularly for Paediatric Patients)**

2007 : \$ 14,000
2008 : \$ 27,000
2009 : \$ 25,813
2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Regni Science and Technology Pty Ltd

Administering Organisation Monash University

Project Summary

Disease diagnosis, chronic disease monitoring and stress monitoring all are limited by diagnostic systems that are attached to patients by wires restricting the recording of such parameters to limited intervals in the clinician's office. The proposed system will enable patients to have a range of physiological parameters recorded without the attachment of wires. This will enable extensive periods of diagnostic data to be recorded to characterize respiratory, cardiac and other parameters during extended periods, and during normal daily activity. In addition the system can be used to monitor patients with chronic disease and detect trends in their disease.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of New South Wales

LP0776902 Dr V Sivaraman; Dr A Burdett

Approved Project Title Energy-Efficient Communication Protocols for Wearable Wireless Biomedical Sensor Devices

2007 : \$ 30,000
2008 : \$ 60,000
2009 : \$ 57,500
2010 : \$ 27,500

Collaborating/Partner Organisation(s)

Toumaz Technology Ltd

Administering Organisation The University of New South Wales

Project Summary

The communication protocols developed in this project will directly contribute to the realisation of wearable, mobile, and robust devices for continuous medical monitoring. Several Australian industries can benefit economically by using the technology to improve the performance, efficiency, and longevity of their existing systems for chronic disease management, aged care, personal wellness, occupational health, and in hospitals/GPs. Non-intrusive monitoring offers quality-of-life to the millions of aged and chronically ill Australians, while low-cost allows it to be widely used in regional and rural communities. Partaking in the innovation of the technology will also give Australia a strong position in the ICT space.

The University of Sydney

LP0776380 Prof SC Fleming; Dr J Canning; Dr SH Law; Dr B Hodder

Approved Project Title Interferometric Distributed Feedback Fibre Laser Sensors

2007 : \$ 56,920
2008 : \$ 117,017
2009 : \$ 118,086
2010 : \$ 57,989

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Thales Australia

Administering Organisation The University of Sydney

Project Summary

This project will solve important problems in realising next generation underwater optical fibre sensor systems for defence and marine exploration. OFTC's expertise in specialty optical fibre and devices will be combined with Thales' expertise in underwater sensor systems to give Australia a global lead. The benefits are commercial, national security and research standing. Domestic manufacture of a major optical system will assist maturation of the sector which is dominated by component companies. This system for underwater surveillance is obviously important to a country with a large coastline to defend. This project will build Australia's global reputation renowned for research excellence in fibre and fibre devices.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

2918 INTERDISCIPLINARY ENGINEERING

The University of Adelaide

LP0776316 A/Prof GJ Nathan; Dr PA Kalt; Dr JJ Parham; Dr NL Smith

Approved Project Title **Assessment and Optimisation of Mixing and Aerodynamic Characteristics of Multi-Fuel Burners for Rotary Kilns**

2007 : \$ 50,000
2008 : \$ 95,000
2009 : \$ 90,000
2010 : \$ 45,000

Collaborating/Partner Organisation(s)

FCT-Combustion

Administering Organisation The University of Adelaide

Project Summary

Cement kilns are increasingly being used to dispose of waste and low-grade biomass fuels. Being nominally greenhouse neutral, these fuels reduce greenhouse gas emissions by displacing fossil fuels. However, their use also presents significant technical challenges, one of which will be addressed by the proposed program. In building capacity of local industry to utilise these fuels in cement kilns, it will open the door to other opportunities in the future. It will also increase the export earnings of an Australian company who will commercialise these outcomes internationally.

University of Wollongong

LP0776644 A/Prof SP Zhu; A/Prof P Cooper; Dr DH Wood; Dr T Denniss

Approved Project Title **Wave to Wire: Optimising Hydrodynamic Performance and Capture Efficiency of Next Generation Ocean Wave Energy Systems**

2007 : \$ 56,340
2008 : \$ 105,950
2009 : \$ 100,594
2010 : \$ 50,984

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Energetech Australia Pty Ltd

Administering Organisation University of Wollongong

Project Summary

Wave energy in the oceans of the world represents a vast renewable energy resource that has not been tapped. This project will play a crucial role in maximising the performance and economic viability of a unique Australian wave energy technology. We will develop a dynamically integrated theoretical model aimed at capturing the complex behaviour of ocean waves and optimising the energy capture efficiency of the Oscillating Water Column (OWC) wave energy system. One of the most exciting aspects of the technology is its potential to provide on-site bulk desalination of seawater, whilst being driven entirely by renewable energy. It will also result in significant reductions in greenhouse gas emissions from electricity generation.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

2999 OTHER ENGINEERING AND TECHNOLOGY

The University of Queensland

LP0776963 A/Prof JJ Cooper-White; Dr LE Rodd; Dr JR Stokes

Approved Project Title **Disposable microfluidic diagnostics for new generation foods, beverages and oral care products**

2007 : \$ 40,000

2008 : \$ 80,000

2009 : \$ 80,000

2010 : \$ 40,000

Collaborating/Partner Organisation(s)

Unilever UK Central Resources Limited

Administering Organisation The University of Queensland

Project Summary

The outcomes of this project will lead to the establishment of a new paradigm in designing foods, beverages and oral care products that have tailored health and vitality benefits (e.g. reduced levels of fat, sugar and salt). In addition, these foods will contain beneficial additives (e.g. anti-oxidants, vitamins, minerals, phytonutrients) targeted to specific consumer groups according to their lifestyle, age, medical condition or requirement for nutritional/nourishment efficacy, thereby contributing to healthy ageing. It is foreseen that this novel approach to designing foods will be extended to products intended for consumers whose sensory perception is compromised by existing medical therapeutic practices (such as radiation therapy).

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3002 CROP AND PASTURE PRODUCTION

The University of Adelaide

LP0776635 Dr BN Kaiser; Prof MA Tester; Dr JA Rafalski; Dr K Dhugga

Approved Project Title Targeted approaches to improve nitrogen use efficiency in maize

2007 : \$ 150,000
2008 : \$ 300,000
2009 : \$ 300,000
2010 : \$ 150,000

Collaborating/Partner Organisation(s)

DuPont-Pioneer

Administering Organisation The University of Adelaide

Project Summary

Nitrogen is an essential input required for growing high yielding quality cereal crops such as maize and wheat. Unfortunately, excessive use of nitrogen fertilizers can lead to serious environmental costs including nitrogen pollution through leaching and the significant cost in non-renewable fossil fuels used in their production. Improving nitrogen use efficiency in crops such as maize will reduce fertilizer use while ensuring long-term sustainable production and harvestable yields. This collaboration with DuPont-Pioneer will focus on identifying nitrogen-linked traits in Maize that will be incorporated into new lines targeted at reducing grower dependence on nitrogen fertilizers.

The University of Queensland

LP0776937 Prof RG Birch; Dr GM Graham; A/Prof BJ Carroll; Dr D Schliebs; Mr PW Collins

Approved Project Title Understanding and avoiding transgene silencing in sugarcane

2007 : \$ 136,702
2008 : \$ 268,105
2009 : \$ 313,260
2010 : \$ 181,857

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

CSR Sugar Pty Ltd

Administering Organisation The University of Queensland

Project Summary

Sugarcane is one of the world's major crops for food (sugar) and fuel (ethanol, electricity co-generation). It is one of the most appealing target crops for metabolic engineering aimed at renewable biomaterials and biofuels. Australia has invested strongly to achieve scientific leadership in gene technologies in our major export crops including sugarcane. Field tests show that development of methods to avoid unstable expression or 'silencing' of introduced genes is now a critical requirement for practical application. The current project emerges from industry recognition of the need to understand and avoid transgene silencing. The methods developed using sugarcane are expected to have rapid applicability for wider benefits in agriculture.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Sydney

LP0776994 Prof RM Trethowan

Approved Improved Indian Mustard for sustainable biodiesel production

Project Title

2007 : \$ 20,000
2008 : \$ 40,000
2009 : \$ 40,000
2010 : \$ 20,000

Collaborating/Partner Organisation(s)

AACT

Administering Organisation The University of Sydney

Project Summary

There is an urgent need to reduce Australia's dependency on fossil fuels and to improve the sustainability of the Australian farming sector. The on-farm production of biodiesel will reduce farm input costs, reduce farmer dependency on fluctuations in fossil fuel costs and reduce greenhouse gas emissions. Indian mustard is drought tolerant and produces inedible oil suitable for biodiesel production. The genetic improvement of Indian mustard will provide farmers with a viable crop for biodiesel production and its bio-fumigation properties make it an effective addition to the crop rotation. Useful by-products include a natural insecticide and, once the glucosinolates are removed, meal suitable for animal feed.

The University of Western Australia

LP0776586 Dr TD Colmer; Prof Dr TJ Flowers; Prof K Siddique; Dr V Valdez; Dr R Varshney; Dr PM Gaur

Approved Physiological and molecular characterisation of salinity tolerance in chickpea

Project Title

2007 : \$ 28,450
2008 : \$ 83,524
2009 : \$ 116,546
2010 : \$ 137,338
2011 : \$ 75,865

Collaborating/Partner Organisation(s)

COGGO

ICRISAT

Administering Organisation The University of Western Australia

Project Summary

Chickpea is a grain legume often grown in rotation with cereal crops to enhance profitability and environmental sustainability of broadacre cropping systems in Australia, and elsewhere. Chickpea is sensitive to salinity, and thus can not be grown on soils affected even by mild salinity. Limited grain legume options currently exist for these soils. This project will improve salt tolerance in chickpea and thus allow it to be grown in areas too saline for current cultivars. The research contributes to the National Research Priority of 'An Environmentally Sustainable Australia', as new cultivars of chickpea with improved salt tolerance will enhance the profitability and sustainability of rotational cropping systems in Australia.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3003 HORTICULTURE

Charles Sturt University

LP0776282 A/Prof GM Gurr; Prof S Wratten; A/Prof DG James

Approved Project Title **Attract and reward: a novel approach to enhancing biological control of crop pests**

2007 : \$ 14,000
2008 : \$ 28,000
2009 : \$ 28,000
2010 : \$ 14,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Organic Crop Protectants PTY Ltd

Administering Organisation Charles Sturt University

Project Summary

Pests cause serious damage to Australia's agricultural crops. Current control relies heavily on synthetic pesticides. This project will develop novel products based on natural plant compounds to attract beneficial insects into crops where they will be supported with nectar, pollen and shelter to maximise their lifespan, reproduction, residency. This use of Australia's beneficial insect biodiversity will provide novel pest control options to help transform the vegetable and grape industries. The work will reduce reliance on conventional pesticides; thereby contributing towards Australia's environmental sustainability and providing healthier foodstuffs.

Murdoch University

LP0776618 Em/Prof JA McComb; Mr C Newell; A/Prof B Dell

Approved Project Title **Propagation of terrestrial orchids for cultivation and conservation using in vitro symbiotic germination and tuberisation .**

2007 : \$ 21,000
2008 : \$ 42,000
2009 : \$ 42,000
2010 : \$ 21,000

Collaborating/Partner Organisation(s)

New Pro Microculture

Administering Organisation Murdoch University

Project Summary

The objective is to make Australian terrestrial orchids which have spectacular and unusual flower shapes and colours easier to grow, by producing tubers coated with mycorrhizal fungi. The availability of such propagules will be of value for horticulture, reintroduction of orchid species when rehabilitating mined land, and restoration of populations of rare and endangered species. At present germination of the dust-like seeds with the appropriate mycorrhizal fungus, and handling the slow growing delicate seedlings makes these beautiful species unavailable except to the dedicated orchid enthusiast.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3005 VETERINARY SCIENCES

The University of Queensland

LP0776555 Prof JT Rothwell; Dr PC Mills; Dr SE Cross; Prof CJ Phillips; Dr MR Latter

Approved Project Title **Development of a topical treatment to replace surgical mulesing in sheep**

2007 : \$ 30,000
2008 : \$ 75,000
2009 : \$ 90,000
2010 : \$ 45,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Pfizer Animal Health

Administering Organisation The University of Queensland

Project Summary

10,800 farms in Australia are sheep farms and a further 30,000 have sheep. Exports of wool earn over \$2 billion annually. The animal rights campaign to ban mulesing has forced the industry to outlaw mulesing by 2010. Mulesing is largely confined to Australian Merino sheep and requires Australian research. If practical alternatives are not found costs will rise compromising the economic viability of many sheep farms. Chemical use on the breech will increase causing environmental contamination. A simple topical alternative to mulesing will allow farmers to economically manage flies and satisfy welfare imperatives. This will support rural communities and sustain Australia's export income from wool.

