

Number of Successful Proposals for Linkage - Projects to Commence in 2010 by State and Organisation

New South Wales

Charles Sturt University	1
Macquarie University	2
Southern Cross University	1
The University of New England	1
The University of New South Wales	28
The University of Newcastle	2
The University of Sydney	15
University of Technology, Sydney	2
University of Western Sydney	2
University of Wollongong	7

New South Wales **61**

Victoria

Australian Catholic University	2
Deakin University	10
La Trobe University	2
Monash University	17
RMIT University	6
Swinburne University of Technology	2
The University of Melbourne	25
University of Ballarat	1
Victoria University	4

Victoria **69**

Queensland

Griffith University	6
James Cook University	2
Queensland University of Technology	7
The University of Queensland	19

Queensland **34**

South Australia

The Flinders University of South Australia	1
The University of Adelaide	8
University of South Australia	7

South Australia **16**

Number of Successful Proposals for Linkage - Projects to Commence in 2010 by State and Organisation

Western Australia

Curtin University of Technology	5
Murdoch University	3
The University of Western Australia	8

Western Australia **16**

Tasmania

University of Tasmania	3
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Tasmania **3**

Northern Territory

Charles Darwin University	1
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Northern Territory **1**

Australian Capital Territory

The Australian National University	10
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University of Canberra	1
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Australian Capital Territory **11**

Total Number of Grants **211**

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

New South Wales

Charles Sturt University

LP100100136 Prof Geoff M Gurr, Dr Angus J Carnegie, Mr Richard Bashford, Dr Robin A Bedding

Approved Project Title **Protecting Australia's pine plantations from exotic pests and climate change.**

2010	\$95,000.00
2011	\$95,000.00
2012	\$95,000.00
Primary FoR	0705 FORESTRY SCIENCES
APAI	1

Partner Organisations

Forestry Tasmania, Forests NSW, National Sirex Coordination Committee, NSW DPI

Administering Organisation Charles Sturt University

Project Summary

This project will protect pine plantations (representing 57% of Australia's \$3.3 billion pa forestry industry) from the dual threat of exotic pests and climate change. Sirex wood wasp has been well controlled until the recent, unprecedented, increase of ips bark beetles. The ips beetle is now disrupting biological control of sirex by its feeding activity so work is required to understand and combat this effect. The work is made more urgent by looming climate change because storm-damage, drought and heat stressed trees are especially vulnerable to sirex attack. It is estimated that this novel pest management approach could save the industry at least \$188 million pa based on a conservative estimate of reducing losses by 10%.

Macquarie University

LP100100312 Prof Deborah M Kane, Prof Paul D Smith, Dr Robert J Carman, Prof Chennupati Jagadish, Dr Lan Fu

Approved Project Title **Integrated Photonics for Secure Communication and Related Applications in Financial Transaction Data Analysis**

2010	\$180,000.00
2011	\$190,000.00
2012	\$230,000.00
Primary FoR	0205 OPTICAL PHYSICS

Partner Organisations

Arq Indigo Research and Development Pty Ltd

Administering Organisation Macquarie University

Project Summary

The project includes excellent basic science, semiconductor device fabrication and applied mathematics with explicitly identified consequences for innovation. There is strong potential for national economic benefits through the manufacture of new integrated photonic devices, the application of these devices in secure communication systems, the research of advanced non-linear analysis protocols, and the implementation of these in financial transaction analysis. Professional development and research education of postgraduate students and early career researchers will be carried out in a multi-disciplinary research environment with ongoing uptake of the research in industry and commercial sectors.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100256 Prof Graham E Town, Prof Neil H Weste
Approved Project Title **Integrated energy conversion and management systems in silicon-on-sapphire.**

2010 \$119,661.00
2011 \$109,339.00
2012 \$111,000.00
Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING
APAI_IT 1

Partner Organisations

Sapphicon Semiconductor Pty Ltd

Administering Organisation Macquarie University

Project Summary

The aim of this research is to develop specialised "power-supply-on-a-chip" integrated circuits (ICs) for efficient conversion and management of electrical energy. The project will utilise and develop the unique local expertise and IC fabrication capability in silicon-on-sapphire technology in partnership with Sapphicon Semiconductor Pty. Ltd. The ICs developed will be used to improve the performance of small-scale electric power and transport systems based on alternative energy sources, thereby assisting energy self-sufficiency in rural and remote communities and reducing Australia's dependence on fossil and other non-renewable fuels. Sales of the ICs will also generate export income for Australian industry.

Southern Cross University

LP100100589 Prof Colleen M Cartwright, Dr Kelly A Shaw, A/Prof Jeffrey Soar, Ms Jacqueline A Kelly, Prof June M Heinrich, A/Prof Sivarama (Shankar) K Sankaran, Prof Neal F Ryan
Approved Project Title **Strengthening leadership capacity in Australia's rapidly changing aged and community care sector**

2010 \$150,000.00
2011 \$140,000.00
2012 \$133,520.00
Primary FoR 1503 BUSINESS AND MANAGEMENT
APDI Dr Kelly A Shaw
APAI 2

Partner Organisations

Baptist Community Services (NSW and ACT), Lutheran Community Care

Administering Organisation Southern Cross University

Project Summary

The project supports the priorities of: ageing well and promoting an innovative culture and economy and links to the goal of social inclusion. It will contribute significantly towards improved performance and efficiency in an increasingly important sector which contributes to the national economy and provides both care and employment to many Australians. Rapidly increasing demands and challenges require effective, competent leadership to deal with competing tensions, in turn resulting in a more resilient and sustainable industry. This will contribute to more stability, reduced staff turnover and improved outcomes for residents/clients, including through new and innovative workplace culture and practices.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The University of New England

LP100100880 Prof Julius H Van Der Werf, Prof Brian P Kinghorn

Approved Project Title **Methods to infer dense genomic information from sparsely genotyped populations**

2010 \$100,000.00

2011 \$90,000.00

2012 \$90,000.00

Primary FoR 0604 GENETICS

Partner Organisations

Genus plc, Pfizer Animal Health

Administering Organisation The University of New England

Project Summary

Prediction of phenotype based on DNA polymorphisms or sequence has important applications such as prediction of disease risk in human medicine and prediction of genetic value in plant or animal breeding. This project will enhance precision and lower the cost of association studies leading to substantial increase in accuracy of such predictions. This will allow more effective genetic improvement, particularly of difficult but important traits such as disease resistance, reduced green-house gas emissions and product quality. The same methods can be extended to improve genetic improvement in plants and better prediction of human disease risk.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The University of New South Wales

LP100100481 Prof Rose Amal, Dr Christopher W Chow, Dr May T Lim, Dr John A van Leeuwen, Prof Dr Dongsheng Wang, Prof Dr Gregory V Korshin, Ms Mary Drikas

Approved Project Title **Development and Modelling of Advanced Coagulation and Oxidation Processes**

2010 \$189,000.00

2011 \$182,000.00

2012 \$186,000.00

Primary FoR 0904 CHEMICAL ENGINEERING

APAI_IT 1

Partner Organisations

Australian Water Quality Centre, Coliban Water, DCM Process Control, Hunter Water Australia, South Australian Water Corporation, Water Corporation of WA

Administering Organisation The University of New South Wales

Project Summary

The success of this program will help place Australia at the forefront of water quality control and management research. It will address concerns with managing and treating waters of changing characteristics due to climate change. In addition to the socio benefits, project success will also impart economic benefits to the nation through (i) fabricating new hybrid coagulants, that are versatile with enhanced performance for removing NOM, and possess antimicrobial properties (ii) developing a new energy efficient photocatalysis technology. The proposed research will expand the knowledge base in this area and increase Australia's international profile as a global leader in developing cutting-edge cost effective water resource technologies.

