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

230000	**MATHEMATICAL SCIENCES**	
2301	MATHEMATICS	1
2302	STATISTICS	2
2399	OTHER MATHEMATICAL SCIENCES	1
230000	**MATHEMATICAL SCIENCES**	**4**
240000	**PHYSICAL SCIENCES**	
2402	THEORETICAL AND CONDENSED MATTER PHYSICS	1
2404	OPTICAL PHYSICS	1
2405	CLASSICAL PHYSICS	1
2499	OTHER PHYSICAL SCIENCES	2
240000	**PHYSICAL SCIENCES**	**5**
250000	**CHEMICAL SCIENCES**	
2501	PHYSICAL CHEMISTRY (INCL. STRUCTURAL)	1
2503	ORGANIC CHEMISTRY	3
2504	ANALYTICAL CHEMISTRY	3
2505	MACROMOLECULAR CHEMISTRY	2
2599	OTHER CHEMICAL SCIENCES	2
250000	**CHEMICAL SCIENCES**	**11**
260000	**EARTH SCIENCES**	
2601	GEOLOGY	4
2602	GEOPHYSICS	2
2603	GEOCHEMISTRY	1
2604	OCEANOGRAPHY	1
2605	HYDROLOGY	1
2606	ATMOSPHERIC SCIENCES	1
260000	**EARTH SCIENCES**	**10**
270000	**BIOLOGICAL SCIENCES**	
2701	BIOCHEMISTRY AND CELL BIOLOGY	6
2702	GENETICS	2
2703	MICROBIOLOGY	1
2704	BOTANY	4
2705	ZOOLOGY	1
2707	ECOLOGY AND EVOLUTION	10
2708	BIOTECHNOLOGY	2
2799	OTHER BIOLOGICAL SCIENCES	1
270000	**BIOLOGICAL SCIENCES**	**27**
280000	**INFORMATION, COMPUTING AND COMMUNICATION SCIENCES**	
2801	INFORMATION SYSTEMS	3
2802	ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING	4
2803	COMPUTER SOFTWARE	2
2805	DATA FORMAT	1
280000	**INFORMATION, COMPUTING AND COMMUNICATION SCIENCES**	**10**
290000	**ENGINEERING AND TECHNOLOGY**	
2903	MANUFACTURING ENGINEERING	1
2904	AUTOMOTIVE ENGINEERING	1
2905	MECHANICAL AND INDUSTRIAL ENGINEERING	2
2906	CHEMICAL ENGINEERING	6
2907	RESOURCES ENGINEERING	2
2908	CIVIL ENGINEERING	2

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

2909	ELECTRICAL AND ELECTRONIC ENGINEERING	3
2910	GEOMATIC ENGINEERING	1
2911	ENVIRONMENTAL ENGINEERING	2
2913	METALLURGY	4
2914	MATERIALS ENGINEERING	2
2917	COMMUNICATIONS TECHNOLOGIES	1
290000	**ENGINEERING AND TECHNOLOGY**	**27**
300000	**AGRICULTURAL, VETERINARY AND ENVIRONMENTAL SCIENCES**	
3001	SOIL AND WATER SCIENCES	1
3002	CROP AND PASTURE PRODUCTION	2
3003	HORTICULTURE	1
3005	VETERINARY SCIENCES	2
3006	FORESTRY SCIENCES	2
3007	FISHERIES SCIENCES	2
3008	ENVIRONMENTAL SCIENCES	5
300000	**AGRICULTURAL, VETERINARY AND ENVIRONMENTAL SCIENCES**	**15**
310000	**ARCHITECTURE, URBAN ENVIRONMENT AND BUILDING**	
3101	ARCHITECTURE AND URBAN ENVIRONMENT	4
3102	BUILDING	1
3199	OTHER ARCHITECTURE, URBAN ENVIRONMENT AND BUILDING	1
310000	**ARCHITECTURE, URBAN ENVIRONMENT AND BUILDING**	**6**
320000	**MEDICAL AND HEALTH SCIENCES**	
3204	MEDICAL MICROBIOLOGY	2
3205	PHARMACOLOGY AND PHARMACEUTICAL SCIENCES	5
3207	NEUROSCIENCES	1
3209	OPTOMETRY	1
3210	CLINICAL SCIENCES	2
3211	NURSING	3
3212	PUBLIC HEALTH AND HEALTH SERVICES	12
3214	HUMAN MOVEMENT AND SPORTS SCIENCE	1
320000	**MEDICAL AND HEALTH SCIENCES**	**27**
330000	**EDUCATION**	
3301	EDUCATION STUDIES	7
3302	CURRICULUM STUDIES	1
3303	PROFESSIONAL DEVELOPMENT OF TEACHERS	2
3399	OTHER EDUCATION	1
330000	**EDUCATION**	**11**
340000	**ECONOMICS**	
3402	APPLIED ECONOMICS	6
340000	**ECONOMICS**	**6**
350000	**COMMERCE, MANAGEMENT, TOURISM AND SERVICES**	
3502	BUSINESS AND MANAGEMENT	6
3503	BANKING, FINANCE AND INVESTMENT	3
350000	**COMMERCE, MANAGEMENT, TOURISM AND SERVICES**	**9**
360000	**POLICY AND POLITICAL SCIENCE**	
3601	POLITICAL SCIENCE	1
3602	POLICY AND ADMINISTRATION	1
360000	**POLICY AND POLITICAL SCIENCE**	**2**

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

370000	**STUDIES IN HUMAN SOCIETY**	
3701	SOCIOLOGY	5
3702	SOCIAL WORK	1
3703	ANTHROPOLOGY	2
3704	HUMAN GEOGRAPHY	2
3705	DEMOGRAPHY	1
3799	OTHER STUDIES IN HUMAN SOCIETY	2
370000	**STUDIES IN HUMAN SOCIETY**	**13**
380000	**BEHAVIOURAL AND COGNITIVE SCIENCES**	
3801	PSYCHOLOGY	4
380000	**BEHAVIOURAL AND COGNITIVE SCIENCES**	**4**
390000	**LAW, JUSTICE AND LAW ENFORCEMENT**	
3901	LAW	2
3904	LAW ENFORCEMENT	3
390000	**LAW, JUSTICE AND LAW ENFORCEMENT**	**5**
400000	**JOURNALISM, LIBRARIANSHIP AND CURATORIAL STUDIES**	
4001	JOURNALISM, COMMUNICATION AND MEDIA	3
400000	**JOURNALISM, LIBRARIANSHIP AND CURATORIAL STUDIES**	**3**
410000	**THE ARTS**	
4101	PERFORMING ARTS	1
4102	VISUAL ARTS AND CRAFTS	1
4104	DESIGN STUDIES	1
4199	OTHER ARTS	3
410000	**THE ARTS**	**6**
420000	**LANGUAGE AND CULTURE**	
4201	LANGUAGE STUDIES	1
4202	LITERATURE STUDIES	1
4203	CULTURAL STUDIES	2
420000	**LANGUAGE AND CULTURE**	**4**
430000	**HISTORY AND ARCHAEOLOGY**	
4301	HISTORICAL STUDIES	3
430000	**HISTORY AND ARCHAEOLOGY**	**3**
Total Number of Grants		**208**

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

2301 MATHEMATICS

RMIT University

LP0775463 Prof A Baghai-Wadji

Approved Project Title **Higher Order Effects in Miniaturized Piezoelectric Devices**

2007 : $ 113,708
2008 : $ 102,818
2009 : $ 97,320

Collaborating/Partner Organisation(s)
EPCOS AG
EPCOS Pte Ltd

Administering Organisation RMIT University

Project Summary

The national benefits of this project are: (a) We will provide opportunities to two postdoctoral researchers to pursue cutting edge research on electromagnetic radiation/scattering and self-heating phenomena in microelectronic devices involving ultrathin lossy electrodes. (b) We will provide industry-oriented research on coating and shielding problems in microelectronic devices to two postgraduate students. (c) We will team up with world leading industrial partners and transfer high-tech know-how to Australia. (d) The outcomes of our research will position Australia as the prime focal point for the design, modelling and simulation of microacoustic devices.

2302 STATISTICS

Queensland University of Technology

LP0775231 Prof KL Mengersen; Dr HL Johnson; Mr RD Brighouse

Approved Project Title **Making the Most of Database Information in Patient-Based Decision-Making - A Bayesian Approach**

2007 : $ 90,000
2008 : $ 60,000
2009 : $ 60,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
St. Andrews War Memorial Hospital

Administering Organisation Queensland University of Technology

Project Summary

This project addresses Australia's national research priority of Promoting and Maintaining Good Health and will lead to immediate improvement in health outcomes through optimising patient outcomes in Australian hospitals; cross-disciplinary and cross-hospital communication. Through enhanced capability in combining information from diverse sources the project will enhance Australia's medical research and practice, align professional and community expectations, utilise increased amounts of local medical information, and address national demands for quality science underpinning health decisions.

University of Wollongong

LP0775475 Dr RG Clark; Prof RL Chambers; Mr P Sutcliffe

Approved Project Title **Handling Missing Data in Complex Household Surveys**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Australian Bureau of Statistics

Administering Organisation University of Wollongong

Project Summary

The Australian Bureau of Statistics (ABS) has an extensive program of household surveys that is a key source of information on the social and economic conditions of the population. They provide statistics and data on a large range of social and economic topics, such as health, education, the labour force, income and expenditure. Analysis of household survey data by a variety of organisations underpins policy development and evaluation and the expenditure of billions of dollars. This project will substantially improve the cost-efficiency and reliability of Australian household survey data, by creating new approaches for handling missing data that deal with the realities of typical household surveys.

2399 OTHER MATHEMATICAL SCIENCES

Queensland University of Technology

LP0775269 Dr TW Farrell; Dr PA Hobson; Prof IW Turner; Dr GR Fulford; Dr BP Edwards

Approved Project Title **Multiscale Modelling and Thermal Design Optimisation of Large-Scale Biomass Stockpiles for Use in Renewable Energy Products**

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

Collaborating/Partner Organisation(s)
Sugar Research Institute

Administering Organisation Queensland University of Technology

Project Summary

By minimising the risk of spontaneous combustion this project will significantly contribute to the ability of the Australian sugar industry to store wet bagasse (sugar cane fibre residue) in large stockpiles. This will facilitate the year-round availability of biomass as a feedstock in renewable energy production. The mathematical models developed in this project deliver an enabling mechanism for facilitating the diversification of the sugar industry with the potential to produce significant financial returns for the industry. This research has the potential to initiate considerable and extremely positive, down-stream environmental impacts for Australia by enhancing feedstock production for ecologically sustainable power generation systems.

2402 THEORETICAL AND CONDENSED MATTER PHYSICS

The University of Melbourne

LP0775022 Prof S Prawer; Dr RG Beausoleil

Approved Project Title **Optical Information Processing with Diamond**

2007 : $ 271,309
2008 : $ 232,113
2009 : $ 220,942

Collaborating/Partner Organisation(s)
HP Laboratories

Administering Organisation The University of Melbourne

Project Summary

The explosive growth in ideas for applications of quantum mechanics to practical devices for information processing has been a worldwide phenomenon of the past 4 years. A leading material which promises many of the desirable quantum properties is diamond. We aim to build on our extensive expertise in fundamental diamond research to design, fabricate and analyse novel quantum devices made from diamond. We will seek to attain the glittering prize of constructing diamond devices that will absorb, store and re-emit single light-photons with revolutionary applications to information storage and processing.

2404 OPTICAL PHYSICS

The University of Adelaide

LP0775608 Prof J Munch; A/Prof PJ Veitch

Approved Project Title **The Development of High Power Cryo-Cooled Lasers and Their Application to Remote Sensing and Other Satelite-based Data Acquisition**

2007 : $ 99,677
2008 : $ 115,796
2009 : $ 118,396

Collaborating/Partner Organisation(s)
Northrop Grumman Space Technology (NGST)

Administering Organisation The University of Adelaide

Project Summary

We shall develop high power cryo-cooled lasers which will contribute directly to the national research priorities in Frontier Technologies and Safe Guarding Australia. In particular it will contribute to photonics, to remote sensing of the environment and to space based defence and surveillance applications. It will establish Australia as a pioneer in the field and generate important IP. It will be of benefit to Australian and international laser and defence industry, and it will be an ideal project for educating young laser physicists and engineers, of which there currently is a serious shortage in Australia.

2405 CLASSICAL PHYSICS

The University of Sydney

LP0775324 Prof MM Bilek; Prof DR McKenzie; Prof Y Mai

Approved Project Title **Fracture-Resistant Highly Insulating Vacuum Glazing**

2007 :	$ 325,000
2008 :	$ 320,000
2009 :	$ 320,000
2010 :	$ 190,000
2011 :	$ 100,000

Collaborating/Partner Organisation(s)
Sydney Glass Pty. Ltd
Nippon Sheet Glass Co., Ltd

Administering Organisation The University of Sydney

Project Summary

Vacuum glazing can provide thermal and sound insulation for windows that achieve the benefits of double glazing without the increased thickness by incorporating a vacuum space between two sheets of glass. The gap is maintained by pillars under high compressive stress due to atmospheric pressure. In this project, we will study the effect of pillar designs and materials on the U-value and the mechanical performance of these complex structures. Detailed simulations and measurements of stress distributions in the pillars, edge seals and glass sheets, under static and dynamic loading conditions, will allow us to develop glazing structures with greatly increased mechanical strength.

2499 OTHER PHYSICAL SCIENCES

Monash University

LP0774893 A/Prof M Aguilar; Dr J Popplewell

Approved Project Title **New Membrane Chips For Protein Interaction Analysis**

2007 : $ 70,000
2008 : $ 70,000
2009 : $ 70,000

Collaborating/Partner Organisation(s)
Farfield Scientific Limited
ATA Scientific

Administering Organisation Monash University

Project Summary

This proposal is based on a strategic partnership between Monash University and Farfield Sensors. We will create a series of new biosensors that will be used to establish a new approach to the structural analysis of membrane protein function. In particular, this technology may lead to the identification of new proteins and drug targets for therapeutic development. The long-term outcome would be the development of improved therapeutics which would be coupled to potential economic returns when further commercialisation is achieved.

Queensland University of Technology

LP0775260 Prof L Morawska; Dr ZD Ristovski; Prof L Ferreira; Dr GR Johnson; Ms JA Rossner

Approved Project Title **Quantification of current and future traffic emissions of greenhouse gases and particulate matter for application in transport and urban planning**

2007 : $ 148,818
2008 : $ 34,207
2009 : $ 36,970

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Queensland Transport

Administering Organisation Queensland University of Technology

Project Summary

The socio-economic benefits from the project include (i) novel transport emissions model, enabling assessment of the impact of transport proposals, applied in one of the most rapidly developing urban regions of Australia, SEQ; (ii) a matrix of particles, CO2, N2O and CH4 emission factors for vehicles operating in Australia, an essential input parameter in vehicle emission inventories. The ultimate economic benefit of this research will be a reduction in transport related air pollution and greenhouse emissions, thus increasing the health and well-being of Australians, reducing health care costs and placing Australia in the forefront of international progress in the race toward better methods for achieving environmental sustainability.

2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

University of South Australia

LP0775448 A/Prof J Addai-Mensah; A/Prof WM Skinner; Dr SC Grocott

Approved Project Title **Improving Aqueous Processing and Control of Copper-Uranium Leach Tails Behaviour**

2007 : $ 170,236
2008 : $ 170,236
2009 : $ 150,236

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
BHP Billiton Technology

Administering Organisation University of South Australia

Project Summary

The research will provide essential training and equip us with better understanding, appropriate scientific knowledge and diagnostic tools for establishing an effective U and Cu mineral leaching and subsequent treatment processes. Specifically, improved valuable mineral dissolution rate, greater pulp handleability, efficient particles washing and pulp dewatering technology for treating U-Cu metal containing pulps, significant increase in productivity and production with reductions in reagents and human risk, will emerge. These beneficial outcomes will increase profitability and competitiveness of BHP-Billiton and Australian mineral export.

2503 ORGANIC CHEMISTRY

Monash University

LP0774874 Dr AJ Robinson; Dr BG Livett

Approved Project Title **Structural modification of conus-derived venom peptides- A route to new therapeutics**

2007 : $ 140,000
2008 : $ 140,000

Collaborating/Partner Organisation(s)
Polychip Pharmaceuticals Pty Limited

Administering Organisation Monash University

Project Summary

Current product deficiencies in the area of pain management are forcing the pharmaceutical industry to develop new strategies for achieving analgesia and reduce their dependence on traditional, addictive opiate-based products. Structural modification of Conus derived peptides will provide exciting new leads for achieving effective analgesia.

The University of Queensland

LP0775547 Prof RJ Capon

Approved Project Title **Australian Marine Biodiversity As A Source Of New Drugs To Control Neurodegenerative Disease**

2007 : $ 145,118
2008 : $ 125,118
2009 : $ 125,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Neuropharma SA

Administering Organisation The University of Queensland

Project Summary

With the aging of Australia's population the impact of neurodegenerative diseases such as Alzheimer's and Parkinson's is rapidly on the rise. There is an urgent need to develop new and better drugs to treat the symptoms and underlying cause of these debilitating diseases. Historically, the majority of the world's pharmaceuticals have been drawn from biodiversity (ie plants, microbes and animals). As one of the few megabiodiverse nations, Australia is ideally positioned to accelerate and focus the search for drugs from nature. This project will explore an exceptionally promising pool of Australian biodiversity, its marine ecosystems, as a source of inspiration for the development of new drugs to treat neurodegenerative diseases.

The University of Sydney

LP0774839 Dr MD McLeod; Dr AR McKinney

Approved Project Title **Synthesis and Analysis of Canine Anabolic Steroid Metabolites**

2007 : $ 48,620
2008 : $ 51,691
2009 : $ 58,120

Collaborating/Partner Organisation(s)
Australian Racing Forensic Laboratory

Administering Organisation The University of Sydney

Project Summary

The Australian racing industry is a major driver of economic activity. In NSW, racing is estimated to contribute $1,000 million to GDP, $151 million to Government revenue and provide 50,000 jobs. The future security and prosperity of the racing industry depends on maintaining the highest standards of integrity in the public eye, and this in turn depends on the enforcement of regulations relating to illicit substances. The outcome of this project will be the introduction of robust methods of analysis for potential drug abuse in greyhound racing that will position Australia as a world leader in the field.

2504 ANALYTICAL CHEMISTRY

Griffith University

LP0775226 Asst Prof H Zhao; Dr S Zhang

Approved Project Title **Development of a Novel Photoelectrochemical Method for Ultra-sensitive and Selective Determination of Organic Pollutants**

2007 : $ 60,000
2008 : $ 40,000
2009 : $ 30,000

Collaborating/Partner Organisation(s)
Aqua Diagnostic Pty Ltd

Administering Organisation Griffith University

Project Summary

Rapidly deteriorating environmental conditions have caused worldwide fresh water shortage problems. For Australia, this is an urgent issue due to our limited fresh water resources. Globally, all levels of governments and legislative authorities have attempted to adopt stricter environmental legislation and better water resource management practice to address these urgent problems. However, these priorities cannot be achieved until large scale and accurate environmental data are available. The success of the project would result in a new environmental monitoring system capable of online, real-time monitoring of environmental water quality, which will directly benefit water resource management practice in Australia.

The Flinders University of South Australia

LP0775464 Dr NH Voelcker; A/Prof JG Shapter; A/Prof KJ Reynolds; Mr C Nicholls

Approved Project Title **Development of an implantable device to monitor lactate levels in blood: Monitoring the Performance of Australian athletes using Biosensor Technology**

2007 : $ 90,000
2008 : $ 85,000
2009 : $ 80,000

Collaborating/Partner Organisation(s)
Citech Holdings Pty Ltd

Administering Organisation The Flinders University of South Australia

Project Summary

Sport is a critical area for social and economic investments. Novel medical monitoring systems using implantable biosensors will ensure optimal training programs for Australian athletes and maintain international competitiveness. Here we are developing a biosensor for real-time monitoring of lactate levels in athletes using frontier porous semiconductor technology and smart telemetry protocols to transfer the readings to a remote base unit. These highly innovative devices and the materials that they are made from have enormous commercial potential in biomedical engineering. There is a strong potential for Australia to have an important stake in this area by combining expertise in engineering, chemistry and nanostructured materials.

The University of New South Wales

LP0775216 A/Prof JJ Gooding; Dr S Iyengar

Approved Project Title **Solving the problem of detecting small molecules in complex samples: A Label-Free Electrochemical Immuno-biosensor for drugs and pesticides**

2007 : $ 100,000
2008 : $ 124,000
2009 : $ 112,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Agamatrix inc.

Administering Organisation The University of New South Wales

Project Summary

Biosensors are portable analytical devices which can be used by the general public without specialist training. The proposed research will develop a biosensor for the detection of small molecules such as pesticides, poisons and drugs; a class of analytes where there is currently no viable biosensor technology. The simple to use device will benefit the Australian community by providing technology which will allow rapid and inexpensive monitoring of water as well as biomedical diagnosis. The research will also benefit Australia via providing the training of scientists to establish the new generation of Australia's bionanotechnology industry.

2505 MACROMOLECULAR CHEMISTRY

The University of Newcastle

LP0775378 A/Prof A McCluskey; Dr MC Bowyer; Dr CI Holdsworth; Dr CJ Lennard

Approved Project Title **Chemical listening devices: Novel sensors targeting the clandestine manufacture and transport of illicit drugs and explosives.**

2007 : $ 139,000
2008 : $ 119,644
2009 : $ 120,298

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Australian Federal Police

Administering Organisation The University of Newcastle

Project Summary

There can be no doubt that protecting Australia's borders from the dual threats of terrorism and illicit drugs is of paramount importance to continuation of our well-being and way of life. Our chemical sensors are simple hand-held or remote chemical listening sensors, which will have the ability to sense the presence of characteristic chemical vapours associated with explosives and illicit drugs. The simplicity and low cost of the chemical listening allows for installation at key locations -e.g. transport hubs, shipping containers, airports etc as well as placement within clandestine drug laboratories.

The University of Sydney

LP0774927 Dr BS Hawkett; Prof GG Warr; Dr SK Jones

Approved Project Title **Encapsulation of magnetic nanoparticles for the hyperthermia treatment of liver cancer**

2007 : $ 175,000
2008 : $ 200,000
2009 : $ 150,000

Collaborating/Partner Organisation(s)
Sirtex Medical Limited

Administering Organisation The University of Sydney

Project Summary

This project will provide targeted hyperthermia treatment for liver cancer. The treatment will be non systemic and therefore, unlike radiotherapy and chemotherapy, will cause minimal collateral damage to healthy tissue within the patient. Liver cancer is one of the commoner forms of cancer in humans with estimates of up to 2 million patients per year being affected worldwide. Currently 95% of these patients will die from the condition. This project will lead to improvements in health outcomes for liver cancer patients. As a consequence of the worldwide demand for this treatment, and related equipment, the project will generate foreign exchange earnings through exports and new job opportunities in the clever end of small business enterprise.

2599 OTHER CHEMICAL SCIENCES

The Australian National University

LP0774909 Prof JW White; Prof M Augustin; Dr TJ Wooster

Approved Project Title **Milk protein denaturation and stabilisation at surfaces**

2007 : $ 80,000
2008 : $ 75,000
2009 : $ 75,000

Collaborating/Partner Organisation(s)
Dairy Ingredients Group of Australia Ltd

Administering Organisation The Australian National University

Project Summary

The Australian Dairy Industry, valued at $2.8 billion in 2003-4, is ranked third among rural industries in Australia. Australia exports over 50% of its annual milk production, contributing to 13% of world trade. Exports of dairy products are valued at $2.4 billion. In order for Australia to maintain this position, Australia needs to keep up with its major competitors by ensuring quality and consistency of dairy products is maintained, and by developing new applications and innovative products. The proposal expects to recruit an exceptional young Australian graduate - a former Rhodes Scholar from Oxford University.