LP0776358 Dr DJ Trott; Dr RN Cobbold; Dr H Wetzstein; Dr J Chin

Approved Project Title **Of pets, vets and antimicrobials: fluoroquinolone use in dogs and resistance biology.**

2007 : \$ 58,527
2008 : \$ 110,713
2009 : \$ 90,699
2010 : \$ 38,513

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Bayer Australia Limited

NSW Department of Primary Industries

Administering Organisation The University of Queensland

Project Summary

Antimicrobial resistance is a current and growing threat relevant to human health, animal welfare, food production, and environmental preservation. This project will provide new insights into the basic science of antimicrobial resistance, through the generation of accurate data on the role of companion animal use of antibiotics on the development and control of resistance. Ultimate project goals are to produce recommendations that limit the generation of further resistance. Project outcomes have demonstrable relevance to human preventative health, which is recognised as a national research priority. The health and welfare of pets will also be improved, which has associated community benefits.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3006 FORESTRY SCIENCES

The University of Melbourne

LP0776563 Dr G Bossinger; Prof AA Myburg; Dr A Spokevicius

Approved Project Title **Functional genetic analysis of wood formation genes in Eucalyptus**

2007 :	\$ 32,500
2008 :	\$ 65,000
2009 :	\$ 65,000
2010 :	\$ 32,500

Collaborating/Partner Organisation(s)
sappi

Administering Organisation The University of Melbourne

Project Summary

Eucalypts are the world's most important plantation hardwood species due to their superior wood characteristics and high growth rates that make them excellent carbon sequestration platforms. Australia is the custodian of the world's natural eucalypt resource and our results will assist in their sustainable use with the potential to transform the national forestry industry by helping to streamline tree improvement efforts. This will be achieved by increasing our understanding of the development and production of wood, which will lead to increased productivity (more and better quality wood from less land). Custom designed wood also holds much promise for the production of novel biopolymers and as a renewable source for improved biofuels.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3007 FISHERIES SCIENCES

The University of Queensland

LP0776985 A/Prof SP Collin; Dr A Barnes; Dr MJ Porter; Dr RP Smullen

Approved Project Title **Alternate diets for a sustainable aquaculture industry: neuroethology of feeding in barramundi**

2007 : \$ 39,793

2008 : \$ 50,706

2009 : \$ 23,147

2010 : \$ 12,234

Collaborating/Partner Organisation(s)

Ridley Aqua Feed

Administering Organisation The University of Queensland

Project Summary

Our unique approach to identify the sensory requirements of farmed barramundi and develop new alternative feeds will 1. Improve barramundi production by increasing growth rates, 2. Enhance acceptance and ingestion of food pellets, thereby reducing leaching of nutrients vital to the fish and detrimental to the environment, 3. Help produce formulated diets that will offer the advantages of nutritional consistency, storage convenience, reduced feed waste and pollution and 4. Lower costs allowing for the successful and profitable production of barramundi and potentially other finfish.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3008 ENVIRONMENTAL SCIENCES

Charles Darwin University

LP0776798 Prof B Campbell; Mr AG Drucker; Prof Dr MK Luckert; A/Prof A Angelsen

Approved Project Title **Natural resource management and enterprise development: can they improve Indigenous livelihoods?**

2007 : \$ 33,500
2008 : \$ 61,000
2009 : \$ 61,000
2010 : \$ 33,500

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Business, Economic and Regional Development
Ramingining Homelands Resource Centre Aboriginal Corporation
Centre for International Forestry Research

Administering Organisation Charles Darwin University

Project Summary

High on the Australian agenda is the removal of disadvantage faced by Indigenous groups and the sustainable use of biodiversity on Indigenous land. In terms of Eastern Indonesia, the Australian agenda relates to poverty eradication, with fewer threats to Australian borders in terms of illegal fishing and migration. This project provides fundamental knowledge on household resource use patterns, and the constraints and opportunities for natural resource activities, as a step towards identifying ways in which natural resources can be mobilised to improve livelihoods.

Curtin University of Technology

LP0776652 Prof BB Lamont; Prof JD Majer; A/Prof GI Metternicht; Dr CE Cooper; Dr MH Parsons

Approved Project Title **Dynamics of animal mediated vegetation establishment and persistence in disturbed landscapes**

2007 : \$ 93,000
2008 : \$ 181,500
2009 : \$ 178,500
2010 : \$ 90,000

APA(I) Award(s): 1

APDI Dr MH Parsons

Collaborating/Partner Organisation(s)

Barrick Gold of Australia
Iluka Resources Enneaba Operation
Whiteman Park (State Planning Commission)
Chemistry Centre (WA)
Roo Gully Wildlife Sanctuary
Specialty Feeds Pty. Ltd.
Perth Zoo

Administering Organisation Curtin University of Technology

Project Summary

This project aims to provide strategies and commercial products for the best management of animals in plant community restoration. Ensuring effective seed dispersal and minimizing levels of herbivory will reduce resources expended on restoration and ensure sustainable ecosystems. A small reduction in the costs of individual plant protection not only improves the success of rehabilitation programs but save millions of dollars throughout the mining industry and rural areas generally. It will also save thousands of dollars in culling programs. An extension of our study will target roadside hazards where kangaroos and traffic have high impact rates.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

Griffith University

LP0776375 Dr MA Burford; Dr KR O'Brien; Prof DP Hamilton; A/Prof CJ Lemckert

Approved Project Title **Sources of phosphorus promoting cyanobacteria in subtropical reservoirs**

2007 : \$ 20,000
 2008 : \$ 40,000
 2009 : \$ 40,000
 2010 : \$ 20,000

Collaborating/Partner Organisation(s)

South East Queensland Water
 Gold Coast Water
 Redland Water & Waste

Administering Organisation Griffith University

Project Summary

Water managers around Australia are currently considering various strategies to deal with water shortages. Many of these management actions have potential to impact water quality, through altering the nutrient balance within reservoirs and hence affecting nutrients available for cyanobacteria. Cyanobacteria blooms pose an increasing threat to water supplies, with economic, social and environmental costs of \$150M pa in Australia. The project will provide tools to water quality managers to assess how changes to subtropical reservoirs, such as water recycling, catchment land-use changes and increased drawdown are likely to affect nutrient budgets and cyanobacteria blooms.

Macquarie University

LP0776840 A/Prof RG Harcourt; Dr L Moller

Approved Project Title **Watching migrating whales: ensuring the sustainability of a growing whale-watch industry**

2007 : \$ 30,000
 2008 : \$ 47,500
 2009 : \$ 30,313
 2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Environment and Conservation
 Bass & Flinders Cruises

Administering Organisation Macquarie University

Project Summary

Whale-watching is a huge growth industry, contributing \$270 million to Australia in 2003. Yet most whalewatching targets species listed under the EPBC Act 1999 as species slowly recovering from massive overexploitation. Current protection measures are historical (ie best-guess) rather than scientific in origin. We will assess the scientific basis for these protection measures by experimentally manipulating tour boat behaviour, and by determining the economic feasibility of the industry. By doing so we will increase the long-term sustainability of the industry, a valuable tourist industry for regional Australia.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

Queensland University of Technology

LP0776918 Dr S Tong; A/Prof PB Mather

Approved Project Title **Development of a framework for assessing the vulnerability of eco-environmental health to climate change**

2007 : \$ 30,432
2008 : \$ 58,478
2009 : \$ 58,360
2010 : \$ 30,314

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Queensland Department of Natural Resources and Water
Queensland Environmental Protection Agency
Queensland Department of Emergency Services

Administering Organisation Queensland University of Technology

Project Summary

Many governments and international agencies are increasingly concerned about the potential eco-environmental and public health impact of emerging issues such as climate change, urbanisation and loss of biodiversity. However, it remains unclear how the vulnerability of eco-environmental health to these changes can be assessed and which framework should be adopted. This research will focus on the development of a framework for assessing the vulnerability of eco-environmental health to climate change, and will provide valuable information to help identify knowledge and information gaps in the risk assessment of major eco-environmental health hazards.

The University of Western Australia

LP0776626 Dr PF Grierson; Prof MA Adams; Ms S Madden; Mr S White; Dr S van Leeuwen; Mr B Smith; Mr LR Evans

Approved Project Title **Dynamics of woody vegetation and water in the central Pilbara - understanding and managing for environmental change**

2007 : \$ 97,500
2008 : \$ 210,000
2009 : \$ 200,000
2010 : \$ 210,000
2011 : \$ 122,500

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

Pilbara Iron Company (Services) Pty Ltd
BHP Billiton Iron Ore Pty Ltd
Department of Environment and Conservation

Administering Organisation The University of Western Australia

Project Summary

The development and application of technologies and knowledge for enhancing sustainable management of semi-arid environments are of high priority and significant economic, social and environmental benefit. The value of iron ore exports from the Pilbara is expected to grow by nearly 30% in the next year, while the projected production of iron ore over the next 4 years is expected to be valued in excess of 60 billion dollars. However, continued and rapid expansion in the development of these resources is contingent on environmental oversight and adoption of an adaptive management approach. This research will thus make a major contribution to understanding the Pilbara ecosystems that provide tremendous economic wealth for all Australians.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3101 ARCHITECTURE AND URBAN ENVIRONMENT

The University of Melbourne

LP0776850 Ms CL Newton; Dr D Hes; Dr S Wilks; Prof KG Dovey; Dr K Fisher

Approved Project Title **Smart Green Schools: Educational and Environmental Outcomes of Innovation in School Building Design**

2007 : \$ 50,000
2008 : \$ 105,000
2009 : \$ 120,000
2010 : \$ 65,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Department of Education & Training
H2o Architects
McGauran Giannini Soon Pty Ltd
Hayball Leonard Stent
Government architect
Sustainable Built Environments
Mary Featherston Design
Rubida Research
McBride Charles Ryan

Administering Organisation The University of Melbourne

Project Summary

The research touches upon many of the key National Research Priorities. Children spend a large proportion of their waking hours within a school environment. A healthy school environment which efficiently uses energy resources and information technology will help 'strengthen Australia's social economic fabric' in the longer term and support student engagement. Children's inhabitation of virtual space as 'native' users of information rich 'frontier technologies' will be complemented by buildings acting as 3D textbooks educating children about an 'environmentally sustainable Australia' and providing feedback on design innovations intended to save 'water' and 'minimise environment impacts' on land and climate.

The University of New South Wales

LP0776642 Prof WG Randolph; Mr JD Plume; Dr BP Parolin; A/Prof BH Judd

Approved Project Title **An Integrated Information Model to Support Metropolitan Planning, Management and Analysis**

2007 : \$ 107,500
2008 : \$ 206,500
2009 : \$ 125,000
2010 : \$ 26,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Planning
City of Sydney
Landcom
EPM Technology
Simmersion

Administering Organisation The University of New South Wales

Project Summary

This project will be the first in Australia to integrate diverse types of urban data using an open-standard geospatial information model to research the outcomes of major urban renewal proposals in collaboration with both a state and local government planning instrumentalities. Since the issues being addressed are common to every planning body in Australia, the flow-on benefits will be of national significance for future urban planning and management. The research will place Australia at the forefront of international research to improve spatial information management that will inform planning decisions at the local and state level.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

University of Canberra

LP0776248 Dr D Tait; Prof TR Carney; A/Prof J Goodman-Delahunty; Prof CJ Lennard; Prof GW Brawn; Dr GP Battye; A/Prof DA Blackman; Ms AM Wallace; Dr J Robertson; Ms DH Jones; Dr KH Auty; Dr GK Missingham; Adj/Prof RC Refshauge

Approved Project Title Gateways to Justice: improving video-mediated communications for justice participants

2007 : \$ 39,607
2008 : \$ 99,086
2009 : \$ 108,194
2010 : \$ 48,716

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Australian Federal Police
PTW Architects
Department of Justice
Department of the Attorney-General
Production Audio Services Pty Ltd
Jumbo Vision International Pty Ltd
Director of Public Prosecutions
ICE Design Australia Pty Ltd

Administering Organisation University of Canberra

Project Summary

Australia will be better protected from terrorism and crime if courts are able to make effective use of high-quality video evidence, both from scientific experts and from key witnesses who cannot be produced in person for security reasons. Appropriate application of the technology can also increase effective and timely access to justice for other justice participants including indigenous people in remote communities. The project contributes to the take-up of frontier technologies by developing a best practice model for using video testimony in justice settings, and identifying the social and environmental conditions necessary for successful implementation.

University of Technology, Sydney

LP0776904 Dr S Kaji-O'Grady; Dr M Kornberger

Approved Project Title The Architecture of Academic Research

2007 : \$ 30,000
2008 : \$ 60,500
2009 : \$ 30,500

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Woods Bagot

Administering Organisation University of Technology, Sydney

Project Summary

In pursuit of increased and more innovative research there has been substantial expenditure in the construction of research environments yet little independent evaluation of their impact. The results of this project are crucial in determining future best practice in the design and operation of research environments. It will support the Australian design industry to achieve better outcomes in tertiary facilities here and abroad. More broadly, the architectural profession and university sectors will gain critical insights into each other's working methods and needs. Ultimately, this project will help to improve the effectiveness of research in Australian universities.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3102 BUILDING

The University of New South Wales

LP0776421 Prof M Loosemore; A/Prof KM Dunn; Dr FT Phua

Approved Project Title **Managing cultural diversity on Australian construction sites**

2007 :	\$ 35,000
2008 :	\$ 65,000
2009 :	\$ 65,000
2010 :	\$ 35,000

Collaborating/Partner Organisation(s)

Multiplex Construction
Mirvac Group
Baulderstone Hornibrook
DeMartin & Gasparini / Boral
Baseline Constructions
Master Builders Association
Construction, Forestry, Mining, and Energy Union

Administering Organisation The University of New South Wales

Project Summary

This research will help to improve the dismal occupational health and safety record of the Australian construction industry (240% more injuries than all-industry average). It will also help to reduce the relatively high levels of workplace compensation due to occupational injuries and diseases (70% higher than all-industry average). Since construction employs 8% of the working population and generates 6% of GDP, significant economic and social benefits will arise for wider society from a more culturally harmonious, efficient and productive construction industry. Finally, by making construction safer for NESB migrants who are a significant source of labour, this research will help to reduce severe skill shortages.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3199 OTHER ARCHITECTURE, URBAN ENVIRONMENT AND BUILDING

Deakin University

LP0776579 Prof Dr CA Langston; Dr GJ Treloar; Dr C Liu; Dr DJ Beynon; Dr UM de Jong

Approved Project Title **Strategic Assessment of Building Adaptive Reuse Opportunities**

2007 : \$ 35,000
2008 : \$ 70,000
2009 : \$ 70,000
2010 : \$ 35,000

Collaborating/Partner Organisation(s)

Uniting Church in Australia
Williams Boag Architects

Administering Organisation Deakin University

Project Summary

This research will review a large database of existing buildings, many of which have exceeded their useful life. An innovative model will be developed to enable Australia's building and property industries to identify the most viable opportunities for building adaptive reuse. The model will integrate financial, environmental and social sustainability, enabling community stakeholders to make informed decisions with widespread benefits. The research is aligned with the national priority area: An Environmentally Sustainable Australia: Transforming Existing Industries. The expertise developed in this project will be regionally and internationally applicable, providing momentum for the growing adaptive design and conservation market.