LP100100600 Dr Peter Banks, Prof Chris R Dickman, Dr Matthew W Hayward, Dr Roger P Pech, Dr Daniel H Lunney, Dr Andrea E Byrom

Approved Project Title **The return of the native: reintroductions, reinvasions, and a new paradigm in restoration ecology**

2010 \$140,000.00

2011 \$125,000.00

2012 \$100,000.00

Primary FoR 0501 ECOLOGICAL APPLICATIONS

Partner Organisations

Australian Wildlife Conservancy, Landcare Research, Mosman Municipal Council, NSW Department of Environment and Climate Change (DECC), NSW National Parks and Wildlife Service, Rentokil Initial Pty Ltd, Taronga Conservation Society Australia

Administering Organisation The University of New South Wales

Project Summary

We develop a new solution to improve pest control used to protect rare and endangered wildlife by using reintroductions of common native species as a block to reinvasion following pest control. Our approach will significantly reduce the ongoing costs of pest control in Australia and our solution can be used by both large conservation organisations as well as small community groups aiming to control pests and protect key wildlife. Our technique can also be exported to solve alien species problems elsewhere in the world. This work strengthens Australia's world renowned expertise for research into alien species and ability to develop novel solutions to alien impacts.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100702 Prof Richard A Bryant, Dr Zachary Steel, Prof Derrick Silove

Approved Project Title **Building resilience in Aceh**

2010 \$192,000.00

2011 \$140,000.00

2012 \$300,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

APAI 2

Partner Organisations

Yayasan Mulia Haiti / Centre Mulia Haiti

Administering Organisation The University of New South Wales

Project Summary

The poor health, academic, and mental health functioning of Acehnese people is one of the major public health problems in the Asian Pacific region. This project will identify the specific factors that lead to these problems and provide an evidence base to shape future empirically-informed interventions to reduce mental health problems in Acehnese communities. This project directly addresses the priority of safeguarding Australia by establishing an empirical platform to shape future policies for enhancing the social and emotional well-being of one of Australia's important northern neighbours.

LP100100382 Prof Janet B Chan, Dr Jane J Bolitho

Approved Project Title **Restorative Justice for Victims and Serious Offenders**

2010 \$61,033.00

2011 \$76,009.00

2012 \$78,386.00

Primary FoR 1602 CRIMINOLOGY

Partner Organisations

NSW Department of Corrective Services

Administering Organisation The University of New South Wales

Project Summary

This project investigates how to reduce the human costs of serious crime through Restorative Justice (RJ) processes that can help victims recover from the trauma of serious crimes and hold offenders accountable for their actions. The project will (1) provide an independent and rigorous assessment of the RJ program for the industry partner, (2) contribute to an evidence-based national debate on policy responses to serious crimes through identifying the strengths and limitations of RJ and showing how RJ can be optimally practised to maximise benefits for all participants and the wider community, and (3) contribute significantly to the theory and practice of RJ, enhancing Australia's international reputation as a leader in this research area.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100424 Dr Anton C Clifford, A/Prof Anthony Shakeshaft, Dr Julaine M Allan, A/Prof Christopher M Doran, A/Prof Komla Tsey, Dr Andrew R MacQueen
Approved Project Title **Assessing the effectiveness of a Community Reinforcement and Family Training intervention for alcohol misuse with Indigenous Australians**

2010 \$40,000.00

2011 \$40,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Lyndon Community, Yoorana Gunya Family Violence Healing Centre Aboriginal Corporation

Administering Organisation The University of New South Wales

Project Summary

A national benefit will be the contribution of evidence about the feasibility, utility and potential effectiveness of individual and family-based interventions for reducing alcohol-related harms and improving family functioning among Indigenous Australians. Community level benefits will include, firstly, the strengthened role and capability of participating health services and staff to utilise evidence based approaches to support Indigenous individuals and families dealing with alcohol problems. Secondly, Indigenous individuals and families participating in the Community Reinforcement and Family-based Training intervention will acquire the requisite skills and knowledge to manage the alcohol problems affecting them.

LP100100466 A/Prof Dennis Del Favero, Em/Prof Neil C Brown, Prof Paul J Compton, Prof Jeffrey Shaw, Prof Horace Ip, Ms Sarah I Kenderdine, Mr Tim Hart, Prof Lev Manovich, Prof Peter Weibel
Approved Project Title **Narrative reformulation of museological data: the coherent representation of information by users in interactive systems**

2010 \$224,560.00

2011 \$208,806.00

2012 \$195,000.00

Primary FoR 1902 FILM, TELEVISION AND DIGITAL MEDIA

Partner Organisations

Australia Council for the Arts, City University of Hong Kong, Museum Victoria, University of California, San Diego - Visual Arts, ZKM Center for Art and Media

Administering Organisation The University of New South Wales

Project Summary

The proposed research seeks to provide Australia with a long-term opportunity to enhance its involvement in the billion-dollar creative economy by building the world's first immersive 360-degree interactive data browser. Research into such systems benefits society by providing a cutting-edge development in digital technology and information access that enables a creative innovation culture. Through applied research into the narrative forms that underpin museological archives, this study will ensure that Australia remains at the forefront of the growing world-wide research into interactive technology thereby assisting the global digital media industry to tackle emergent challenges.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100598 Prof Stephen J Foster, Dr Vute Sirivivatnanon, Prof Mark G Stewart
Approved Project Title **A Re-evaluation of the Safety and Reliability Indices for Reinforced Concrete Structures**

2010 \$77,000.00
 2011 \$73,000.00
 Primary FoR 0905 CIVIL ENGINEERING

Partner Organisations

Cement Concrete and Aggregates Australia

Administering Organisation The University of New South Wales

Project Summary

The use of concrete in Australian building structures exceeds 13 million tonnes per year and its impact on the environment is considerable. With 5% of total CO2 emissions coming from cement production, one of the main components of concrete, it is imperative that Australian standards produce efficient design solutions. Preliminary modelling shows that a minimum 5% efficiency gain is possible through a re-evaluation of reliability indices with contemporary construction practices and materials, giving an immediate 180,000 tonne per annum reduction in carbon emissions. Added to this are savings through reduced transport and reduced water, sand and aggregate consumption, the potential saving on the environment, and economy, are considerable.