University of Wollongong

LP0775032 Dr SJ Blanksby; Dr PJ Barker

Approved Project Title **Why is ColorbondR steel greener on the other side of the fence? Designing additives to retard weathering of surface coatings**

2007 : $ 39,118
2008 : $ 39,118
2009 : $ 39,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
BlueScope Steel Research

Administering Organisation University of Wollongong

Project Summary

COLORBONDR steel, the flagship pre-painted steel product of BlueScope Steel Limited, has become an iconic part of both suburban and outback landscapes whether installed as roofing, walling or water conservation accessories (tanks, down-pipes etc). This proposal aims to provide a detailed understanding of molecular level changes in COLORBONDR steel surface coatings brought about by levels of heat and radiation encountered in-service. These insights will lead to further improvements in both lifetime and aesthetic durability of COLORBONDR steel, ensuring continuing economic success of BlueScope in the domestic building market with consequent benefits to manufacturing communities throughout the supply-chain nationwide.

2601 GEOLOGY

Monash University

LP0775020 Prof P Vickers-Rich; Dr TH Rich

Approved Project Title **A New Approach to the Collection of a Large Suite of Dinasour Specimens**

2007 : $ 47,713

Collaborating/Partner Organisation(s)
Big Island Pictures

Administering Organisation Monash University

Project Summary

Monash University and the University of Alaska, Fairbanks, propose to cut of a tunnel in permafrost on the North Slope of Alaska during the early Spring. This is expected to lead to the acquisition of a new assembly of dinasour fossils. An important aspect of the project is its sponsorship by Big Island Pictures, Brisbane, who will produce a documentary about this unique experiment in palaeontological engineering. This novel approach to recovering dinosaurs will lead to a new and perhaps more complete assemblage of specimens, whilst attracting a vast audience and conveying to the public how innovative science is done. The public interest is attested to by the consortium of sponsors that has been assembled by Big Island Pictures including major television stations in Australia, USA, England, France, and Germany and the Film Finance Corporation of Australia.

The Australian National University

LP0775058 Prof Dr R Grun; Prof SG Webb; Dr AS Fairbairn; Dr EJ Rhodes; Dr N Stern

Approved Project Title **Environmental Evolution of the Willandra Lakes World Heritage Area**

2007 : $ 229,739
2008 : $ 151,312
2009 : $ 189,833

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Department of Conservation and Environment
Three Traditional Tribal Groups

Administering Organisation The Australian National University

Project Summary

The Willandra Lakes World Heritage Area ranks as the most significant area for documenting Australia TMs unique cultural and environmental history. Parts of this remarkable archive are being lost through erosion. This project is the basis for a strategic research alliance between the custodians and managers of the area and leading Australian research institutions to build a picture of the continent TMs human and environmental history before this evidence is irretrievably lost. Lake Mungo is known to Australians as the site of the world TMs earliest cremation and a window into our remote past. We will provide novel insights into the evolution of the Australian landscape, its fragile environment and the history of its resilient inhabitants.

The University of Adelaide

LP0774959 Dr MS Lee; Dr JR Paterson; Dr JG Gehling; Dr GD Edgecombe; A/Prof JB Jago

Approved Project Title **The Cambrian Population Explosion of Arthropods in Australia: Ediacaran origins, evolution and biodiversity**

2007 : $ 90,000
2008 : $ 90,000
2009 : $ 90,000

Collaborating/Partner Organisation(s)
Beach Petroleum Pty Ltd
The South Australian Museum
The Australian Museum

Administering Organisation The University of Adelaide

Project Summary

This project addresses key questions on the origin and diversification of life, by investigating the evolution of the most important fossil group (arthropods) across arguably the most important event after the origin of life (the Cambrian explosion of macroscopic life). It will also excavate, promote and conserve two key geological resources of national importance, in the Flinders Ranges and Kangaroo Island. Also, it will lead to increased knowledge of the palaeoecology and geology of the economically-important Adelaide geosyncline, and benefit rural SA communities through ecotourism, a rural schools education program, and public outreach.

LP0774818 A/Prof TH Payenberg; A/Prof DM McKirdy; Dr PJ Boult; A/Prof K Grice

Approved Project Title **Sediment transport in upwelling currents and its relevance to an active petroleum system in the Morum Sub-basin, South Australia**

2007 : $ 35,118
2008 : $ 60,118
2009 : $ 28,118
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Petroleum Group, Primary Industries South Australia

Administering Organisation The University of Adelaide

Project Summary

Australia had a trade deficit of $3.5 billion in petroleum products in 2005 and this is forecast to increase dramatically in the future. Giant oil fields may exist in the Morum Sub-basin and their exploitation could significantly reduce Australia's trade deficit in petroleum products. It would also reduce Australia's reliance on oil form politically unstable parts of the globe. Any exploration activity and subsequent exploration success would have a significant effect on the rural economy based around Portland, the main port in the area, through which most of the logistics would flow.

2602 GEOPHYSICS

The University of Adelaide

LP0775223 Prof SA Greenhalgh; Dr J Zhe

Approved Project Title **New developments in 3D electrical resistivity imaging of the shallow subsurface**

2007 : $ 45,000
2008 : $ 47,000
2009 : $ 47,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
ZZ Resistivity Imaging Pty Ltd

Administering Organisation The University of Adelaide

Project Summary

This project is concerned with developing improved procedures for electrical imaging of hidden geological features in the subsurface. These techniques are required to solve urgent problems associated with important issues, such as natural hazards, disposal of dangerous waste, groundwater and construction of major buildings and tunnels. The project will develop new hardware, software and interpretation aids, as well as providing postgraduate training in an area of vital national importance.

LP0774891 A/Prof GS Heinson; Prof D Giles; Mr JA de Wet; Ms L Vella; Mr S Bilben; Mr M Cawood

Approved Project Title **Three-dimensional magnetotelluric imaging of lithospheric-scale mineral systems from source to deposit**

2007 : $ 124,534
2008 : $ 140,904
2009 : $ 85,227

Collaborating/Partner Organisation(s)
BHP Billiton
Teck Cominco Australia Pty. Ltd.

Administering Organisation The University of Adelaide

Project Summary

Geochemical studies indicate that world-class mineral deposits are partly sourced from fluids emerging from Earth's mantle and lower crust. Finding major mineral deposits in the future will therefore require knowledge of which parts of the crust and mantle yield the most prospective locations. However, there are few methods that can image deep Earth resources, and these can be very expensive. We propose to develop the magnetotelluric method as a low-cost and rapid approach for delineating 3D information on deep mineral systems beneath existing major deposits, and adapting this to explore in greenfield locations.

2603 GEOCHEMISTRY

Macquarie University

LP0774887 Prof SY O'Reilly; Prof WL Griffin; Dr NJ Pearson

Approved Project Title **Trace element analysis of diamond: new applications to diamond fingerprinting and genesis**

2007 : $ 77,823
2008 : $ 73,426

Collaborating/Partner Organisation(s)
Rio Tinto OTX (Operational and Technical Excellence)

Administering Organisation Macquarie University

Project Summary

The project will provide new insights into the processes by which diamond crystallises in the Earth's mantle. A better understanding of these processes can lead to improved models and techniques for diamond exploration, enhancing the prospect of finding new deposits in Australia and abroad. The project will test the potential of trace-element microanalysis to fingerprint diamonds by source. If successful, this technology will provide economic benefits by reducing theft and illegal mining, which represent significant losses to legitimate companies. Application of this Australian development could reduce the circulation of "conflict diamonds", which would have real social benefits worldwide, especially in some developing countries.

2604 OCEANOGRAPHY

The University of Queensland

LP0775303 Dr SG Dove; Dr WP Leggat; Prof D Yellowlees; Dr JM Lough; Dr PA Hutchings; Dr KG Caldeira

Approved Project Title **Assessing the risk of ocean acidification for the Great Barrier Reef.**

2007 : $ 176,650
2008 : $ 174,650
2009 : $ 125,650

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Great Barrier Reef Research Foundation

Administering Organisation The University of Queensland

Project Summary

The increase in greenhouse gases such as CO2 represents a challenge for coral reefs such as Australia's Great Barrier Reef (GBR). While the impact of greenhouse warming on coral reefs has been partially explored, the potentially serious implications of a decrease in ocean pH due have not been properly assessed. Detecting and understanding changes to carbonate concentrations and reef calcification are of great importance if managers are to respond strategically to potential ecological changes. This project directly addresses National Research Priority 1 of achieving 'An Environmentally Sustainable Australia' by addressing the priority goal of 'Responding to climate change and variability'.

2605 HYDROLOGY

The University of Melbourne

LP0774814 Dr AW Western; Mr MH Tyler; Dr JP Walker

Approved Project Title **Quantifying near-surface diffuse discharge from the southwest Great Artesian Basin**

2007 : $ 114,754
2008 : $ 110,288
2009 : $ 71,836

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
BHP Billiton Olympic Dam
Great Artesian Basin Coordinating Committee
South Australian Arid Lands Natural Resource Management Board
Santos Ltd

Administering Organisation The University of Melbourne

Project Summary

Groundwater from the Great Artesian Basin (GAB) supplies one of Australia's largest mining operations and many pastoral enterprises. The GAB is the only significant water resource through much of arid central Australia and supports unique environmental values in this region. This project will provide vital data on natural, near-surface leakage rates from the GAB that can be used to gain a greater understanding of the amount of water available for sustainable extraction. This will assist in the improved management of the GAB resource and in doing so contribute to greater certainty for the mining and pastoral users of the GAB groundwater and provide greater protection for unique ecosystems associated with natural discharge springs.

2606 ATMOSPHERIC SCIENCES

Macquarie University

LP0774996 Prof AJ Pitman; Dr J Beringer; Prof W Steffen; Dr G Richards; Dr Y Wang

Approved Project Title **Reengineering a dynamic vegetation model to explore the stability of Australian terrestrial carbon**

2007 : $ 57,883
2008 : $ 63,856
2009 : $ 70,182

Collaborating/Partner Organisation(s)
Australian Greenhouse Office

Administering Organisation Macquarie University

Project Summary

Overseas models do not represent Australian biophysical processes well: our flora and fauna are unique and our soils are old and nutrient poor. In contrast, the National Carbon Accounting System (NCAS) is a world-class framework for estimating current carbon processes. By building NCAS expertise into an overseas model of soil and vegetation processes we can develop the capacity to increase our confidence in future projections of carbon and vegetation change. Our proposal, linking Universities, CSIRO and the Australian Greenhouse Office establishes a team that is internationally competitive. It will enhance local expertise and local model development to ensure national policy development is underpinned by world-class science.

2701 BIOCHEMISTRY AND CELL BIOLOGY

Monash University

LP0775530 Prof CW Pouton; Dr JM Haynes; Dr P Bello

Approved Project Title **Functional characterisation of neurons derived from embryonic stem cells and NS cells**

2007 : $ 31,118
2008 : $ 31,118
2009 : $ 31,118

Collaborating/Partner Organisation(s)
Stem Cell Sciences Ltd

Administering Organisation Monash University

Project Summary

The ability to obtain specific neurons from NS cells will revolutionise the study of nerve function, will allow the establishment of much-improved models for discovery of new drugs, and will define how enriched populations of neural cells can be obtained for applications in treatment of neurodegenerative diseases. The project will provide vital data for the emerging biotechnology industry associated will applications of stem cell biology, and will stimulate clinical researchers to investigate the therapeutic potential of cell derived from NS cells.

Southern Cross University

LP0775151 A/Prof C Morris; A/Prof DN Leach; Dr BC Granzin

Approved Project Title **Understanding the chemical components that influence the flavour and quality of milk under different pasture management systems.**

2007 : $ 80,000
2008 : $ 75,000
2009 : $ 70,000
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Norco Co-operative Limited

Administering Organisation Southern Cross University

Project Summary

The project will preserve and substantially increase the penetration of Australian milk into the Asian import market for dairy products, which stands at $2.1 billion annually, and is expected to grow at 6.6%per annum over the next 5 years. This outcome can potentially counteract the decline in dairy farm numbers in northern NSW, attract new suppliers to the region, and stimulate rural community growth and prosperity.

The Australian National University

LP0775395 Dr PC John; Dr E Perotti; Dr DA Jones; Dr O Leblanc

Approved Project Title **Isolation and characterization of genes regulating female reproductive organ development in plants.**

2007 : $ 96,751
2008 : $ 96,751
2009 : $ 96,751

Collaborating/Partner Organisation(s)
Groupe Limagrain
Pioneer Hi-Bred Intl
Syngenta Seeds Inc.

Administering Organisation The Australian National University

Project Summary

Genes that regulate female reproductive organ development are of immense value for Australia as tools for seed improvement. Those from our preliminary screen have convinced our industry partners that they can be agents for engineering of apomixis or creation of fertile seed without fertilisation. This will allow the capture of hybrid vigour in wheat and rice, for which commercial hybrid seed production is not currently available. In wheat alone, apomixis presents for Australia an economic value of more than Aus$ ½ billion per annum. Furthermore, controlled apomixis will accelerate breeding programs that will bring drought resistance and minimal fertiliser requiring varieties to the farmer.

The University of New South Wales

LP0774951 Dr Y Li; Prof MD Willcox; Dr PJ Cozzi; Prof P Russell; Dr BJ Walsh; Dr Z Zhao

Approved Project Title **Identification of novel biomarkers in tears for prostate cancer diagnosis and prognosis**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Minimic Pty Ltd
Institute for Eye Research

Administering Organisation The University of New South Wales

Project Summary

The purpose of this study is to identify novel biomarkers in the tears of patients with CaP. The use of the several techniques will increase the chance of success and enable us to find more diagnostic markers. If successful, the identified proteins may be used to diagnose and determine the stage of cancer. This will help guide clinicians in choosing the best treatment methods for an individual patient. The markers may also be used to monitor the disease progress and the effects of treatment. The results from this study may improve the prognosis of CaP patients.

University of Tasmania

LP0774820 Dr R Chung; A/Prof AK West; A/Prof M Chuah; Dr P PALUMAA; Dr R SILLARD

Approved Project Title **Identifying the specific structural features of metallothionein that regulate its ability to modulate astrogliosis**

2007 : $ 108,000
2008 : $ 100,000
2009 : $ 95,000

Collaborating/Partner Organisation(s)
Bestenbalt LLC

Administering Organisation University of Tasmania

Project Summary

This project contributes directly to the Designated National Research Priority 2 and could potentially have a significant impact upon the broader Australian Community by identifying a novel and powerful therapeutic agent based upon metallothionein proteins with the ultimate aim of helping patients who have a brain injury or a neurodegenerative disease. It is important to note that the partnership between UTAS and Bestenbalt LLC is a critical step in the development of these exciting research discoveries into commercially viable outcomes for the Australian Biotechnology Industry and the broader Australian community.

University of Western Sydney

LP0775238 Dr VJ Higgins; Prof IW Dawes; Adj/Prof PJ Rogers

Approved Project Title **The role of redox balance and reactive oxygen species in beer stability using an integrated transcriptomic and metabolomic analysis**

2007 : $ 100,000
2008 : $ 105,000
2009 : $ 110,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Carlton and United Beverages

Administering Organisation University of Western Sydney

Project Summary

A better understanding of yeast redox balance will enable it to be used to predict fermentation outcomes and to link raw materials and processes to the quality of the final product. These data will produce economies in the brewing industry by the introduction of quality control regimes for raw materials and can be extrapolated to the wine industry. This will provide real economic advantage to Carlton and United Breweries which is an Australian company that has an international profile within a highly competitive industry.

2702 GENETICS

Charles Sturt University

LP0775076 Dr DA Roshier; Dr R Heinsohn; Dr LG Joseph

Approved Project Title **Northern connections-movement of birds between Australia and its near northern neighbours**

2007 : $ 40,000
2008 : $ 95,000
2009 : $ 90,000

Collaborating/Partner Organisation(s)
Department of Environment & Heritage
Agriculture Fisheries & Forestry Australia
Australian Quarantine and Inspection Service

Administering Organisation Charles Sturt University

Project Summary

This project will better enable Australia to meet its international treaty obligations on migratory birds and provide much needed data on patterns of migratory connectivity in northern Australia. These data are critical for the conservation and management of bird species that spend part of their life-cycle outside Australia. The outputs of the project will be used to assist decision makers with policy and management decisions relevant to (1) targeted surveillance for exotic and emergent diseases of relevance to Australia and (2) the conservation and management of bird populations in Northern Australia.

The University of Melbourne

LP0775187 Dr B Appleton; Prof ME Goddard; Dr J Vaughan

Approved Project Title **Breeding for the future - Alpaca genetics**

2007 : $ 74,000
2008 : $ 74,000
2009 : $ 74,000

Collaborating/Partner Organisation(s)
Alpaca Genomics Australia Pty Ltd

Administering Organisation The University of Melbourne

Project Summary

The Australian alpaca industry is recognised as an international leader. Alpaca fleece provides an annual national economic benefit of $1 million and has enormous potential for growth. This project will use a novel molecular mapping approach to generate a genetic test for desirable Suri fleece - the single biggest factor in developing a purebreeding suri line whilst retaining variation in other traits and avoiding inbreeding. This will quickly increase the industry value, providing opportunity for rural communities to diversify farming enterprises and maximise income, and offering further employment in regional areas. This project will ensure Australian breeders retain a competitive edge in the face of alpaca research beginning in the USA.

2703 MICROBIOLOGY

La Trobe University

LP0774913 Prof RJ Seviour; Dr D Tillett

Approved Project Title **Biocontrol of foaming in activated sludge plants with bacteriophages**

2007 : $ 50,236
2008 : $ 50,236
2009 : $ 50,236

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
South East Water
Melbourne Water

Administering Organisation La Trobe University

Project Summary

Activated sludge systems are the most widely used processes for treating wastewater in Australia. Yet most eventually suffer from episodes of bulking and foaming, where high levels of biosolids leave the plant with the treated waste, representing serious pollution hazards. Attempts to solve these problems have met with limited success.The highly novel biocontrol method proposed here will provide a specific, environmentally friendly and safe method to protect our rivers, streams and oceans form the harmful consequences of these problems

2704 BOTANY

The University of Adelaide

LP0775100 Dr DM Lewis

Approved Project Title **Heterotrophically grown microalgae as a feed source for the Australian aquaculture industry**

2007 : $ 46,118
2008 : $ 32,118
2009 : $ 30,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
South Australian Oyster Hatchery

Administering Organisation The University of Adelaide

Project Summary

The Australian aquaculture industry has rapidly grown in the past decade producing premium quality, high value species, e.g. tuna and oyster. In the new millennia it is predicted that the Australia aquaculture industry will be the most profitable area within the Australian seafood industry. An integral component for the long-term sustainability of the Australian aquaculture industry is the availability of top-quality microalgal concentrates, shelf-stable pastes or live feeds, which provide the nutritional requirements of aquatic species in the hatcheries. This project will develop novel microalgal production strategies that would add value to the Australian aquaculture industry.

LP0774857 Dr ES Scott; A/Prof JM Facelli; Ms RM Velzeboer; Dr AJ Able

Approved Project Title **Impact of Phytophthora cinnamomi on native vegetation in South Australia - understanding underlying mechanisms to improve management**

2007 : $ 71,000
2008 : $ 71,000
2009 : $ 71,000

Collaborating/Partner Organisation(s)
Department for Heritage and Environment
SA Water
Forestry SA
City of Tea Tree Gully
Adelaide Hills Council
Adelaide Mount Lofty Natural Resource Management Board
SA Murray-Darling Basin Natural Resources Management Board
Department for Transport, Energy and Infrastructure

Administering Organisation The University of Adelaide

Project Summary

The disease Phytophthora dieback threatens many Australian native plants and the animals that rely on them for food and habitat. This research will provide new knowledge of the susceptibility to the disease of plant species that are threatened with extinction, and of the effects of plant and soil microbial community composition on patterns of spread of the disease. This knowledge will assist the recovery of rare and threatened plant species and ecological communities statewide and nationwide.

The University of Queensland

LP0775239 A/Prof ID Godwin; Prof S Fukai; Dr DS Loch; Dr TA Holton; Dr WW Hanna

Approved Project Title **Eco-Turf: Water and nutrient use efficient turfgrasses from Australian biodiversity.**

2007 : $ 250,000
2008 : $ 240,000
2009 : $ 305,000
2010 : $ 315,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Jimboomba Turf Company PTY LTD
DPI&F
Council of Mayors

Administering Organisation The University of Queensland

Project Summary

Domestic water consumption in Australia is approximately 30% higher than the OECD average. Approximately one third of domestic water consumption is applied to the garden, including turfgrass lawns. Turfgrasses are significant users of fertilisers, which can lead to problems with runoff and infiltration into the water table. We will use the unique diversity of Australian couch grasses to identify new turfs for domestic, sportsground and amenity lawns. This project will develop tools to select turfgrasses that maintain quality with reduced inputs of water and nutrients, leading to an overall reduction in resource use and downstream ecological effects. Benefits of this project extend to urban and rural communities Australia-wide.

The University of Western Australia

LP0774871 A/Prof M Barbetti; Prof Dr K Sivasithamparam

Approved Project Title **Race status, sources of resistance and mechanisms of resistance to Peronospora parasitica, a major threat to oilseed Brassica production in Australia.**

2007 : $ 90,000
2008 : $ 90,000
2009 : $ 90,000

Collaborating/Partner Organisation(s)
Department of Agriculture Western Australia

Administering Organisation The University of Western Australia

Project Summary

Through successful identification of mechanisms and molecular characterisation of resistance to Peronospora parasitica races and the identification of sources of host resistance against these races, breeders, for the first time, will be able to develop cultivars with resistance against the full spectrum of P. parasitica races occurring across southern Australia. Benefits include prevention of severe losses in canola from downy mildew, and more viable and sustainable production with less reliance upon fungicides. This research addresses the National Research Priority 'An Environmentally Sustainable Australia' and the Priority Goal of 'Transforming existing industries', and will particularly benefit southern Australian rural communities.

2705 ZOOLOGY

The University of Adelaide

LP0775207 Dr MA Keller; Dr ES Scott

Approved Project Title **Blue-banded bees as greenhouse pollinators: healthy and consistent supplies for reliable pollination services**

2007 : $ 100,000
2008 : $ 90,000
2009 : $ 80,000

Collaborating/Partner Organisation(s)
Biological Services
Perfection Fresh Australia PTY LTD
Timbercorp

Administering Organisation The University of Adelaide

Project Summary

Native blue-banded bee pollination of tomatoes will increase crop yield by 15-20% through improved pollination and simultaneously decrease labour costs by $16,000/Ha/year. The use of blue-banded bees will change the face of the industry. It will cause a 90% decrease in the use of pesticides, increase the use of biological pest management and give rise to a novel industry to provide pollination services. Blue-banded bee pollination will open up international markets through production of improved quality with less production costs and healthier production methods. Furthermore, the project will remove an environmental threat by providing a native substitute for alien bumblebees.

2707 ECOLOGY AND EVOLUTION

Griffith University

LP0774866 A/Prof CP Catterall; Dr RL Pressey

Approved Project Title **Forecasting and managing biodiversity change: birds in an urbanising landscape**

2007 : $ 52,136
2008 : $ 65,796
2009 : $ 60,254

Collaborating/Partner Organisation(s)
Brisbane City Council
Logan City Council
SEQ Catchments

Administering Organisation Griffith University

Project Summary

The project will help to predict changes in biodiversity from different development options, and will identify forms of urban design that provide improved biodiversity outcomes. The case study region (SE Queensland) is a national "biodiversity hotspot" due to high biodiversity combined with high threat from urbanisation. Findings will also be relevant to the ecological sustainability of forest ecosystems and urban areas throughout Australia. The project will develop decision-support tools for conservation planning, with the involvement of research partners from local government and regional environmental management. This will contribute to the sustainable use of Australia's biodiversity, a national research priority.

The University of Melbourne

LP0775172 Prof NJ Enright; Prof BB Lamont

Approved Project Title **Management of fire-prone shrublands in Western Australia: testing the effects of frequent fire**

2007 : $ 70,000
2008 : $ 90,000
2009 : $ 50,000

Collaborating/Partner Organisation(s)
Department of Conservation and Land Management

Administering Organisation The University of Melbourne

Project Summary

Understanding the impacts of different fire regimes (frequency, intensity, patchiness, size of fires) on high diversity shrublands will help CALM (the land managers) develop fire management prescriptions that ensure the conservation of rare and threatened flora, and maintain biodiversity. The research will identify relationships between weather, fuel and fire behaviour that is currently lacking for shrubland vegetation types. It offers advances in our understanding of ecosystem structure and function, with applied value in fire management for conservation and asset protection. The project contributes to development of ecological theory, and provides a scientific basis for improved management of Australia's unique natural heritage.