RMIT University

LP0776834 Dr R Horne; Prof M Berry; Dr JE Kellett; Prof S Hamnett

Approved Project Title **Lifetime Affordable Housing in Australia: Integrating environmental performance and affordability**

2007 : \$ 54,500
2008 : \$ 113,000
2009 : \$ 115,000
2010 : \$ 56,500

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

VicUrban
Building Commission
LAND MANAGEMENT CORPORATION

Administering Organisation RMIT University

Project Summary

Existing dwellings and the locations of suburban housing with respect to employment centres result in significant greenhouse gas emissions. Water and other environmental issues are also important in housing performance, and there is currently a perceived trade-off between these factors and the affordability of housing. For the first time in Australia, this study will focus on overcoming this apparent policy dilemma. The research will inform future housing policy in strengthening Australia's economic and social fabric, while contributing towards Australia's National Research Priority 1 'Environmentally Sustainable Australia'. Outcomes will provide significant national economic, social, water use and greenhouse gas benefits for Australia.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3203 MEDICAL BIOCHEMISTRY AND CLINICAL CHEMISTRY

The University of Adelaide

LP0776684 Dr BE Forbes; Prof JC Wallace; Dr C Owczarek; Dr E Maraskovsky

Approved Project Title **Development of novel therapies for the treatment of cancer**

2007 : \$ 35,898
2008 : \$ 73,655
2009 : \$ 37,757

Collaborating/Partner Organisation(s)

CSL Limited

Administering Organisation The University of Adelaide

Project Summary

Both aging and obesity are significant risk factors for cancer and are becoming a burden on the health care budget. The proposed novel cancer therapy will improve current cancer treatments by enhancing their efficacy, thereby reducing the required dose and minimizing side effects. Such an outcome would not only benefit the well being of the individual but would achieve significant health care cost savings.

The University of Sydney

LP0776802 A/Prof C O'Neill

Approved Project Title **Development of a non-invasive diagnostic test of Embryo Viability**

2007 : \$ 20,000
2008 : \$ 40,000
2009 : \$ 40,000
2010 : \$ 20,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

COOK Australia Pty Ltd

Administering Organisation The University of Sydney

Project Summary

A successful outcome will:

- . improve the cost effectiveness of assisted reproductive technologies resulting in reduced health care costs and allowing greater use of ART in animal production
- . by greater cost-effectiveness, facilitate greater access to these advanced technologies in less well developed economies
- . build the national capacity in development and validation of biotech diagnostics
- . build collaborative relationship between the CI, University of Sydney and a leading industry partner (Cook Australia)
- . lead to significant new fundamental knowledge in embryology that will be of major International significance

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3205 PHARMACOLOGY AND PHARMACEUTICAL SCIENCES

The University of Sydney

LP0776892 Dr PM Young; A/Prof H Chan; Dr D Traini; A/Prof DF Fletcher

Approved Project Title **Engineering a delivery device and development of a novel formulation for chronic obstructive pulmonary disease and cystic fibrosis**

2007 : \$ 70,000

2008 : \$ 118,500

2009 : \$ 96,500

2010 : \$ 48,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Pharmaxis

Administering Organisation The University of Sydney

Project Summary

This project will position Australia to become one of the world leaders in the treatment of chronic obstructive pulmonary disease (COPD), cystic fibrosis (CF) and other chronic respiratory diseases. The financial burdens of COPD and CF come to at least \$900 million a year in Australia alone. These diseases have significant impact on patients and the health system through regular clinical visits, hospitalisation and employment downtime. The global market for the treatment of COPD is currently more than \$8 billion and is expected to increase substantially. The positioning of an Australian pharmaceutical company at the forefront of COPD/CF treatment will have significant national benefits for patients, the health system, and research infrastructure in the field.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3207 NEUROSCIENCES

The University of Melbourne

LP0776744 Prof T Kilpatrick; Dr V Perreau; Prof SJ Foote; Prof LR Griffiths; A/Prof PA Moscato; Prof RJ Scott; Dr JM Stankovich; Dr JP Rubio; Dr M Bahlo; Dr DR Booth; Dr H Butzkueven; Dr R Heard; Dr J Lechner-Scott; Prof JS Wiley

Approved Project Title **Identifying genes that influence clinical course and susceptibility in multiple sclerosis**

2007 : \$ 135,000
2008 : \$ 200,000
2009 : \$ 65,000

Collaborating/Partner Organisation(s)

Sydney West Area Health Service
John Hunter Hospital
MS Research Australia

Administering Organisation The University of Melbourne

Project Summary

This project aims to identify the genetic basis of multiple sclerosis (MS), the most common neurologic disease in young Australian adults. MS urgently needs research to identify predisposition, aid early diagnosis and provide bona fide molecular targets for new therapies. This will benefit people with MS and those susceptible to it. Crucial new knowledge identified will benefit other major areas of MS research including epidemiology, immunology and neurobiology. Collaboration of 8 major Australian institutions is also important for this project and future studies. The team will have access to a new national MS GeneBank (platform) with samples from 2240 patients that should generate findings important to world-wide MS genetic knowledge.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3210 CLINICAL SCIENCES

The Australian National University

LP0776890 A/Prof TJ Senden; Dr RW Stephens; Dr SK Jones

Approved Project Title **New methods to improve regional isotope therapy of liver tumours in cancer patients**

2007 : \$ 41,000
2008 : \$ 82,000
2009 : \$ 41,000

Collaborating/Partner Organisation(s)

Sirtex Technology Pty Ltd

Administering Organisation The Australian National University

Project Summary

The most common cause of death in cancer patients is secondary tumours in vital organs. Successful treatment of liver tumours with regional isotope therapy now offers improved survival rates. This project will research novel radiolabelled nanoparticles and advanced computer imaging algorithms to improve regional isotope therapy of liver tumours. It will provide better methods of objective assessment and management that can reduce risk and improve patient survival.

The University of Queensland

LP0776294 Dr JM Fleming; Prof LE Worrall; Dr PL Cornwell; Dr TP Haines; Dr T Ownsworth; Miss MB Kendall; Prof LI Chenoweth

Approved Project Title **Determinants of successful community transition for individuals with acquired brain injury and their families**

2007 : \$ 19,769
2008 : \$ 39,539
2009 : \$ 33,994
2010 : \$ 14,225

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Disability Services Queensland

Acquired Brain Injury Outreach Service

Administering Organisation The University of Queensland

Project Summary

Transition home following acquired brain injury (ABI) is a critical phase in which individuals and families are vulnerable. Unsuccessful transitions are characterised by events such as financial crisis, family breakdown, loss of work, social isolation, and institutionalisation. ABI does not discriminate, but there is a higher rate in Indigenous, rural and remote communities and amongst younger people. The societal impact of ABI includes loss of income and livelihood, health and welfare dependence, and long-term accommodation support. Research into the determinants of successful transition will alleviate the personal, social and economic burden of ABI and inform policy and program priorities for appropriate Australian Government bodies.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

University of Western Sydney

LP0776482 A/Prof TJ Millar; Prof J Bartlett; Dr HA Ketelson

Approved Project Title **Investigation of the structure of the pre-ocular tear film**

2007 : \$ 90,000
2008 : \$ 172,500
2009 : \$ 175,000
2010 : \$ 92,500

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Alcon Inc.

Administering Organisation University of Western Sydney

Project Summary

Eye care is critical to the elderly e.g. over 50% can expect to suffer from dry-eye which inhibits productivity and independence. Eye-drops are often used for treatment and development of drops will improve the well-being and productivity of the elderly. Formulation of eye-drops is complex because they must be comfortable, easy to use, and preserve the active agent. Better formulations will benefit people both medically and financially. It will lead to more compliance, and thus maintain the independence of and productivity of older people. This will increase the market share and the financial gains will be fed back to the community. This project will also train scientists in industrial production and marketing.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3212 PUBLIC HEALTH AND HEALTH SERVICES

La Trobe University

LP0776269 Prof V Lin; Prof BF Oldenburg; Prof WD Hall; Prof RA McDermott; Prof K Eagar; A/Prof M Fleming; A/Prof DG Legge; Dr DL O'Neill; Dr DR Filby; Prof A Wilson; Mr I Thompson

Approved Project Title **Developing new methods for building health policy capacity in Australia**

2007 : \$ 20,378
2008 : \$ 62,688
2009 : \$ 84,530
2010 : \$ 42,220

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Health (South Australia)

Queensland Health

ACT Health

Administering Organisation La Trobe University

Project Summary

This project will contribute to improving the capacity for policy analysis, development and evaluation in the health policy workforce and state health jurisdictions in this country. Building health policy capacity will enable the Australian health system to more effectively address current and emerging challenges including an ageing population, increasing incidence of chronic disease, pressures for cost containment, continuing poor Aboriginal health and emerging threats to Australia's public health, health security and National Health Strategy.

Macquarie University

LP0776485 Dr ML Power; Dr BC Ferrari; Dr PJ Beggs; A/Prof UM Ryan; Ms J Musto

Approved Project Title **Molecular Ecology of Cryptosporidium in Rural and Urban NSW**

2007 : \$ 36,039
2008 : \$ 74,055
2009 : \$ 78,487
2010 : \$ 40,471

Collaborating/Partner Organisation(s)

NSW Health

Administering Organisation Macquarie University

Project Summary

Cryptosporidiosis is of particular concern in rural NSW. Significant increases in the incidence of cryptosporidiosis coupled with repeated outbreaks in regional areas demonstrate a need for improved management strategies. This project will identify transmission patterns of this disease relevant to the Australian environment, which is essential for future control. The reduction of economic costs for medical treatment of cryptosporidiosis and improved on-farm management through control of Cryptosporidium transmission from farm animals are significant to public health and of national and community benefit. The primary national benefit will be improved rural community health through prevention of cryptosporidiosis outbreaks.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

Murdoch University

LP0776722 Prof A McMurray; Prof F Stanley; Prof B Down; Dr PA Stumbles; A/Prof GE Kendall; Prof BJ Waddell; Dr M Sims; Dr P Franklin; Ms DA Shaw; Mr SJ Smith; Ms FK Skelton; Ms J Pitcher; Dr E Mattes; Prof C Michael

Approved Project Title **Our Children, Our Families, Our Place: Enabling Communities for Child Health and Wellbeing.**

2007 : \$ 54,090
2008 : \$ 104,090
2009 : \$ 120,000
2010 : \$ 114,000
2011 : \$ 44,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

WA Department of Health
WA Department of Education and Training
Peel Health Foundation
Department of Health and Ageing
Department of Transport and Regional Services
Department of Education, Science and Training
Department of Family and Community Services and Indigenous Affairs
St John of God Health Services

Administering Organisation Murdoch University

Project Summary

This study focuses on community capacity building, participation and reciprocal knowledge development, early prevention and intervention, and multi-tiered intersectoral collaboration to ensure efficient use of resources and maximise positive outcomes for children. The project is set in the Peel Region of WA, among the fastest growth areas in Australia with sufficient sub-populations of interest to enable innovative multilevel statistical modelling techniques to inform other regions across Australia. In addition, the study will implement and evaluate a suite of interventions.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

Queensland University of Technology

LP0776881 Prof NL Haworth; Dr AJ Lennon; Prof MC Sheehan; Mr J Wikman

Approved Project Title Improving child safety in cars

2007 : \$ 13,917
2008 : \$ 29,440
2009 : \$ 29,828
2010 : \$ 14,305

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Royal Automobile Club of Queensland (RACQ)

Administering Organisation Queensland University of Technology

Project Summary

This study aims to reduce the number of children killed and injured as passengers in car crashes. These deaths and injuries currently impose huge social and emotional costs on the community and the families involved. Any injury will compromise child health and development, and many result in temporary or long-term disability and care needs. From an economic viewpoint alone, child passenger fatalities and injuries have been conservatively estimated to cost in excess of \$400 million per year. Thus, this research will contribute to both social and economic savings and contribute to better health outcomes for the nation's children

LP0776558 A/Prof R Schweitzer; Dr M Brough; Ms P Peterson; Mr JG Forrest

Approved Project Title Whole-of-family treatment of trauma in African refugees: an individual, family and community approach.

2007 : \$ 16,592
2008 : \$ 33,850
2009 : \$ 36,361
2010 : \$ 19,103

Collaborating/Partner Organisation(s)

Queensland Program of Assistance to Survivors of Torture and Trauma

Administering Organisation Queensland University of Technology

Project Summary

This project will strengthen Australian social, family and community life for refugee and humanitarian entrants by addressing individual, family and community impacts of torture and trauma. The project's uniqueness arises from its specific emphasis on individual cultural sensitivity, using counselling methods consistent with a refugee world view.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

The Flinders University of South Australia

LP0776426 Prof J Wakerman; A/Prof MF Dollard; Prof SV Dunn; Ms S Knight; Dr ML MacLeod; Mr G Rickard

Approved Project Title **Back from the Edge: Reducing and Preventing Occupational Stress in the Remote Area Nursing Workforce**

2007 : \$ 61,879
2008 : \$ 123,330
2009 : \$ 115,352
2010 : \$ 117,513
2011 : \$ 63,612

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Council of Remote Area Nurses of Australia

Northern Territory Department of Health and Community Services

Australian Government Department of Health and Ageing

Administering Organisation The Flinders University of South Australia

Project Summary

This study will improve services to remote Australia, particularly remote Indigenous communities. Three percent of the population is dispersed across this large area which is characterized by a high proportion of Indigenous people, poorer health outcomes and lower socio-economic status. The study will generate new knowledge and specific stress-reduction interventions in the workforce. These will improve retention in the remote area nursing workforce and thereby benefit employers through reductions in recruitment costs and sick leave. A stable workforce will improve service quality. Other benefits will include improved continuity of care, greater client focus and ultimately improved health outcomes.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Melbourne

LP0776573 Prof CF Humphreys; Dr CS Ross; Prof JR Wiseman; Dr M Frere; Dr CJ Laming; Dr KM Crinall; Ms C Nixon; Dr CL Gassner; Ms JE Griffith; Mr T Healy; Dr J Bennett; Ms C Asquini

Approved Project Title **Family Violence Reform: Using knowledge to develop and integrate policy and practice**

2007 :	\$ 45,000
2008 :	\$ 85,674
2009 :	\$ 97,094
2010 :	\$ 108,084
2011 :	\$ 89,664
2012 :	\$ 38,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Victoria Police
Dept of Human Services
DOJ
Dept of Victorian Communities

Administering Organisation The University of Melbourne

Project Summary

Family violence is a serious threat to the health and well-being of women, children and some men, costing the economy an estimated \$8.1 billion annually. This research will address national 'hot' issues, including: the effectiveness of removing perpetrators and keeping children and women in their homes; whether the early referral of children to community services impacts on the statutory child protection system; the integration of criminal and civil justice responses; and the effectiveness of multi-disciplinary governance arrangements in metropolitan and rural regions. The research will provide continuous feedback to policy makers and practitioners, and will establish Australia as a world leader in delivering family safety.