LP100100283 Prof Raphael H Grzebieta, Prof Ann M Williamson, Dr Jake Olivier, Dr Raymond F Job, Dr Charles A Karl

Approved Project Title **Safety management system for heavy vehicle transport**

2010 \$100,000.00
 2011 \$89,000.00
 2012 \$150,000.00
 2013 \$161,000.00
 2014 \$110,000.00
 Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

APAI 1

Partner Organisations

Motor Accidents Authority Of NSW, NSW Centre for Road Safety, Transport Certification Australia Ltd, Zurich Financial Services Australia

Administering Organisation The University of New South Wales

Project Summary

Crashes involving heavy vehicles result in around 330 deaths, over 3000 serious injuries annually, and cost over \$6 billion per year. Trucks deliver 72% of Australia's total freight. The quantity delivered by trucks has increased by 40% over a decade and will double over the next 20 years. Conservatively the transport industry contributes about 5.6% to GDP and employs nearly 5% of the workforce. Safe transport is crucial for Australia's health and economic recovery. If a 10% reduction in casualty truck crashes were to result from this study, the cost benefit ratio would be around 200 to 1.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100437 Prof Mark F Harris, Prof Christopher B Del Mar, Prof Mieke L van Driel, A/Prof Danielle Mazza, Dr John C Litt, Prof Nicholas A Zwar, Ms Therese Snowdon, Ms Justine Waters, Dr Nancy Huang, Prof Richard Taylor, Dr Grant M Russell

Approved Project Title **Implementing guidelines to prevent chronic disease in the community**

2010	\$95,000.00
2011	\$120,000.00
2012	\$180,000.00
2013	\$50,000.00
Primary FoR	1117 PUBLIC HEALTH AND HEALTH SERVICES
APAI	1

Partner Organisations

MBF Health Insurance, National Heart Foundation of Australia, Royal Australian College of General Practitioners, University of Ottawa

Administering Organisation The University of New South Wales

Project Summary

The burden of chronic disease in Australia has resulted in prevention of chronic disease being an important priority for the Australian health system. High quality evidence for preventing chronic disease exists; however the practice falls short of the evidence. Finding ways to implement the evidence for preventing chronic disease is an urgent national need. This study aims to apply the evidence for preventing chronic disease in practice. It will generate data and validate a model on how to effectively improve the uptake of guidelines by both practitioners and consumers. This project is of national and community benefit because it will enable the potential of preventing chronic disease to be realised.

LP100100732 Prof Ilan B Katz, A/Prof Sarah Maddison, Prof Patrick Dodson

Approved Project Title **Where's the evidence? Understanding the use of evidence in Indigenous policy**

2010	\$74,000.00
2011	\$86,000.00
2012	\$100,000.00
Primary FoR	1605 POLICY AND ADMINISTRATION
APAI	2

Partner Organisations

Australian Human Rights Commission, Lingiari Foundation

Administering Organisation The University of New South Wales

Project Summary

The project will strengthen the social and economic fabric of Indigenous communities and Australia as a whole by helping to improve the production and use of robust evidence and the engagement of Indigenous people themselves in Indigenous policy development. The dialogue approach has been used in many conflict situations. Here it will help the development of innovative approaches to resolving tensions between policymakers, researchers and Indigenous people, and also Indigenous and non-Indigenous Australians. The project will significantly build the capacity of Indigenous researchers in this area. It will help Australian and international policymakers make more effective use of research in other areas of social policy.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100712 Dr Alison Lennon, Prof Stuart R Wenham
Approved Project Title **Industrial High Efficiency Solar Cells**

2010	\$160,000.00
2011	\$170,994.00
2012	\$190,000.00
2013	\$180,000.00

Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING
 APAI 1

Partner Organisations

Suntech Power Holdings Co Ltd

Administering Organisation The University of New South Wales

Project Summary

Photovoltaics is a promising candidate for sustainable energy generation, with Australia well-placed to capture the economic and environmental benefits from maintaining its strong position with this technology. Suntech, a world-leader in silicon solar cell production with US\$2 billion annual revenue, will provide a “high profile” showplace for the developed patterning technology. This will enhance commercial opportunities arising from the project and confirm Australia’s reputation as a world leader in innovative photovoltaic research. This reputation attracts high-calibre professionals to Australia, stimulates local research and will provide opportunities for local manufacturing to exploit the technology developed as part of this project.

LP100100847 Dr Samsung Lim, Prof John C Trinder, Dr Russell Turner
Approved Project Title **Full-Waveform Lidar Remote Sensing for Forest Inventory**

2010	\$83,021.00
2011	\$84,758.00

Primary FoR 0909 GEOMATIC ENGINEERING
 APAI_IT 1

Partner Organisations

Forests NSW

Administering Organisation The University of New South Wales

Project Summary

Australia has the sixth largest forest area in the world, consisting of 164 million hectares covering 21% of the continent. The Australian government has invested in research for management of forests by construction of forest database and detection of forest change. The successful application of full-waveform lidar data for the extraction of plot statistics such as percentile tree counts, stem measurement, canopy cover and leaf area index, will contribute to forest resource management and analysis. Significantly, this research will be of benefit to Forests New South Wales as well as the many industries that require reliable forest resource data, such as land care, national defence, emergency services, and fire fighting authorities.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100128 Dr Michael J Manefield, Dr Torsten Thomas, Prof Staffan L Kjelleberg, Prof Peter D Steinberg
Approved Project Title **In situ microbial conversion of coal to methane: Biotechnology development for clean use of Australian coal.**

2010	\$311,000.00
2011	\$275,000.00
2012	\$350,000.00
2013	\$301,600.00

Primary FoR 1003 INDUSTRIAL BIOTECHNOLOGY

Partner Organisations

Biogas Energy

Administering Organisation The University of New South Wales

Project Summary

We will develop a biotechnology that uses native microorganisms to accelerate the underground conversion of coal to methane. Approximately 90% of Australia's coal resources cannot be accessed economically using traditional mining technologies. A technology that converts coal to methane could generate an energy supply worth an estimated \$60 billion, foster the development of an energy industry now in its infancy, and generate numerous new employment opportunities. Environmentally, methane is a cleaner burning fuel than coal, uses much less water for processing and generates the same quantity of electricity with lower CO2 emissions. This project highlights the fact that Australia's microbial diversity is a resource we cannot afford to ignore.

LP100100242 A/Prof John M Murray, Dr Geoff P Symonds
Approved Project Title **Can an anti-HIV gene in blood stem cells protect from immune depletion by HIV?**

2010	\$120,000.00
2011	\$119,000.00
2012	\$121,000.00

Primary FoR 0102 APPLIED MATHEMATICS

Partner Organisations

CALIMMUNE Australia Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

Approximately 15,000 individuals in Australia are currently HIV infected. Gene therapy has the capacity to remove antiretroviral treatment related issues, dramatically decrease treatment costs and simplify treatment of HIV.