The University of New England

LP0775145 Dr PJ Clarke; Dr K Knox; Dr RA Bradstock; Dr TD Auld

Approved Project Title **Fire severity, habitat heterogeneity and life histories. Resolving the persistence ability of plants in frequently fired landscapes**

2007 : $ 102,148
2008 : $ 102,148
2009 : $ 102,148

APA(I) Award(s): 1

APDI Dr K Knox

Collaborating/Partner Organisation(s)
NSW Department of Environment and Conservation

Administering Organisation The University of New England

Project Summary

The wise management of Australia's biodiversity has major economic and social benefits for the nation through the provision of ecosystem services, bio-products and tourism. Fire is a pivotal environmental factor that will continue to influence plant biodiversity in fire-prone ecosystems. Inappropriate fire regimes, however, threaten biodiversity through disruption of life cycles. If too many or too few fires occur in an area this can lead to decline and extinction of plant and animal species. This research will provide a risk-assessment tool for the management of biodiversity to reverse population declines and prevent extinctions.

The University of New South Wales

LP0775462 Prof MA Adams; Dr B Singh; Dr CV Barton; Dr AL Cowie

Approved Project Title **Quantifying tree and soil respiration and their responses to global change**

2007 : $ 50,236
2008 : $ 50,236
2009 : $ 50,236

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
NSW Department of Primary Industry
Australian Greenhouse Office

Administering Organisation The University of New South Wales

Project Summary

The Australian Greenhouse Office, as well as independent analysis, recognizes that belowground processes must be better quantified if Australia's contributions to atmospheric concentrations of greenhouse gases (GG) are to be firmly based. A major issue is the lack of dedicated research focused on soil and plant root emissions of GG and, in particular, a lack of testing of methodologies suited to Australian soils and conditions. This project will address these concerns. We will also be addressing the clear need for further training of PhD qualified researchers in the field of climate change.

LP0774833 Prof RT Kingsford; Dr SW Laffan; Dr D Ramp; Dr JA Merson; Dr RA Bradstock; Dr R Mulley; Dr TD Auld; Dr RS Chapple

Approved Project Title **Managing Ecosystem Change in the Greater Blue Mountains World Heritage Area**

2007 : $ 150,000
2008 : $ 150,000
2009 : $ 150,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
NSW DEC, National Parks and Wildlife Service
Blue Mountains City Council
NSW Department of Primary Industries
NSW DEC, Policy and Science Division
Hawkesbury Nepean Catchment Management Authority

Administering Organisation The University of New South Wales

Project Summary

Protected areas are the primary mechanism for conserving Australia's unique biodiversity. Of added significance are areas of biodiversity recognised as World Heritage Areas, such as the GBMWA. Climate, pest species and altered fire regimes potentially diminish their ecological values but some of these anthropogenic threats can be managed. Effective management depends on spatially-explicit understanding that allows priorities to be set and management objectives identified and tested. This research will develop a model for determining management priorities for large protected areas, meeting State, National and International obligations. Significant conservation benefits will accrue along with social, economic and human well-being benefits.

LP0775000 A/Prof IM Suthers; Prof NR Loneragan; Mr MD Taylor; Dr C Gray

Approved Project Title **Stocking of fish and prawns at ecologically determined densities into Australian estuaries**

2007 : $ 132,148
2008 : $ 132,148
2009 : $ 132,148

APA(I) Award(s): 1

APDI Mr MD Taylor

Collaborating/Partner Organisation(s)
NSW Department of Primary Industries - Fisheries

Administering Organisation The University of New South Wales

Project Summary

Increasing numbers of people like to go fishing, and to catch a fish, which translates into tourism income and aquaculture business. Restocking is a fisheries management option when the natural supply or survival of larvae is limited. This study will determine for the first time the ecologically appropriate abundance of small mulloway and prawns that an estuary can sustain. We will assess the extra effort needed to release larvae into particular key habitats, and develop new technologies to identify our larvae from the wild. Our findings will be relevant to restocking of Australia's inland rivers, which at present has little ecological basis.

The University of Queensland

LP0775264 Dr CA McAlpine; Dr M Maron; Dr GC Smith; Dr DV Pullar; Dr MN Gentle

Approved Project Title **Restoration of Fragmented Brigalow Landscapes for Conservation: Evaluating Alternative Futures in a Changing Climate**

2007 : $ 140,000
2008 : $ 105,000
2009 : $ 110,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Queensland Murray-Darling Committee
Condamine Alliance
Queensland Environmental Protection Agency
Department of Main Roads
Border Rivers-Gwydir Catchment Managment Authority

Administering Organisation The University of Queensland

Project Summary

Appropriate management and restoration of Australia's endangered brigalow communities will prove critical for the conservation of the nation's biodiversity assets. The Brigalow Belt South supports disproportionately high numbers of threatened fauna species. This research will provide regional, state and national natural resource management organisations with the ability to conserve threatened and unique brigalow fauna in the long-term. Regional communities will benefit as the tool will be used for multiple uses ranging from advising regional landholders on optimal management of native vegetation on their properties to maximising the value of regional landscape restoration projects.

The University of Sydney

LP0775183 Dr AJ Pile; Prof CB Pattiaratchi; Prof DJ Booth; Dr M Thomson; Dr D Skropeta

Approved Project Title **Effect of deep-sea drilling on sustainability of deep-sea ecosystems.**

2007 : $ 250,000
2008 : $ 214,000
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Santos Ltd.
Woodside Energy Ltd

Administering Organisation The University of Sydney

Project Summary

Offshore oil and gas production makes a significant contribution to the Australian economy and enhances our energy security. Australia's vast deep-sea reserves of hydrocarbons lie on the NW Shelf and in Bass Strait, ecological 'hot spots' that are extremely vulnerable to the impact of exploration, extraction and production. Using deep-sea equipment, we will conduct the field experiments that are essential to understanding these ecosystems and the impact of deep-sea structures. Our advances will produce data and develop methodologies that will make Australia a world leader in reconciling our deep-sea energy and environmental needs.

LP0775167 Prof R Shine

Approved Project Title **Predicting the ecological impact of cane toads on native fauna of northwestern Australia**

2007 : $ 172,683
2008 : $ 170,000
2009 : $ 161,000

Collaborating/Partner Organisation(s)
Conservation and Land Management
Australian Reptile Park
Department of Environment and Heritage

Administering Organisation The University of Sydney

Project Summary

At current rates of spread, cane toads will invade the Kimberley region of northwestern Australia within a few years. We urgently need to be able to predict which native species will be at risk from toads, and which will be relatively unaffected either because they are not killed by toads, or because they can rapidly learn, or evolve, in ways that reduce this impact and thus allow population recovery. We will obtain these data by exposing native animals to toads and recording the results; and thus, can identify the most important priorities for conservation efforts.

University of Tasmania

LP0775258 Dr GJ Edgar; Prof JB Kirkpatrick; Dr TM Brooks

Approved Project Title **Incorporation of vulnerability and irreplaceability into marine protected area planning**

2007 : $ 120,000
2008 : $ 115,000
2009 : $ 110,000

Collaborating/Partner Organisation(s)
Conservation International
Parks and Wildlife Service
Department for Environment and Heritage - South Australian Government

Administering Organisation University of Tasmania

Project Summary

The primary national benefit will be to better safeguard biological diversity by reducing extinction risk for marine species. This will be achieved through analysis of factors affecting extinction risk, and through the development of protocols to improve the siting of marine protected areas for conservation outcomes. A more effective National Representative System of Marine Protected Areas will be achieved through decreased extinction risk and lower opportunity costs. In addition, a quantitative baseline dataset will be obtained for evaluating long-term changes in threatened marine species populations, and the effectiveness of future management actions aimed to safeguard threatened species.

2708 BIOTECHNOLOGY

Monash University

LP0774941 Dr RM Gleadow; Prof JD Hamill; Prof BL Moeller

Approved Project Title **Molecular, physiological and environmental regulation of toxic prussic acid levels (cyanogenesis) in forage sorghum.**

2007 : $ 70,000
2008 : $ 70,000
2009 : $ 70,000

Collaborating/Partner Organisation(s)
Pacific Seeds

Administering Organisation Monash University

Project Summary

Forage sorghum is grown widely in dry, tropical areas of Australia. The leaves contain dhurrin, a natural defence product that liberates prussic acid (cyanide) when leaf tissue is disrupted (eg when chewed). The problem is that young plants or those experiencing drought are highly toxic, resulting in financial loss through reduced nutritive value, livestock loss and wasted feed. Using new, non-GM technology we will identify novel genetically altered sorghum lines with negligible prussic acid. Lines with enhanced levels could be used as soil biofumigants. Breeders can use this germplasm to develop varieties tailored for increasingly dry Australian conditions. The new varieties with controlled dhurrin content will be suitable for export.

The University of Queensland

LP0775089 Dr SP Finnigan; Dr ZS Chan

Approved Project Title **Novel EEG data mining methods for detecting and monitoring brain injury**

2007 : $ 75,000
2008 : $ 70,000
2009 : $ 65,000

Collaborating/Partner Organisation(s)
BrainZ Instruments Limited

Administering Organisation The University of Queensland

Project Summary

The outcomes of this project could ultimately help produce novel technology which would enable bedside monitoring of brain function in patients with brain injuries such as stroke. This technology could aid critical care and treatment of such patients. Hence patients' recoveries could be positively affected and the high death or disability rates associated with such conditions could be reduced. A host of economic and social benefits for patients, their families, hospitals and their staff, governments and healthcare organisations could thus result. The developed technology would be non-invasive, compact and relatively inexpensive, and could thus be used in rural and regional hospitals, thereby also benefiting patients in those communities.

2799 OTHER BIOLOGICAL SCIENCES

Charles Darwin University

LP0774812 Dr LB Hutley; Dr J Beringer; Dr SK Arndt; Dr S Livesley; Dr GD Cook; Dr K Butterbach-Bahl

Approved Project Title **Integrative assessment of disturbance and land-use change on total greenhouse gas balance and nutrient cycling in savanna ecosystems**

2007 : $ 70,000
2008 : $ 65,000
2009 : $ 55,000

Collaborating/Partner Organisation(s)
Environmental Protection Agency, Department of Natural Resources, Environment and The Arts
Australian Greenhouse Office

Administering Organisation Charles Darwin University

Project Summary

Climate change and variability is expected to have an impact on the NT environment and economy. This project will enable NT specific calibrations of climate variability-land use models, such as the National Carbon Accounting System. The NT Government will have access to a high quality database and calibrated models relating to greenhouse gas emissions as a function of land use change. The project will improve estimates and management of GHG and provide a basis for the NT to potentially exploit future carbon-trading initiatives or GHG abatement schemes as fundamental data describing emissions as a function of land use will be available. This is of national significance given the size of the savanna biome in Australia.

2801 INFORMATION SYSTEMS

Monash University

LP0774834 A/Prof F Burstein; A/Prof L Churilov; A/Prof A Zaslavsky; A/Prof J Wassertheil; Prof PA Arbon

Approved Project Title **Context-aware mobile decision support systems for medical emergency management in mass gatherings**

2007 : $ 52,000
2008 : $ 52,000
2009 : $ 52,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Intel Australia

Administering Organisation Monash University

Project Summary

This project contributes to gaining a clearer understanding of the nature and requirements of medical emergency during mass gathering events. We will build and test a mobile real time decision support tool for improving efficiency of medical decisions to strengthen Australia's ability to manage potential health- related hazards. This project addresses research priorities of promoting and maintaining good health. It capitalizes on smart information use and will be of great benefit to mass gatherings emergency management. 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.

The University of New South Wales

LP0775532 Prof EW Coiera; A/Prof JI Westbrook; A/Prof WR Wobcke; Dr F Magrabi

Approved Project Title **Agent-based methods for communication system design in complex organisations**

2007 : $ 140,000
2008 : $ 160,000
2009 : $ 127,266

APA(I) Award(s): 2
APDI Dr F Magrabi

Collaborating/Partner Organisation(s)
Prince of Wales Hospital

Administering Organisation The University of New South Wales

Project Summary

There is a direct opportunity to directly improve the efficiency, effectiveness, and safety of health work as a result of improved communication tools arising from this project. The current evidence that poor communication systems and practices significantly impair clinical work, and are related to avoidable clinical error and patient death, suggest compelling national benefits. Health represents 10% of GDP, and communication technologies have yet to be significantly exploited here. There are substantial commercial opportunities nationally, for successful new communication services that service health care. Internationally the markets may be even larger, as healthcare is a larger proportion of GDP in nations such as the US.

University of Technology, Sydney

LP0775041 Prof C Zhang; Dr L Cao; Dr MK Browne; Mrs YK Morrow; Mr R Schurmann; Mr PG Newbigin; Mr F Figueiredo; Mr Y Zhao

Approved Project Title **Data Mining of Activity Transactions to Strengthen Debt Prevention**

2007 : $ 152,000
2008 : $ 173,000
2009 : $ 144,000

APA(I) Award(s): 1

APDI Mr Y Zhao

Collaborating/Partner Organisation(s)
Centrelink

Administering Organisation University of Technology, Sydney

Project Summary

A national benefit from this research will be the significant analytical contribution to the prevention of incorrect payment directly associated with 30% of Commonwealth outlays. Funds not incorrectly paid will be available for direction to other areas of national importance. Another benefit is the new technology will have application in commercial, state and federal government agencies where research into activity, event or process data can be used to improve service delivery outcomes. A further national benefit will be the development and use of frontier activity transaction mining techniques to ensure Australia a leading role in enterprise data mining research and development.

2802 ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING

Monash University

LP0774944 Prof MP Georgeff; A/Prof DA Campbell; Prof HW Schmidt; Dr S Thompson; Prof GI Webb

Approved Project Title **Intelligent Collaborative Care Management**

2007 : $ 180,000
2008 : $ 160,000
2009 : $ 140,000

Collaborating/Partner Organisation(s)
British Telecommunications PLC

Administering Organisation Monash University

Project Summary

The project will provide the basis for new models of consumer care in both social and commercial settings. In a commercial setting, customer care means looking after the customer, with the hope of retaining their business. By developing a formal model of evidence-based care, together with the information technologies to implement this model, the project will result in higher quality, safer, more efficient and more effective care. This will produce significant economic and social benefits for Australia across a wide range of service industries. The project will also generate export opportunities for information technology services and products in health care and other service industries. In addition, it will drive collaboration with leading global businesses, providing new paths to market for Australian research, technologies and innovations.

RMIT University

LP0775361 A/Prof DK Kumar; Prof X Yu

Approved Project Title **Smart Task Allocation Support for Small-Scale Printing Factory**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Valonia MG

Administering Organisation RMIT University

Project Summary

The outcomes will give the Australian small-scale printing industry the capability to be competitive and cost-effective while looking after the wellbeing of its workforce. The understanding of complex relationships between various tasks in small-scale printing environments will improve the wellbeing of workers. The smart computer system will provide a frontier technology that will improve the profitability and efficiency. It will also result in a cutting edge technology that is applicable to other similar industries.

The Flinders University of South Australia

LP0775369 A/Prof KJ Reynolds; Prof H Owen; Mr P Williamson

Approved Project Title **ISim - a realistic intubation simulator using Virtual Reality technology**

2007 : $ 70,000
2008 : $ 65,000
2009 : $ 60,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Medical Realities Pty Ltd

Administering Organisation The Flinders University of South Australia

Project Summary

Simulation training has been adopted widely in aerospace, nuclear power and the military, but simulation in medicine has a relatively short history. This research will drive Australia to the forefront of the medical simulation industry. Effective management and treatment of patients is a priority in health care. Medical resources are required to ensure that staff are trained efficiently and effectively on critical medical procedures. The high growth of claims for medical accidents and the accompanying rise in medical insurance adds to the impetus for major hospitals to demonstrate they are using advanced methods for training. The community will benefit from better-trained medical staff, and a better standard of healthcare.

The University of Queensland

LP0774994 Dr AP Bradley; Prof S Crozier; Prof DJ Venter; Dr AJ Mehnert; Dr PC Bamford

Approved Project Title **Multi-modal, Multi-dimensional Virtual Microscopy for Diagnostic Quantitative Pathology**

2007 : $ 185,000
2008 : $ 163,000
2009 : $ 153,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
MonoGen, Inc.
Mater Health Services Pathology

Administering Organisation The University of Queensland

Project Summary

This project will contribute to the development of a new generation of virtual microscopy (VM) systems that provide new and innovative features capable of significantly increasing the adoption of digital imaging technology throughout the field of pathology. These systems have the potential to significantly enhance the efficiency and efficacy of not only primary diagnostic workflows, but also aspects of proficiency testing and continuing education vital for a vibrant, well regulated discipline. In addition, the project will contribute to our knowledge of the pathology assessed in the screening and diagnosis of cancers such as cervical, lung and bladder cancers.

2803 COMPUTER SOFTWARE

Swinburne University of Technology

LP0775188 Prof J Han; Dr J Schneider; Dr TD Ebringer; Mr RH Harvey; Mr AJ Rogers

Approved Project Title **Service orientated architectures in management of IT infrastructures**

2007 : $ 96,000
2008 : $ 96,000
2009 : $ 81,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Computer Associates

Administering Organisation Swinburne University of Technology

Project Summary

Through the utilisation of the proposed framework for building rich business service registries, Australian companies will be able to take full advantage of service oriented architectures in constructing and managing their IT infrastructure in a way that is not currently possible. Such a registry will be able to provide a coherent view of an enterprise's services and resources, and an effective way to co-relate and utilise them, in a changing environment. The development of the framework will also further cement Australia's leading market position in providing service registries to enterprises world-wide, enhance Australia's international research reputation and provide an excellent training environment for young researchers.

The Australian National University

LP0774896 Dr AP Rendell; Dr PE Strazdins; Dr MJ Frisch; Dr GW Trucks; A/Prof S Chong-Wee See

Approved Project Title **Programming Paradigms, Tools and Algorithms for Electronic Structure Calculations on Clusters of Non-Uniform Memory Access Parallel Processors**

2007 : $ 85,000
2008 : $ 85,000
2009 : $ 70,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Gaussian, Inc.
Sun Microsystems

Administering Organisation The Australian National University

Project Summary

In recent years Australian academia has invested heavily in high performance computing systems. A significant fraction of these resources are devoted to performing computational chemistry studies, such as those used in drug design. This project links Australian researchers with the company responsible for a particularly widely used computational chemistry application package, and also with a major international computer company. Our aim is to substantially improve the performance of this code on cluster based compute systems. This, as well as our generic performance evaluation tools, would be of substantial benefit to the Australian research community. The project will forge links with researchers in Singapore, Japan and the USA.

2805 DATA FORMAT

University of South Australia

LP0775036 Prof AJ Grant; Dr PD Alexander; Dr DV Haley; Mr NA Letzepis

Approved Project Title **Cooperative Mesh Networks for Municipal Wireless Access**

2007 : $ 88,000
2008 : $ 78,000
2009 : $ 68,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Cohda Wireless

Administering Organisation University of South Australia

Project Summary

Robust mobile broadband data communication is vital for public safety and emergency services applications. This project will improve the performance and cost-effectiveness of mesh networks, enabling new network architectures. Immediate benefits to Australia will be: Contribution to a growing knowledge base and fundamental capabilities wireless broadband communications; Education of future leading academic and industrial innovators; Raising the international profile of Australian research in information technology. The contribution of Information and Communications Technology to the National economy is widely recognized. ICT contributes to wealth creation, employment and exports, underpinning many innovation processes.

2903 MANUFACTURING ENGINEERING

Swinburne University of Technology

LP0775400 Prof SH Masood; Prof E Shayan

Approved Project Title **An intelligent design support system for manufacturing of palletising machinery**

2007 : $ 55,000
2008 : $ 52,000
2009 : $ 50,000

Collaborating/Partner Organisation(s)
Alloyfab Engineering Associates Pty Ltd

Administering Organisation Swinburne University of Technology

Project Summary

The food and beverage manufacturing process in most Australian enterprises is a highly automated process, where food cartons, bottles or cans are required to move at a controlled speed for filling or assembly operations. These operations require highly efficient and reliable material handling machinery such as palletising systems. The outcome of this research will be of direct economic benefit to Australian manufacturers and suppliers of such machinery in reducing the cost and lead time of designing and delivering highly automated flexible palletising and de-palletising systems with maximum performance.

2904 AUTOMOTIVE ENGINEERING

University of Technology, Sydney

LP0775445 A/Prof N Zhang; Dr JM Jeyakumaran; Mr RT Tamba; Mr SP Fitzgerald

Approved Project Title **Dynamic Modelling and Gear Shift Simulation of Powertrains with Dual Clutch Transmissions**

2007 : $ 100,000
2008 : $ 115,000
2009 : $ 100,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
NT Consulting International Pty Ltd

Administering Organisation University of Technology, Sydney

Project Summary

The project will make a significant contribution to the development and commercialisation of dual clutch transmissions, which represent a breakthrough vehicle transmission technology. The acquired knowledge and advanced simulation tools will enable engineers to design superior vehicles with improved fuel efficiency and performance. The project will hence benefit the nation and community, resulting in:
1) powertrains with improved fuel efficiency, drivability and gear shift quality at the lowest production cost;
2) increased employment in the automotive sector benefiting from leading the world in applying the frontier technology to vehicles;
3) increased knowledge base on complex dynamic systems, well trained researchers and engineers.

2905 MECHANICAL AND INDUSTRIAL ENGINEERING

Queensland University of Technology

LP0775178 Dr RJ Brown; Dr ZD Ristovski; Prof DJ Hargreaves; Mr U Kruger

Approved Project Title **Optimisation of Dual Fuel Compression Ignition (Diesel) Engines With Respect to Engine Performance and Pollutant Emissions.**

2007 : $ 120,000
2008 : $ 90,000
2009 : $ 90,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Alternative Engine Technologies Pty Ltd

Administering Organisation Queensland University of Technology

Project Summary

A successful dual-fuel compression ignition (diesel) engine technology utilizing renewable alcohol fuels will provide a commercially attractive, immediate solution to the global fuel challenges of security and cost of oil supply, greenhouse gas emissions, and air quality . This project provides both the rigorous laboratory and field testing required to develop, test, optimize and validate both engine performance and pollution emissions. This ethanol dual fuel approach has the potential to reduce Australia's dependence on imported fuels, support the development of regional agriculture and employment through the expansion of the biofuels industry and enhance the environmental performance of transport and stationary engines.

The University of New South Wales

LP0775610 Prof E Leonardi; Dr TJ Barber; Dr V Timchenko; Dr R Islam

Approved Project Title **The use of numerical and experimental techniques to develop energy efficient open refrigerated display cabinets**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Austral Refrigeration Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

This project will provide knowledge for Australian industry to develop new energy efficient refrigerated display cabinets, putting Australia in the forefront of commercial refrigeration display cabinet technologies. This will have a significant impact on sustainability of our environment and will assist Australia to meet present and future international climate obligations by contributing to the reduction of greenhouse emissions. The Government has already introduced new MEPS levels, and are planning to increase these to more stringent levels in 2007. The development of the techniques proposed in this application will be essential for manufacturers if they are to economically meet these MEPS level requirements.

2906 CHEMICAL ENGINEERING

Monash University

LP0775322 Prof C Li

Approved Project Title **Production of diesel from the catalytic pyrolysis of waste plastics**

2007 : $ 234,484
2008 : $ 218,921
2009 : $ 135,921

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Ozmotech Pty Ltd

Administering Organisation Monash University

Project Summary

Large amounts of waste plastics go to landfill daily. Landfill simply buries our wastes for future generations and can contribute to the contamination of ground water. This project aims to develop an advanced pyrolysis technology to produce transport diesel from waste plastics. This technology is an economically attractive and environmentally friendly way for the disposal of waste plastics without any environmental problems associated with the landfill or direct incineration of waste plastics. As this technology is based on advances in Australian research and development, exporting this to other countries will further enhance its economic and social benefits to Australia.

The University of Melbourne

LP0775073 Prof GW Stevens; A/Prof DB Gore; Dr I Snape

Approved Project Title **Development of Low Cost In Situ Techniques for Petroleum Remediation in Cold Regions**

2007 : $ 90,000
2008 : $ 70,000

Collaborating/Partner Organisation(s)
B.P.