LP0776809 Dr AJ Jones; Dr AB McDougall; Ms MA Robertson

Approved Project Title **An Investigation into Strategies for using Information and Communication Technologies to Address Educational Disadvantage Resulting from Prolonged School Absence**

2007 :	\$ 26,000
2008 :	\$ 50,000
2009 :	\$ 41,000
2010 :	\$ 17,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

RCH Education Institute

Administering Organisation The University of Melbourne

Project Summary

A framework of information and communication technology (ICT) types and uses relating to accessibility problems caused by illness and recuperation will be developed. Working with 30 secondary students from a major children's hospital, teachers and hospital educators, the researchers will develop, implement and evaluate communications strategies, support structures and continuing professional development programs for effective elearning. Outcomes will aid students whose education is disrupted through illness and absence, with consequential benefits to them, the community and nation. This project focuses on students absent due to illness or accident, but has potential benefit for other students absent from school for extended periods.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

LP0776287 Dr RH Osborne; A/Prof R Buchbinder; A/Prof L March; Prof IP Wicks; Dr IN Ackerman

Approved Project Title **The consequences of osteoarthritis in Australia: Work productivity loss and health service utilisation**

2007 : \$ 60,000

2008 : \$ 109,000

2009 : \$ 61,813

2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Commonwealth Department of Health and Ageing

Administering Organisation The University of Melbourne

Project Summary

This project will determine the burden of osteoarthritis in Australia. Although osteoarthritis is one of the most common and costly conditions affecting the developed world, little is known about the number of Australians living with hip or knee osteoarthritis, the population need for health services or the impact of the condition on the workforce. Directly addressing Australia's National Action Plan for Arthritis, this research will be used by health policy makers in planning future resources to appropriately meet the needs of people with osteoarthritis. This work is of national importance because osteoarthritis is the single largest cause of workplace disability and a major contributor to lost productivity.

LP0776733 Dr AG White; Dr KF Jones; Dr E Koh; Dr N Veis

Approved Project Title **Framing Marginal Art: Developing an ethical, multi-dimensional framework for exhibiting art by people who experience mental illness and/or psychological trauma.**

2007 : \$ 26,470

2008 : \$ 36,470

2009 : \$ 10,000

Collaborating/Partner Organisation(s)

Cunningham Dax Collection

Museum Victoria

Mental Health Foundation of Australia (Victoria)

Administering Organisation The University of Melbourne

Project Summary

This project develops an ethical, multi-dimensional framework for exhibiting creative works by people who experience mental illness and/or psychological trauma. Providing such a framework will enable these works to be exhibited ethically, which will serve the public interest by enhancing the contribution of creative programs to individual and social well-being. Furthermore, by educating the public about mental ill-health it lessens stigma and encourages those affected by illness to seek early, preventive treatment. This project, which leads to better understanding of illnesses that affect one-fifth of the population in their lifetime, will create better health outcomes for significant numbers of Australians.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Queensland

LP0776879 Prof JM Najman; Mr RJ Kemp; Dr ML Legosz

Approved Project Title **Drug Use by a Community Sample of Young Amphetamine Users in South-East Queensland - A Longitudinal Study**

2007 : \$ 59,627
 2008 : \$ 124,399
 2009 : \$ 131,272
 2010 : \$ 66,500

Collaborating/Partner Organisation(s)

Queensland Health
 Crime and Misconduct Commission

Administering Organisation The University of Queensland

Project Summary

Drug use can impact on the national well being in a multitude of ways. In 1998-1999 the fiscal cost of licit and illicit drug use was estimated to be \$34.4 billion, while drug-related crime is estimated to cost Australia \$1.96 billion annually. This study is valuable in its capacity to inform evidence-based policy and practice addressing amphetamine uptake and amphetamine use trajectories and harms. This has implications for developing strategies to enable young Australians to make healthy choices regarding amphetamine and other drug use, and for the broader economic and social benefits arising from healthy and productive individuals, families and communities.

University of South Australia

LP0776922 Prof PR Howe; Prof R Young; Dr N Sinn

Approved Project Title **Cognitive and behavioural benefits of omega-3 fatty acid supplementation across the lifespan**

2007 : \$ 38,524
 2008 : \$ 77,049
 2009 : \$ 77,049
 2010 : \$ 38,524

APDI Dr N Sinn

Collaborating/Partner Organisation(s)

Novasel Australia Pty Ltd

Administering Organisation University of South Australia

Project Summary

The Australian Bureau of Statistics recently estimated that 7-19% of children have learning and behaviour problems associated with child ADHD. Concurrently, rates of dementia are rapidly increasing worldwide, currently costing the Australian government \$6.6 billion pa, and it has been predicted that rates of dementia could double every 20 years. If omega-3 PUFA research can show benefits in cognition and behaviour across the lifespan, this has potential benefit for fish oil products and their ability to enhance mental health and cognitive outcomes, thereby helping to lower the substantial social and health care costs associated with poor academic performance, mental illness and growing rates of dementia.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3214 HUMAN MOVEMENT AND SPORTS SCIENCE

Australian Catholic University

LP0776456 Dr DA Greene; Dr EJ Bradshaw; A/Prof GA Naughton; A/Prof MB Andersen; Prof D Courteix; Mr MA Kinchington

Approved Project Title **Tracking the musculoskeletal health and performance of talented adolescent female athletes**

2007 : \$ 39,309

2008 : \$ 52,122

2009 : \$ 25,827

2010 : \$ 13,013

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

New South Wales Institute of Sport
New South Wales Sporting Injuries Committee
Gymnastics Australia
Athletics Australia
Water Polo New South Wales

Administering Organisation Australian Catholic University

Project Summary

The vision is to gain an innovative understanding of risk factors for the early detection or prevention of injury, and to identify factors that promote participation longevity in young athletes. The biomechanics explored in this study will provide a basis for larger studies in future years. Large economic and social benefits can be gained from increased knowledge of injury prevention early in life. Lowered injury costs provide immediate cost benefits to the nation. Ultimately, in a nation familiar with the high costs of cardiovascular and musculoskeletal diseases, the health sector of Australia will be the greatest benefactor of this project.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3301 EDUCATION STUDIES

Central Queensland University

LP0777022 Dr RE Harreveld; Prof M Singh

Approved Project Title **Multi-level leadership for engaging young people through innovations in senior learning:
Brokering socio-economically aligned learning and work**

2007 : \$ 17,500
2008 : \$ 36,500
2009 : \$ 39,000
2010 : \$ 20,000

Collaborating/Partner Organisation(s)

Dept of Education, Training & the Arts - Strategic Implementation Branch

Administering Organisation Central Queensland University

Project Summary

This research will provide new evidence about the conditions and actions that are favourable to innovation leadership. The project will contribute to Australia's efforts to promote cultural and economic innovation through its exploration of innovation leadership in the 'brokering of integrated, socio-economically aligned learning and work'. It will benefit Australian policy makers working to re-articulate the links between education, training and work, and advance conceptual knowledge of the leadership capacities required for multi-level, large-scale, cross-sectoral innovations in non-school-centric innovations in the senior phases of learning.

Monash University

LP0776363 Dr JM Deppeler; Dr JM Mitchell; Dr JM Ryan

Approved Project Title **Using Data for School Change: Improving Literacy Achievement In Secondary Schools**

2007 : \$ 30,000
2008 : \$ 80,000
2009 : \$ 97,500
2010 : \$ 47,500

Collaborating/Partner Organisation(s)

Catholic Education Office, Melbourne

Administering Organisation Monash University

Project Summary

Highly effective schools and improved outcomes for all students are key objectives of the Australian Government. A central equity issue and key goal is to improve outcomes of Australia's most educationally disadvantaged students, including those with disabilities and others who are at risk of not achieving national benchmarks of literacy. The proposed project has the potential to make a strong contribution to national benefits by developing a model for improving literacy achievement and by providing new data on the future likely requirements of 21st century educational systems and schools which will play a leading role in promoting Australia's educational standards and priorities.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

University of Western Sydney

LP0776977 Prof RG Craven; Dr AS Yeung; Dr GE Munns; Dr P Cavanagh; Prof JH Lester; Dr B Davies

Approved Project Title **Seeding Success and Research-Based Intervention for Aboriginal Students: Impact of quality teaching, effective schools, and psycho-social drivers on educational outcomes**

2007 : \$ 45,000
2008 : \$ 85,000
2009 : \$ 107,500
2010 : \$ 67,500

Collaborating/Partner Organisation(s)

Department of Education and Training

Administering Organisation University of Western Sydney

Project Summary

Aboriginal students are educationally disadvantaged. This research offers important educational & social benefits. Elucidating the impact of quality teaching, effective schooling, and drivers of life potential on educational outcomes not attained by generations of Aboriginal Australians will identify potent practical strategies that seed success. The outcomes of this research have the potential to 'break the cycle' of underachievement by generating new solutions to: strengthen schooling; shape a better future for Aboriginal students by enabling students to reach their full potential; build capacity at community, school, classroom, and individual levels; and providing educators with best available practice effective strategies for doing so.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

3302 CURRICULUM STUDIES

Griffith University

LP0776515 Prof RL Zevenbergen; Prof PA Sullivan; Prof S Lerman; Dr J Boaler

Approved Project Title **Enhancing mathematical learning for Indigenous students in remote communities: A design research approach**

2007 :	\$ 20,840
2008 :	\$ 63,340
2009 :	\$ 85,000
2010 :	\$ 61,488
2011 :	\$ 18,988

Collaborating/Partner Organisation(s)

Association of Independent Schools of Western Australia

Administering Organisation Griffith University

Project Summary

Students attending schools in remote community schools need to have quality learning practices that are sustainable in hard-to-staff regions. Indigenous students are not performing at acceptable levels in many measures of mathematical achievement so the project is of national significance in addressing this social phenomenon. The cultural-mathematical approach of the project is novel and offers new potential for learning. The project takes a holistic approach to this issue to include teachers, students and Aboriginal Education Workers in a partnership of learning mathematics. The principles developed through this project can be applied to learners and learning mathematics in other contexts.

The University of Sydney

LP0776843 A/Prof AJ Martin; Dr JM Bobis; Dr JA Anderson; Dr JA Way; Mr A Fraser

Approved Project Title **Middle Years Transition, Engagement and Achievement in Mathematics - The MYTEAM Project**

2007 :	\$ 22,000
2008 :	\$ 43,500
2009 :	\$ 46,000
2010 :	\$ 24,500

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Catholic Education Office, Sydney

Administering Organisation The University of Sydney

Project Summary

It is a Commonwealth policy objective that all students attain essential numeracy skills. In reality, 30% of 15 year olds do not attain these skills. Alongside this are declining enrolments in mathematics, a trend away from advanced mathematics courses, and an emerging 'skills shortage' in mathematics-related pathways. The MYTEAM project provides new solutions to national problems associated with disengagement, under-participation and underperformance in mathematics and empowers more individuals to aspire to and realise mathematics-related employment opportunities. Addressing such a shortfall in the labour market will have a positive impact on the future economy, the nation's social well-being, and individuals' pathways beyond school.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3303 PROFESSIONAL DEVELOPMENT OF TEACHERS

The University of Melbourne

LP0776747 Prof GM MacNaughton; Prof EH Wertheim; Ms EA Freeman

Approved Project Title **Creating Culturally Respectful Primary Schools: Enhancing Relationships through Strategic Professional Learning**

2007 : \$ 30,000
2008 : \$ 60,000
2009 : \$ 30,000

Collaborating/Partner Organisation(s)

Scanlon Foundation
 Australian Psychological Society
 Catholic Education Office Melbourne
 Haig Street Primary School
 St Anthony's Primary School

Administering Organisation The University of Melbourne

Project Summary

A critical issue facing Australian school communities is how to best support teachers to build sustainable whole school approaches to respecting cultural diversity in times of increasing tension about Australia's multiculturalism. This project will investigate an innovative professional learning program to build teacher capacity to help children to think about and respond to differences constructively and to creatively problem solve ways to meet diverse needs. Outcomes will include policy and practice recommendations for the national education sector policy about how primary schools can contribute to wider social cohesion through the development of inclusive and culturally respectful school communities.

LP0776936 Dr MD Mulcahy; Ms JA Kriewaldt; Prof DJ Clarke; Mr JN Hutchinson; Ms AL Dempster; Ms FA Cosgrove

Approved Project Title **Strengthening Standards of Teaching through Linking Standards and Teacher Learning: The Development of Professional Standards for Teaching School Geography**

2007 : \$ 25,000
2008 : \$ 53,000
2009 : \$ 42,500
2010 : \$ 14,500

Collaborating/Partner Organisation(s)

Australian Geography Teachers Association
 Geography Teachers' Association of Victoria
 Victorian Institute of Teaching

Administering Organisation The University of Melbourne

Project Summary

This research project will advance the Commonwealth Government's social and economic agenda by addressing the national strategy to raise the quality of teachers and the status of teaching. In seeking to improve the practice of geography teaching in schools, it will also address, albeit indirectly, the national research priority of achieving an environmentally sustainable Australia. Teaching standards and associated professional learning resources that can enable improvement of this practice are an important tool for teachers in both metropolitan and rural settings, Australia-wide. This project addresses a significant need to contribute to the development of ways of bridging the gap between teaching standards and teacher learning.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

The University of Queensland

LP0776703 Dr KM Makar

Approved **Elaborating a model of learning to teach mathematical inquiry**

Project Title

2007 : \$ 19,000

2008 : \$ 38,000

2009 : \$ 19,000

Collaborating/Partner Organisation(s)

Jindalee State School

Lowood State School

Administering Organisation The University of Queensland

Project Summary

Australia's pioneering workforce in scientific and technological innovation requires classrooms which promote creative and flexible thinking, curiosity and persistence, deep disciplinary knowledge, and facility with technology, particularly in mathematics. International comparisons indicate Australia's classrooms teach out-dated procedural knowledge in maths that neglects 21st century needs. Mathematical knowledge developed through inquiry of authentic problems can provide purpose and deeper understanding as well as to cultivate capacity to grapple with uncertainty and greater complexity. This project is a university-schools partnership committed to the same purpose: promote the teaching of mathematical inquiry.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

3399 OTHER EDUCATION

Griffith University

LP0776519 A/Prof BJ Bartlett; Mr IC Thomas

Approved Project Title **Reconnecting Disaffected Youth through Successful Transition to Work**

2007 : \$ 32,500
2008 : \$ 65,000
2009 : \$ 62,500
2010 : \$ 30,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BoysTown

Administering Organisation Griffith University

Project Summary

According to the ABS (2006) more than 15% of Australia's youth receives employment benefits at a cost that the Department of Family and Community Services (2000) estimated between \$44 000 and \$46 000/person/year. High rates of offending and repeat arrests are prevalent within the group at a cost to the youth concerned and to the nation. The Productivity Commission estimated in 2004 that outlay to keep someone in prison was between \$67,000 and \$85,000 per year. We seek to short-circuit the human and economic costs of the failure cycle by improving individuals' capacities to gain and retain work, and to have healthy lifestyles and positive self-concept, and thereby to contribute to their positive participation in society.