In this study we will model a new approach to treat HIV in which the patient's own cells are used as the therapy by incorporating an anti-HIV gene. These cells are then re-introduced into the patient.

The strong mathematical focus of this project, and its application to a promising approach against HIV, will place Australia at the forefront of the mathematics of gene research and contribute to the National Priority Area of Promoting and Maintaining Good Health and the Priority Goal of Preventative Healthcare.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100806 Dr Markus Oeser, Mr Alan Pearson, Prof Nasser Khalili, Prof Dr Brian Shackel
Approved Project Title **Permeable Pavements with Concrete Surface Layers- Experimental and Theoretical Basis for Analysis and Design**

2010	\$53,338.00
2011	\$53,338.00
2012	\$53,338.00
Primary FoR	0905 CIVIL ENGINEERING
APAI	2

Partner Organisations

Concrete Masonry Association of Australia

Administering Organisation The University of New South Wales

Project Summary

Permeable pavements constitute unique and effective means to address important environmental issues and support green, sustainable growth. By capturing stormwater and allowing it to seep into the ground, porous pavements are instrumental in recharging groundwater, reducing stormwater runoff and preventing pollutants from entering the Australian river systems and sea-shores. Other advantages for Australian communities that are associated with the construction of permeable pavement arise from their properties such as acoustic and thermal insulation due to the high void content of the material. Thus, permeable pavements improve on the living conditions in urban areas by reducing noise levels and preventing urban heat island effects.

LP100100597 Dr Roslyn G Poulos, Dr Julie Hatfield, Prof Raphael H Grzebieta, A/Prof Andrew S McIntosh, A/Prof Chris Rissel

Approved Project Title **Safer cycling: A partnership project to better understand cycling patterns, hazards and incidents**

2010	\$77,000.00
2011	\$67,000.00
2012	\$64,000.00
Primary FoR	1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Bicycle New South Wales Incorporated, Roads and Traffic Authority of New South Wales, Sydney South West Area Health Promotion Service, Willoughby City Council

Administering Organisation The University of New South Wales

Project Summary

Cycling is the ultimate 'clean fuel' energy source, is renewable, and is sustainable. It can also positively impact on national health concerns such as cardiovascular health, obesity, and diabetes. If cycling is to be encouraged as a health-promoting practice, or as a sustainable form of transport, then it is incumbent on governments to address injury concerns to ensure that its benefits outweigh its risks and to provide an environment that minimises risk and optimises the transport advantages. This project will provide understanding of cycling patterns, hazards and incidents. It will provide vital knowledge to inform policy and planning with respect to transport and health and inform future health and safety promotional campaigns.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100596 Mr Gerard M Redmond, Mr Michael Mendelson, Mr Mark H Greenberg, Dr David H Rea, Prof Brian Nolan, Dr Matthew C Gray, Prof Peter Whiteford, Prof Holly E Sutherland

Approved Project Title **Supporting families: Horizontal and vertical equity in the Australian tax-benefit system in historical and comparative perspectives**

2010 \$90,000.00

2011 \$70,000.00

2012 \$120,000.00

Primary FoR 1605 POLICY AND ADMINISTRATION

APAI 1

Partner Organisations

Australian Council of Social Services, Caledon Institute of Social Policy, Department of Families, Housing, Community Services and Indigenous Affairs, Institute of Policy Studies, University of Essex

Administering Organisation The University of New South Wales

Project Summary

Tax benefit reform and equity between different groups are key policy concerns currently and for the foreseeable future. The tax-benefit system is under review, and the Global Financial Crisis has prompted debate on how tax-benefit policy can stimulate the economy while maintaining equity and promoting social inclusion. This project will put debate about tax-benefit reforms and deficit reduction strategies in historical and an international comparative context. Results generated will provide a rich and comprehensive framework for assessing current and future policy options in areas that are closely aligned with the designated national research priority goals of a healthy start to life and strengthening Australia's economic and social fabric.

LP100100562 Prof Peter G Saunders

Approved Project Title **Social disadvantage and economic recession: promoting inclusion and combating deprivation**

2010 \$130,000.00

2011 \$70,000.00

Primary FoR 1605 POLICY AND ADMINISTRATION

Partner Organisations

Anglicare Victoria, Australian Council of Social Services, Benevolent Society, Mission Australia, Social Inclusion Unit, Social Inclusion Unit - SA, Social Inclusion Unit - Tasmania, St Vincent de Paul Society National Council of Australia Inc

Administering Organisation The University of New South Wales

Project Summary

The onset of recession in the wake of the global financial crisis has reawakened concern over inequality and exclusion. This project will feed directly into the government's new social inclusion agenda by providing a better understanding of the nature of social exclusion, its relation to location-specific and other dimensions of disadvantage, and the processes that trigger and sustain exclusion. A specially designed survey will be coordinated with other data collection activity to provide timely new information that will assist government and non-government agencies to promote social inclusion and tackle the root causes of disadvantage.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100533 Dr Xiaoyuan Shang, Dr Karen R Fisher, Mrs Xiaoli Feng
Approved Project Title **Transition to adulthood of young people with disabilities from state care in China**

2010 \$80,000.00

2011 \$80,000.00

2012 \$75,000.00

Primary FoR 1605 POLICY AND ADMINISTRATION

Partner Organisations

Social Welfare Center

Administering Organisation The University of New South Wales

Project Summary

The project has implications for the national priority of safeguarding Australia through supporting the government strategy of engaging in our region. Disability is an AusAid priority in the Asia Pacific. The project demonstrates Australia's commitment to using our research and policy to improve social inclusion in China and to generalise to other developing countries. It contributes to developing Australian social policy, research and training in a way that is relevant to child and disability state care practices in Australia and China. The project facilitates future connections between researchers and policy officials in Australia and China, the Chinese Social Welfare Centre and the Chinese Ministry of Civil Affairs.

LP100100461 A/Prof Helen A Swarbrick
Approved Project Title **Harnessing contact lens design to optimise optics and vision through corneal refractive reshaping**

2010 \$193,000.00

2011 \$159,000.00

2012 \$180,000.00

Primary FoR 1113 OPTOMETRY AND OPHTHALMOLOGY

Partner Organisations

Bausch and Lomb Boston, BE Enterprises Pty Ltd, Capricornia Contact Lens Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

Development of innovative OK lens designs to correct presbyopia and astigmatism, optimised for visual performance through manipulation of optical aberrations, will place Australian rigid contact lens manufacturing at the international forefront of OK lens production. Lens designs to control myopia progression will strategically position Australian lens manufacturing to capitalise on the potential market in Asia, where myopia is prevalent. Significant intellectual property will be generated for Australia through greater understanding of OK lens design manipulation to optimise visual outcomes. This project promises to enhance the international reputation of UNSW researchers, keeping Australian science at the forefront of this research area.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100367 Dr Matthew D Taylor, Prof Iain M Suthers, Prof David J Booth, Prof Charles A Gray
Approved Project Title **Feeding and breeding: Rainfall effects on connectivity and fidelity of iconic coastal fishes**

2010 \$160,000.00
2011 \$150,000.00
2012 \$140,000.00
Primary FoR 0501 ECOLOGICAL APPLICATIONS
APAI 1

Partner Organisations

NSW Department of Primary Industries (Fisheries)

Administering Organisation The University of New South Wales

Project Summary

Large predatory fish are of great significance to recreational anglers, not only for their trophy status but also for their disproportional fecundity and contribution to future fishing. Remarkably, the distribution and movements of large estuarine fish in estuaries and the coastal ocean are unknown, despite their importance to the national economy. We will determine the role of freshwater discharge and oceanography on the coastal and estuarine habitat requirements, movements and home ranges of mulloway, flathead and bream from the scale of hours to years, and extend these findings to evaluate population sub-structuring and connectivity in the context of a changing climate.