Administering Organisation The University of Melbourne

Project Summary

Internationally, Australia has taken a leading role in promoting environmental awareness and is committed to both the mitigation of future hazards, and the tackling of existing pollution. The clean-up of abandoned Antarctic sites is seen as a priority, and research into low-impact technology is central to meeting established remediation goals. Successful development of a low-cost in-situ remediation scheme will not only serve to protect vulnerable Antarctic habitats in Australian stewardship, but will do much to cement Australia as a global leader in environmental protection offering as it does, a generic cold region hydrocarbon remediation solution.

The University of Newcastle

LP0775345 Prof KP Galvin; A/Prof B Moghtaderi

Approved Project Title **Dry Processing of Fine Coal Using the Reflux Classifier**

2007 : $ 50,000
2008 : $ 40,000
2009 : $ 40,000

Collaborating/Partner Organisation(s)
Australian Coal Research Limited
Ludowici MPE

Administering Organisation The University of Newcastle

Project Summary

New and efficient separation technologies are crucial for developing the concept of Dry Coal Processing. The benefits to the industry of Dry Processing are compelling, with savings in water consumption, and much larger savings in dewatering and transportation of the product. The Reflux Classifier is a new fluidized bed technology developed in Australia using the more conventional water fluidization approach. Already the technology is contributing to Australian exports in the rapidly growing area of mining services. The purpose of this project is to establish its potential for use in the Dry Processing of fine coal. Other benefits of the study include the education and training of researchers in this field.

LP0775107 A/Prof B Moghtaderi; A/Prof EM Kennedy; Prof BZ Dlugogorski; Mr N Arthur

Approved Project Title **Development of a novel desalination process**

2007 : $ 100,000
2008 : $ 75,000
2009 : $ 75,000

Collaborating/Partner Organisation(s)
Proactive Energy Developments Limited

Administering Organisation The University of Newcastle

Project Summary

The process proposed in this submission provides a simple, flexible and cost effective platform for small-scale desalination applications. The proposed process can be an integral part of a more comprehensive approach to resolve the shortage of freshwater in arid to semi-arid regions of rural Australia. This will contribute to the Federal Government's National Research Priority 1: An Environmentally Sustainable Australia, particularly the priority goal 'Water - a Critical Resource'.

The University of Queensland

LP0775429 Dr J Zhu; Prof V Rudolph

Approved Project Title **Plasma-Catalytist Hybrid Process for Simultaneous Removal of NOx and SOx**

2007 : $ 167,000
2008 : $ 132,000
2009 : $ 135,000
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Indigo Technologies Group Pty Ltd

Administering Organisation The University of Queensland

Project Summary

Coal combustion provides over 80% of the electricity produced in Australia, with the power stations being major emitters of the pollutants NOx and SOx. This project will potentially lead to a new technology to simultaneously remove NOx and SOx in a single and economical process, eliminating the secondary waste streams that disadvantage current competing technologies. This will provide: significant environmental benefits for Australia in reducing these dangerous atmospheric pollutants; economic advantage to our power stations by enabling cheaper, more efficient technologies and consolidate Australia's leading position in the world in air pollution control.

The University of Sydney

LP0775438 Prof BS Haynes; Dr A Montoya

Approved Project Title **Process Chemistry for Distributed Manufacture of Nitric Acid**

2007 : $ 85,000
2008 : $ 77,030
2009 : $ 77,030

APDI Dr A Montova

Collaborating/Partner Organisation(s)
Orica Pty Ltd

Administering Organisation The University of Sydney

Project Summary

This project will benefit Australia by enabling a new approach to the manufacture of explosives for the country's mining industry which will provide the entire explosives supply chain with greater safety and security. Development of this technology will enhance Orica's competitive position as the largest manufacturer of mining explosives in the world and will produce wealth for the country through the continued success of this ASX Top 50 company and the export of the technology.

2907 RESOURCES ENGINEERING

The University of New South Wales

LP0775415 Dr RY Yang; Mr CT Jayasundara; Mr DC Curry

Approved Project Title **Fundamental investigation of particle-fluid flow in the IsaMill grinding process**

2007 : $ 77,030
2008 : $ 77,030
2009 : $ 77,030

APDI Mr CT Javasundara

Collaborating/Partner Organisation(s)
Xstrata Technology

Administering Organisation The University of New South Wales

Project Summary

The Australian mining and minerals processing industries generated exports of about $56 billion in 2004/5, representing approximately 44 per cent of Australia's total exports. Grinding is a basic operation that liberates valuable minerals from the host rock. However, conventional grinding technologies are very inefficient. The newly developed IsaMill technique greatly improves the power efficiency of the grinding process. This project aims to understand the flow of particles and fluids within IsaMill through combined experimental and numerical studies, leading to improved grinding performance and lower energy consumption. Such work will provide a significant economic benefit not only to Xstrata but also to the Australian mineral processing industry.

LP0775286 Prof AB Yu; Dr A Vince

Approved Project Title **Particle scale modelling of dense medium cyclones in coal preparation**

2007 : $ 150,000
2008 : $ 150,000
2009 : $ 155,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Australian Coal Research Ltd

Administering Organisation The University of New South Wales

Project Summary

Australia is the world's biggest coal exporter, and black coal is Australia's largest export, worth around $A13.5 billion annually. Dense medium cyclones process the vast majority of tonnes fed to Australian coal preparation plants, and hence play a critical economic role in coal production. This project aims at providing substantial design and operational improvements through the application of a novel combined continuum and discrete modelling method. Specifically, the improvements targeted relate to better process and product control, a decrease in unit energy consumption and improvements in productivity, which, together with the research training offered, will further enhance Australia's leading position in global coal industry.

2908 CIVIL ENGINEERING

The University of New South Wales

LP0775059 Prof N Khalili; Dr C Song; Mr PL Tamsett; Mr PS Ravindra

Approved Project Title **An integrated approach to modelling granular materials in a pavement system**

2007 : $ 96,020
2008 : $ 89,177
2009 : $ 90,871

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Roads and Traffic Authority

Administering Organisation The University of New South Wales

Project Summary

The Australian transportation system consists of some 900,000 km of paved roads valued in excess of 300 billion dollars. Hundreds of millions of dollars are spent each year on maintenance. About 90% of these paved roads are constructed with granular base and sub-base materials. This project will develop an accurate constitutive model for granular materials and a numerical method that are essential in predicting the life-long performance of pavements. The project will lead to improved pavement design procedures, which, together with the research training offered through the conduct of the work, will result in cost-effective and highly reliable pavement designs.

University of Technology, Sydney

LP0775149 Dr HH Ngo; Prof S Vigneswaran; Mr A Listowski; Mr P Cullum

Approved Project Title **Fluidised bed biosorption-flocculation granular activated carbon (FBBSF-GAC) for membrane filtration in wastewater reuse**

2007 : $ 60,000
2008 : $ 60,000
2009 : $ 50,000

Collaborating/Partner Organisation(s)
Sydney Olympic Park Authority
Activated Carbon Technologies Pty Ltd

Administering Organisation University of Technology, Sydney

Project Summary

Water resource is limited and has been continuously decreasing. The idea of recycling and reusing of wastewater has been adopted for irrigation, industry and other non-potable uses. In Australia, wastewater reuse is now considered a key strategy for conserving water at national, state and local level. In this study, the proposed treatment unit is to produce a superior effluent quality for water reuse while minimize membrane fouling of the membrane filtration system. Hence, it will benefit water industries globally and communities in Australia. There will be a major export opportunity from Australia to supply efficient, low-cost and sustainable flocculant together with an improved treatment system worldwide.

2909 ELECTRICAL AND ELECTRONIC ENGINEERING

Queensland University of Technology

LP0774899 Dr F Zare; Prof GF Ledwich; Prof A Ghosh; Mr BL Schaffler

Approved Project Title **High Efficient and Reliable Power Converters with Low Electromagnetic Interference Based on an Intelligent Distributed Control System in Train Systems**

2007 : $ 70,000
2008 : $ 65,000
2009 : $ 60,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Schaffler & Associates Pty Ltd

Administering Organisation Queensland University of Technology

Project Summary

A large percentage of the old train systems in Australia have old equipment which decreases the efficiency and reliability of the system and they can be replaced by high power smart converters with minimum losses and electromagnetic interference. This project aims to improve the efficiency of train systems by intelligent distributed control systems which reduces fuel consumption and greenhouse gas emissions. The outcomes can be applied to other transport systems in Australia. Another benefit is the production of a PhD graduand with significant experience in the use of smart power converters to improve efficiency of all types of transport systems.

The University of Queensland

LP0775139 Prof TK Saha

Approved Project Title **Investigation of key factors affecting the polarisation based diagnostics of power transformers**

2007 : $ 100,000
2008 : $ 100,000
2009 : $ 80,000

Collaborating/Partner Organisation(s)
Connell Wagner
Energy Australia
Powerlink Queensland

Administering Organisation The University of Queensland

Project Summary

To avoid system wide power interruptions, major assets in the electricity network must be always operating satisfactorily. One of the key assets in the electricity network is the power transformer. Currently many transformers are over 50 years old and failure of a transformer may result in long interruptions in supply and the loss of millions of dollars in revenue. The ageing of transformers needs to be properly monitored to avoid catastrophic failures. This project will provide an innovative solution for the better understanding of the ageing processes of transformers and help
managers make correct decisions for maintenance and replacement strategies.

University of Tasmania

LP0775025 Dr MA Kashem; A/Prof M Negnevitsky; Prof GF Ledwich; Prof A Ghosh

Approved Project Title **On-line Monitoring and Modelling of Electric Loads for Improving Operational Conditions of Power Systems**

2007 : $ 112,000
2008 : $ 102,000
2009 : $ 92,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Transend Networks Pty Ltd

Administering Organisation University of Tasmania

Project Summary

Recently, the Tasmanian Electricity System has been connected to the National Electricity Market through Basslink. The behaviour of loads to deviations in frequency and voltage becomes critical when transmission constraints begin to control market outcomes. The project will deliver vital information regarding load behaviour and models representing load responses to frequency and voltage excursions with the objective of optimising power exchanges within the National Electricity Market. This will allow Tasmania to take advantage of various renewable technologies. The research will focus on the quality of electricity supply in Tasmania and the national power grid, and on the consequent economic benefits.

2910 GEOMATIC ENGINEERING

The University of New South Wales

LP0774828 A/Prof AG Dempster; A/Prof CA Scott

Approved Project Title **A Positioning System for Mobile Phones**

2007 : $ 26,618
2008 : $ 26,618
2009 : $ 26,618

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Seeker Wireless

Administering Organisation The University of New South Wales

Project Summary

This project aims to produce a positioning system that integrates a mobile phone-based technique developed in Australia, known as Seekerzone, with GPS. The combination of Seekerzone and GPS delivers a system capable of reporting whether children or valuables are in a safe location. As security becomes an increasing priority, this system can operate indoors or outdoors, and provides many solutions. Seekerzone has already attracted international interest, and coupled with GPS, its applications and export opportunities will multiply. The target product will provide effective and convenient security, while its developemnt will provide important research training in Australia's drastically under-resourced spatial industry.

2911 ENVIRONMENTAL ENGINEERING

Griffith University

LP0775348 Dr RA Stewart; Prof Dr SB White

Approved Project Title **Impact of urban water conservation strategies on end-use water consumption in residential households**

2007 : $ 80,000
2008 : $ 80,000
2009 : $ 80,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Wide Bay Water
Queensland Water Directorate
Gold Coast City Council

Administering Organisation Griffith University

Project Summary

This research project will deliver the following social or economic benefits for Australia: (1) save over twenty per cent of household water consumption; (2) deferment of the construction of environmentally adverse water infrastructure facilities such as desalination plants, dams and water treatment plants; (3) water security will improve due to lower water consumption rates allowing governments to better plan new water resource options; and (4) through the implementation of more efficient water fixtures/appliances, households will not only save money due to lower water bills, but they will also be contributing lower greenhouse gases to the atmosphere by reducing the amount of energy required to produce and treat potable water.

The University of Queensland

LP0774925 Dr JF Mueller; Dr RV Hyne; Dr RK Symons; Dr A Sjodin

Approved Project Title **Sources, fate and exposure pathways for emerging persistent organic pollutants in Australia**

2007 : $ 105,118
2008 : $ 105,118
2009 : $ 105,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Queensland EPA
Department of Environment and Conservation, NSW
Queensland Health Scientific Services
Western Australian Department of Water
ERGO
The National Measurement Institute

Administering Organisation The University of Queensland

Project Summary

Brominated flame retardants and perfluorinated chemicals have received much attention from media and environmental groups. They accumulate in biota and humans and levels are shown to be increasing. It is proposed they be included in the global treaty on persistent organic pollutants (POPs), recently ratified by Australia. This project aims to determine sources, fate and exposure pathways for these chemicals with an emphasis on exposure to infants. This will provide information for risk assessment development and more effective management of these chemicals. Furthermore, the study's approach and results will contribute to a rationalization of the issues related to emerging POPs.

2913 METALLURGY

Monash University

LP0775412 Dr PF Thomson

Approved Project Title **The effect of roll slip on the crystallographic texture of a hot-rolled aluminium alloy sheet**

2007 : $ 30,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Alcoa Australia Rolled Products

Administering Organisation Monash University

Project Summary

The project will assist in improving the technology of manufacture of aluminium can body-stock, a large industry world-wide and help to keep Australian manufacture competitive with the overseas product. Because the Industry Partner has manufacturing activities in regional centres, it will also assist in strengthening regional industry.

The University of New South Wales

LP0775466 Prof V Sahajwalla

Approved Project Title **Recycling waste plastics in electric arc furnace steelmaking: Fundamental understanding of plastics/slag interactions and slag foaming**

2007 : $ 150,118
2008 : $ 140,118
2009 : $ 170,118
2010 : $ 100,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Onesteel

Administering Organisation The University of New South Wales

Project Summary

This project will deliver the fundamental science that will enable companies to produce steel using waste plastics. Novel waste recycling process will improve the efficiency of EAF steelmaking, lowering costs and energy consumption, thereby enhancing the international competitiveness of Australian steelmaking industry. At the same time, our advances will allow EAFs to consume substantial amounts of plastic waste, including plastics that are currently unsuitable for recycling. The technology will lower greenhouse gas emissions and will reduce the reliance of EAFs on metallurgical coke. This will have a significant impact on the environment.

LP0775033 Prof DJ Young; Dr SL Chan; Dr RY Chen; Dr DW Yuen

Approved Project Title **Understanding and minimising oxidation during hot rolling and metal coating of steel strip**

2007 : $ 70,000
2008 : $ 50,000
2009 : $ 30,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
BlueScope Steel Limited - Western Port Works

Administering Organisation The University of New South Wales

Project Summary

Steel production is one of the few manufacturing industries in which Australia is internationally competitive. Annual steel exports generate about two billion dollars in national income. Substantial value is added to raw steel by hot rolling it into sheet and coating with zincalume and paint. The market for these products is intensely competitive, and continued success is critically dependent on productivity and quality. This project will assist BlueScope Steel in understanding and controlling millscale development on hot rolled products, and avoiding scale defects in zincalume coating.

The University of Sydney

LP0775153 Prof SP Ringer; Dr JM Cairney; Mr JG Williams; Dr FJ Barbaro; Mr CR Killmore

Approved Project Title **Optimisation of Nanostructure in new Microalloyed Strip Cast Steels for Control of Properties**

2007 : $ 140,000
2008 : $ 150,000
2009 : $ 150,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
BlueScope Steel

Administering Organisation The University of Sydney

Project Summary

Australia is an internationally competitive producer of steel and stands to benefit from the improvements in steel design made possible by a more fundamental understanding of the relationship between steel nanostructure and steel properties and performance. Using targeted microalloying additions, this project aims to develop a new class of strip cast steels that can serve entirely new applications and so open up new market growth opportunities in Australia's manufacturing industry. This research falls under the national research priority 'Frontier Technologies for Transforming Australian Industry'.

2914 MATERIALS ENGINEERING

University of Wollongong

LP0775456 Dr ZP Guo; Prof HK Liu; Dr JZ Wang; Dr KK Konstantinov; Prof M Forsyth

Approved Project Title **Miniature lithium ion battery for implantable medical device applications**

2007 : $ 110,000
2008 : $ 100,000
2009 : $ 100,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
DLG Battery Co. Ltd.

Administering Organisation University of Wollongong

Project Summary

This project addresses National Research Priorities in the areas of breakthrough science, frontier technologies and promoting and maintaining good health. Substantial national benefit could be derived from this project: (i) Australia will innovate in an important and intensely active area in which the results will have long-lasting significance in implantable rechargeable battery development; (ii)The development of new scientific knowledge related to this project will place Australia at the forefront of an emerging domain of research body batteries; (iii) In the long term, the successful outcome of this research will lead to more reliable batteries for implantable devices, thereby promoting health care.

LP0775109 Dr G Wang; Prof HK Liu; Dr KK Konstantinov; Dr JZ Wang; Dr D Wexler; Prof O Savadogo

Approved Project Title **Exploration of new catalyst materials for hydrogen/air fed proton exchange membrane fuel cells**

2007 : $ 110,000
2008 : $ 100,000
2009 : $ 90,000

Collaborating/Partner Organisation(s)
LeadPower Battery Co., Ltd

Administering Organisation University of Wollongong

Project Summary

Fuel cell technology is the most critical technology for the hydrogen economy. Hydrogen/air fed fuel cells can provide pollution-free power sources for vehicles and distributed power generation. A breakthrough in fuel cell technology using hydrogen as fuel will supply us with clean and sustainable energy sources, dramatically improve our environment, and maintain national energy security. The success of fuel cell technology will also significantly reduce our dependence on oil. This research project is expected to establish local expertise, and scientific and industrial know-how on fuel-cell technology.

2917 COMMUNICATIONS TECHNOLOGIES

The University of Melbourne

LP0775467 Prof RS Tucker; Dr AV Tran; Prof M Zukerman; Dr KJ Hinton

Approved Project Title **Next-Generation Optical Broadband Access for Rural and Regional Areas**

2007 : $ 130,000
2008 : $ 100,000
2009 : $ 90,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
NEC Australia Pty. Ltd.

Administering Organisation The University of Melbourne

Project Summary

Broadband services in less densely populated areas are a high priority for the Australian government as shown by the $1.1 billion 'Broadband Connect' program. Current commercial broadband access in less densely populated areas is both limited and expensive. Both CUBIN and NEC are committed to developing solutions that enable truly broadband services. NEC Australia's large research and development capability is unique and it, together with CUBIN, will convert this research into national benefits including:
-Creating new knowledge and innovation
-Attracting foreign investment and promoting exports
-Training high quality post-doctoral researchers and postgraduate students
-Supporting job creation and retaining talented people in Australia

3001 SOIL AND WATER SCIENCES

The University of New South Wales

LP0775006 Prof PR Munroe; A/Prof AG Crosky; Dr SD Joseph

Approved Project Title **Chicken Litter Char for Soil Health and Carbon Sequestration**

2007 : $ 35,000
2008 : $ 35,000
2009 : $ 35,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Biomass Energy Services and Technology Pty. Limited

Administering Organisation The University of New South Wales

Project Summary

The project has considerable national benefit from a range of perspectives. The recycling of waste residues from farming to the rejuvenation the carbon in soil, through the application of chars, will promote sustainable land use and increase agricultural productivity. Further, an improved understanding of the mechanisms by which chars sequester carbon and nitrogen compounds will assist in the adaptation of Australian agriculture to the impact of climate change. Pyrolysis technology, in char generation, has the potential for primary producers to turn waste products into something of value, which may provide their businesses with an additional income stream.

3002 CROP AND PASTURE PRODUCTION

The University of Queensland

LP0775027 Prof RG Birch; Dr D Schliebs; Mr PW Collins

Approved Project Title **Optimising transgene expression and stability for enhanced sugar yield and high-value sugar production in sugarcane**

2007 : $ 400,000
2008 : $ 400,000
2009 : $ 370,000
2010 : $ 515,000
2011 : $ 315,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
CSR Sugar Pty Ltd

Administering Organisation The University of Queensland

Project Summary

'SugarBooster' technology has the potential to underpin a value-added sugarcane industry. Higher sucrose yield is a key to sustainable export profitability, and it makes the development of renewable biofuels from sugarcane more feasible. Isomaltulose has established health benefits for consumers and it is also attractive as a renewable starting material for industry. But it must currently be produced by expensive fermentation. Efficient production in plants will open an increasing world market. This collaborative project is vital to bring these breakthrough technologies to reliable commercial implementation, in time to capture the economic benefits of the protected IP for Australia.

University of Tasmania

LP0774886 Dr DE Evans; Dr D Stewart; Mr JA Juttner

Approved Project Title **Barley malt modification, its control by understanding the biochemistry and genetics of proteases and thioredoxin**

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

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Joe White Maltings Pty Ltd

Administering Organisation University of Tasmania

Project Summary

Australia is a major world exporter of malting barley (~2 millon t/pa) and malt (800,000 t/pa), primarily to the rapidly expanding Asian economic development region. An additional 200,000 t/pa of malt is provided to the Australian domestic brewing industry. By improving the quality of Australian malting barley and optimising its production, we expect higher demand and prices for Australian malting barley and malt. This will help support the viability of rural communities and the value adding involved in the malting and brewing of their produce in Australia.

3003 HORTICULTURE

The University of Western Australia

LP0775351 Dr G Yan; Dr DC Hardie; Dr T Khan

Approved Project Title **Fast tracking pea weevil resistance into field pea cultivars through interspecific hybridisation**

2007 : $ 87,000
2008 : $ 80,000
2009 : $ 80,000
2010 : $ 100,000

Collaborating/Partner Organisation(s)
Dardin Agri Holdings (Australia) Pty. Ltd. - a subsidiary of the Aztech Group Companies
Department of Agriculture and Food Western Australia

Administering Organisation The University of Western Australia

Project Summary

Field pea is a high value export product of Australia and increased adoption will lead to greater sustainability of agriculture, improved farm income and value adding opportunities (eg. food industry) in regional Australia. Novel breeding tools used within this project will accelerate the development of pea weevil resistant field peas that are less dependent on the application of pesticides than current varieties. Their availability will encourage further uptake of field pea into Australian cropping systems, contributing to environmentally sustainable farming systems by improving soil nitrogen levels and reducing the environmental effect of pesticides.

3005 VETERINARY SCIENCES

The University of Melbourne

LP0775052 Dr CA Hartley; Dr JR Gilkerson; Dr J Huang; Dr SJ Symes

Approved Project Title **Equine rhinitis A virus; molecular pathogenesis and methods for control**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Pfizer Animal Health

Administering Organisation The University of Melbourne

Project Summary

The horse industry in Australia is primarily based in rural locations and is a major contributor to the national economy both in terms of direct economic contribution to gross domestic product and as a major employer of people in regional Australia. The research proposed in this project will improve our understanding of the pathogenesis of a virus that causes respiratory disease in horses that is related to the virus that causes foot and mouth disease in ruminants and swine. The technology developed during this project would have a global market.

The University of Sydney

LP0775506 Dr R Dixon; Dr G Brown; Dr R Malik; Dr J Toribio; Dr RM Dixon; Dr SF Walton

Approved Project Title **Evaluating the impact of new interdisciplinary interventions to enhance dog health to benefit community health outcomes in remote Indigenous communities**

2007 : $ 140,000
2008 : $ 123,000
2009 : $ 133,543

APA(I) Award(s): 1

APDI Dr G Brown

Collaborating/Partner Organisation(s)
Animal Management in Rural and Remote Indigenous Communities
RSPCA NSW
Warlukurlangu Artists Aboriginal Association
IDEXX Laboratories Australia

Administering Organisation The University of Sydney

Project Summary

Indigenous health and welfare is of major concern for Australians. This project, which focuses on the dog, also recognises that the dog harbours a number of diseases that can infect humans. To maintain sustainable dog health programs to reduce disease in dogs, and, as a corollary, have positive impact on human health and welfare, culturally-relevant, evidence-based education programs are critical. Dog health programs will indirectly improve the expectations, standards and self-worth of many Indigenous Australians. As a consequence, the national benefits include the development of environmentally sustainable Indigenous communities, and the strengthening of Australia's social and economic fabric especially in rural and remote areas.