The University of Queensland

LP0776270 Prof GA Jull; A/Prof RF Peterson; A/Prof VM O'Connor; Prof JM McMeeken; Ms FC Blackstock; Dr N Morris; Prof A Wright; Ms AL Jones; Dr D Rivett; Dr TP Haines

Approved Project Title **Innovations in Clinical Education for Physiotherapy Students**

2007 : \$ 112,000
2008 : \$ 274,500
2009 : \$ 267,500
2010 : \$ 105,000

Collaborating/Partner Organisation(s)

LAERDAL Pty Ltd
Physiotherapists Board of Queensland
Australian Physiotherapy Council
NSW Physiotherapists Registration Board
Queensland Health Skills Development Centre
Queensland Health
Australian Physiotherapy Association
John Hunter Hospital
St Vincents Health Education Centre
Department of Health, Western Australia
NSW Department of Health
Department of Human Services

Administering Organisation The University of Queensland

Project Summary

Australia has workforce shortages and an ageing population. Physiotherapists are key players in promoting and maintaining good health through their leadership in physical activity and rehabilitation to retain Australians in the workforce and to ensure quality of life for our ageing population. There is a national shortage of physiotherapists. Increasing numbers of physiotherapists are being trained, requiring new models of clinical training as there is no capacity in conventional training to cope with student numbers. This research will develop and evaluate new models of training incorporating standardised patients (actors) and simulators (mannequins) which increase education capacity. Models are transferable to other health professions.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3402 APPLIED ECONOMICS

Monash University

LP0776491 Prof OK Tam; A/Prof J Chen; Prof JM Godfrey; Prof G Palmer

Approved Project Title **Improving Corporate Governance in China's Largest 166 State-Owned Central Enterprise Groups**

2007 : \$ 25,000

2008 : \$ 52,000

2009 : \$ 49,446

2010 : \$ 22,446

Collaborating/Partner Organisation(s)

China Finance Association, Ministry of Finance, People's Republic of China

Administering Organisation Monash University

Project Summary

This is a pioneering study that takes advantage of a unique research opportunity for Australian researchers to be at the forefront of research in the corporate governance of China's largest 166 state-owned central enterprises with which the Australia business sector is increasingly engaged in both trade and investment.

The project will allow Australians to play a leading role in shaping a major reform in our second most important trading partner and will enhance Australian knowledge of impending trends in strategic areas of mutual interest. It will arm Australia with greater understanding of its many faceted engagements with China.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The Australian National University

LP0776940 Prof JR Butler; A/Prof LB Connelly

Approved Project Title Motor vehicle injuries: economic evaluation of a new treatment modality

2007 : \$ 14,539
2008 : \$ 29,079
2009 : \$ 29,079
2010 : \$ 14,539

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

NRMA - ACT Road Safety Trust

Administering Organisation The Australian National University

Project Summary

The management of injured persons following motor vehicle accidents is a serious health issue in Australia, with over 60,000 minor injuries and 20,000 major injuries occurring annually. This project will provide a cost-effectiveness analysis of a new multidisciplinary approach to managing minor injuries by utilising data from the Accident Care Evaluation (ACE) trial of a new clinic being tested for this purpose.

LP0776706 Prof PD Drysdale; Prof AJ MacIntyre; Prof R Jha; Dr L Song; Prof C Athukorala; Prof W Maley; Dr S Howes; Dr C Bowman

Approved Project Title South Asian and East Asian economic integration and Australia: strategies for Asian regional cooperation

2007 : \$ 70,000
2008 : \$ 136,500
2009 : \$ 151,500
2010 : \$ 110,000
2011 : \$ 63,500
2012 : \$ 38,500

Collaborating/Partner Organisation(s)

AusAID

Administering Organisation The Australian National University

Project Summary

Australia has a vital interest in India's rise, its impact on South Asia's development and its integration with South and East Asia. The limited knowledge and the thinness of the intellectual base and institutional connections that would allow us to manage our interests in this event effectively mean that Australia is not yet well positioned to influence the forces and the thinking that will drive the process. Moving to explore the phenomenon of South Asia's development and aspirations in Asia and globally, is now a priority for Australia as other economies move to take up the opportunities that are unfolding from this development. This is a ground-breaking project that will address these deficiencies.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Melbourne

LP0776894 Dr R Scutella; Dr RK Wilkins; Prof K Mavromaras; Prof P Gregg; Dr J Wadsworth; Mr DJ Perkins

Approved Job retention and advancement of disadvantaged job-seekers

Project Title

2007 :	\$ 28,765
2008 :	\$ 53,765
2009 :	\$ 50,500
2010 :	\$ 44,644
2011 :	\$ 19,144

Collaborating/Partner Organisation(s)

Brotherhood of St Laurence

Administering Organisation The University of Melbourne

Project Summary

This project will use empirical methods to help determine what is necessary for job retainment and career advancement of disadvantaged jobseekers. Job retainment and advancement are essential to prolonged workforce participation and the development of human capital of disadvantaged jobseekers re-entering the workforce. Understanding and supporting the drivers of workforce participation is identified as a National Research Priority. Therefore, the project findings will be of considerable importance to employment policy development in Australia to help ensure that future policy developments improve the human capital of disadvantaged entrants to the labour market and alleviate longer-term poverty and social exclusion.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

3502 BUSINESS AND MANAGEMENT

Macquarie University

LP0776828 A/Prof S Cuganesan; Prof RW Dunford; Prof IC Palmer

Approved Project Title **Flexible Forms of Organising, Management Control Systems and Performance in Organisations Fighting Serious and Organised Crime**

2007 : \$ 82,000
2008 : \$ 157,000
2009 : \$ 155,500
2010 : \$ 80,500

Collaborating/Partner Organisation(s)

Australian Crime Commission
Victoria Police

Administering Organisation Macquarie University

Project Summary

The criminal networks behind serious and organised crime are becoming more fluid and flexible. In response, law enforcement organisations are creating flexible structural arrangements and experimenting with management control systems to balance the need for both flexibility and control. This research will identify combinations of structure and management controls most suited to this task. Subsequent benefits will flow to the community/nation through more effective and efficient policing of serious and organised crime. More broadly, organisations in fast changing business environments will benefit by understanding how to design and manage their structure and management control systems to enhance performance.

Queensland University of Technology

LP0776845 Prof P Davidsson; A/Prof PR Steffens; Dr S Terjesen; Dr JR Fitzsimmons; Dr T Baker

Approved Project Title **Firm Early Development and Performance (FEDP): A Panel Study**

2007 : \$ 50,500
2008 : \$ 82,000
2009 : \$ 63,466
2010 : \$ 49,366
2011 : \$ 17,400

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

National Australia Bank
BDO Kendalls

Administering Organisation Queensland University of Technology

Project Summary

Research in several developed economies has shown that small, independent firms - and especially the new entries - contribute disproportionately to innovation, job creation and regional economic well-being. The project will substantially improve our understanding of successful development pathways across a range of contexts facing young Australian firms, and ultimately lead to improved business outcomes and economic and social benefits. In contribution to NRP 3.5, promoting an innovation culture and economy, high-technology firms will be over-sampled and given particular attention. The research is part of a strategy to create a world class research centre in entrepreneurship.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of New South Wales

LP0776781 Prof SJ Frenkel; Dr M Groth

Approved Project Title **Managing Call Centres: A Study of Management Practices, Work and Outcomes**

2007 : \$ 31,439

2008 : \$ 67,725

2009 : \$ 36,286

Collaborating/Partner Organisation(s)

AMP Customer Service

National Australia Bank

Administering Organisation The University of New South Wales

Project Summary

The study offers three types of benefits. First, improvements in management practice. By highlighting variations in management practice and its effects, training materials will be developed to improve call centre management capability. Second, we aim to fill a gap that currently exists in developing employee skills in managing emotions at work. This will reduce job burnout and labour turnover and help to maintain the industry's international competitiveness which is threatened by offshore competition. Third, government policy making will be better informed by highlighting the impact of current institutional arrangements on employment relations and performance.

The University of Queensland

LP0776272 Dr S Liu; Dr JR Smith; Dr R Yi; Prof C Gallois; Prof PW Liesch; Ms SK Daly

Approved Project Title **Through the eyes of the Chinese: Attitudes to and opinions of Australia and their influence on Sino-Australian business exchange**

2007 : \$ 19,830

2008 : \$ 39,642

2009 : \$ 39,991

2010 : \$ 20,179

Collaborating/Partner Organisation(s)

SD Consulting

Queensland Government

Commerce Queensland

Administering Organisation The University of Queensland

Project Summary

The outcomes of this research will have significant policy implications for the Australian government and business sectors in terms of improving intercultural understanding, facilitating bilateral trade, unlocking the potential of the Chinese market, as well as increasing economic efficiency. The capacity of Australian businesses to engage with China will be substantially improved by enhancing our knowledge base about the individual, social, and national factors that facilitate and inhibit engagement in Sino-Australian business relations and exchange. Findings from this research will also inform the international development in education and training, tourism and technology in Australia.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Sydney

LP0776814 Dr M Cavanagh; Dr PW Atkins; Dr AM Grant; Mr GB Spence

Approved Project Title Developing leadership for high stress workplaces: Improving well-being, engagement, productivity and staff retention

2007 : \$ 130,937

2008 : \$ 218,587

2009 : \$ 193,100

2010 : \$ 105,450

APA(I) Award(s): 2

APDI Mr GB Spence

Collaborating/Partner Organisation(s)

Blake Dawson Waldron, Lawyers

Northern Hospital Network of the South Eastern Sydney and Illawarra Area Health Service

Administering Organisation The University of Sydney

Project Summary

Workplaces today are increasingly complex. The ageing of the workforce, growing economic pressure and increasing employee mobility make the ability of organisations to attract, develop and retain talented staff critical issues for Australian industry. Staff stress costs the economy tens of billions of dollars a year. This project focuses on the measurement and development of leader's ability to take sophisticated perspectives on complex events, and in so doing open new possibilities for effective action. By developing models, tools and training methods to enhance this ability in managers, we aim to make an important contribution economic sustainability and employee well-being in Australia and internationally.

University of South Australia

LP0776939 Prof AH Winefield; A/Prof MF Dollard; A/Prof C Provis; Mr QC Black; Mr D Farrell

Approved Project Title Developing and testing a best practice model of enterprise bargaining in the retail sector

2007 : \$ 34,179

2008 : \$ 70,256

2009 : \$ 73,056

2010 : \$ 36,980

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Shop, Distributive and Allied Employees Association

Administering Organisation University of South Australia

Project Summary

Recently, the Australian labour market has seen a decrease in the manufacturing sector and an increase in the retail sector. The SDA with over 230,000 members is the largest trade and industrial union in Australia. It negotiates EB Agreements on behalf of employees. This research will assess improved job satisfaction and job conditions - a key EB goal, which will have tangible benefits in reducing turnover of retail sector employees, recognised as a major problem for employers. This research will enhance effectiveness for unions and employers in the implementation of agreements commensurate with the needs of employees, the findings of which will have broad applicability across Australian industry

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

University of Wollongong

LP0776569 Prof Dr S Dolnicar; Prof Dr JR Rossiter; Dr J Ciarrochi; Mr AB Munro; Mr MS Gunasekara; Ms DJ Neveling

Approved Project Title Identifying, attracting and retaining successful foster parents.

2007 :	\$ 45,000
2008 :	\$ 85,000
2009 :	\$ 80,000
2010 :	\$ 85,000
2011 :	\$ 115,000
2012 :	\$ 70,000

Collaborating/Partner Organisation(s)

CareSouth

Administering Organisation University of Wollongong

Project Summary

This research project will improve Australian foster care systems. By developing tools to identify, attract and retain successful foster parents more effectively we will address two critical problems facing foster care organisations: decreasing numbers of foster parents and increasing numbers of 'placement breakdowns'. Improvements of these factors will (1) give foster children a more positive and healthier start to life; (2) reduce the extent to which foster children develop antisocial and emotional attachment problems; (3) reduce the incidence of criminal and antisocial behaviours among foster children; and consequently (4) have a positive long-term effect on the social fabric of Australia.