LP100100804 A/Prof Susan M Thompson, Prof Bill Randolph, A/Prof Bruce H Judd, Dr Bin Jalaludin
Approved Project Title **Planning and Building Healthy Communities: A multidisciplinary longitudinal study of the relationship between the built environment and human health**

2010 \$136,212.00
2011 \$100,632.00
2012 \$118,053.00
Primary FoR 1205 URBAN AND REGIONAL PLANNING

Partner Organisations

Landcom, National Heart Foundation of Australia, Sydney Southwest Health

Administering Organisation The University of New South Wales

Project Summary

This project examines how urban environments support health. Tracking residents' behaviours over a long time, the study fills a gap in current knowledge about how urban environments manage and promote good health (a national research priority area). It will identify the design features, social interventions and locational qualities in selected sites which positively benefit human health. The research will describe the likely health outcomes for future Australians living in areas with similar characteristics. It will also strengthen multidisciplinary approaches and policy development in this area by bringing together a team from urban planning, development and health.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100056 Prof Trevor D Waite, Dr Xiaomao Wang, A/Prof Gregory L Leslie, Dr Xia Huang, Dr Heriberto A Bustamante, Prof Xianghua Wen, Dr Jing Guan

Approved Project Title **Optimisation of nutrient removal, membrane fouling and sludge dewatering in hybrid coagulation/submerged membrane bioreactor treatment of wastewaters**

2010 \$210,000.00

2011 \$168,000.00

2012 \$170,000.00

Primary FoR 0904 CHEMICAL ENGINEERING

APAI 2

Partner Organisations

Beijing OriginWater Technology Co Ltd, Sydney Water, Water Quality Research Australia Ltd

Administering Organisation The University of New South Wales

Project Summary

Submerged membrane bioreactor technology for the treatment of wastewaters is now a competitive technology with small footprint and generally high quality of treated effluent. Despite this, challenges remain in ensuring low effluent nutrient concentrations, minimal membrane fouling and acceptable excess sludge dewaterability. Addition of iron or aluminium-based coagulant chemicals can assist but many uncertainties with regard to choice of chemical, optimal dosing arrangements and membrane bioreactor operating conditions remain. Experimental and computational studies targeted at improving understanding and optimising performance will be undertaken through collaborative studies by the UNSW and Tsinghua University (Beijing) research team.

LP100100852 Prof Trevor D Waite, Prof Richard G Luthy, Dr Souhail Al-Abed, Dr Graeme E Batley

Approved Project Title **Synthesis of Activated Carbon Supported Zero Valent Iron Nanoparticles and Application to Contaminant Degradation in Benthic Sediments**

2010 \$200,000.00

2011 \$195,000.00

2012 \$204,662.00

Primary FoR 0907 ENVIRONMENTAL ENGINEERING

APAI 2

Partner Organisations

NSW Department of Environment and Climate Change (DECC), NSW Maritime, Orica Australia Pty Ltd, Sydney Metropolitan Catchment Management Authority, Sydney Ports Corporation

Administering Organisation The University of New South Wales

Project Summary

Sediment contamination is a major problem in harbours and estuaries around Australia. For example, in Sydney Harbour, a total fishing ban has been implemented as a result of excessive levels of dioxins and benzofurans in fish tissues. There is also concern at the possibility of large scale contamination of Botany Bay as a result of historic industrial activity around the Bay. While dredging and on-land treatment of sediments is being adopted at the most severely contaminated sites, the cost of this approach is exorbitant. For sites where removal of contaminated sediments cannot be justified, the approach proposed in this study of a technology that entraps contaminants and enhances their in situ biodegradation is potentially a way forward.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100504 Prof John M Whitelock, Dr Megan S Lord, Dr Simon J McCarthy
Approved Project Title Targeted growth factor delivery using natural polysaccharide materials for bone regeneration

2010 \$80,182.00
2011 \$80,182.00
2012 \$80,182.00
Primary FoR 0903 BIOMEDICAL ENGINEERING
APDI Dr Megan S Lord

Partner Organisations

HemCon Inc

Administering Organisation The University of New South Wales

Project Summary

This proposal addresses the core issue of nano-biomaterials capable of encouraging bone growth and providing better and more complete healing of bone fractures. Australia will benefit firstly through improved health outcomes by providing material-based solutions to address slow or non-healing fractures, which are increasingly prevalent in the aging population in Australia. This will have a further benefit to the Australian economy improving the quality of life enabling people to work longer and reducing the need for further surgical intervention. This proposal will also have benefits to Australia through training future researchers in this field which will in turn provide economic growth through the development of Australian industries.

LP100100299 Prof Aibing B Yu, Dr Andrew Vince
Approved Project Title Particle scale modelling and analysis of the multiphase flows in coal preparation

2010 \$240,000.00
2011 \$228,000.00
2012 \$250,000.00
Primary FoR 0914 RESOURCES ENGINEERING AND EXTRACTIVE METALLURGY
APAI 4

Partner Organisations

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, with an annual value >\$20 billion. Optimum design and control of the processes in coal preparation play a critical economic role in coal production. This project aims at providing substantial 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.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100814 Prof Aibing B Yu, Dr Haiping Zhu, Dr Renhu Pan
Approved Project Title **Granular dynamics: characterization, modelling and application**

2010	\$53,338.00
2011	\$53,338.00
2012	\$53,338.00
Primary FoR	0904 CHEMICAL ENGINEERING
APAI	2

Partner Organisations

Fujian longking Co.,Ltd

Administering Organisation The University of New South Wales

Project Summary

Storage and transport of bulk solids are widely encountered in mineral, metallurgical and chemical industrials which are important to Australia. The design and control of bulk solids handling equipment must be optimised for the efficiency of processing. This project provides a systematic investigation of the techniques used to characterize bulk solids, and applies the new findings to hopper flow and pneumatic conveying. This, together with the research training offered through the conduct of the work, is very helpful to maintaining Australia's leading position in bulk solids handling and application in resource, energy, process and allied industries.