3006 FORESTRY SCIENCES

Murdoch University

LP0774966 A/Prof RW Bell; Prof RJ Hobbs; Em/Prof AJ McComb

Approved Project Title **Balancing Water Quality and Ecosystem Health with Water Yield -- Ecosystem Response to Thinning in Wungong Catchment**

2007 : $ 130,000
2008 : $ 140,000
2009 : $ 110,000
2010 : $ 60,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
WATER COPORATION

Administering Organisation Murdoch University

Project Summary

Reduced rainfall in past decades and future climate uncertainty have added a sense of urgency in Australia to search for new water resources to sustain a growing economy and population. A forest thinning trial is planned in the Wungong Catchment, Western Australia, to substantially increase water yield. Thinning is attractive as a low-cost option, and is potentially suitable for other catchments. However the potential environmental and ecological impacts, which are major community concerns, must be investigated. This project will assess the levels of impact, associated ecosystem responses and the capacity of catchment ecosystems to sustain such management intervention.

The University of Melbourne

LP0775362 Dr IE Woodrow; Dr JQ Goodger

Approved Project Title **Enhancing the essential oil yield of clonal blue mallee plantations**

2007 : $ 87,000
2008 : $ 87,000
2009 : $ 87,000

APDI Dr JQ Goodger

Collaborating/Partner Organisation(s)
Felton Grimwade and Bickford Pty Ltd

Administering Organisation The University of Melbourne

Project Summary

Production of high quality eucalyptus oil in Victoria involves sustainable harvesting of foliage from public land. A recent review of land use by the Victorian Government has required that, over the next few years, oil producers move their harvesting operations into plantations on private land. This project will assist producers by developing methods for establishing plantations of eucalypts (blue mallee) with very high and economically viable yields of eucalyptus oil. This research will help restore Victoria's position as one of the major producers of high quality eucalyptus oil.

3007 FISHERIES SCIENCES

Monash University

LP0774947 Dr RD Reina; Mr TI Walker

Approved Project Title **Capture stress and post-capture survival of sharks and other chondrichthyans in fisheries bycatch**

2007 : $ 46,687
2008 : $ 33,740

Collaborating/Partner Organisation(s)
Department of Primary Industries

Administering Organisation Monash University

Project Summary

Australia is adopting ecosystem approaches to fisheries management. However, to embrace such an approach there is an urgent need for better information on the biology, ecology and population dynamics of sharks, rays and chimaeras (class Chondrichthyes). Chondrichthyan species are among the most sensitive in their response to the effects of fishing. Results from the present proposal will contribute to determining mortality of chondrichthyan bycatch species in response to the effects of capture in fishing gear, handling by fishers and discarding at sea. The work will contribute to biodiversity conservation and maintenance of ecosystem structure and function for present and future generations.

University of Tasmania

LP0775480 Dr AJ Ritar; Prof PR Haddad; Dr GW Dicinoski

Approved Project Title **Hatchery production of rock lobster seedstock for aquaculture and enhancement with emphasis on ozonation of culture water to reduce disease**

2007 : $ 200,000
2008 : $ 180,000
2009 : $ 190,000
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Department of Primary Industries and Water
Southern Rocklobster Ltd

Administering Organisation University of Tasmania

Project Summary

The strong and growing worldwide demand for a range of lobster products cannot be fulfilled by existing wild fisheries. Only the sustainable production of lobsters using hatchery seedstock will satisfy the needs of aquaculture and the possibility of enhancing and reseeding the fishery. Lobster aquaculture will provide a new high-value industry for coastal rural Australia, especially in areas with existing fishing and aquaculture enterprises. This project will develop new technologies to address the challenging target of producing commercial quantities of juvenile lobsters for aquaculture and enhancement.

3008 ENVIRONMENTAL SCIENCES

Murdoch University

LP0775356 Prof RC Thompson; Dr AJ Lymbery; Dr A Smith; Dr P Clark; Dr PB Spencer; Mr KD Morris; Dr AF Wayne

Approved Project Title **The nature, diversity and potential impact of infectious agents in Western Australian threatened mammals.**

2007 : $ 153,118
2008 : $ 145,118
2009 : $ 137,118

APA(I) Award(s): 1
APDI Dr A Smith

Collaborating/Partner Organisation(s)
Department of Conservation and Land Management

Administering Organisation Murdoch University

Project Summary

This project will generate new information on parasitic diseases, which will contribute to the management of terrestrial ecosystems by government agencies such as the Western Australian Department of Conservation and Land Management, and private concerns, such as the Australian Wildlife Conservancy. The project will also assist in the formation of appropriate responses to exotic disease incursions, by increasing understanding of the spread of parasitic infections between native, feral and domesticated animal species.

The University of Queensland

LP0774850 Prof HP Possingham; Dr AL Green

Approved Project Title **Marine conservation planning for persistent coral reef communities: Incorporating connectivity and resilience**

2007 : $ 75,000
2008 : $ 60,000
2009 : $ 65,000

Collaborating/Partner Organisation(s)
The Nature Conservancy, acting by and through its Australia and Pacific Island Countries Programs

Administering Organisation The University of Queensland

Project Summary

Australia's biological diversity underpins much of our economic wealth - for example the remarkable diversity of coral reefs fuels a multibillion dollar tourism industry. However, despite substantial efforts to conserve marine ecosystems, Australian coral reefs are at increasing risk from climate change related catastrophes. To counteract this trend, we must choose marine reserve networks using methods that account for the dynamic nature of climate change and reef community responses to maximise the persistence of reef biodiversity. The new theory and methods will enable us to create more effective and economically efficient marine reserve systems.

The University of Western Australia

LP0774881 Prof JT Lambers; Dr CB Hinz; Dr EJ Veneklaas; Dr GR Hancock; Dr A Kepic; Mr MJ Wealleans; Dr P Kendrick; Dr A Porporato

Approved Project Title **Ecohydrological feedbacks between vegetation and soil in natural and engineered landforms in arid Australia**

2007 : $ 300,000
2008 : $ 280,000
2009 : $ 248,287
2010 : $ 200,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Minerals and Energy Research Institute of WA (MERIWA)
Newcrest Mining - Telfer Gold Mine
BHP Billiton
Pilbara Iron Pty Ltd
WA Department of Conservation and Land Management

Administering Organisation The University of Western Australia

Project Summary

We address 'An Environmentally Sustainable Australia'. 1. Water is the binding factor in our project, defining vegetation, geomorphology and hydrology. 2. Rehabilitation is an integral part of the mining business. Our project is instrumental in developing ecological engineering approaches to rehabilitation. 3. Ultimate goal of the project is to develop stable landforms, protecting underlying rock. 4. We investigate locally adapted native plant species for use in arid-zone land rehabilitation, to preserve biodiversity. 5. The area of study is exposed to long droughts and cyclonic rainfall. Understanding the resilience of the landscape will provide pivotal insight into the impact and potential adaptive response to climate variability.

University of Tasmania

LP0775365 Dr DJ Ross; Prof MJ Keough; Prof BD Eyre; Dr CM Crawford; Ms CA Coughanowr; Dr DE Richardson

Approved Project Title **Anthropogenic influences on the source, transformation and fate of carbon and nitrogen in coastal waters: a case study of the Derwent Estuary**

2007 : $ 170,000
2008 : $ 220,000
2009 : $ 190,000
2010 : $ 45,625

Collaborating/Partner Organisation(s)
Derwent Estuary Program
Norske Skog Paper Mills (Australia) Limited

Administering Organisation University of Tasmania

Project Summary

Ninety five percent of Australia's population live in the coastal zone on the shores of our major bays and estuaries. These water bodies are valuable resources for recreation, boating, fishing, marine transport and industry, but some activities, particularly the release of nitrogen, impose an environmental and economic cost. This project will significantly advance our understanding of the natural processes that control the transformation and fate of nitrogen in coastal waters. As such the outcomes of this study will provide key information for managers on the environmental outcomes of nutrient management strategies.

University of Technology, Sydney

LP0775468 Prof CG Palmer; A/Prof R Lim; Dr GC Hose; Dr JC Chapman; Dr MS Warne

Approved Project Title **Mechanistic and probabilistic approaches to assessing the impact of pesticide mixtures in Australian waterways**

2007 : $ 50,000
2008 : $ 60,000
2009 : $ 64,100

Collaborating/Partner Organisation(s)
Department of Environment and Conservation

Administering Organisation University of Technology, Sydney

Project Summary

This project will provide vital information on the impacts of pesticide mixtures in Australian waterways and will also provide information with respect to safe levels of pesticides for water quality management. This information will be used to develop scientifically sound management policies and provide advice to regulatory authorities such as the NSW Department of Environment and Conservation and the Federal Department of Environment and Heritage. Specifically the results will contribute to ensuring the use of pesticides in market gardens close to Sydney does not threaten the health of local rivers.

3101 ARCHITECTURE AND URBAN ENVIRONMENT

Griffith University

LP0775236 Prof B Gleeson; Prof AL Brown; Dr NG Sipe; Dr J Dodson

Approved Project Title **Urban Accessibility Re-Shaped - Transport disadvantage and urban socio-spatial change**

2007 : $ 80,000
2008 : $ 80,000

Collaborating/Partner Organisation(s)
Gold Coast City Council

Administering Organisation Griffith University

Project Summary

The project directly addresses 'National Research Priority 2: Promoting and Maintaining Good Health - Strengthening Australia's social and economic fabric' by assisting governments to solve problems of communities' poor access to employment and services. Good urban accessibility is crucial to achieving good economic, social and environmental outcomes from land-use and transport planning in Australian cities. The project will assist state and local government's to address unmet and often unidentified community needs. The project will be of immense national importance in providing new methodologies to assess urban access employment and services. Internationally this project will mark Australia as a producer of high quality urban research.

Queensland University of Technology

LP0775225 Dr DC Baker; Prof NF Ryan; A/Prof R Freestone; Prof KA Brown; Prof L Ferreira; A/Prof ME Drew; A/Prof A Goonetilleke; Prof PM Charles; Dr P Barnes; Prof WE Walker; Prof JD Kasarda; Dr SJ Appold; Mr SM Goodwin; Mr AR Walker; Dr MB Charles; Prof M Weijnen

Approved Project Title **The Airport Metropolis: Managing the Interfaces**

2007 : $ 182,455
2008 : $ 286,457
2009 : $ 212,000
2010 : $ 203,000

APA(I) Award(s): 2
APDI Mr AR Walker

Collaborating/Partner Organisation(s)
Brisbane Airport Corporation
Adelaide Airport Limited
Capital Airport Group Pty Ltd
Airtrain City Link
Port of Brisbane Corporation
Brisbane City Council
Tourism and Transport Forum
PTV Asia-Pacific Pty Ltd
Commerce Queensland
Airbiz Aviation Strategies Pty Ltd
Queensland Transport

Administering Organisation Queensland University of Technology

Project Summary

The project aims to develop coordinated and equitable decision-making to ensure that airport-urban development balances economic, social and environmental issues and produces a sustainable regional (and national) competitive advantage that is both secure and resilient. The project will develop modelling technologies for the innovative management of data to ensure efficient and resilient infrastructure coordination. The outputs will enable an open planning process whereby all stakeholders are able to provide informed input into decision-making. Strategic decision-making, based on increased certainty about future airport and regional planning and development will improve conditions for growth in a range of industries.

RMIT University

LP0775120 Dr R Horne; Prof JF Fien; Prof S Hamnett; Dr JE Kellett

Approved Project Title **Carbon neutral communities: making the transition**

2007 : $ 52,000
2008 : $ 58,000
2009 : $ 59,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Manningham City Council
City of Playford
NAGA
ICLEI
MEFL
Community Power
Consumer Affairs Victoria

Administering Organisation RMIT University

Project Summary

This project has well defined National benefits, both economic and social, for the collaborative partners, the business community, policy makers, community groups and the broader Australian community. It contributes toward NRP 1, through developing practical measures for reducing GHG emissions in Australian urban areas, and strategies for overcoming barriers to greater uptake of energy efficiency and alternative technologies; and helping Australia to meet its greenhouse reduction targets. The project economic benefits to through energy savings; stimulating innovation in urban design, building design and transport use; promoting new business opportunities; and encouraging more sustainable lifestyle decisions.

The University of Queensland

LP0774952 A/Prof RA Hyde; Mr EA Gardner; Ms P Skoien; Mrs LA Rutherford; Mr C WALTON; Dr DA Wadley

Approved Project Title **Towards a Quality of Life Model for Sustainable Housing in South East Queensland**

2007 : $ 79,545
2008 : $ 41,000
2009 : $ 41,000
2010 : $ 60,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Landmatters Currumbin Valley Pty Ltd
Gold Coast Water
Department of Natural Resources

Administering Organisation The University of Queensland

Project Summary

Current reports, on Quality of Life in South East Queensland and the Queensland Governments State of the Environment demonstrate a paradox, - high quality of life but also increasing environmental impact. How to address this paradox is a major research question addressed in this project. Through examining examples of best practice sustainable housing it is possible to address this question. The key factors of quality of life will be identified for housing, which will assist policy makers plan for a sustainable future.

3102 BUILDING

The University of New South Wales

LP0775164 Dr TJ Barber; Prof E Leonardi

Approved Project Title **Experimental and numerical study of sprinklers for improved fire safety**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Arup Fire, Ove Arup & Partners
New South Wales Fire Brigade

Administering Organisation The University of New South Wales

Project Summary

Fire sprinklers are a common method for extinguishing fires. Current lack of detailed knowledge about sprinklers can lead to conservative design and excessive cost, often limiting the installation of these proven life-saving devices. This project sees the involvement of Arup Pty Ltd and the NSW Fire Brigade in examining the behaviour of sprinklers using a custom-designed test-rig, laser based measurement and a numerical model. This will result in improved confidence in sprinkler specification and installation and the project will have use and significance beyond Australia. Successful implementation promises reductions in the loss of life and property as well as financial savings.

3199 OTHER ARCHITECTURE, URBAN ENVIRONMENT AND BUILDING

The University of Sydney

LP0775241 Prof EJ Blakely

Approved Project Title **Finding new economic drivers for Sea Change (coastal) and similar rapidly growing communities**

2007 : $ 76,400
2008 : $ 75,000
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Sea Change Taskforce Secretariat

Administering Organisation The University of Sydney

Project Summary

This project is of major benefit to developing more environmentally sensitive but diverse economies for coastal communities. Coastal communities are commuter or tourism dominated, each of these issues generate both current and future liabilities for the communities and the nation.

3204 MEDICAL MICROBIOLOGY

University of Canberra

LP0775507 A/Prof S Mahalingam; A/Prof PA Keller; Dr GD Ewart; Dr CA Luscombe

Approved Project Title **Novel strategies in the design and development of antivirals against dengue virus**

2007 : $ 50,236
2008 : $ 50,236
2009 : $ 50,236

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Biotron Ltd

Administering Organisation University of Canberra

Project Summary

Globally, there are 50-100 million cases of dengue fever, with 500,000 cases of the more severe dengue haemorrhagic fever, each year. Australia has between 100 and 900 cases of dengue infection annually, often from travellers, but disease outbreaks occur in northern Australia. Effective anti-viral treatment will reduce disease burden. The project contributes to an evidence-based drug design program in collaboration with Australia's leading biotechnology industries. As a biotechnology industry project developing treatments for an emerging disease, it contributes to the national research priorities of Frontier technologies for building and transforming Australian industries, Promoting and maintaining good health and Safeguarding Australia.

University of Technology, Sydney

LP0775326 Prof JT Ellis; A/Prof JL Harkness; Mr D Stark; A/Prof DJ Marriott

Approved Project Title **Gastrointestinal parasites and their diagnosis**

2007 : $ 61,778
2008 : $ 61,778
2009 : $ 61,778

Collaborating/Partner Organisation(s)
St. Vincent's Hospital Sydney

Administering Organisation University of Technology, Sydney

Project Summary

Gastrointestinal disease such as diarrhoea, abdominal pain and irritable bowel syndrome are common in the Australian population and there are a wide variety of causes, including potentially parasites. The parasite Dientamoeba fragilis has, until recently, been overlooked as a cause of human disease, but recent studies have confirmed its role as a pathogen. This project seeks to improve the diagnosis of this organism in faeces and this development will allow effective treatment to be used in patients thereby ameliorating disease.

3205 PHARMACOLOGY AND PHARMACEUTICAL SCIENCES

Monash University

LP0774970 A/Prof CJ Porter; Dr BJ Boyd; Dr GY Krippner

Approved Project Title **Rational Design of Pegylated Dendrimer Nanostructures for Site Specific Drug Delivery**

2007 : $ 85,466
2008 : $ 80,466
2009 : $ 80,466

Collaborating/Partner Organisation(s)
Starpharma Pty Ltd

Administering Organisation Monash University

Project Summary

This project will provide technological advances with significant benefits in terms of improved drug treatment, and therefore health outcomes for Australia. The project builds on areas of research strength in Australia (nanotechnology and biotechnology/biomaterials) and will add considerably to the expanding Australian expertise-base in dendrimer technology (in which it is a world leader). The interdisciplinary nature of this project will also result in a unique training program for the researchers included in this grant. Such experience is in great demand, particularly in Australia where the burgeoning start-up discovery industry is critically short of personnel with skills in drug delivery.

LP0775192 Dr MJ Scanlon; Dr DK Chalmers; Dr DI Rhodes; Prof MW Parker; Dr J Deadman

Approved Project Title **Therapeutic approaches to treat human immunodeficiency virus infection: development of HIV-1 integrase inhibitors**

2007 : $ 134,125
2008 : $ 123,438
2009 : $ 119,950

Collaborating/Partner Organisation(s)
Avexa

Administering Organisation Monash University

Project Summary

This project aims to assist the development of new anti-HIV drugs, which would benefit the 15000 Australians and over 40 million people worldwide who are currently infected with this terrible disease. The project will utilise state of the art technologies - including the Australian Synchrotron when it is commissioned in 2007 - to identify and synthesise compounds as new leads for the treatment of HIV.

The University of New South Wales

LP0775181 A/Prof M Kavallaris; Dr TM LaVallee

Approved Project Title **Targeted development of dual action antitumour and antiangiogenic agents using differential and functional proteomics**

2007 : $ 77,525
2008 : $ 77,525
2009 : $ 77,525

Collaborating/Partner Organisation(s)
EntreMed Inc.

Administering Organisation The University of New South Wales

Project Summary

There is an enormous need to develop more effective and less toxic therapeutic approaches to reduce the social and economic burden of cancer. The recent identification of small molecules that can act by both destroying cancer cells and the blood vessels that carry nutrients to them has provided a unique opportunity to define the pathways involved in the action of these agents in order to develop more potent drug analogues. Development of these molecules will involve a collaborative and multidisciplinary link with our industry partner and the use of frontier technologies that may lead to improved health and economic outcomes for Australia.

The University of Queensland

LP0774870 Prof DJ Adams; Prof DJ Craik; Dr DT Wilson

Approved Project Title **New modulators of voltage-gated sodium channel subtypes from Australian Tarantula venoms**

2007 : $ 175,000
2008 : $ 160,000
2009 : $ 150,000

Collaborating/Partner Organisation(s)
Xenome Ltd.

Administering Organisation The University of Queensland

Project Summary

The venoms of Australian tarantula spiders provide a unique and untapped source of bioactive molecules. From a large stock of venom, and in collaboration with Australian pharmaceutical company Xenome, we will develop a comprehensive library of venom components suitable for drug screening. Potential national benefits from this work include a huge reduction in the healthcare bill deriving from a new treatment for pain, as well as substantial royalty returns from drugs sales. Discoveries from the program are also likely to lead to an enhancement in Australia's reputation in the neurosciences and to the development of new diagnostic research tools. The major community benefit will be a reduction in the suffering of chronic pain patients.

The University of Sydney

LP0775441 A/Prof H Chan; Dr PM Young; Dr D Traini

Approved Project Title **Mannitol Powders for Assessment of Asthma in Children**

2007 : $ 75,000
2008 : $ 70,000

Collaborating/Partner Organisation(s)
Pharmaxis

Administering Organisation The University of Sydney

Project Summary

A successful conclusion of this project will enable Australia to become a world leader in childhood asthma assessment. The availability of an objective diagnostic test for early detection of asthma would assist formulating early treatment strategies at this crucial stage in the progression of the disease, improving the quality of life of asthma sufferers in their early years. The Australian pharmaceutical sector will benefit through the ability to develop proprietary formulations targeted towards taking advantages of the scientific knowledge on pharmaceutical powders and aerosols. The mannitol testing is environmental friendly as powder aerosol delivery does not require any harmful organic solvents to operate.

3207 NEUROSCIENCES

The University of Queensland

LP0775179 Prof JN Marshall; A/Prof SP Collin; Dr RD McCauley; Dr KA Fritsches; Dr NS Hart; Prof BM Degnan; Dr SM Degnan; Dr MD Norman; Dr JN Hooper; Dr PA Hutchings; Dr MG Meekan; Dr EA Widder; Dr T Frank; Dr JC Partridge; Dr CE Diebel; Prof EJ Warrant; Dr S Johnsen; Prof Dr G Worheide; Dr DJ Lindsay

Approved Project Title **Deep Downunder: designing a deep-sea exploration and discovery capability for Australia.**

2007 : $ 380,000
2008 : $ 351,000
2009 : $ 362,000

APA(I) Award(s): 4

Collaborating/Partner Organisation(s)
DeepOcean Quest - CREA

Administering Organisation The University of Queensland

Project Summary

Exploration of the deep-sea with the modern technologies to be developed by Deep-Downunder is a first for Australia. We aim to explore and discover life at depths from 50-3000m off The Great Barrier Reef, around the seamounts of Lord Howe Island and Tasmania and in the deep canyons of WA and SA. We expect to discover new species, hope for a glimpse of giant squid at home and will answer specific questions on Australia's ocean biology, fisheries and biotechnology never before approachable. To be effective guardians of Australian waters we must learn what lies in the depths we can't see from a boat.

3209 OPTOMETRY

The University of New South Wales

LP0774938 A/Prof HA Swarbrick

Approved Project Title **The future of corneal refractive reshaping: can we control myopia or is the risk of corneal compromise too great?**

2007 : $ 97,908
2008 : $ 129,309
2009 : $ 134,190

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Boston Products Group of Bausch & Lomb
BE Enterprises Pty Ltd
Capricornia Contact Lens Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

Refinement of corneal reshaping lens designs, optimised for visual outcomes through manipulation of aberrations, will significantly benefit local contact lens manufacturing and export by expanding the existing market base. This research will also strategically position Australian lens manufacturing to capitalise on the market for myopia-control contact lenses, particularly in the Asian region. Significant intellectual property will be generated for Australia in terms of enhanced understanding of the role of manipulation of corneal shape in modulating progressive myopia. Outcomes from this project will enhance the international reputation of the UNSW research group, keeping Australian science at the forefront of this area of research.

3210 CLINICAL SCIENCES

Macquarie University

LP0775136 Dr C McMahon; Dr FL Gibson; Dr J Fisher; Dr J Boivin; Em/Prof DM Saunders

Approved Project Title **Age at first birth, mode of conception and adjustment to parenthood**

2007 : $ 85,000
2008 : $ 85,000
2009 : $ 85,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
IVFAustralia
Melbourne IVF

Administering Organisation Macquarie University

Project Summary

The trend to delayed childbearing is well-established, multiply determined and unlikely to change in the short term. This study will provide contemporary Australian evidence on the experience of becoming a parent at different ages, naturally and through assisted conception, for Australian men and women. Both risk and protective factors for older first-time parents will be identified, thus informing policy and services that can better support Australian families with planning and rearing children. A key outcome will be a Parenting Decision-Aid to provide evidence-based reader-friendly information about the positives and negatives of first-time parenthood at different ages.

University of South Australia

LP0775217 Prof S Stewart; Dr AM Tonkin; Prof D Wilkinson; Ms RA Clark; Ms K Eckert; Mr N Coffee; Mr P Astles; Ms MK Milligan

Approved Project Title **CARDIAC-ARIA : Measuring the accessibility to cardiovascular services in rural and remote Australia via applied geographical spatial technology (GIS)**

2007 : $ 52,896
2008 : $ 52,896
2009 : $ 52,896

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
AlphaPHARM Pty Ltd

Administering Organisation University of South Australia

Project Summary

Despite significant improvements in the cardiovascular health of Australians, Cardiovascular Disease (CVD) continues to impose a heavy burden on Australians in terms of cost,disability and death. Recent evidence suggests that mortality from CVD increases with increasing remoteness. Rates are reported to be between 20% and 50% higher in rural areas compared to major cities. This project, with its extensive use of Geographic Information Systems (GIS) technology, will rank 11,338 rural and remote population centres to identify geographical 'hotspots' where there is likely to be a mismatch between the demand for and actual provision of cardiovascular services.