LP0776729 Dr PR Massingham; Cmdr R Longbottom; Mr RA Duggan

Approved Project Title Measuring and Managing the Impact of Lost Organisational Knowledge

2007 :	\$ 30,000
2008 :	\$ 60,000
2009 :	\$ 60,000
2010 :	\$ 30,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Defence

Administering Organisation University of Wollongong

Project Summary

This research should produce significant economic and social benefits for many sectors, and the theoretical model potentially has practical benefits for all organisations. It addresses a widespread problem across the public service: the country's ageing demographic, which is affecting its efficiency and sustainability. It will improve the Royal Australian Navy's capacity to maintain national security, and help it to manage industry better. This will create cost savings and improve risk management, and thereby also contribute to one of the ARC's priority research areas: Safeguarding Australia.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3504 TRANSPORTATION

The University of Sydney

LP0776308 Prof MR Stevenson; Prof R Norton; Dr R Ivers; Prof RR Grunstein; A/Prof AM Williamson; Prof
NL Haworth; Dr L Meuleners

Approved **Safety in the Heavy Vehicle Industry: A Collaborative Response**

Project Title

2007 : \$ 67,155

2008 : \$ 134,310

2009 : \$ 149,310

2010 : \$ 82,155

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

National Transport Corporation

Australian Transport Safety Bureau

Queensland Transport

DiagnoseIT Pty Ltd

NSW Police Traffic Services

Administering Organisation The University of Sydney

Project Summary

The management and regulation of heavy vehicles, particularly in relation to safety, is recognised as an urgent issue at all levels of government across Australia. In the absence of research that identifies the key determinants of heavy vehicle crashes, countermeasures will continue to be based on anecdote. The proposed study will determine the role key risk factors, namely scheduling and sleep-related factors, play in heavy vehicle crashes and will identify cost-effective strategies to reduce the growing economic burden associated with these crashes.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

3602 POLICY AND ADMINISTRATION

Deakin University

LP0776979 A/Prof LI Hancock

Approved Project Title **Community Engagement for Localised Greenhouse Reduction: a local government demand-management model for business and household water, energy and waste reduction**

2007 : \$ 22,054

2008 : \$ 42,230

2009 : \$ 20,176

Collaborating/Partner Organisation(s)

Hobsons Bay City Council
Global Greenplan Foundation

Administering Organisation Deakin University

Project Summary

New integrated community strategies are needed to deal with the imperative of reducing Australia's carbon footprint. With an explicit focus on enhancing community engagement for localised greenhouse reduction, this project will generate important analysis and policy prescriptions for demand reduction strategies. The development of enduring sustainable environment attitudinal and behavioural change is central to the National Strategy for Ecologically Sustainable Development, which sees a clear role for governments, business and individuals in progressing ecologically sustainable development. The results will contribute to developing new place-based integrated eco-sustainability models for implementation by local/state governments.

Queensland University of Technology

LP0776386 Prof RL Parker; Dr CS Gunasekara; Dr DC Hine; Dr AB Griffiths

Approved Project Title **A comparative study of knowledge transfer systems and their contribution to knowledge transfer and diffusion, innovation and socioeconomic transformation**

2007 : \$ 47,500

2008 : \$ 105,000

2009 : \$ 115,000

2010 : \$ 57,500

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

QMI Solutions
Australian Institute for Commercialisation
Queensland Rural Industry Training Council Inc

Administering Organisation Queensland University of Technology

Project Summary

This project will contribute to the national priority goal of promoting an innovation culture and economy by providing knowledge with which to improve institutional arrangements for research commercialisation for the purpose of enhancing business innovation and ensuring that publicly fund research results in commercial and social benefits. The research is of particular benefit to regional and rural communities because it adopts a novel system level design which explores the role of KTSs in socioeconomic transformation and across sectors and regions. It therefore moves beyond prior studies which have focused on high technology sectors and regions.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

RMIT University

LP0776616 A/Prof JR Wolfram Cox; Prof OE Hughes

Approved Project Title **New Police Management - From Command and Control to Collaborative Governance: An assessment of organisational change at Victoria Police**

2007 : \$ 35,000
2008 : \$ 62,000
2009 : \$ 61,500
2010 : \$ 56,500
2011 : \$ 22,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Victoria Police

Administering Organisation RMIT University

Project Summary

Changes in governance will be assessed and refined in order to assist Victoria Police to become more proactive and collaborative in achieving its strategic aims of intelligent, confident, community and partnership policing and thereby to make a difference to community safety over the next five years. Proactive collaboration at all levels will help Victoria Police to protect communities from terrorism and crime in contemporary conditions and will assist in the safeguarding of Australia. More generally, the results of the project will assist the accumulation of research-based evidence to inform policy making based on the claimed benefits of decentralisation in police forces around the world.

University of Canberra

LP0776807 Prof JA Halligan; Prof I Marsh; Prof S Bartos; Dr JL O'Flynn; A/Prof DA Blackman

Approved Project Title **Whole of Government: Evaluating frameworks for integrating policy development, implementation and delivery of public services.**

2007 : \$ 36,000
2008 : \$ 79,000
2009 : \$ 82,000
2010 : \$ 39,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

AGIMO, Dept Finance & Administration

Australian Public Service Commission

Department of Agriculture, Fisheries and Forestry

Dept of Health & Ageing

Office of Indigenous Policy Coordination, FaCSIA

Administering Organisation University of Canberra

Project Summary

The Australian Government is committed to whole of government approaches to policy, implementation and service delivery. This research will help make whole of government work better, by analysing its fundamentals and providing guidance on best practice. It links five key government agencies, coordinating departments and those at the front line of service delivery. Case studies include national security, avian flu and indigenous policy coordination. The project will build ongoing collaboration between academic researchers and public servants. It will develop practical guidelines to assist government organisations better serve clients and solve complex policy challenges.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3701 SOCIOLOGY

Monash University

LP0776818 Prof AB Markus; Dr J Goldlust; Dr N Jacobs

Approved Project Title **Understanding identity, social change and emerging needs: Melbourne's Jewish community and Australian society**

2007 : \$ 36,628
2008 : \$ 67,227
2009 : \$ 58,727
2010 : \$ 28,128

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Jewish Care

Administering Organisation Monash University

Project Summary

Understanding current developments within ethnic and religious groups is of vital national importance. The detailed profile of Australian ethno-religious groups to be produced will be of relevance to a range of planning issues, including: strategies to maximize the life potential of young Australians, preventative health care, appraisal of future needs of an ageing population and of the capacity of voluntary agencies to maintain their existing levels of social welfare provision. Integral to the project is ongoing consultation with communal leaders, social workers and policy makers. It will provide for informed public discussion and promote a climate of consultation and dialogue.

Swinburne University of Technology

LP0776899 Prof DL Meredyth; Prof TN Thomas; Prof MD Gilding; Prof NL Cherry; Dr L Weber; Mr G Jamieson

Approved Project Title **Exploring the experience of security in the Australian Vietnamese community: practical implications for policing**

2007 : \$ 51,857
2008 : \$ 102,625
2009 : \$ 125,827
2010 : \$ 120,794
2011 : \$ 45,735

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Victoria Police Centre

Australian Vietnamese Women's Welfare Association

Australian Police Multicultural Advisory Bureau

Administering Organisation Swinburne University of Technology

Project Summary

Effective policing in Victoria depends upon sensitive relations with complex communities, but police experience persistent difficulties in implementing community policing strategies with the Australian Vietnamese community. Vietnamese residents call for police action and protection from drug and gambling-related crime. However, police find it difficult to build effective communication and co-operation with a community that seems reticent and lacking in trust. This project explores solutions to these problems, drawing on qualitative research on attitudes, experience of security and insecurity, institutional culture and cultural understandings amongst both police and community members.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The Flinders University of South Australia

LP0777019 Prof WC Martin; Prof S Richardson

Approved Project Title Understanding low skilled men's access to jobs: An occupational case-study approach

2007 : \$ 12,813
2008 : \$ 25,627
2009 : \$ 25,627
2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Anglicare SA inc.

Administering Organisation The Flinders University of South Australia

Project Summary

The withdrawal of low skilled men from the labour force has been substantial over recent decades. As many as 40% of men without post-school qualifications do not have full-time jobs. This development has many negative social consequences. It damages the affected men's wellbeing, and that of their families. It reduces labour supply at a time of labour shortages. It increases dependency on the welfare system. This project will develop new understandings of the barriers low skill men face when they seek jobs in areas of rising employment, such as the service sector. It will provide an assessment of the possibilities of overcoming these barriers, and develop ideas about how best to enhance low skilled men's access to good jobs.

University of South Australia

LP0776732 Prof BA Pocock

Approved Project Title Work/Life Balance, Well-Being and Health: Theory, Practice and Policy

2007 : \$ 58,000
2008 : \$ 118,000
2009 : \$ 130,000
2010 : \$ 70,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

State Health Advisory Committee on Work Life: Creating Family Friendly Workplaces
SafeWork SA

Administering Organisation University of South Australia

Project Summary

This project links to the national research priority of promoting and maintaining good health in two ways. It establishes a new annual national measure of work/life balance, a critical element of good health and well-being, assisting understanding about work/life conflict and informing workplace and government policy responses to it, strengthening Australia's social and economic fabric. Deep study of work/life issues in the health sector will also inform recruitment, retention and well-being in the health workforce, with flow-on to the health system more broadly. The project includes analysis of 'pre-retirement' work/life issues, also linking to the 'ageing well, ageing productively' priority.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

University of Wollongong

LP0776689 Prof Dr S Dolnicar; A/Prof LT Lyons; Prof S Ville

Approved Project Title **The role of community connectedness in retaining skilled migrant women in Australia**

2007 : \$ 12,813

2008 : \$ 25,627

2009 : \$ 25,627

2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Office for Women - New South Wales Government Premier's Department

Administering Organisation University of Wollongong

Project Summary

Australia faces a severe skills shortage in areas central to its social fabric and that are traditionally dominated by women: nursing, childcare and teaching. While we are successful in attracting skilled migrants to fill these gaps, one third choose to leave Australia within 5 years. This is a very unfavourable outcome in view of the continuing skills shortage and the unrecoverable costs associated with attracting skilled migrants. The project will gain insight into factors that influence the retention rates of skilled female migrants and, in doing so, enable government agencies to develop targeted retention measures.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3702 SOCIAL WORK

Griffith University

LP0776371 Prof PA Creed; A/Prof NJ Buys; Dr C Tilbury

Approved Project Title **Promoting successful further education and work transitions for young people in state care**

2007 : \$ 39,297

2008 : \$ 70,712

2009 : \$ 31,415

Collaborating/Partner Organisation(s)

Department of Child Safety
Education Queensland

Administering Organisation Griffith University

Project Summary

The national benefits of this research include:

- . understanding the impact of being in care on educational participation, career aspirations and transitions
- . knowledge about further education, work pathways and employment outcomes for care leavers
- . informed policy and program responses to young people transitioning from care aimed at reducing early exit from education and enhancing their work readiness
- . raising expectations for young people in care and improving their capacity to make choices towards positive pathways.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of New South Wales

LP0776662 Prof B Cass; Dr DJ Brennan; Ms S Green; Ms AC Hampshire

Approved Project Title **Grandparents as primary carers of their grandchildren: A national, State, Territory analysis of grandparent-headed families - policy and practice implications**

2007 : \$ 78,307
2008 : \$ 133,581
2009 : \$ 100,274
2010 : \$ 45,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

NSW Department of Community Services

SA Department of Families and Communities

Mission Australia

Department of Families Community Services and Indigenous Affairs

NT Department of Health and Community Services

Administering Organisation The University of New South Wales

Project Summary

This unique collaboration between researchers, four government Departments in the Commonwealth, NSW, South Australia and the Northern Territory concerned with child and family welfare, and Mission Australia, uses innovative methods to analyse non-Indigenous and Indigenous grandparents as primary carers of their grandchildren. The project will analyse the circumstances and needs of grandparents and grandchildren in different formal and informal arrangements. It will provide a comprehensive audit of national, state and territory policies and identify gaps for the development of policies and services to promote the health and wellbeing of grandparents and children.

LP0776591 Dr E Pittaway; Prof RP Hugman

Approved Project Title **Refugee Women at Risk: protection and integration in Australia**

2007 : \$ 20,243
2008 : \$ 43,003
2009 : \$ 46,524
2010 : \$ 23,763

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

ANCORW

Administering Organisation The University of New South Wales

Project Summary

The potential for long-term settlement problems for vulnerable refugee groups has serious implications for the wider Australian community in terms of social cohesion and the weakening of the social fabric. Concern has been expressed by service providers and refugee and migrant communities, about the social and economic consequences of the failure to adequately respond to the needs of these refugees, most of who come from traumatic backgrounds. The research will identify models of best practice service provision and will analyse the role these play in supporting and accelerating successful integration and in promoting social harmony in our diverse cultural society.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

LP0776503

Dr X Shang; Ms KR Fisher; Mr W Wei

**Approved
Project Title**

Experiences of Families with Children with Disabilities in China

2007 :	\$ 27,849
2008 :	\$ 50,370
2009 :	\$ 50,221
2010 :	\$ 27,700

Collaborating/Partner Organisation(s)

Plan International-China

Administering Organisation The University of New South Wales

Project Summary

The project contributes to safeguarding Australia by understanding our region through the opportunity to demonstrate Australia's engagement in research to benefit China, with which it is establishing strong links in social, economic and cultural interests. Research expertise about Australia's child disability policies is relevant to China's social policy development. It contributes to national understanding of East Asian child disability policies, including partnership approaches to social support between government, nongovernment and communities, also developing in Australia. The project strengthens connections between Australian researchers and policy-makers, Plan International (China and Australia) and China Disabled Persons Federation.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3704 HUMAN GEOGRAPHY

The Flinders University of South Australia

LP0776660 Prof AP Beer; Dr E Baker; Prof GA Wood

Approved Project Title **Housing Assistance and the Life Course: Understanding the Impact of Policy Alternatives**

2007 : \$ 43,313

2008 : \$ 43,313

Collaborating/Partner Organisation(s)

HomeStart Finance

Administering Organisation The Flinders University of South Australia

Project Summary

Australian governments are confronted by increasing pressure to assist low-income and vulnerable households gain access to affordable and appropriate housing. Over 100,000 Australians are homeless and 1.3 million households experience housing stress. This project will answer the question, what form of housing assistance generates the best outcomes for both vulnerable individuals and society as a whole? It does so through interviews with low income home purchasers, private tenants and public tenants. The research will strengthen Australia's social fabric by helping governments make better decisions around housing assistance to vulnerable groups.