LP100100868 Dr Guangqing Zhang, Prof Oleg Ostrovski
Approved Project Title **Fundamentals of an Innovative Technology for Solar Silicon Production**

2010	\$80,000.00
2011	\$78,000.00
2012	\$110,000.00
Primary FoR	0914 RESOURCES ENGINEERING AND EXTRACTIVE METALLURGY

Partner Organisations

Creswick Quartz Pty Ltd

Administering Organisation The University of New South Wales

Project Summary

Australia is a world leader in research in photovoltaic technology for solar energy. However, Australia does not produce solar grade silicon. The proposed project will develop a novel frontier technology which will cut the solar silicon production cost by 50%. This will enhance Australia's capacity to power a world-class photovoltaic industry of the future and build on Australia's strengths in research and innovation. Application of the technology will contribute to achieving national target of 6.74 GW photovoltaic solar power capacity by 2020; this will reduce 9.32 million tonnes/year of CO2 emission (the Australian photovoltaic industry roadmap) and contribute to an environmentally sustainable Australia.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The University of Newcastle

LP100100361 Prof Kevin P Galvin

Approved Project Title Gravity Separation and Desliming of Fine Particles

2010 \$30,000.00

2011 \$50,000.00

2012 \$50,000.00

Primary FoR 0904 CHEMICAL ENGINEERING

APAI 1

Partner Organisations

Australian Coal Research Ltd, Bloomfield Collieries Pty Ltd, Ludowici Australia Pty Ltd

Administering Organisation The University of Newcastle

Project Summary

This project will be of benefit to the Australian coal and mineral processing industries, worth tens of billions of dollars to the Australian economy each year. The objective is to establish an innovative system of cascading Reflux Classifiers for achieving both gravity separation and desliming of fine particles. Presently millions of tonnes of fine coal exist in tailings dams, unrecoverable by existing technologies such as flotation. This research will provide options for the recovery of this resource, making the remediation of these sites economically viable. The project will also support the education and training of researchers in this field of importance to Australia's future.

LP100100133 Prof Behdad Moghtaderi, Dr Elham Doroodchi, Mr Ian S Munro

Approved Project Title Enhanced Waste Heat Recovery from Low-grade Heat Sources Using a Novel Supercritical Power Cycle

2010 \$120,000.00

2011 \$108,000.00

Primary FoR 0913 MECHANICAL ENGINEERING

Partner Organisations

Granite Power Ltd

Administering Organisation The University of Newcastle

Project Summary

Compared with conventional technologies for waste heat recovery, GRANEX cycle offers higher thermal efficiencies, better economics and a greater degree of robustness. If deployed across the country to recover even 10% of the nation's waste heat, it would reduce greenhouse emissions by 9 mega tonne which is roughly 1.6% of the annual national emissions. That is equivalent to the yearly CO2 emissions from 648,000 houses or 2 million cars. The proposed research will place Australia within the forefront of the research and development activities in the field of waste heat recovery and will clearly contribute to the Federal Government's effort in the National Research Priority 1, An Environmentally Sustainable Australia.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The University of Sydney

LP100100300 Prof Peter A Castaldi, Prof Elizabeth J Elliott, Prof Anthony Scott, Prof Sandy Middleton, Prof Jonathan C Craig, Dr Catherine D'Este, Dr Christine L Paul, Dr Patrick McElduff, Prof Carol A Pollock, Dr Mary Haines, Prof Sally Redman, Prof Elizabeth M Yano, Dr Hunter Watt, Ms Kate Needham

Approved Project Title **Organisational change in healthcare: Determinants of effective clinical networks.**

2010 \$70,000.00

2011 \$150,000.00

2012 \$72,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Greater Metropolitan Clinical Taskforce, Sax Institute

Administering Organisation The University of Sydney

Project Summary

This research will be internationally leading and place Australia at the forefront of research into organisational change in health care. Developing innovative health care organisational structures, such as clinical networks, has the potential to improve the effectiveness of health care and to reduce costs. Benefits for the community will flow from this project through informed decision making about the best ways to bring about organisational change in health care. The results of this study will have immediate application to the organisational strategies of the Greater Metropolitan Clinical Taskforce and other national government health care agencies that implement organisational change through clinical networks.

LP100100310 Prof Hans G Coster, Prof Geoffrey W Barton, Dr Daniel R Ryan, Dr Cormac O'Cleirigh, Dr John M Kavanagh

Approved Project Title **Measurement and Prevention of Membrane Fouling for Water Reuse in Biorefineries**

2010 \$100,000.00

2011 \$78,000.00

2012 \$75,000.00

Primary FoR 0904 CHEMICAL ENGINEERING

APAI 1

Partner Organisations

AB Mauri Technology and Development Pty Ltd

Administering Organisation The University of Sydney

Project Summary

The effluent streams from molasses based fermentation contain dark-coloured melanoidins (recalcitrant COD) which limit discharge options and make water recovery via membrane technology challenging. Understanding membrane fouling to a level where its behaviour can be reliably predicted is a vital step in gaining widespread acceptance of this technology. Advances made here have a built-in multiplier effect, as insights from yeast production (core business for our industrial partner A B Mauri) can be readily applied to large-scale fermentation producing fuel alcohol from molasses as well as the emerging use of lignocellulosics. This project will contribute significantly to sustainability by reducing industrial water consumption.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100347 A/Prof Fariba Dehghani, Dr John M Kavanagh
Approved Project Title **New fermentation and purification production technologies for menaquinone-7 for promoting bone and cardiovascular health**

2010 \$90,000.00

2011 \$70,000.00

2012 \$70,000.00

Primary FoR 1003 INDUSTRIAL BIOTECHNOLOGY

Partner Organisations

Agricure Pty Ltd

Administering Organisation The University of Sydney

Project Summary

We will develop a significantly more cost-efficient and environmentally friendly process for the production of vitamin K (menaquinone-7, or MK7) to manufacture food supplements for humans and animals. MK7 will increase bone regeneration and minimise the risk of cardiovascular disease. It has the potential to reduce the costs of these conditions for the community, and to increase the quality of life for Australia's ageing population. Orthopaedic diseases are also a major veterinary issue, and our advance should make MK7 a more widely used available supplementary food for animals such as horses and dogs.