3211 NURSING

Curtin University of Technology

LP0775460 Dr AM Williams; Dr MC Oldham; Dr C Toye

Approved Project Title **Evaluating the feasibility and effect of using a hospital wide coordinated approach to introduce evidence-based changes for pain management**

2007 : $ 47,998

Collaborating/Partner Organisation(s)
Sir Charles Gairdner Hospital
St John of God Hospital Subiaco

Administering Organisation Curtin University of Technology

Project Summary

This project will develop a comprehensive educational program and approach to pain management for public and private hospitals that could be used by other hospitals elsewhere. An educational program for hospitals staff, and specifically for Pain Resource Nurses, will be produced. This project has the potential to minimise the experience of pain and prevent widespread complications associated with pain for all hospitalised patients, irrespective of diagnosis or reason for admission. It is also envisaged that this project will establish a model of change that could be used to facilitate evidence-based practice in other aspects of healthcare apart from pain.

Griffith University

LP0775127 Prof W Moyle; Prof J Cheek; A/Prof MM McAllister; Dr LV Venturato; Mr CG Francis

Approved Project Title **Enhancing moral care and quality of life in people with dementia**

2007 : $ 62,000
2008 : $ 55,000
2009 : $ 66,000

Collaborating/Partner Organisation(s)
Lifecare Services Australia PTY Ltd

Administering Organisation Griffith University

Project Summary

This research explores largely unknown quality of life experiences of persons living with dementia in residential aged care, and therefore factors that may promote well being, longevity, meaning, family and social coherence. The research will result in new knowledge for a model of care that is truly person-centred and will inform health, ageing and education policy, as well as an enlarged and clearer role function for caregivers. The solution focused model of dementia care is likely to also have positive effects on staff satisfaction and result in improved recruitment and retention.

University of Technology, Sydney

LP0774836 Prof CM Duffield; Mr MA Roche; Prof C Homer; Prof L O'Brien-Pallas; Prof J Buchan; Dr J Shamian

Approved Project Title **Patient and nurse outcomes and the cost of nurses' turnover in Australian hospitals**

2007 : $ 134,000
2008 : $ 106,000
2009 : $ 110,000

Collaborating/Partner Organisation(s)
Wyong Hospital
ACT Health
WA Health

Administering Organisation University of Technology, Sydney

Project Summary

An adequate supply of nurses is fundamental to all of the National Health Priority disease areas where quality care cannot be delivered without an adequate number of motivated nurses. Designing cost-effective methods of retaining nurses requires understanding reasons why they leave the workforce and the impact this has on patient care and system costs. The findings will assist policy makers and workforce planners at both local and national levels, to design strategies to effectively recruit and retain nurses as demands for health care and market competition for staff both increase.

3212 PUBLIC HEALTH AND HEALTH SERVICES

Australian Catholic University

LP0775053 A/Prof RP Webber; A/Prof C Bigby; Prof B Bowers

Approved Project Title **Accommodating the Needs of People with Lifelong Intellectual Disability in Residential Aged Care**

2007 : $ 31,000
2008 : $ 31,000
2009 : $ 31,000

Collaborating/Partner Organisation(s)
Valesell Pty Ltd as ATF trustee for Peter Gill Agency Trust

Administering Organisation Australian Catholic University

Project Summary

Unique challenges face the residential aged care system because of the increased life expectancy of people with life-long intellectual disability and the likelihood of their premature ageing. Although this group is recognised by Federal and State governments as requiring specific and special service arrangements, little is known about adapting disability and aged care services to their needs, thus program development is in its early stages. This research will inform the development of policy and programs in the Aged Care, Disability and Health sectors with the aim of improving the quality of life for people with intellectual disability as they age.

Macquarie University

LP0775436 A/Prof SM Burton; Ms LP Clark; Dr AG Penman; Ms A Tang; Ms WR Oakes

Approved Project Title **The relationships between retail availability, peer smoking and tobacco purchase and consumption: a diary study of smoking behaviour**

2007 : $ 30,000

Collaborating/Partner Organisation(s)
The Cancer Council of NSW

Administering Organisation Macquarie University

Project Summary

Despite multiple public health initiatives, smoking remains the leading preventable cause of death, costing the Australian community more than 19,000 lives each year. Public awareness of the dangers of smoking is high, yet around 19% of Australians continue to smoke. Social effects (e.g. the presence of nearby smokers) and the high retail availability of cigarettes are likely to be associated with smoking rates and failed quit attempts, yet there is little research in this area. By providing a better understanding of the effect of these factors on smoking patterns, the study will suggest the most effective avenues for reducing the rate of smoking in Australia, and thus decreasing its substantial cost to individuals and the community.

LP0775196 Dr RE Connally; Prof JA Piper; Dr M Paje; A/Prof J Iredell; Dr LG Hamey

Approved Project Title **Automated pathogen detection using time-gated luminescence microscopy**

2007 : $ 98,000
2008 : $ 80,000
2009 : $ 75,000
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Olympus Australia
University of Sydney Westmead Hospital

Administering Organisation Macquarie University

Project Summary

A rapid and general means of in-situ pathogen identification would benefit the community by ensuring that appropriate treatments can be applied in the early stages of a disease. Patient prognosis is thereby improved and opportunities for multi-drug resistant organisms to arise are limited. Time-gated luminescence microscopy (TgM) exploits persistent luminescence to overcome autofluorescence, a serious problem in pathogen detection. Drug-resistant 'Golden Staph' (MRSA) will be used as the model organism to evaluate TgM efficacy. Ultimately however, TgM will be applied for the detection of tuberculosis, a highly contagious disease affecting the respiratory system of more than one-third of the world's population.

Monash University

LP0775329 Dr D Liew; A/Prof C Reid; Dr AJ Owen; A/Prof JE Shaw; Dr DJ Magliano

Approved Project Title **Epidemiological modelling of cardiovascular disease and diabetes in Australia**

2007 : $ 67,000
2008 : $ 70,000
2009 : $ 75,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
sanofi-aventis

Administering Organisation Monash University

Project Summary

With Australia's population ageing and becoming increasingly obese, cardiovascular diseases and diabetes are predicted to be a massive burden on our already stretched health system. Preventing the onset of disease is clearly the best management strategy, but we also need effective treatment strategies for those with these diseases, and we need to ensure that we are spending our healthcare dollars in the most effective and cost-effective manner to achieve these aims. This research will evaluate how best to do this in a specifically Australian context.

The University of Adelaide

LP0775341 A/Prof AJ Braunack-Mayer; A/Prof WA Rogers; Mr JR Moss; Prof JE Hiller; Dr P Bi; Dr AB Salter; Dr RC Givney; Dr H van Eyk

Approved Project Title **Citizens' juries: enabling effective influenza pandemic policy through engagement with the community**

2007 : $ 32,000
2008 : $ 52,000

Collaborating/Partner Organisation(s)
Department of Health

Administering Organisation The University of Adelaide

Project Summary

The project will provide information and practical guidance to assist with South Australian pandemic management specifically and will have implications for the state and national disaster planning generally. The project will provide resources for both state and national policy makers in the form of technical reports and comprehensive public health information modules appropriate for dissemination to the wider Australian community. The project will contribute to increased community awareness of pandemic influenza and enhanced community acceptance of (and cooperation with) pandemic management plans while establishing a mechanism for future pandemic and disaster policy planning and evaluation.

The University of Melbourne

LP0774989 Dr AF Williams; A/Prof E Manias; Prof P Dunning; A/Prof RG Walker

Approved Project Title **Improving safety and quality: psychosocial influences of managing medicines by consumers with chronic health problems**

2007 : $ 77,030
2008 : $ 77,030
2009 : $ 77,030

APDI Dr AF Williams

Collaborating/Partner Organisation(s)
The Royal Melbourne Hospital
IM Medical Limited

Administering Organisation The University of Melbourne

Project Summary

Many Australians have multiple chronic conditions that require complex prescribed medicine regimens to control symptoms and prevent further illness. Long-term health outcomes depend on how well consumers manage their medicines. This project will contribute to the development and evaluation of a medicine self-management training package to help consumers understand and manage their complex medication regimens. Optimal medicine self-management improves the consumer's general wellbeing and benefits the Australian community through promoting good health and reducing health care costs.

The University of New South Wales

LP0774843 A/Prof AM Williamson; Dr RW Brander; Dr J Hatfield; Dr S Sherker; Dr A Hayen

Approved Project Title **Science of the Surf (SOS): The Development and Evaluation of a National Campaign to Reduce the Risk of Coastal Drowning**

2007 : $ 71,799
2008 : $ 66,474
2009 : $ 65,320

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
NSW Health
Surf Life Saving Australia
NSW Department of Tourism, Sport and Recreation

Administering Organisation The University of New South Wales

Project Summary

Australian beaches attract approximately 80 million domestic and international tourists a year and are an integral part of the Australian lifestyle. Each year, 58 people die and 563 people are hospitalised as a result of coastal drowning in Australia; many more are rescued by surf lifesavers. Many incidents occur when swimmers are caught in rip currents. Raising awareness about common surf hazards, such as rip currents, aims to minimise the risk of drowning. This research will promote and maintain good health and well being for Australians by delivering an effective drowning prevention intervention. In doing so, reducing drowning risk would save up to $187 million each year in health care costs.

The University of Queensland

LP0774868 Dr I Ozolins; Dr M Dick; A/Prof C Turner; Prof D Wilkinson; Prof S Stewart; Prof PJ Schluter; Ms E Yorkston; Ms PM Régo

Approved Project Title **Recruitment and Retention of the Australian Medical Practitioner Workforce - a Longitudinal Electronic Cohort Study**

2007 : $ 80,000
2008 : $ 80,000
2009 : $ 80,000
2010 : $ 50,000
2011 : $ 50,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Queensland Health
Royal Australian College of General Practitioners

Administering Organisation The University of Queensland

Project Summary

Identifying and acknowledging the significant personal and professional influences on the career decisions of doctors, including the choice to leave the profession for several years and factors driving the decision to return or not return, will provide not only the major public employers of doctors, but also government, community and private practice groups with reliable current evidence to inform medical workforce planning and design, and ensure quality health care.

The University of Western Australia

LP0775021 Dr SF Pettigrew; Prof RJ Donovan; Prof DP Boldy; Prof R Newton

Approved Project Title **Investigating older Australians' beliefs about and understanding of mental health and their practice of relevant protective behaviours**

2007 : $ 56,000

Collaborating/Partner Organisation(s)
Department for Community Developement - Office for Seniors Interests and Volunteering
Department of Health, Western Australian Office of Mental Health

Administering Organisation The University of Western Australia

Project Summary

Healthy ageing and mental health are acknowledged national priorities. This project will generate new knowledge relating to older Australians' mental health literacy and the motivators and barriers influencing their engagement in protective behaviours. The resulting communications strategy will provide tangible outcomes for the industry partners to utilise. The project will thus produce knowledge advancement and tools for practitioners, both of which will enhance public welfare and reduce long-term healthcare costs. While this project focuses on older Australians, those of all ages will benefit from a communications campaign that provides individuals with knowledge to protect and strengthen their mental health.

University of South Australia

LP0774983 Prof J Cheek; Prof W Moyle; Ms A Ballantyne; Ms MJ Stanley; Ms ME Corlis; Mrs DK Oxlade

Approved Project Title **Alone in a crowd: Supporting older Australians managing loneliness**

2007 : $ 50,000
2008 : $ 50,000
2009 : $ 50,000

Collaborating/Partner Organisation(s)
Helping Hand Aged Care Inc.
RSL Care

Administering Organisation University of South Australia

Project Summary

The project provides crucial understandings and knowledge about loneliness as understood by older Australians and support/service providers, and solutions to assist them manage it. The findings will provide immediate practical outcomes that can be implemented by support/service providers, whilst also providing information that can assist policy makers and managers in the service provision area. The findings will enhance the health and well-being of older Australians with concomitant social and economic benefits. The study contributes to ensuring the optimum use and deployment of finite health and social resources.

University of Technology, Sydney

LP0775435 Prof D Slade; Prof MJ Stein-Parbury; Dr HB Scheeres; Prof CM Matthiessen; A/Prof RA Iedema; Ms HC de Silva Joyce; Mr SK Choucair; Dr RN Dunston

Approved Project Title **Emergency Communication: Addressing the challenges in health care discourses and practices**

2007 : $ 122,000
2008 : $ 152,000
2009 : $ 142,000

Collaborating/Partner Organisation(s)
ACT Health
NSW AMES
Division of Allied Health - NSCCH
Northern Sydney Central Coast Area Health Service
South East Sydney Illawarra Area Health Service

Administering Organisation University of Technology, Sydney

Project Summary

Communication breakdowns have been identified as the major cause of
critical incidents in public hospitals in NSW (NSW Health, 2005a). A key applied benefit of knowledge generated by the project will be a
contribution to the reduction of critical incidents leading to patient
harm - an outcome applicable to Emergency Departments nationally. This project will benefit Australia's Hospital and Health administrations as they endeavour to find solutions to the impact of communication breakdowns and provide communications training of health care personnel. The research will deliver recommendations for system-wide improvements in communication competency.

University of Western Sydney

LP0775015 Prof DE Jackson; Prof LM Wilkes; Ms J Hutchins

Approved Project Title **Model of care: A family focussed approach to promote child protection**

2007 : $ 25,118
2008 : $ 29,888
2009 : $ 28,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
The Benevolent Society

Administering Organisation University of Western Sydney

Project Summary

Childhood neglect and abuse is an issue for all Australians. Models of best practice for child protection services are essential to protect the well-being of these children. This project will draw upon information from consumers and workers to provide a framework for a sustainable model of best practice for child protection that is transferable to other settings. A further benefit of this study is that it will provide insight into occupation health and safety issues associated with working in long term relationships with vulnerable families.

3214 HUMAN MOVEMENT AND SPORTS SCIENCE

The Australian National University

LP0775541 Prof DG Byrne; Prof RD Telford

Approved Project Title **The effect of physical activity and a structured exercise program on the psychological and physical development of Australian primary school children**

2007 : $ 71,006
2008 : $ 71,006
2009 : $ 71,006

Collaborating/Partner Organisation(s)
Commonwealth Institute

Administering Organisation The Australian National University

Project Summary

This study will explore the effects of early childhood physical activity on development. Our study will assess quantitatively the beneficial effects of exercise on personal and physical growth in young children in a non-intimidating way using a specifically designed exercise program.

3301 EDUCATION STUDIES

Curtin University of Technology

LP0775502 Prof Dr GB Dellar; Dr RF Cavanagh; Mr DN Ansell; Dr PS Reynolds; Ms L Moore

Approved Project Title **Western Australian rural and remote schooling: The influence of learning environments on student participation and retention**

2007 : $ 74,000
2008 : $ 60,000
2009 : $ 65,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Department of Education and Training

Administering Organisation Curtin University of Technology

Project Summary

By 2010 all Australian States and Territories will have raised the school leaving age from 15 to 17 years of age. As one of the first States to have undertaken this essential step toward re-engaging disaffected youth in education, training and/or employment options, it is important that a rigorous examination of the Western Australian experience is conducted. The proposed research focuses on what is likely to be the most problematic area of the initiative for school communities - how and why the programs offered to students in rural and remote school and classroom learning environments impact upon student engagement and retention.

The Flinders University of South Australia

LP0775094 Prof MJ Lawson; Prof PT Slee; A/Prof LD Owens; Dr PK O'Toole; Dr KD Gregory; Dr H Askell-Williams

Approved Project Title **Building the capabilities of school communities to improve their wellbeing**

2007 : $ 68,000
2008 : $ 65,000
2009 : $ 65,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Department of Education and Children's Services
Blackwood High School
Aberfoyle Park High School
Christies Beach High School & Southern Vocational College
Flagstaff Hill School
Wallara District Office

Administering Organisation The Flinders University of South Australia

Project Summary

Wellbeing remains an issue for all education systems and for the nation. One indicator of this is that, on average, one in six Australian students experience affronts to their wellbeing through bullying or harassment at least once a week. Teacher wellbeing is also an issue of national importance as education systems face issues of teacher retention. This project will provide a model that can be used by other schools and educational systems for development of interventions that address wellbeing issues of social competence, learning and leadership for key groups in school communities.

The University of Melbourne

LP0775224 Prof PE Griffin; Prof RJ Adams; Dr CL Parsons; Mr JJ Allman; Mr IJ Claridge; Ms K Underwood

Approved Project Title **Profiling developmental standards of learning for students with intellectual disabilities**

2007 : $ 105,000
2008 : $ 105,000
2009 : $ 105,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Department of Education and Training
Centre for Advanced Assessment and Therapy Services

Administering Organisation The University of Melbourne

Project Summary

This project addresses an area of educational assessment that has been traditionally neglected as 'too hard'. It offers hope to students with intellectual disabilities. If developmental progress can be mapped and identified in competency terms and linked to successful teaching and learning strategies, the students can be expected to make more rapid progress towards achieving their potential. Teachers in mainstream schools can also expect to be helped in recognising development and given advice for intervention. The materials will be made available world wide to help all students in this challenging area.

The University of New England

LP0775034 Dr BG Boughton; Dr R Spence

Approved Project Title **An investigation into the contribution of the national adult education system to the post-conflict reconstruction and development of East Timor**

2007 : $ 46,000
2008 : $ 45,000
2009 : $ 45,000

LIF Award(s): 1

Collaborating/Partner Organisation(s)
DRTL Ministry of Education & Culture
DRTL Ministry of Labour & Community Reinsertion
Linga Longa Inc.

Administering Organisation The University of New England

Project Summary

This project will improve our understanding of the society and culture of our closest neighbour, East Timor, and of the dynamics of aid and development in our region. The Australian adult education community will learn to interact more effectively with the development process in Timor, as we pilot an approach which may be applicable in other communities, particularly ones with histories of conflict and where poverty is a major issue. Funding agencies will benefit from understanding better how to target adult education aid to achieve poverty reduction and democratic development. The project will strengthen the capacity of the government of East Timor to use adult education policy to raise living standards in their country.

The University of Queensland

LP0775106 Dr CE Manathunga; Prof PR Boreham; Dr PA Lant; A/Prof GD Mellick; Prof C Critchley

Approved Project Title **Research and innovation leaders for industry**

2007 : $ 73,036
2008 : $ 73,036
2009 : $ 73,036

Collaborating/Partner Organisation(s)
Rio Tinto Technology Ltd
Queensland State Development, Innovation and Trade
CSR Sugar

Administering Organisation The University of Queensland

Project Summary

This research project will contribute significant national benefits because it will provide new data on the future likely requirements of 21st century researchers who will play a leading role in promoting Australia's innovation culture and economy. Government, industry, university and graduate stakeholders require an evidence-base upon which to reform Australian research training policy. By exploring the graduate employment outcomes and transitions of recent graduates and employers' perceptions of their knowledge and skills, this study will inform the development of research training quality indicators and contribute to theoretical debates about the nature of knowledge production and innovation in post-modern times.

The University of Sydney

LP0775083 A/Prof PW Jones

Approved Project Title **AusAID at work: the design, delivery and impact of Australian aid to education in Asia and the Pacific**

2007 : $ 96,453
2008 : $ 96,804
2009 : $ 100,548
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Australian Agency for International Development (AusAID)

Administering Organisation The University of Sydney

Project Summary

The project is designed to determine how Australian overseas aid can make more effective interventions in the education sector, at a time of significant budgetary increases. Australian overseas aid is officially regarded as a key means of promoting poverty reduction, economic growth, social cohesion, expanded trade and regional security. Each objective is significant for Australian futures. Aid to the education sector has been taking on increasing weight, given that well-performing education systems are known to impact positively in these areas. The project provides a platform for greater impact of Australian aid, including that provided in partnership with other donors.

University of South Australia

LP0775030 Prof A Reid; A/Prof NC Cranston; Prof JP Keating; Prof WR Mulford

Approved Project Title **Education Investment in Australian Schooling: Serving Public Purposes**

2007 : $ 60,000
2008 : $ 130,000
2009 : $ 60,000

Collaborating/Partner Organisation(s)
Australian Government Primary Principals Association
Education Foundation

Administering Organisation University of South Australia

Project Summary

The public purposes of schooling are central to the social and economic health of Australian society, since they provide a basis for realising the goals and aspirations of that society. This project will use the insights and current practices of many school communities to establish how the purposes of schooling are currently understood and enacted. This clarification will be used as the basis for (a) a reassessment and refinement of such policy statements as the National Goals of Schooling; (b) professional development activities and resources and sharing of good practice; and (c) the development of instruments for assessing the achievement of public purposes.

3302 CURRICULUM STUDIES

Deakin University

LP0775072 A/Prof CA Beavis; Prof CM Bradford; Dr JA O'Mara; Dr C Walsh

Approved Project Title **Literacy in the digital world of the twenty-first century: learning from computer games.**

2007 : $ 64,000
2008 : $ 40,000
2009 : $ 47,000

Collaborating/Partner Organisation(s)
Department of Education & Training
Australian Centre for the Moving Image
The Victorian Association for the Teaching of English

Administering Organisation Deakin University

Project Summary

The creation of a literate and tech-savvy workforce and community is essential to Australia's future prosperity. By helping teachers better understand and teach ICT-enabled forms of text and literacy, drawing on insights from young people's actual engagement with digital culture in their leisure hours, the project will help strengthen young Australians' capacity to critically evaluate and use ICTs for effective learning and communication. This project will help produce the skills, knowledge and orientations necessary to create smart information use, through developing and strengthening young people's uses and understandings of ICT-based forms of text and literacy.

3303 PROFESSIONAL DEVELOPMENT OF TEACHERS

La Trobe University

LP0774978 A/Prof R Lewis

Approved Project Title **Adolescent mental health and supportive classroom environments: investigating organizational supports as mediators to a sustainable reduction in aggressive classroom management.**

2007 : $ 55,000
2008 : $ 47,000

Collaborating/Partner Organisation(s)
VicHealth
Lakeside Secondary College
Lalor North Secondary College
Peter Lalor Secondary College
La Trobe Secondary College
Diamond Valley College
Copperfield College
Greensborough Secondary College

Administering Organisation La Trobe University

Project Summary

Making classrooms safe and supportive for all students enables young Australians to lead healthier and more productive lives through social inclusion and economic participation. Finding effective ways to reduce teachers' use of non-productive, aggressive strategies in interactions with challenging students offers important social and economic benefits to Australia. These include reductions in adolescent anxiety and depression, greater engagement in schooling, a reduction in student withdrawals and exclusions, increasing parent, community and international confidence in Australia's schools, and a reduction in the number of young teachers leaving the profession.

Monash University

LP0775375 Prof PA Sullivan; Prof DM Clarke; A/Prof BA Clarke

Approved Project Title **Examining the relationship between the documented curriculum, classroom tasks, and the learning of mathematics**

2007 : $ 134,000
2008 : $ 137,000
2009 : $ 139,000
APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Catholic Education Commission of Victoria
Department of Education & Training, Victoria

Administering Organisation Monash University

Project Summary

There is an obvious connection between maximizing mathematics learning of young people and the nation's future. Currently many young people are missing opportunities for learning mathematics at school, and this not only reduces their own opportunities, but also increases their risk of long term dependence on government services. At the same time, mathematics is increasingly necessary for tertiary study in a range of fields, and the number of students choosing the highest level of mathematics is declining. The project will evaluate the types of tasks that teachers can use to engage all students in learning mathematics effectively, while preserving options for those students who may choose to specialise in tertiary mathematics study.

3399 OTHER EDUCATION

The University of Queensland

LP0775096 Dr CJ Mallett; A/Prof SR Billett; Prof RI Tinning; Dr AJ Rossi

Approved Project Title **Learning and mentoring in high performance sports coaching**

2007 : $ 31,000
2008 : $ 35,000
2009 : $ 36,000

Collaborating/Partner Organisation(s)
Australian Sports Commission

Administering Organisation The University of Queensland

Project Summary

Effective coaching is held responsible for Australia's international sporting performance. Yet little is known about how best elite sports coaches learn effective and innovative high-performance coaching practices. This project aims to identify and contribute to effective elite sport coaching development in Australia. This will be achieved through understanding how best current elite coaches learn through their coaching work. Implications here extend across sport and to other domains of human activity. The contribution of sport to Australian national identity is well established and the economic benefit of sport and more specifically sporting success in Australia is also well recognised.