The University of Newcastle

LP0776385 A/Prof PM McGuirk; Prof Dr PM O'Neill; Dr KJ Mee; Dr RA King; Dr L Instone

Approved Project Title **Enabling inter-agency data sharing to support the spatial analysis of social vulnerability in a transforming region**

2007 : \$ 26,000

2008 : \$ 52,500

2009 : \$ 51,500

2010 : \$ 25,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

REGIONAL COORDINATION MANAGEMENT GROUP

Administering Organisation The University of Newcastle

Project Summary

This project's resolution of constraints to government agency data sharing will enable modernisation of public sector information management, creating a secure environment for joined-up use of agency data and enabling major resource savings. It will produce more geographically sensitive indicators of social vulnerability, marking a major advance in its understanding and assessment. The project will significantly broaden agency's capability for research and analysis. It will generate major social benefits nationally, enabling the development of research-based policy enhancements that better align human service delivery with community needs. Lastly, it will contribute significantly to the strengthening Australia's social and economic fabric.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3705 DEMOGRAPHY

The Australian National University

LP0776784 Prof TJ O'Neill; Prof PF McDonald; Dr MA Martin; Dr J Penm; Dr JB Temple; Dr S Roberts; Mr
TS Higgins

Approved **Expenditure needs and drawdown of retirement savings during later life: how important**
Project Title **are demographic factors and financial resources?**

2007 : \$ 55,000

2008 : \$ 110,000

2009 : \$ 78,615

2010 : \$ 23,615

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Rice Warner Actuaries

AMP

Administering Organisation The Australian National University

Project Summary

Projections of expenditure patterns in retirement which allow for population heterogeneity will provide individuals with a better appreciation of their income needs and their savings requirements for a comfortable retirement. It will also enable financial institutions to develop products which better target retirees' needs over the course of retirement, and in addition it will enable improved assessment of aspects of Government income support policy. Specifically, understanding the complex interactions between private and public pensions, and concession card receipt upon expenditure behaviour, will enable more accurate costings of the public support of elderly families as Australia's population ages.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3801 PSYCHOLOGY

The University of New South Wales

LP0776767 Dr M Groth; Prof SK Parker; Dr S McCarthy; Ms A Thornton

Approved Project Title **Delivering Better Patient Care: Promoting Well-Being and Performance of Health Care Professionals**

2007 : \$ 31,695
2008 : \$ 66,169
2009 : \$ 74,474
2010 : \$ 40,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Prince of Wales Hospital

Administering Organisation The University of New South Wales

Project Summary

The research offers three broad benefits. First, given the serious challenges currently facing the Australian health care system, the research addresses a national research priority and will have significant policy implications. Second, it will improve our understanding of how to enhance health care professionals' performance and well-being, and thereby increasing staff retention, organisational effectiveness, and improving the quality and efficiency of health care delivery. Third, the knowledge generated will be a valuable input into development programs aimed at improving managerial practices within Australian health care organisations.

University of Wollongong

LP0776836 A/Prof CJ Gonsalvez; Prof A Blaszczyński; Dr AR Clarke

Approved Project Title **Problem Gambling: Can Subtle Physiological Reactions To Wins And Losses Help Identify The Problem Gambler?**

2007 : \$ 12,813
2008 : \$ 25,627
2009 : \$ 25,627
2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Tabcorp Holdings Limited

Aristocrat Technologies Australia, Pty. Ltd

Administering Organisation University of Wollongong

Project Summary

Problem gambling is a major public health issue affecting 3%-6% of the adult population with the Productivity Commission (1999) detailing many associated consequences including major depression, suicide, substance abuse, marital and familial dysfunction and domestic violence. Problem gambling also has deleterious, long term effects on the mental and physical health of partners and children. Vulnerable groups include adolescents and young adults, socio-economically disadvantaged subpopulations, and specific ethnic minorities. The project's focus on identifying physiological patterns specific to problem gamblers represents an important first step in the development of an early screening test and timely interventions for at-risk individuals.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

3903 JUSTICE AND LEGAL STUDIES

La Trobe University

LP0776653 Dr SP Taylor; Prof SM Gifford

Approved Project Title **The Impact on the Human Rights of Asylum-Seekers and Host Communities of Australia's Border Control Cooperation with Indonesia and PNG**

2007 : \$ 22,276

2008 : \$ 33,982

2009 : \$ 11,706

Collaborating/Partner Organisation(s)

Jesuit Refugee Service (Australia)
Oxfam Australia

Administering Organisation La Trobe University

Project Summary

Australia regards border control cooperation with Indonesia and PNG as vital for preventing irregular entry into its own territory. Little is known, however, about the implications of cooperation for asylum-seekers or their host communities in Indonesia and PNG. This project is of national benefit because it advances knowledge by investigating whether Australia can more effectively safeguard the human rights of asylum-seekers and others affected by its regional border control cooperation. The results of this study will enhance the capacity of policy makers to deal with mixed flows of irregular migrants and asylum-seekers consistently with human rights and thus Australia's ability to play a positive leadership role in its region.

The University of New South Wales

LP0776639 Prof AC Byrnes; A/Prof A Durbach

Approved Project Title **Building Human Rights in the Region through Horizontal Transnational Networks: the Role of the Asia Pacific Forum of National Human Rights Institutions**

2007 : \$ 27,500

2008 : \$ 52,500

2009 : \$ 55,000

2010 : \$ 30,000

Collaborating/Partner Organisation(s)

Asia Pacific Forum of National Human Rights Institutions

Administering Organisation The University of New South Wales

Project Summary

The observance of human rights is an important element of social cohesion and stability in the countries of the region. This project undertakes an evaluation of a regional public network of national human rights institutions, the Asia Pacific Forum of National Human Rights Institutions, and assesses the extent to which a cooperative horizontal endeavour like the Forum can effectively promote and facilitate the implementation of shared international goals in the field of human rights. The research findings will contribute to improved policymaking for the promotion of the implementation of human rights and other international good governance goals in the region.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3904 LAW ENFORCEMENT

Griffith University

LP0776296 Dr SM Dennison; Dr KJ Freiberg; Dr AL Stewart

Approved Project Title **Vulnerable families: A study of the impact of parental offending and incarceration on children's developmental outcomes**

2007 : \$ 39,763
2008 : \$ 86,676
2009 : \$ 95,426
2010 : \$ 48,513

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Communities
Queensland Corrective Services
Catholic Prison Ministry

Administering Organisation Griffith University

Project Summary

The limited evidence available suggests that parental incarceration severely compromises the development and well-being of children and increases the risk of delinquency. The financial and personal costs to the community of individuals embarking on an offending career are substantial. Significant cost-savings and prevention of victimisation could result from effectively targeting this high-risk population. This research will identify where and when scarce government resources should be targeted. Appropriately timed programs can deliver a range of long-term benefits for children, families and communities. The research will also investigate the reintegration of prisoners into their families, with the aim of reducing prisoner recidivism.

Macquarie University

LP0776267 Dr PA Watters; Mr BK Watson; Dr AC Ng; Dr M Dras; Dr S Cassidy; Mr S McCombie; Mr BJ Reardon; Prof JP Pieprzyk

Approved Project Title **Defence Against Phishing Attacks**

2007 : \$ 38,440
2008 : \$ 76,881
2009 : \$ 76,881
2010 : \$ 38,440

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

National Australia Bank

Administering Organisation Macquarie University

Project Summary

Australian businesses and citizens are losing millions of dollars in cybercrimes every year. Rural and regional businesses depend on the integrity of their Internet banking service, and yet, cybercriminals are working hard to defraud these users. This project aims to build a reliable defence against phishing attacks which rely on social engineering to steal online identities, using intelligence gathered from the brazen trade of credentials in the public domain.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The Australian National University

LP0776958 Dr BH Hunter; Dr RG Schwab; Dr DJ Weatherburn

Approved Project Title An inter-disciplinary analysis of the dynamics of Aboriginal interactions with the criminal justice system

2007 : \$ 20,000

2008 : \$ 40,000

2009 : \$ 40,000

2010 : \$ 20,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

NSW Department of Attorney General

Administering Organisation The Australian National University

Project Summary

The over-representation of Indigenous Australians in prison continues to be a serious problem, more than a decade after the Royal Commission into Aboriginal Deaths in Custody. There are few rigorous studies identifying the dynamic factors associated with Indigenous interaction with the criminal justice system. This project will identify the Indigenous pathways within the system, in order to alert policy-makers to potential interventions at crucial junctures of criminal careers. It will use dynamic statistical models to identify important socioeconomic and geographic factors. Qualitative data will facilitate a deeper understanding of processes underlying the high rates of Indigenous arrest and imprisonment.

The University of Melbourne

LP0776708 Prof TL McCormack; Mr BM Oswald; Prof SB Kaye

Approved Project Title International Operations and the Australian Federal Police: Devising a legal framework

2007 : \$ 31,514

2008 : \$ 56,514

2009 : \$ 62,998

2010 : \$ 37,998

Collaborating/Partner Organisation(s)

Australian Federal Police

Administering Organisation The University of Melbourne

Project Summary

As a major player in the maintenance of regional peace and security, Australia is increasingly using Australian Federation Police (AFP) in a range of international operations. The extent of deployments and the expectations both governments and communities place on these operations is unprecedented. This project, in collaboration with the AFP, will draw upon recent experiences to provide a clear legal framework, advancing the capacity for AFP deployments to maintain their high commitment to the rule of law. The project is of international significance and will consolidate Australia's reputation as innovative and influential in the planning, management and conduct of police in international operations.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

University of South Australia

LP0776962 Dr J Slay; Mr JJ Beckett; Dr MA Raymond; Mr P Reedy; Mr BD Blundell

Approved Project Title **Validation and Verification of Electronic Evidence: Developing a Testing Regime for Digital Forensic Software Reliability.**

2007 : \$ 33,000

2008 : \$ 66,000

2009 : \$ 33,000

Collaborating/Partner Organisation(s)

National Institute of Forensic Science
NSW Police State Electronic Evidence Branch
Australian Federal Police
South Australian Police

Administering Organisation University of South Australia

Project Summary

Law Enforcement is analysing an exponentially-increasing quantity of Electronic Evidence - a 100,000 fold increase was experienced by the NSW police in the last decade. This is clear indication that computer related evidence is now an essential component of traditional crime investigation as well as computer crime. We intend to streamline the investigative process. This can only occur with the development of a validation framework from which we can build a testing regime to establish reliability of forensic tools and therefore the forensic investigative processes.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

3999 OTHER LAW, JUSTICE AND LAW ENFORCEMENT

Griffith University

LP0776279 Prof H Adelman; Dr JA Ransley; Dr M Bull; Prof JD McMillan

Approved Project Title **Dilemmas in Non-Citizen Detention and Removal: An International Comparative Study.**

2007 : \$ 31,282

2008 : \$ 64,542

2009 : \$ 33,260

Collaborating/Partner Organisation(s)

Commonwealth Ombudsman

Administering Organisation Griffith University

Project Summary

The project will generate policy proposals to obviate costly legal challenges, damaging ethical controversies, and the erosion of confidence and morale in the administration of Australian immigration practices. By developing new safeguards for the integrity of Australia's immigration, the project will assist in protecting Australian citizens from the dangers of terrorism and crime. Proposals generated will seek to respect the human rights of non-citizens, whilst increasing confidence in the integrity of the immigration system and reducing public fears concerning security.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

4001 JOURNALISM, COMMUNICATION AND MEDIA

Queensland University of Technology

LP0776341 Dr M Foth; Prof GN Hearn; Prof P Roe; Ms C Satchell

Approved Project Title **Swarms in Urban Villages: New Media Design to Augment Social Networks of Residents in Inner-City Developments**

2007 : \$ 65,958
2008 : \$ 128,000
2009 : \$ 122,175
2010 : \$ 60,133

APA(I) Award(s): 1
APDI Ms C Satchell

Collaborating/Partner Organisation(s)

Queensland Department of Housing
Creatop
4UTV
Optus

Administering Organisation Queensland University of Technology

Project Summary

This study will develop advanced knowledge of how urban neighbourhood communities can be assisted to grow in healthy ways by the use of new media and ICTs. By careful attention to cultural and social assets in the community, innovations will be engendered which enhance economic and social development. This will lead to greater social inclusion, fair access to and smart use of information and services, urban sustainability and healthier local economies. Understanding the opportunities afforded by digital augmentation of social networks will help Australians negotiate the complex web of daily choices, access a greater social safety net and participate in the socio-cultural and socio-economic life of their neighbourhood and city.

LP0777006 Prof J Hartley; Dr GJ Thomas; Mrs M Laforest; Dr K McWilliam

Approved Project Title **The uses of romance for new demographics and multimedia platforms: A model of media innovation in international women's fiction publishing**

2007 : \$ 43,922
2008 : \$ 87,437
2009 : \$ 82,039
2010 : \$ 38,524

APDI Dr K McWilliam

Collaborating/Partner Organisation(s)

Harlequin Enterprises (Australia) Pty Ltd

Administering Organisation Queensland University of Technology

Project Summary

The national benefit of this project is both economic and socio-cultural. Economically, it investigates new ways to produce and distribute Australian creative content for local and export markets. It identifies how branch offices of global firms can be creative offices. Culturally, it develops scenarios for maximizing the acceptance, uptake and use of digital technologies by both large-scale publishers and young Australians. It investigates agents along the length of the creative value chain - from authors to audiences - to determine the uses of creative fiction, identifying the features that attract / repel users of published fiction in these genres. Finally it extends the capabilities of users to create their own romance content.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

The University of Melbourne

LP0776929 Ms J Lee; Dr MR Davis; Ms R Michael; Mr A Wilkins

Approved Project Title **The Bloom Book Industry Report: an annual survey of the Australian book publishing industry**

2007 : \$ 12,000

2008 : \$ 23,750

2009 : \$ 23,500

2010 : \$ 11,750

Collaborating/Partner Organisation(s)

Thorpe-Bowker

Bloom Partners

Administering Organisation The University of Melbourne

Project Summary

This project represents a university-industry partnership to document the state of play in Australian book publishing, an industry of central importance in Australian intellectual and cultural life. The data gathered will help to identify opportunities and risks for the industry at a time when it is undergoing rapid technological change and reorienting itself towards global markets. The project will be designed to facilitate comparison with studies in other countries, identify the local impact of global trends and foster forward-looking industry responses. The information gathered will be invaluable for researchers, industry personnel and policy-making bodies, and will establish the groundwork for targeted research into key industry issues.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

4003 CURATORIAL STUDIES

Queensland University of Technology

LP0776236 Dr A Russo; Prof DL Meredyth; Ms LJ Kelly

Approved Project Title **Engaging with Social Media in Museums**

2007 : \$ 60,489

2008 : \$ 127,733

2009 : \$ 130,067

2010 : \$ 62,823

APDI Dr A Russo

Collaborating/Partner Organisation(s)

Australian Museum

Powerhouse Museum

Museum Victoria

Cooper Hewitt National Design Museum, A Smithsonian Institution

Administering Organisation Queensland University of Technology

Project Summary

This project will prototype the use of social media in museums to produce a new source of high-quality cultural information, and link regional, rural and international users with city-based institutions. It implements National Research Priority Frontier Technologies for Building and Transforming Australian Industries: promoting an innovation culture and economy and smart information use.