LP100100799 A/Prof Fariba Dehghani, A/Prof Vincent Gomes, Dr Michael Patane
Approved Project Title **Extraction and purification of a novel glycoprotein with antiviral activity from an Australian mollusc**

2010 \$160,000.00

2011 \$150,000.00

2012 \$170,000.00

Primary FoR 1003 INDUSTRIAL BIOTECHNOLOGY

APAI 1

Partner Organisations

Protech Research Pty Ltd

Administering Organisation The University of Sydney

Project Summary

Our aim is to develop the science that will enable the transformation of Australian seafood industry, a world leader in mollusc harvesting, into a value-added health and nutrition industry. We will develop a cost-effective technology for the extraction and production of high purity haemocyanin from the biomass produced in a Tasmanian seafood manufacturing process. We will demonstrate the potential of using haemocyanin for promoting the health and well-being of patients affected by the herpes simplex virus (HSV) and the human papilloma virus (HPV). New knowledge gained from the project will place Australia in the forefront of global treatment of infectious disease research and boost export earnings derived from molluscs' waste materials.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100052 Prof Stewart L Einfeld, Dr Katherine V Sofronoff, Dr Kylie M Gray, Dr Jacqueline M Roberts, Dr Renae B Beaumont

Approved Project Title **Effectiveness of social skills training for children with autism**

2010 \$95,000.00

2011 \$67,000.00

2012 \$30,000.00

Primary FoR 1114 PAEDIATRICS AND REPRODUCTIVE MEDICINE

Partner Organisations

Autism Spectrum Australia

Administering Organisation The University of Sydney

Project Summary

Our industry partner, Aspect Australia, is one of the world's largest providers of educational and other services for people with autism. The demonstration of effectiveness of the program in Aspect classes will likely lead to widespread use and benefit of the program in the education sector nationally and internationally. This in turn would lead to potential lessening of disability in children with autism with improvements in their mental health and significant cost savings to the community.

LP100100720 A/Prof Brian S Hawkett, A/Prof James K Beattie, Dr Jeffrey Gore, Dr Chiara Neto

Approved Project Title **Inhibition of Spontaneous Detonations of Explosive Emulsions in Hot and Reactive grounds**

2010 \$115,000.00

2011 \$115,000.00

2012 \$190,000.00

Primary FoR 0302 INORGANIC CHEMISTRY

Partner Organisations

Dyno Nobel Asia Pacific Ltd

Administering Organisation The University of Sydney

Project Summary

Dyno Nobel Asia Pacific is a major supplier of explosive services to the coal, iron ore and gold-mining industries. Many mines in Australia and overseas are in hot and reactive ground, where eliminating the risk of spontaneous detonation is a considerable addition to operating costs. The Company and the University will collaborate to significantly improve our capacity to evaluate ground for reactivity and to formulate new inhibited emulsion explosives for use in hot and reactive ground. This will lead to much more flexible, cost-effective mining operations, by understanding the key parameters for the safe 'sleep time' of on-site explosives. This should result in greater export competitiveness and rural employment opportunities.

LP100100594 Prof Michael J Jacobson, Dr Lina Markauskaite, Dr Chun Hu

Approved Project Title **Learning the complexity of scientific knowledge about climate change with computer modelling and visualization technologies**

2010 \$80,000.00

2011 \$90,000.00

2012 \$125,000.00

2013 \$105,000.00

Primary FoR 1301 EDUCATION SYSTEMS

Partner Organisations

NSW Department of Education And Training, NSW Department of Environment and Climate Change (DECC)

Administering Organisation The University of Sydney

Project Summary

This project provides benefits to the national priorities of a environmentally sustainable Australia; and frontier technologies for building and transforming Australian industries. The project helps students in Australia more deeply understand the sciences that underlie environmental sustainability. Learning with modelling and visualization technologies will help students learn important scientific knowledge and prepare them for the use of frontier technologies that are becoming infused into the practices of scientists and professionals in many fields. This project also directly contributes to the national Digital Education Revolution initiative.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100566 Dr Xiaozhou Liao, Prof Simon P Ringer, Dr Zhiwei Shan
Approved Project Title **In-situ transmission electron microscopy nanoindentation investigation of advanced structural metallic materials**

2010	\$125,000.00
2011	\$123,000.00
2012	\$53,338.00
Primary FoR	0912 MATERIALS ENGINEERING
APAI	2

Partner Organisations

Hysitron Inc.

Administering Organisation The University of Sydney

Project Summary

This project will apply in-situ transmission electron microscopy nanoindentation to understand the relationships among microstructures, deformation mechanisms and mechanical properties of advanced metallic materials, including nanostructured alloys and metallic amorphous-crystalline composites. The results will deliver the fundamental science to design materials with optimum mechanical properties for a wide range of applications, such as fuel-efficient aircraft and road vehicles. The project will bring a cutting-edge technique to Australian science that adds an important arm to our already prominent research strengths in materials science, and will provide Australian scientists greater capability to understand and design advanced materials.

LP100100612 Dr Srinarayana Nagarathinam, Prof Masud Behnia, Prof Steven W Armfield, Dr Nathan Groenhout

Approved Project Title **Design tools for optimising data centre layout to minimise energy usage**

2010	\$100,000.00
2011	\$93,000.00
2012	\$95,000.00
Primary FoR	0907 ENVIRONMENTAL ENGINEERING
APDI	Dr Srinarayana Nagarathinam

Partner Organisations

AECOM Australia PTY LTD

Administering Organisation The University of Sydney

Project Summary

Data centres are major consumers of energy worldwide, mainly through the need to cool the equipment. It has become imperative to develop the science for reducing this consumption. Rising computing demand, increasing power density, and increasing infrastructure and energy costs are major issue for data centres around the world. Our research will provide a powerful alternative to conventional thermal management techniques for cooling high-density heat loads in mixed-density environments. We will address the key issue of energy minimisation through a detailed flow analyses by the use of numerical simulations and optimisation algorithms.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100158 A/Prof Deborah J Schofield, Dr Megan E Passey, A/Prof Simon J Kelly, Prof Eric T Vos, A/Prof Richard Percival
Approved Project Title **Long term economic impacts of disease on older workers to 2030: Costs to government and individuals and opportunities for intervention**

2010 \$140,000.00
 2011 \$170,000.00
 Primary FoR 1402 APPLIED ECONOMICS
 APAI 1

Partner Organisations

Pfizer Pty Ltd

Administering Organisation The University of Sydney

Project Summary

This project will fill substantial gaps in Australian evidence about the health conditions of the future that will keep older workers out of the labour market and diminish their own immediate and long-term living standards, thereby reducing funds available to government. We will address one of the most significant issues resulting from the fundamental changes to the demography of the Australian labour market and one that is regularly raised by the government following the release of the 2002 and 2007 Intergenerational Reports. This project will also examine the interventions that would improve the health of older workers and increase labour force participation over the long term.