3402 APPLIED ECONOMICS

The Australian National University

LP0775245 Prof JM Corbett; Prof CC Findlay

Approved Project Title **Setting Priorities for Services Trade Reform**

2007 : $ 100,000
2008 : $ 100,000
2009 : $ 100,000

Collaborating/Partner Organisation(s)
Productivity Commission

Administering Organisation The Australian National University

Project Summary

Services could be a deal maker in the Doha Round of trade negotiations, and Australia has much to gain if developing countries can be persuaded to make commercially meaningful commitments to liberalise services trade. Australia will also gain if the economies of the region are strengthened through regulatory reform. And Australia can gain from further regulatory reform at home. To these ends, the project will provide new understanding of regulatory best practice that will reveal the priorities for services trade reform.

LP0775444 Prof R Jha; Dr S Howes

Approved Project Title **Social Safety Nets in India: Effectiveness, Nutritional Impact and Political Economy**

2007 : $ 140,000
2008 : $ 145,000
2009 : $ 150,000

Collaborating/Partner Organisation(s)
AusAID

Administering Organisation The Australian National University

Project Summary

India is, potentially, one of Australia's most significant trading and strategic partners. As India, a democratic country with low per capita income deepens its economic reforms programs, their success depends critically upon domestic political support which would require that the policies adopted make a significant dent on poverty. The proposed research will examine the impact of two of the most significant policy initiatives for poverty alleviation and thus provide critical analyses of how a democratic polity should address poverty. The project's results will also have significant implications for the design of AusAID's recommended anti-poverty interventions in other developing countries.

LP0775133 Dr L Song; Prof RG Garnaut

Approved Project Title **China's Industrialisation and Demand for Energy and Minerals**

2007 : $ 155,000
2008 : $ 43,000

Collaborating/Partner Organisation(s)
Rio Tinto Limited

Administering Organisation The Australian National University

Project Summary

Understanding China's medium and long-term growth prospects and the implications for both demand and supply of resources are critically important to Australian economic policy and performance, as well as to investment decisions of Australian resource producers, and professional decisions of Australians in a wide range of occupations. Analysis of the medium and long-term demand for resources from China would be beneficial for Australian resource industries. It is also important to Australian budget, education and infrastructure policy. Increasing Chinese demand for resources will be critical in shaping global environmental policies.

The University of New South Wales

LP0774950 A/Prof GF Barrett; Prof JR Piggott; Prof AD Woodland; Prof RG Gregory

Approved Project Title **An Integrated Approach to the Timing of Retirement: Life Cycle, Labour Force Heterogeneity, Financial Status and Public Support**

2007 : $ 170,000
2008 : $ 174,455
2009 : $ 191,290
2010 : $ 105,554

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Department of Families, Community Services and Indigenous Affairs

Administering Organisation The University of New South Wales

Project Summary

This project will generate new knowledge on household decision making over retirement timing. National benefits will be generated through improved institutional design and policy formulation, which in turn will promote a labour market conducive to increased mature-age participation. The project involves collaboration across several institutions and will contribute to the development of research expertise through the training of PhDs and research assistants, creating a critical threshold of integrated research into ageing. This will facilitate a world-class presence in this important domain, thus contributing directly to the National Research Priority of Ageing Well, Ageing Productively.

The University of Sydney

LP0775055 Prof DA Hensher; Prof PR Stopher; Dr SP Greaves; Mr RW Whelan

Approved Project Title **Exploring Behavioural Responses of Motorists to Exposure-Based Charging Mechanisms**

2007 : $ 95,000
2008 : $ 100,000
2009 : $ 35,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
AAMI Ltd

Administering Organisation The University of Sydney

Project Summary

Our continued reliance on cars is estimated to cost the Australian economy around $50 billion per year in accidents, congestion and air pollution. This project delivers a new approach to reduce these externalities, in which charges are levied on drivers based on their accident history, the kilometres driven and the circumstances under which these kilometres are driven. In addition to the safety and congestion benefits, the outcomes of the project will be of importance to those charged with raising revenue to support infrastructure maintenance and development, and the insurance industry as a basis for reducing risks in driving and making premiums more equitable.

LP0774919 A/Prof DJ Schofield; Dr ME Passey; Mr A Earnest; A/Prof R Percival; A/Prof SJ Kelly

Approved Project Title **Economic impacts of disease on older workers: Costs to government and individuals and opportunities for intervention**

2007 : $ 90,000
2008 : $ 80,000
2009 : $ 90,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Pfizer Australia

Administering Organisation The University of Sydney

Project Summary

With an ageing workforce, Australia is at risk of having an inadequate workforce to ensure economic growth and to maintain sufficient taxation revenue to support future needs.

This project will provide fill substantial gaps in the Australian evidence the health conditions that keep older workers out of the labour market and that diminish their own immediate and long-term livings standards and reduce funds available to government. We will address one of the most significant issues resulting fundamental changes to the demography of the Australian labour market and one is regularly raised by the Prime Minister and Treasurer in their speeches following the Intergenerational Report.

3502 BUSINESS AND MANAGEMENT

Griffith University

LP0775312 Dr N Subramaniam; Prof AD Shulman; Prof JD Stewart; Prof AC Ng

Approved Project Title **Strengthening Corporate Governance Behaviour in the Public Sector: Evaluating the Benefits of a Knowledge Systems Approach**

2007 : $ 40,000
2008 : $ 56,000
2009 : $ 45,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Department of Main Roads
Roads and Traffic Authority (NSW)

Administering Organisation Griffith University

Project Summary

There is considerable pressure on government agencies to improve corporate governance and become more accountable. But there is a lack of systematic data and analyses on the efficacy of the range of governance structures and arrangements in practice. In addressing this void, this study is of national significance. Building upon knowledge management and group behaviour processes, the research will lead to the development and testing of best practice models and guidelines for corporate governance management in the public sector

Queensland University of Technology

LP0774931 Dr PK McDonald; Dr JM Bailey; Dr B Pini; Dr R Price; Mr A Allegretto

Approved Project Title **Social citizenship and employment for secondary school students**

2007 : $ 77,082
2008 : $ 77,082
2009 : $ 77,082

APDI Dr R Price

Collaborating/Partner Organisation(s)
Brisbane Catholic Education Centre
Young Workers Advisory Service
Department of Education, Queensland
Queensland Council of Unions

Administering Organisation Queensland University of Technology

Project Summary

The study will guide communities, policy makers and social institutions about how best to encourage the development of social and workplace citizenship behaviour in young people at a time of multiple, intersecting and possibly contradictory social, policy and legislative changes. It will identify the structural mechanisms (via curriculum development, industry policies/practice and public policy development) through which young student-workers may become less vulnerable and more empowered in their labour market experiences. Ultimately, this will result in a stronger voice for young people and hence a strengthened social fabric in the domain of work

The University of Melbourne

LP0774949 A/Prof MJ Davern; A/Prof KE Stagnitti; Prof CB Ferguson

Approved Project Title **Modelling the adoption and use of virtual services technologies for rural and regional healthcare: Economic and quality of care perspectives**

2007 : $ 62,000
2008 : $ 60,000
2009 : $ 60,000

Collaborating/Partner Organisation(s)
Southwest Alliance of Rural Health (SWARH)

Administering Organisation The University of Melbourne

Project Summary

Rural and regional Australians account for more than a third of the population. Compared with their urban counterparts, they face higher mortality rates and experience higher hospitalisation rates. They face significant challenges in accessing healthcare services and expertise. This research will provide guidelines on the effective and efficient use of virtual services technologies to provide more equitable access to healthcare for rural and regional Australians. This will enable healthcare providers and government agencies to select and deliver appropriate technology solutions yielding improved quality of care at a reduced cost. Access delays will be reduced through localised healthcare delivery.

The University of Queensland

LP0775220 Prof JR McColl-Kennedy; Dr TS Dagger; A/Prof JC Sweeney; Mrs BR Mirolo; Ms MM Hargraves

Approved Project Title **Customer Co-production in Ongoing Health Service Delivery: A Longitudinal Study**

2007 : $ 60,799
2008 : $ 30,816
2009 : $ 24,169

Collaborating/Partner Organisation(s)
Haematology and Oncology Clinics of Australasia Pty Ltd

Administering Organisation The University of Queensland

Project Summary

Customers do not merely receive services. Increasingly they are actively involved in their design and delivery even to the extent of being regarded as 'part-time employees'. Customer co-production is tipped to be the next frontier in competitive effectiveness. Benefits to customers,however, are largely unknown. Often customers fail in their co-production role with serious negative consequences. Given the important role of customers (patients) in ongoing health care, and the potential for failure, it is critical that customer co-production be fully investigated. If performed well co-production should result in positive patient outcomes and significant cost savings for the healthcare sector.

The University of Sydney

LP0775306 Dr JD Buchanan; Ms B van Wanrooy; Ms GA Considine

Approved Project Title **WorkChoices and the Evolution of Australian Working Life: The Changing Role of the Labour Contract**

2007 : $ 281,030
2008 : $ 141,030
2009 : $ 189,530
2010 : $ 202,000
2011 : $ 101,378

APDI Ms B van Wanroov

Collaborating/Partner Organisation(s)
Unions NSW

Administering Organisation The University of Sydney

Project Summary

Both internationally and nationally, there is much speculation as to how the transformation of the industrial relations framework will impact on workers and the broader community. Knowledge of the impact of WorkChoices is vital for employers, unions and governments to understand the influence the industrial relations framework has on Australia's social and economic fabric. The survey will address some of the social issues that are debated widely in Australia such as the impact of the industrial relations changes on wages and wage inequality, work and family balance, skills development and shortages, workers in regional areas, and workers in low skilled and low paid jobs.

LP0774962 Prof J Guthrie; Prof CA Adams; Ms C Boedker; Prof J Mouritsen; Prof G Roos

Approved Project Title **Visualising Value in Australian Organisations: Case Studies in Extended Performance Management, Measurement and Reporting**

2007 : $ 78,000
2008 : $ 81,000
2009 : $ 85,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
NSW Department of Lands
Computer Sciences Corporation
Westpac Australia
Australian Red Cross Blood Service
Society of Knowledge Economics

Administering Organisation The University of Sydney

Project Summary

This research positions and develops Australia at the forefront of the knowledge economy. Participating organisations will realise insights into their invisible resources and improve their understanding of the performance, utilisation and productivity of their intangible resources. Corporate social responsibility and social and environmental management are recognized as crucial to the contemporary organisation and this research provides a means of managing, measuring and reporting these perspectives, enhancing Australia's reputation and long-term economic sustainability.

3503 BANKING, FINANCE AND INVESTMENT

Monash University

LP0775035 A/Prof CJ Mews; Prof M Ariff; Prof M Skully; Dr AR Ghouse; Dr D Bakar; Prof A Saeed

Approved Project Title **Religion, Finance and Ethics: Islamic and conventional perspectives on shared principles, practices, and financial institutions and instruments**

2007 : $ 52,000
2008 : $ 54,000
2009 : $ 52,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Muslim Community Co-Operative (Australia) Ltd
Amanie Business Solutions Sdn. Bhd
MacPherson + Kelley lawyers
Australian Financial Investment Group Ltd

Administering Organisation Monash University

Project Summary

By linking together specialists in finance, banking and religious history, with the Muslim Community Cooperative (Australia), this project explores communication and mutual benefit between international Islamic finance and conventional Western finance. It will propose new financial structures and instruments to expand the scope of Islamic finance, to maximise lending and investment opportunities in Australia, and to promote interaction between the Islamic and conventional financial sectors. The project will enable Australian researchers to work with international authorities in Islamic finance, promoting dialogue between Islamic and other groups, and increase investment and development within the Australian financial market.

The University of New South Wales

LP0775195 Dr KD Walsh; Dr EL Welch; Prof T Smith

Approved Project Title **The Role of Corporate Governance Mechanisms in Maximising the Performance of Listed Australian Corporations**

2007 : $ 60,000
2008 : $ 59,996
2009 : $ 52,057

Collaborating/Partner Organisation(s)
Barclays Global Investors

Administering Organisation The University of New South Wales

Project Summary

The recent spake of corporate collapses and scandals highlights the need for an ongoing commitment to the development, implementation and maintenance of strong systems of governance within Australian corporations. This commitment necessitates an understanding of which suite of governance mechanisms are most effective in positively impacting upon corporate performance rather than just the performance impact of a particular mechanism in isolation. To date, research facilitating such an understanding is all but non-existent. However, our study will yield this much-needed evidence and, therefore, provide the foundations for ongoing corporate governance reform on the part of regulators and practitioners alike.

University of Technology, Sydney

LP0775442 Prof C Chiarella; Dr LJ Clewlow

Approved Project Title **The Pricing and Hedging of Multi-Factor Multi-Commodity Based Swing Options**

2007 : $ 107,000
2008 : $ 107,000
2009 : $ 109,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Lacima Group Pty. Ltd.

Administering Organisation University of Technology, Sydney

Project Summary

The partner organisation, an Australian based company, is a leading global player in providing risk management solutions to energy corporations world-wide. The advances of the project will help it to enhance Australia's role as a provider of practical implementation of the most recent academic advances in the area of risk management technology.

3601 POLITICAL SCIENCE

The Australian National University

LP0775290 Prof JG Uhr

Approved Project Title **Strengthening Parliamentary Institutions: Australia in Comparative Perspective**

2007 : $ 127,309
2008 : $ 86,000
2009 : $ 94,000

Collaborating/Partner Organisation(s)
Dept of the Senate
Department of the House of Representatives

Administering Organisation The Australian National University

Project Summary

Australia has a valuable international record as a parliamentary democracy, with much to teach, as well as much to learn from, the international community about effective parliamentary institutions. This joint ANU-Commonwealth Parliament project will be based at the ANU's new Parliamentary Studies Centre and managed by that Centre's inaugural director, Professor John Uhr. The project will greatly strengthen the intellectual and policy framework of Australia's democracy assistance in the Asia Pacific region.

3602 POLICY AND ADMINISTRATION

Macquarie University

LP0774980 A/Prof JJ Rodwell; Prof PD Steane; Dr AJ Noblet; Prof S Osborne

Approved Project Title **Investigating the Impact of Work Design on Productive Wellbeing in Mercy Health: The Modernising Third Sector**

2007 : $ 54,085
2008 : $ 80,069
2009 : $ 84,127

Collaborating/Partner Organisation(s)
Mercy Health & Aged Care Inc.

Administering Organisation Macquarie University

Project Summary

Around the world the Third Sector (TS) of the economy is coming under pressure to modernise their management. The typical approaches to modern management being imposed overseas may not be appropriate for TS organisations and therefore they need to be critically examined, especially for their impact on employees. In Australia the TS is a large (approx. $15billion), yet low-profile set of organisations, of which the health industry is central. This project will investigate the issues that make workplaces in a TS health organisation a healthier and more productive place to work. The results could directly help improve workplaces covering more than 150,000 employees.

3701 SOCIOLOGY

Deakin University

LP0775125 Dr KE Cook; Prof PG Smyth; A/Prof AM McClelland; Dr EC Davis

Approved Project Title **The implications of welfare reform for single parent families in their transition to paid work**

2007 : $ 44,225
2008 : $ 38,665
2009 : $ 31,268

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Brotherhood of St Laurence

Administering Organisation Deakin University

Project Summary

The study will clarify the policy and practice implications of welfare reform by focussing on its implementation and impacts. These findings will: provide single parents with insight into the experience of returning to work; enable social welfare agencies to design programs and services to meet the changing needs of single parents; provide data for welfare policy review and development; and contribute to the theory and evidence base for ongoing debates such as the effect of combining multiple roles (for example work and parenting) on single parents and the implications of voluntary versus mandatory welfare to work programs.

The University of Adelaide

LP0775632 Prof GJ Hugo

Approved Project Title **New Information and Communication Technologies and The Elderly: Practice, Problems and Potential**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
City of Charles Sturt

Administering Organisation The University of Adelaide

Project Summary

Recent government reports (Costello 2002; 2004; Productivity Commission, Australian Government 2005) indicate that demographic ageing which will see a doubling of the aged population both numerically and as a proportion of the total population in the next quarter century presents a substantial challenge to Australia. One element of that challenge is to maintain and enhance the wellbeing of older Australians while controlling the costs of providing them with support services. New developments in ICT have the potential to facilitate achieving these twin goals but little is known of the take up of ICT among older Australians and those who will enter the older ages over the next three decades.

The University of New South Wales

LP0775514 A/Prof J Braithwaite; A/Prof RA Iedema; A/Prof JI Westbrook; A/Prof AR Foxwell; Dr RA Boyce; Prof TM Devinney; A/Prof MM Budge

Approved Project Title **An action research project to strengthen inter-professional learning and practice across the ACT health system**

2007 : $ 206,000
2008 : $ 226,000
2009 : $ 249,000
2010 : $ 263,000

Collaborating/Partner Organisation(s)
ACT Health

Administering Organisation The University of New South Wales

Project Summary

There are 14 beneficial reasons why this project is vital to the fabric of our nation. These include: the economic benefits of a more efficient health-care system; the social benefits of more responsive and resilient workplaces; the research benefits of better knowledge about how professionals can work together effectively; the consumer benefits of improved patient care; health sector benefits in assisting health reforms to be more effective; and education sector benefits in understanding how professionals from different disciplines can learn together more collaboratively. The benefits are transferable to other industries and professional groups, as well as to Australia's international partners.

The University of Queensland

LP0775040 Prof PR Boreham; Dr G Dow; Prof MC Western; Mr WS Laffan

Approved Project Title **The development and application of a conceptual and statistical framework for the measurement of non-market factors affecting social inequality and social wellbeing.**

2007 : $ 150,000
2008 : $ 150,000
2009 : $ 152,000

Collaborating/Partner Organisation(s)
Queensland Public Sector Union

Administering Organisation The University of Queensland

Project Summary

In response to global and national forces, a new social and economic policy framework has promoted multiple impacts on families, communities and regions in Australia. This project will respond to an increasingly important research and policy question concerning the development of alternative measures of social wellbeing and social inequality to the conventional measures of economic resources within households that are currently employed. This research will provide a nationally and internationally recognized evidence base on which to develop policies of importance to the quality of life in Australia's urban and regional communities.

University of Canberra

LP0775396 Prof AM Harding; A/Prof SJ Kelly; Dr P Williamson; Dr J McNamara

Approved Project Title **Regional Dimensions: The Spatial Implications of Population Ageing and Needs-Based Planning of Government Services**

2007 : $ 114,803
2008 : $ 110,803
2009 : $ 110,803

Collaborating/Partner Organisation(s)
Queensland Department of Premier and Cabinet
Office of Economic and Statistical Research, Queensland Treasury
Australian Bureau of Statistics
NSW Department of Community Services
ACT Chief Minister's Department

Administering Organisation University of Canberra

Project Summary

The national fiscal implications of population ageing have received extensive attention from government in the past few years. However, relatively little attention has been given to the spatial implications of population ageing. Yet such effects will become vigorously debated matters of public policy in the near future, as such issues as regional labour force shortages and regional demand for aged care services assume greater prominence. This project will improve the ability of State and Territory governments to plan for the current and future need for particular government services at a small area level, including services for children and the aged.

3702 SOCIAL WORK

The University of New South Wales

LP0775594 Prof B Cass; Dr DJ Brennan; Prof IB Katz; Ms CM Thomson; Dr DA Mitchell

Approved Project Title **Young Carers: Social policy impacts of the caring responsibilities of children and young adults**

2007 : $ 125,000
2008 : $ 80,000
2009 : $ 84,000

Collaborating/Partner Organisation(s)
Carers NSW
NSW Department of Ageing, Disability and Home Care
Health Administration Corporation (HAC)
Children Youth and Women's Health Service
Carers Association of SA (Carers SA)
Department of Education and Children's Services
NSW Commission for Children and Young People
Department of Further Education, Employment, Science and Technology South Australia
Department for Families and Communities South Australia
Social Inclusion Unit, Dept of the Premier and Cabinet

Administering Organisation The University of New South Wales

Project Summary

This project is a unique collaboration between university researchers, eight government agencies in NSW and South Australia and two Carers Associations, using innovative methods to inform policy development. The project will focus on the costs to young carers (their education, training, employment, social activities, health and wellbeing); benefits of the care relationship to families and to government through savings on formal services; and the social policy frameworks. It will provide a comprehensive audit of policies and services for young carers and care recipients, and identify gaps for future policy development.

3703 ANTHROPOLOGY

The Australian National University

LP0775392 Dr ID Keen; Prof C Lloyd; Dr AJ Redmond; Dr MP Pickering

Approved Project Title **Indigenous participation in the Australian colonial economy: an anthropological and historical investigation.**

2007 : $ 45,000
2008 : $ 44,000
2009 : $ 50,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
National Museum of Australia

Administering Organisation The Australian National University

Project Summary

The main benefits of the research to the Nation and community lie in the new information generated by the project, and the enhancement of our understanding of past relations between Indigenous people and the wider community. The proposal has the potential to mediate the extreme positions in the 'history wars' by investigating the various types of accommodation and mutuality of interests which informed many early encounters on and beyond the frontier. It will also widen the focus of settler-Indigenous relationships from those between Indigenous people and Anglo-Celtic Australians to include relations with other ethnicities including Afghani settlers.

LP0774918 Dr RG Schwab; Ms IB Kral; Ms UJ Raymond

Approved Project Title **Lifespan learning and literacy for young adults in remote Indigenous communities**

2007 : $ 117,000
2008 : $ 114,000
2009 : $ 77,030

APDI Ms IB Kral

Collaborating/Partner Organisation(s)
Fred Hollows Foundation

Administering Organisation The Australian National University

Project Summary

Engagement with learning across the lifespan and increased literacy skills among early school leavers and other young adults will have direct benefits to remote Indigenous communities and to the nation. These include the increased ability of this next generation of Indigenous adults to develop the skills and confidence required to actively build stable and self-reliant institutions, improve social and economic circumstances and enhance the health of their families and communities. Additional benefits will flow from the enhanced capacity of individuals to participate effectively in the national economy and from more positive spending of public funds on evidence-based programs that work rather than ongoing problem alleviation.

3704 HUMAN GEOGRAPHY

RMIT University

LP0775104 Dr JL Shaw; Dr MJ Mulligan; Dr M Clarke; A/Prof DC Mercer

Approved Project Title **Rebuilding Sustainable Communities: Assessing Post-Tsunami Resettlement Projects in Indonesia, Sri Lanka and India.**

2007 : $ 25,726
2008 : $ 66,916
2009 : $ 20,250

Collaborating/Partner Organisation(s)
AusAID
Foundation for Development Co-operation

Administering Organisation RMIT University

Project Summary

It is in the interests of Australia and nations in our regions to improve strategic responses to natural disasters. In addition to their catastrophic short-term effects, disasters sharply reduce employment and output and strain limited state capacity, increasing poverty and inhibiting the prospects for longer-term economic growth and social stability. The development of measures which support the effective rebuilding of social structures and economic activity is key to minimising adverse outcomes. By enriching our understanding of how best to support sustainable resettlement programs, the study responds to the national research priority goal of 'Safeguarding Australia: understanding our region and the world'.

The University of Western Australia

LP0775540 Dr MA Tonts; Prof R Jones

Approved Project Title **The Arts and Social Wellbeing in Rural Communities**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Country Arts Western Australia
Department of Culture and the Arts

Administering Organisation The University of Western Australia

Project Summary

The social wellbeing of Australia's rural communities is of ongoing concern and importance to governments, communities and businesses. It is often held that the arts have the potential to contribute to wellbeing by fostering social connectivity, community cohesion, social inclusion, trust and reciprocity. However, relatively little research examines the hypothesised link between the arts and these outcomes. This project will make an innovative contribution in this area. It will address industry and government calls for research on the contribution of the arts to rural social wellbeing. It will also provide a basis for more effective policy in the arts and regional development.