The Australian museum sector is undergoing a period of substantial change in response to policy and technology initiatives, yet little formal collaboration exists between museums and researchers. This project brings some of the country's major museums together with the Smithsonian Institution, one of the world's foremost cultural institutions.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

4101 PERFORMING ARTS

The University of Melbourne

LP0776532 Prof JR O'Toole; Prof BV Burton; A/Prof RA Ewing; A/Prof AM O'Brien; A/Prof PJ Bundy; Dr KJ Donelan; Dr MJ Anderson; Dr J Hughes; Dr CE Sinclair; Mr NA Jordan

Approved Project Title **Accessing the cultural conversation: investigating participation and non-participation of young people as audiences of live theatrical performances in Australia**

2007 : \$ 52,085
2008 : \$ 113,688
2009 : \$ 111,974
2010 : \$ 127,370
2011 : \$ 77,000

Collaborating/Partner Organisation(s)

The Australia Council for The Arts
The Sydney Opera House
Sydney Theatre Company
Bell Shakespeare
The Brisbane Powerhouse
Queensland Theatre Company
Queensland Performing Arts Centre
Arena Theatre Company
Malthouse Theatre
the Arts Centre
Arts Victoria
NSW Ministry for the Arts

Administering Organisation The University of Melbourne

Project Summary

In order to promote the healthy development of young Australians, where health in middle and late childhood is crucial (National Research Priority 2) a thriving arts sector is essential. For young people to see themselves as real participants in civic engagement with their society not as a marginalised group but as a legitimate sub-group of society, they need access to active participation in the cultural conversation, including live theatrical performance. For this, the arts community, policy makers and arts educators need to better understand young people's engagement with the major providers of theatre, and what factors inhibit or exclude them.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

4104 DESIGN STUDIES

Swinburne University of Technology

LP0776578 Dr DH Barron; Dr DM Whitehouse; Ms M Featherston

Approved Project Title **The School: Designing a dynamic venue for the new knowledge environment.**

2007 : \$ 12,813

2008 : \$ 25,627

2009 : \$ 25,627

2010 : \$ 12,813

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Bialik College

DE&T

Woods Furniture

Administering Organisation Swinburne University of Technology

Project Summary

This project addresses a problem of real concern in relation to national and state government policies for promoting an innovation culture and economy. This project does this at the base level of schools by creating effective education learning environments that will encourage creative and innovative citizens of the future. This detailed examination of the collaborative design process and the day to day functioning of the physical setting, including the use of smart technologies, focusing on stakeholder needs for 21st Century success, will assist in identifying the role of intelligent design in assisting a schools to deliver education for innovation.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

4201 LANGUAGE STUDIES

La Trobe University

LP0776553 Prof AY Aikhenvald; Prof RM Dixon; Prof AM Tamis; Prof PJ Trudgill; Prof MJ Osborne

Approved Project Title **Speaking Greek in diaspora: language contact, survival, and maintenance**

2007 : \$ 59,145
2008 : \$ 120,656
2009 : \$ 123,021
2010 : \$ 123,021
2011 : \$ 61,510

Collaborating/Partner Organisation(s)

Ministry for National Education and Religious Affairs
Ministry of Foreign Affairs
Consulate General of Greece

Administering Organisation La Trobe University

Project Summary

Australia is a highly multilingual and multicultural country, speaking several hundred different indigenous and immigrant languages across the nation. Greek is the second largest language spoken in Australia (the second largest country of Greek diaspora in the world). A systematic investigation of the Greek language spoken in Australia by various generations, and its comparison with Greek as spoken in critical locations in South America, will enhance cross-cultural understanding and communication within Australia and world-wide. The project will fortify the scientific and economic links with the European community already established by the National Centre for Hellenic Studies and Research, in terms of social and economic benefit.

The University of New South Wales

LP0776318 A/Prof CK Thomson; Ms C Jonak

Approved Project Title **Tackling the issues of low numbers of Australia's advanced users of Japanese: Reasons and strategies.**

2007 : \$ 23,101
2008 : \$ 40,537
2009 : \$ 35,319
2010 : \$ 17,883

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

The Japan Foundation, Sydney

Administering Organisation The University of New South Wales

Project Summary

A sound relationship between Australia and Japan is critical to Australia. Their key relations in trade, foreign policy and cultural exchange require an advanced understanding of Japanese. However, Australia is not producing sufficient numbers of advanced users of Japanese. This project creates and implements strategies to develop more Australian learners into advanced users of Japanese, thus contributing to Australia's knowledge base in language education and applied linguistics. The PhD project will train a well-rounded Australian applied/educational linguist, equipping them with in-depth knowledge of current learners as well as fundamental research tools in both quantitative and qualitative analysis.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

4203 CULTURAL STUDIES

The University of Sydney

LP0776649 A/Prof CA Lumby; Prof EC Probyn; Ms KM Albury; Dr CW Evers

Approved Project Title **Peer Based Mentoring in Sport: Strategies for Best Practice**

2007 : \$ 38,524

2008 : \$ 77,049

2009 : \$ 77,049

2010 : \$ 38,524

APDI Ms KM Albury

Collaborating/Partner Organisation(s)

National Rugby League

NSW Rape Crisis Centre

Administering Organisation The University of Sydney

Project Summary

Federal and state governments and agencies have acknowledged the need to increase participation in sport. This project will support this important aim because it will generate empirical data about the value and best practice design of mentoring programs in elite and community or school based sport. Such programs are designed to ensure that sport is a forum for promoting positive social behaviours on and off the field and to increase participation in sport by reducing any negative behaviours associated with sporting cultures.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

4301 HISTORICAL STUDIES

Macquarie University

LP0777003 Em/Prof DB Waterson; Dr RG Prior; Dr PA Stanley; Prof Dr SK Akgun

Approved Project Title **Completing the Gallipoli story: Researching Turkish Archives for a More Comprehensive History**

2007 :	\$ 46,036
2008 :	\$ 85,269
2009 :	\$ 88,017
2010 :	\$ 74,342
2011 :	\$ 77,033
2012 :	\$ 51,474

Collaborating/Partner Organisation(s)

Australian War Memorial

Administering Organisation Macquarie University

Project Summary

Both Australia and Turkey see the Gallipoli Campaign as a defining event. Australian perceptions of the Campaign are based on C.E.W. Bean's Official History and a number of popular publications. Yet, despite the vast collection of material held in Turkish archives, existing accounts give scant attention to Turkish operations leaving the story incomplete. This project will rectify that imbalance by locating and translating key documents-battlefield reports and signals, War Ministry communications, records of prisoner interrogations, aircraft logs and diaries. The result will be a comprehensive history that will contribute to the deepening relationship between Australia and Turkey as we approach the centenary of the Campaign.

The Australian National University

LP0776685 Prof ID McCalman; Prof JM Chappell; A/Prof DP Coleman; Dr P Hyland; Dr NP Erskine

Approved Project Title **Seeing Change: Science, Culture and Technology in the Antipodes from the age of Darwin - a multi-media research collaboration**

2007 :	\$ 70,000
2008 :	\$ 135,554
2009 :	\$ 110,528
2010 :	\$ 44,974

Collaborating/Partner Organisation(s)

Constraint Technologies International

Eptec Pty. Limited

Australian National Maritime Museum

Film Australia Limited

Administering Organisation The Australian National University

Project Summary

To build a collaboration across the humanities, natural sciences, business technology and public culture sectors that will use new forms of digital and visual research to demonstrate the neglected importance of Australasia in the formation of nineteenth-century evolutionary thought and to suggest the relevance of these ideas to understanding contemporary issues of environmental sustainability and the development of frontier technologies within our society and region.

Summary of Linkage Projects Proposals by Primary Class Code for Funding to Commence in 2007

The University of Melbourne

LP0776803 Prof K Darian-Smith; Dr J Evans; Dr P Edmonds; Ms AM Smith

Approved Project Title **Conciliation Narratives and the Historical Imagination in British Pacific Rim Settler Societies**

2007 : \$ 38,524

2008 : \$ 82,728

2009 : \$ 85,730

2010 : \$ 41,526

APDI Dr P Edmonds

Collaborating/Partner Organisation(s)

Museum Victoria

National Museum Australia

Tasmanian Museum and Art Gallery

Administering Organisation The University of Melbourne

Project Summary

This project deepens Australian understandings of the negotiated forms of conciliation that occurred between Indigenous and non-Indigenous peoples in the colonial period to present. By comparing these with conciliation events in New Zealand and British Columbia, the Australian experience is positioned within the global context of the Pacific Rim. The project's innovative approach unites historical and legal research with material culture of extraordinary heritage significance held by three major national collecting institutions (partner organisations) and others. Among the outcomes are scholarly publications, international symposia, publicly assessable web-based and educational materials, a travelling exhibition, and professional training.

The University of Sydney

LP0776254 Dr IR Johnson; Dr SM Robertson; Prof P Reimann; Asst Prof R Mostern

Approved Project Title **Rethinking timelines: a new methodology for describing and communicating history**

2007 : \$ 43,515

2008 : \$ 88,692

2009 : \$ 96,252

2010 : \$ 93,551

2011 : \$ 42,476

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Macquarie Library P/L

Australian National Maritime Museum

Administering Organisation The University of Sydney

Project Summary

The project will lead to better ways of understanding historical events in context through active engagement of learners in the construction of timeline visualisations. It will contribute to the development of better strategies for collaborative content creation and quality control in web-based community resources, and facilitate creation of significant online collaborative databases by communities of interest, without the technical requirements and costs of one-off programming. It will add value to Australian online resources such as MacquarieNet, contribute to new methods of information visualisation in Australian museums and visitor centres, and generate national and international consultancies for the project partners.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

4302 ARCHAEOLOGY AND PREHISTORY

The Australian National University

LP0776332 Prof H Morphy; Dr PM Veth; Dr JJ McDonald

Approved Project Title **The recognition, interpretation and management of significant rock art and related dreaming (Jukurrpa) sites on the Canning Stock Route, Western Australia**

2007 : \$ 177,971
2008 : \$ 320,471
2009 : \$ 285,917
2010 : \$ 143,417

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Jo McDonald Cultural Heritage Management Pty Ltd
 WA Dept of Environment and Conservation (DEC)
 Ngaanyatjarra Council Aboriginal Corporation (Native Title Representative Body)
 Department of Indigenous Affairs
 Department of Land Information
 Department of the Environment and Heritage
 Kimberley Land Council (Native Title Representative Body)

Administering Organisation The Australian National University

Project Summary

The Canning Stock Route is an iconic linear transect of profound importance to a variety of parties: the original inhabitants of the Western Desert, surveyors and drovers who used it in the 20th century and more recently tourists and outback adventurers. Systematic documentation, mapping and synthesis of Indigenous cultural values of the Canning Stock Route will provide a unique resource of benefit to traditional custodians as well as the wider community. Accurate information on sites, places and landscapes and their cultural and scientific values should underpin successful management, protection of sites and sustainable use of the Canning Stock Route into the future.

LP0776789 Dr SL O'Connor; Dr DR Byrne

Approved Project Title **Rethinking Cultural Heritage in Southeast Asia: A Case Study From the New Nation of Timor Leste**

2007 : \$ 36,491
2008 : \$ 72,983
2009 : \$ 77,683
2010 : \$ 41,191

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Environment and Conservation, NSW

Administering Organisation The Australian National University

Project Summary

The project will contribute to the economic and socially sustainable conservation of cultural heritage in Timor Leste. Collaborative work between project personnel and Timor Leste communities and government agencies will promote good will, strengthen ties and enhance cross-cultural understanding between both countries, as will the training of Timor Leste nationals in techniques of heritage assessment and management. Communication of the results of the project will also enhance Australia's understanding of social and cultural issues within Timor Leste and raise Australia's profile overseas.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

4401 PHILOSOPHY

The University of Melbourne

LP0776719 Dr J Moss; Dr KN White

Approved **Health, Freedom and Independent Contracting**
Project Title

2007 : \$ 25,225

2008 : \$ 49,991

2009 : \$ 46,991

2010 : \$ 22,225

Collaborating/Partner Organisation(s)

Kunexion

Administering Organisation The University of Melbourne

Project Summary

The project will offer significant insights into the effects of independent contracts on the key area of rural health. The project will be able to gauge whether independent contracts offer significant improvements to the health and well being of those who use them, as well as the advantages to industry. In addition, the project will also consider the important ethical issue of whether independent contracts enhance the freedom of individual workers and in what ways.

**Summary of Linkage Projects Proposals by Primary Class Code for
Funding to Commence in 2007**

4402 RELIGION AND RELIGIOUS TRADITIONS

La Trobe University

LP0776234 Prof JA Camilleri

Approved Project Title **Developing the Framework for Locally Based Interfaith and Intercultural Dialogue**

2007 :	\$ 35,000
2008 :	\$ 65,000
2009 :	\$ 63,900
2010 :	\$ 33,900

Collaborating/Partner Organisation(s)

Australian Multicultural Foundation

City of Darebin

Banyule City Council

Hume City Council

Moreland City Council

City of Whittlesea

Victorian Council of Churches

Uniting Church

Jewish Community Council of Victoria

Islamic Council of Victoria

Ethnic Communities Council of Victoria

Buddhist Council of Victoria

Administering Organisation La Trobe University

Project Summary

This project will: strengthen Australia's multicultural fabric and social cohesion; enhance Australia's international reputation as an effective multicultural society able to develop programmes for locally based interfaith and intercultural dialogue; boost the prospects for a successful Fifth Parliament of World Religions; provide governments guidelines for multicultural and interreligious community based dialogue initiatives; endow faith communities with a greater capacity to help defuse potential tensions within Australian society and support at-risk communities; establish a solid framework for future research on the role of religion and culture in society.