3705 DEMOGRAPHY

The University of Queensland

LP0775004 Prof JH Baxter; Dr MA Haynes; Prof MC Western

Approved Project Title **Cohabitation in Australia: Trends and Implications for Family Outcomes**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Department of Family, Community Services and Indigenous Affairs

Administering Organisation The University of Queensland

Project Summary

The project will contribute to improvements in the economic and social well-being of Australian families and communities by increasing our understanding of changing pathways into relationships and the implications of these choices for later family outcomes. The national benefit from this will be realised in terms of more effective policies that promote relationship quality and stability. This will help reduce the social and economic costs to the government and the community from poor relationship quality and relationship breakdown.

3799 OTHER STUDIES IN HUMAN SOCIETY

The University of Queensland

LP0775131 A/Prof GM Whitehouse; Prof JH Baxter; Mrs CM Broers

Approved Project Title **Industrial relations, gender equity and work/family balance: assessing the impact of changing law and practice in Queensland**

2007 : $ 55,000
2008 : $ 50,000
2009 : $ 55,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Queensland Department of Industrial Relations
Office for Women

Administering Organisation The University of Queensland

Project Summary

The project has potential to contribute to improvements in the economic and social well-being of Australian families and communities by identifying effective strategies to enhance gender equity in employment and work/family balance. It seeks to extend understanding of how these outcomes vary across regions and sectors of the Queensland economy in the context of a changing industrial relations framework, and to provide an evidence-base to inform the best ways to secure high quality employment and labour force attachment over the life course.

University of South Australia

LP0775242 Prof SB Banerjee; Ms DJ Tedmanson; Dr MR Muirhead

Approved Project Title **Social and cultural factors in Indigenous enterprise management and governance**

2007 : $ 35,000
2008 : $ 35,000

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
UnitingCare Wesley Adelaide Inc
Pukatja Community Council Inc
Turkey Bore and Tjutjunpiri Community Inc
Anilalya Homelands Council

Administering Organisation University of South Australia

Project Summary

The project addresses Indigenous economic self-sufficiency by developing a model of Indigenous enterprise development and governance. By focusing on sustainability of Indigenous communities in remote areas, the project contributes to National Research Priority 3 (Promoting and maintaining good health: Strengthening Australia's social and economic fabric). The project addresses the National framework of principles for delivering services to Indigenous Australians developed by the Council of Australian Governments by seeking new ways to promote economic participation and development, supporting capacity at local and regional levels and building opportunities for indigenous families and individuals to become self-sufficient.

3801 PSYCHOLOGY

La Trobe University

LP0775284 Dr AG Paolini; Dr SP Kent; Prof SF Crowe; Dr PL Carrive; Prof MJ Cook; Prof BE Kolb

Approved Project Title **Environmental impact on neuroendocrine and neurobiological mechanisms: treatment strategies and mimetics for maintaining good health**

2007 : $ 130,262
2008 : $ 160,483
2009 : $ 159,828
2010 : $ 101,667
2011 : $ 44,881

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Jim's Group
The Bionic Ear Institute

Administering Organisation La Trobe University

Project Summary

The current societal climate of industrialized countries such as Australia has shifted considerable over recent decades and is now one which is highly conducive to overfeeding and reduced physical activity. As a result, the incidence of obesity has risen markedly along with an associated increase in obesity-related chronic diseases such as cardiovascular disease, stroke, obstructive pulmonary disease, type II diabetes, and many types of cancers. Less is known about the psychological and behavioural sequelae of this overfeeding. Calorie restriction mimetics may not only act as a preventative intervention to help reduce the incidence and severity of these major health problems, but also impact on social behaviour.

The University of Queensland

LP0775277 Dr CE Amiot; Prof DJ Terry; Prof VJ Callan; Dr JR Smith

Approved Project Title **Newcomer socialisation: Examining the processes predicting changes in organisational identification over time**

2007 : $ 49,000
2008 : $ 54,000
2009 : $ 60,000

Collaborating/Partner Organisation(s)
Brisbane City Council

Administering Organisation The University of Queensland

Project Summary

The project examines factors that maximise the retention of new employees and optimise their well-being. It seeks to understand factors in the organisational socialisation process that lead to an increase in organisational identification and an optimal utilisation of employees' skills and capacities. The project contributes to efforts designed to promote and maintain good health and strenghten Australia's social and economic fabric.

LP0775031 Dr MM Cuskelly; Asst Prof MJ O'Callaghan; A/Prof PH Gray

Approved Project Title **Self-regulation in very low birthweight/very preterm 2 and 4 year olds: A comparison study.**

2007 : $ 40,000
2008 : $ 28,000
2009 : $ 28,000
APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Mater Health Services Brisbane

Administering Organisation The University of Queensland

Project Summary

Increasing numbers of extremely low birthweight children are surviving, and the majority go on to have learning problems. The difficulties these children experience and the resources that are devoted to the task of improving their academic skills have personal, social and economic costs. This project will assist in the identification of areas of difficulty that contribute to their problems in learning, essential for developing effective interventions. Success will bring substantial benefits at both the level of the individual and of society. The study will be undertaken by a PhD candidate as part of a multidisciplinary team, an experience that will provide an exceptional training in research with vulnerable children.

LP0775049 Dr NL Jimmieson; Dr P Bordia

Approved Project Title **The role of supervisors in managing psychosocial risk factors in the workplace: Implications for employee health and organisational effectiveness**

2007 : $ 60,000
2008 : $ 61,562
2009 : $ 64,455

Collaborating/Partner Organisation(s)
Department of Industrial Relations

Administering Organisation The University of Queensland

Project Summary

This research aims to increase the capacity of Australian employers to identify and manage psychosocial risk factors in the workplace. By promoting a continuous improvement approach to occupational stress management, negative outcomes for employers will be reduced, in terms of absenteeism, turnover, and associated losses in productivity. By making business operators more robust to work-related stressors, their need to react to critical stress-related incidents will be lessened and government resources will not be lost as a result of processing claims. In terms of social benefits, this research aims to enhance the quality of working life for employees.

3901 LAW

La Trobe University

LP0775093 Prof JM Brett; Dr DE Kirkby; Dr DR Sykes; Dr NR Tomas

Approved Project Title **The history of advocacy and guardianship for people with disabilities in Victoria, 1986 - 2006**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Office of the Public Advocate

Administering Organisation La Trobe University

Project Summary

The history and analysis of the Victorian Office of the Public Advocate will benefit the national community by providing a fuller understanding of guardianship and advocacy in daily action, and of the interaction between people with disabilities and the state. It will make an important contribution to understanding the changing ways that governments act and deliver services. The project will also deepen understanding of volunteering, in particular of the role ordinary citizens can play in guarding the rights of their fellow citizens.

The Australian National University

LP0775017 Prof NA Gunningham

Approved Project Title **Internal Regulation: Overcoming the Disconnect between Corporate Objectives and Health, Safety, Environmental and Community Performance.**

2007 : $ 73,000
2008 : $ 75,000
2009 : $ 55,000

Collaborating/Partner Organisation(s)
Anglo Coal Australia

Administering Organisation The Australian National University

Project Summary

This research will enable corporations to identify the points of greatest leverage over corporate and facility level health, safety, environmental and community (HSEC) performance and to develop strategies that successfully achieve their HSEC objectives. It will provide broader national benefits in (i) reducing workplace injury and environmental degradation at multiple facilities across Australia and (ii) increasing productivity and economic benefits (by doing so at reduced cost to companies). The study will also benefit the Australian and regional communities by identifying strategies that facilitate better community-company relations.

3904 LAW ENFORCEMENT

Deakin University

LP0775248 Prof MB Powell; A/Prof MR Kebbell; Dr CH Hughes-Scholes

Approved Project Title **The measurement and prediction of police interviewing performance and the dissemination of good practice through a distributive workplace learning system**

2007 : $ 100,270
2008 : $ 80,462
2009 : $ 93,222

APDI Dr CH Hughes-Scholes

Collaborating/Partner Organisation(s)
Victoria Police

Administering Organisation Deakin University

Project Summary

This research aims to develop the first ever standardised measures of police interviewers' performance, focusing on interviews about sexual offences. Standardised measures are essential for quality control evaluation, identifying training needs, assigning workload, predicting case outcome and benchmarking organisation capabilities. By improving the quality of police interviews about sexual offences, this research will improve the reporting, prosecution and conviction rates of sexual offences, which will have a deterrent effect on potential offenders. Further, this research will reduce the stress of witnesses and suspects involved in the legal process and reduce burnout of police interviewers by increasing competency and job satisfaction.

Monash University

LP0774829 Prof JR Ogloff; Dr SD Thomas; Prof PE Mullen; Dr PM Martin; Dr JA Clough; Dr CS Tye; Mr AE Dickinson; Mr KD Lay; Prof J Pfeifer

Approved Project Title **Policing services and the mentally ill: An evidence-based good practice model**

2007 : $ 202,102
2008 : $ 150,000
2009 : $ 162,644
2010 : $ 118,912
2011 : $ 74,689

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Victoria Police

Administering Organisation Monash University

Project Summary

Community safety is at the forefront of policing policy and procedure. As gatekeepers to the criminal justice (and to a lesser extent the mental health) systems, the police play a pivotal role in promoting and maintaining the health, safety and wellbeing of the community. This programme of research will provide much needed quality information and empirical evidence about the current practices, policies, and procedures for dealing with the mentally ill who come into contact with the police. In a broader sense the research will have dramatic, wide-reaching practical outputs for all of Australia, and help contribute to increased levels of community safety and reduced levels of victimisation of some of the most vulnerable in our society.

LP0775304 Dr DJ Wilson; Dr AC Sutton; Mr AE Dickinson; Mr AM Kennedy; Prof W Skogan

Approved Project Title **The police role in victim and witness support: researching a best practice model**

2007 : $ 43,808
2008 : $ 47,308
2009 : $ 57,308
2010 : $ 48,718

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Victoria Police

Administering Organisation Monash University

Project Summary

The experience of victims and witnesses is instrumental in building public confidence in the criminal justice system. Negative experiences with the agencies of criminal justice reduce not only the likelihood that individuals will engage in future, but also the likelihood of their friends and families doing so. The experience of victims and witnesses is therefore central to the creation of an inclusive and participatory criminal justice system. This project aims to strengthen public participation and trust in criminal justice agencies by developing transferrable research-based service delivery systems that better meet the needs of victims and witnesses.

4001 JOURNALISM, COMMUNICATION AND MEDIA

Charles Sturt University

LP0775418 A/Prof J Carroll; Ms Z Hibbert; Prof TR Bossomaier; Dr J Arciuli; Mr DJ Cameron; Mr JR Tulip

Approved Project Title **Crisis management simulation: developing a methodology for transforming communication response.**

2007 : $ 110,000
2008 : $ 109,000
2009 : $ 86,000

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)
Defence - Public Affairs

Administering Organisation Charles Sturt University

Project Summary

The ability of any large corporation or public institution to handle a crisis can have major economic, environmental, social or cultural consequences. For the Australian Defence Force (ADF), effective crisis management communication can literally mean life or death. This project merges cutting-edge digital games technology with applied drama techniques to produce a crisis management game to simulate conflict and crisis scenarios. Working closely with the ADF to better understand organisational communication under extreme pressure, this new approach will build teamwork and break down barriers to effective crisis management. The methodology developed will have global application to public and private organisations.

Edith Cowan University

LP0775520 Prof LR Green; Dr D Rodan; Dr T Cullen; Mr MG Swanson; Ms TM McMahon

Approved Project Title **Improved communication with heart patients in the context of the gift economy**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 25,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
National Heart Foundation (WA division)

Administering Organisation Edith Cowan University

Project Summary

Coronary Heart Disease is Australia's biggest killer and a patient's diagnosis is a traumatic event. A majority of patients resists the implications of their disease and fails to follow medical recommendations fully. Humanities research enables increased understanding of, and better communication with, heart patients yet has not been extensively used to understand how patients make sense of their new status. HeartNET, a therapeutic website, is used to investigate construction of the self as a heart patient and the research also applies gift economy theory to online interactions which help both self and others. Benefits include patient support and improved health outcomes, reducing human and financial costs to the community and Australia.

Queensland University of Technology

LP0775252 Dr JA Tacchi; Dr AJ Skuse

Approved Project Title **Assessing the impact of new communication technologies in developing countries and disadvantaged communities**

2007 : $ 99,903
2008 : $ 86,209
2009 : $ 113,015
2010 : $ 93,961

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Equal Access

Administering Organisation Queensland University of Technology

Project Summary

This research will enhance understanding of the role of new technologies in communication with, and education of, disadvantaged groups as well as exploring the social changes they bring. Australia is committed to reducing poverty, to achieving the Millennium Development Goals and measuring the impact of development. Understanding how communication interventions may be better understood is important to revealing how they support the achievement of better health, wellbeing, education and conflict reduction. This research will strengthen Australia's potential to lead in this field, to develop more effective development assistance and to apply such methods to Australian community development initiatives.

4101 PERFORMING ARTS

Griffith University

LP0775221 A/Prof H Schippers; Dr P Dunbar-Hall; Dr RA Letts

Approved Project Title **Sound Links: Exploring the dynamics of musical communities in Australia, and their potential for informing collaboration with music in schools**

2007 : $ 91,503
2008 : $ 75,691

Collaborating/Partner Organisation(s)
Music Council of Australia
Australian Music Association
Australian Society for Music Education

Administering Organisation Griffith University

Project Summary

While considerable research has been devoted to formal school music programs and their curricula, including the recent National Review of School Music Education (DEST, 2005), little is known about Australia's more informal community contexts and the mechanisms and success factors underlying their approaches to teaching and learning music. Both the National Review and the Australia Council for the Arts have recognised this imbalance, and plead for a more integrated approach to formal, school-based arts education and activities outside of schools. This project will deliver the insights to realise such an approach.

4102 VISUAL ARTS AND CRAFTS

The Australian National University

LP0775461 Mr JC Reid; Dr RG Lamberts; Mr L Kirk

Approved Project Title **Engaging Visions: Configuring a model for cultural practitioners to assist catchment communities in addressing natural resource management issues.**

2007 : $ 114,044
2008 : $ 100,506
2009 : $ 95,124

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Murray-Darling Basin Commission

Administering Organisation The Australian National University

Project Summary

Communities need new approaches to complex natural resource management issues. To achieve environmentally sustainable practices society not only requires reliable information but also the motivation for its uptake. Configuring an effective model for cultural production and distribution will inspire innovative cultural practice and enhance community natural resource management. The Project draws upon, and contributes to, the national and multi-State mandates of both Project partners. The Project, and the partner Investment Plan it will inform, contributes to National Priority 1, An Environmentally Sustainable Australia, and Priority Goal 1, Water - a critical resource.

4104 DESIGN STUDIES

Curtin University of Technology

LP0775473 Prof SA Worden; Ms A Farren; A/Prof JH Stanton

Approved Project Title **Innovative Solutions for Wool Garment Comfort through Design**

2007 : $ 25,118
2008 : $ 25,118
2009 : $ 26,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Department of Agriculture Western Australia

Administering Organisation Curtin University of Technology

Project Summary

This project will investigate how innovation in garment design can add value to the Australian wool clip and be a driver for new industrial development and product innovation. The project is relevant to stakeholders in rural communities as it will show the potential of new distributed technologies for resource-based industries and enable the wool industry to deliver increases in national wealth while minimising environmental impacts. As the project will provide examples of design-led innovation for a traditional Australian product, the links made between wool and garment innovation will encourage a broader consumer understanding of Australian cultural identity.

4199 OTHER ARTS

The University of Adelaide

LP0775279 Dr PJ Sendziuk; Ms A Sadao

Approved Project Title **The Art of AIDS Prevention: Cultural Responses to HIV/AIDS in Australia and the United States**

2007 : $ 33,000
2008 : $ 70,765
2009 : $ 18,280

Collaborating/Partner Organisation(s)
Visual AIDS

Administering Organisation The University of Adelaide

Project Summary

While a number of studies have examined HIV/AIDS as a biological entity, the crucial 'cultural construction' of AIDS, and the effect of this construction on people living with AIDS and the wider public, is poorly understood. This project will assist wider awareness of the fact that public understandings of disease and affected individuals are both culturally mediated and contestable. In examining the important role that artists played in confronting AIDS, this project will also suggest how similar cultural interventions might be employed during existing and future disease epidemics and other public health threats.

The University of Melbourne

LP0775023 Prof JR O'Toole; Dr N Jeanneret

Approved Project Title **Mapping and augmenting engagement, learning and cultural belonging for children undertaking ArtPlay workshops**

2007 : $ 72,535
2008 : $ 67,367
2009 : $ 76,224

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
ArtPlay, Birrarung Marr
Australia Council for the Arts

Administering Organisation The University of Melbourne

Project Summary

The project's triple focus on engagement, learning and cultural citizenship will benefit arts and culture provision for children. Public and private art partnerships are multiplying rapidly, with provision, programming and training largely unmonitored. The project supports both partners' aims: 'promote creative capacity of children, and increased access and engagement in the arts' (Melbourne City) and 'improved opportunities in education and the arts through productive links and strengthened partnerships between education and arts' (Australia Council). It is in line with the federal Government's Early Childhood Strategy: 'helping people maximise their potential and achieve good, healthy, lifetime outcomes'

The University of New South Wales

LP0775050 A/Prof J Bennett; Ms B Huangfu; Dr D McNeill; Prof X Ruan; Ms FM Fenner

Approved Project Title **Measuring Asian Art's Contribution to Contemporary Culture in Australia**

2007 : $ 72,025
2008 : $ 74,403
2009 : $ 85,938

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Casula Powerhouse Arts Centre
Zendai Museum of Modern Art
Asia Australia Arts Centre

Administering Organisation The University of New South Wales

Project Summary

This project substantially develops the research base of two of Australia's leading community-based arts organisations, advancing the theory and practice of multicultural arts programming. In partnership with a major contemporary art gallery in China, it demonstrates how Asian and Australian art can engender community, regional and international dialogue, offering insight into the transformation of local environments. It addresses existing limitations in multicultural arts programming, positing a model of best practice based on dialogue rather than minority representation. It offers unique doctoral level training in Asian and multicultural arts curatorship and significantly advances the discipline base of visual culture in Australia

4201 LANGUAGE STUDIES

Monash University

LP0775283 Dr K Lynch; Dr HJ Bowe

Approved Project Title **Reclamation of Victorian Indigenous languages: Using ICT to enable effective exchange between academics, educators and the Indigenous community**

2007 : $ 80,865
2008 : $ 68,085

Collaborating/Partner Organisation(s)
Department of Education & Traning, Multicultural programs Unit
Victorian Curriculum & Assessment Authority
Victorian School of Languages
Worawa Aboriginal College
Victorian Aboriginal Corporation for Languages Inc
Barenji Gadjin Land Council
Mirrimbeena Aboriginal Education Group Inc
Cyber Dreaming
Networking Communities
Federation of Aboriginal and Torres Strait Islander Languages

Administering Organisation Monash University

Project Summary

The project will exploit online technologies to provide centralised resources for the Indigenous languages of Victoria. The use of modern Information and Communication Technology (ICT) to present a non-threatening and personalised interface to the resources will connect people and materials, and breathe new life into these ancient languages of such contemporary, social and cultural significance. This 'living system' of language information and exchange, built on pure linguistic research will have wide value. It will be of crucial benefit in rural and regional areas. The project will also encourage intergenerational communication within Indigenous families and will improve awareness and appreciation of Indigenous languages.

4202 LITERATURE STUDIES

Macquarie University

LP0775230 Prof JI Roe; Prof N Jose; Dr DW McCooey

Approved Project Title **The Macquarie PEN Anthology of Australian Literature**

2007 : $ 98,753
2008 : $ 108,026
2009 : $ 35,026

Collaborating/Partner Organisation(s)
Allen & Unwin

Administering Organisation Macquarie University

Project Summary

The anthology will be a major scholarly work. Its publication will stimulate scholarship in the Humanities. The project will also renew mainstream interest in the scope and sophistication of Australian literature. Many new works will be introduced to Australian readers, to education systems and to literary scholarship. The stand-alone anthology of Indigenous literature will enhance the public profile of Indigenous writers and will provide a vehicle for the representation of Indigenous culture and history to non-Indigenous Australians, who are often unable to access such knowledge and voices in print. New critical perspectives will ensure a valuable public resource, and understandings of Australian society will be enriched.

4203 CULTURAL STUDIES

Swinburne University of Technology

LP0775215 Prof J Thomas; Prof DL Meredyth

Approved Project Title **Australian information seekers and the social consequences of information poverty**

2007 : $ 92,110
2008 : $ 83,646
2009 : $ 76,597

Collaborating/Partner Organisation(s)
State Library of Victoria

Administering Organisation Swinburne University of Technology

Project Summary

This project aims to advance considerably our understanding of information seeking, and its social, cultural and civic implications for Australia. It will produce useful findings for researchers and policy makers interested in the economic and social consequences of information poverty, and will also contribute to the strategic planning of the public library sector.

University of Technology, Sydney

LP0775364 Prof RJ Gibson; Prof PB Bell; Dr HM Pattinson; Mr AT Lloyd James

Approved Project Title **Investigating the future of Australian television**

2007 : $ 75,000
2008 : $ 67,000

Collaborating/Partner Organisation(s)
Australian Film, Television and Radio School
Foxtel
ACMA

Administering Organisation University of Technology, Sydney

Project Summary

This project investigates the future of Australian television and the society 'served' by it. Regulation of free-to-air TV has tightly controlled the production and dissemination of news, information and entertainment in Australia. Now digital technology offers audio-visual content on many extra platforms, fixed and mobile. This sets up profound changes in Australian economics, politics and culture. Yet there is a marked lack of independent research available to Government and Industry to assist them to plan for the changes. And there is almost no context for careful public debate about these crucial changes. This project will play a vital role in promoting knowledge and informed, strategic decision-making for all constituencies.

4301 HISTORICAL STUDIES

RMIT University

LP0774835 A/Prof JW McCulloch; A/Prof P Miller

Approved Project Title **The role of the Wittenoom Asbestos mine in the lives and deaths of Italian transnational workers**

2007 : $ 27,118
2008 : $ 25,118
2009 : $ 27,118

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)
Italian Australian Institute

Administering Organisation RMIT University

Project Summary

Reconstructing the lives of Italian workers in the context of transnational migration and the mining of one of the worlds' most hazardous minerals is significant in itself as part of Australian historical record. To the Italian community, the story exemplifies the disproportionate contributions and sacrifices of postwar migration. Importantly, the evidence produced will be of use in improving public health and policy responses to the legacy of asbestos disease, both in Australia and in Italy. In drawing on Italian and Australian scholarship, community networks and government initiatives, the project will provide valuable training to a doctoral candidate, and contribute to furthering the practical internationalisation of Australian research.

The University of Queensland

LP0775186 Prof P Spearritt; Dr GA Ginn; Prof DJ Carter; Dr SG Ulm; Dr NS Bordes; Dr CA McAlpine; Dr JP Powell; Mr MC Quinnell; Mr P Gesner; Dr BA Crozier; Dr JM McKay; Ms PE Barnard

Approved Project Title **The Queensland Historical Atlas: Histories, Cultures, Landscapes**

2007 : $ 200,591
2008 : $ 192,533
2009 : $ 209,189

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)
Queensland Museum

Administering Organisation The University of Queensland

Project Summary

An Historical Atlas of Queensland will provide a unique perspective on the interaction between environmental and cultural forces in the shaping of Queensland's history. By bringing together a wide range of existing but dispersed areas of expertise, and making innovative use of the latest digital technolgies, it will produce new knowledges of Queensland's geography, biodiversity, rural and urban development, communications and cultures.

The University of Western Australia

LP0774846 Dr SM Broomhall; Prof JE Malpas; A/Prof JE Barclay Lloyd; Prof JA Griffiths; Mr C Wood

Approved Project Title **An interdisciplinary framework for place-based research and its impact on the tourist industry**

2007 : $ 27,410
2008 : $ 53,868
2009 : $ 51,133

Collaborating/Partner Organisation(s)
Australians Studying Abroad

Administering Organisation The University of Western Australia

Project Summary

The project situates Australian research at the heart of an interdisciplinary inquiry into the understanding of place, and its socio-cultural analysis. It promotes national research on the interpretation of place in social analysis, and the publications produced respond to commercial needs for high-level interpretative place-based studies in the tourism industry. The generation of intellectually rigorous knowledge capital for outbound educational tour operators locates Australia at the intellectual cutting edge of scholarly content for educational tourism and for heritage organizations worldwide. The project is explicitly designed to provide early career training, with opportunities for research on the tourist industry.