LP100100471 Dr Toni Schofield, Dr Jo Lindsay, Dr Fiona Giles, Dr Julie Hepworth, A/Prof John Germov, Dr Rose Leontini
Approved Project Title **Alcohol use and harm minimisation among Australian university students**

2010 \$100,000.00
 2011 \$100,000.00
 2012 \$53,338.00
 Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES
 APAI 2

Partner Organisations

Association of Heads of Australian University Colleges and Halls Inc, NSW Health, Victorian Department of Human Services

Administering Organisation The University of Sydney

Project Summary

Alcohol-related harms cost Australians over \$15.3 billion per year, and in 2008 were described by Prime Minister Kevin Rudd as having reached 'epidemic proportions'. Young people are at greatest risk of alcohol-related damage and university students are among the heaviest drinkers, with up to 70% engaging in binge drinking. By examining the social dynamics of university students' drinking practices and their understanding of harm minimisation, together with the policies and measures offered by colleges and State health authorities, the proposed project will yield a new evidence base and innovative theoretical approach for developing fresh strategic harm minimisation interventions.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100740 Prof Richard Shine
Approved Project Title **Surviving in a toad-colonised landscape: manipulating predator behaviour to reduce the impact of the cane toad invasion**

2010	\$125,000.00
2011	\$125,000.00
2012	\$125,000.00
2013	\$125,000.00
2014	\$125,000.00

Primary FoR 0501 ECOLOGICAL APPLICATIONS

Partner Organisations

Department of Environment and Conservation, Western Australia, Territory Wildlife Park

Administering Organisation The University of Sydney

Project Summary

Invasive species pose a major threat to biodiversity; and within Australia, cane toads are widely viewed as one of the biggest such problems. Vigorous attempts at toad control have failed to slow the invasion front, and toads are now entering the Kimberley region. If we can't stop the toads, are there other ways to reduce the numbers of native predators killed by eating these poisonous invaders? Predators given nausea-inducing chemicals with their first toad meal rapidly learn to avoid cane toads as prey, enabling them to survive even where toads are present. The study will develop those methods for several vulnerable native species, including techniques for deployment of aversion-inducing baits in advance of the toad invasion.

LP100100500 Prof Stephanie D Short, Prof Lesleyanne Hawthorne, Prof Charles J Sampford
Approved Project Title **Building an ethical and sustainable model for health professional recruitment to Australia: A case study of the Philippines**

2010	\$157,000.00
2011	\$167,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Queensland Health

Administering Organisation The University of Sydney

Project Summary

This study will lead to an evidence-based ethical workforce plan for the recruitment of nurses from the Philippines to work in Queensland Health to improve access to health services. The model will be embedded in an integrity system that will ensure transparency and accountability in the employment of overseas-trained health professionals. This will strengthen the governance of the health care systems and nursing professions of both countries.

LP100100451 Dr Daniela Traini, Dr Paul M Young, Prof Hak-Kim Chan
Approved Project Title **Engineering of composite particles to enhance performance in respiratory drug delivery**

2010	\$110,000.00
2011	\$110,000.00
2012	\$115,000.00

Primary FoR 1115 PHARMACOLOGY AND PHARMACEUTICAL SCIENCES

Partner Organisations

Synectix Pharmaceutical Solutions Ltd

Administering Organisation The University of Sydney

Project Summary

Respiratory conditions such as asthma and chronic pulmonary disease affect in excess of 5.8 million Australians and the common method of treatment is via drug inhalation. Although a wide range of drugs are commercially available as dry powder inhalers the efficiency of these systems is poor, with most devices delivering less than 20% to the lung. This project will develop a new method of high-efficiency respiratory drug delivery based on composite particles. The technology developed from this project will advance Australia's Research & Innovation and Pharmaceutical industry sector, and improve healthcare outcomes in the government's key priority area of Promoting and maintaining good health: 'A healthy start to life' and 'Ageing well'

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100319 Dr Rutger W Vervoort, Dr Budiman Minasny, Prof Alexander B McBratney
Approved Project Title **Improved seasonal rainfall prediction for grain growers using farm level data and novel modelling**

2010 \$76,000.00

2011 \$76,000.00

2012 \$76,000.00

Primary FoR 0703 CROP AND PASTURE PRODUCTION

APAI 1

Partner Organisations

Grain Growers Association Ltd

Administering Organisation The University of Sydney

Project Summary

Successful grain production, a key export commodity for Australia, depends heavily on reliable seasonal forecasts. However, the highly variable climate means that for Australia's 25,000 grain growers current forecasts lack detail in space and time. Using a combination of fuzzy classification and artificial neural networks, this project will develop a locally detailed continuously updating data-driven seasonal forecast system using high density climate data from the 17,000 Grain Growers Association members and climate drivers such as sea surface temperature from the Bureau of Meteorology. After validation against observed data, the forecasts will be delivered via a web-based portal to users.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

University of Technology, Sydney

LP100100494 A/Prof Hao H Ngo, Dr Wenshan Guo, A/Prof Richard Lim, Prof Rosemary R Johnston, Dr Maria J Lategan, Mr Andrzej Listowski, Ms Kelly J O'Halloran

Approved Project Title **A new end use of recycled water for sustainable Australian water**

2010 \$83,000.00

2011 \$81,000.00

2012 \$85,000.00

Primary FoR 0907 ENVIRONMENTAL ENGINEERING

Partner Organisations

City West Water, Gold Coast Water, Port Macquarie-Hastings Council, Sydney Olympic Park Authority

Administering Organisation University of Technology, Sydney

Project Summary

The economic, environmental and social impacts of this project would have benefits across Australia, and the rest of the world. Recycled water has never been used in clothes washing machines anywhere in the world, by introducing it here in Australia we would save approximately 20% of domestic water used for laundry purposes. This also has significant policy implications as this would be a huge step towards the implementation of a program of recycled water usage in Australia.

LP100100213 Prof Alastair Pennycook, Dr Criss M Jones Diaz, Dr Kenneth E Cruickshank, A/Prof Garth Alperstein, Dr Liam A Morgan, Dr Pauline F Gibbons

Approved Project Title **Developing Early Literacy in Informal Settings: Engaging Disadvantaged Aboriginal and CALD Families Outside Formal Settings**

2010 \$87,000.00

2011 \$53,000.00

Primary FoR 1399 OTHER EDUCATION

Partner Organisations

NSW Department of Community Services, NSW Department of Education And Training

Administering Organisation University of Technology, Sydney

Project Summary

The development of literacy in pre-school age children is a national priority. This research will address a major gap in the provision of support for literacy development in children and families who do not access formal pre-school programs. It will directly address the disadvantage experienced by children and families in informal settings. The outcomes of this research will benefit work in this area at both a theoretical and a practical level. It will provide a strengthened research base around reaching and involving children and families and will inform those literacy methodologies that seek to address linguistic and cultural difference.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

University of Western Sydney

LP100100369 Prof Rhonda G Craven, Dr Genevieve Nelson, Mr Andrew Anderson, A/Prof Geoffrey E Munns, Dr Tanya Covic

Approved Project Title **Bridging the gap on locational disadvantage: Impact of community-identified interventions on social capital, psychosocial and socioeconomic outcomes**

2010 \$185,000.00

2011 \$180,000.00

2012 \$300,000.00

Primary FoR 1701 PSYCHOLOGY

Partner Organisations

Benevolent Society

Administering Organisation University of Western Sydney

Project Summary

Interventions to combat locational disadvantage are vital given the pervasiveness and long-term consequences for youth and communities. This research will offer important educational and socio-economic benefits by enriching the psychosocial adjustment and life potential of young Australians and the capacity of schools in locationally disadvantaged communities. Effective research and community-identified social capital and psychosocial interventions will enhance pro-social behaviours, health, psychosocial adjustment, and school and community engagement. This will build capacity at community, school, and individual levels and contribute to national socioeconomic wellbeing.

LP100100693 A/Prof Virginia A Schmied, A/Prof Sue Kruske, Prof Caroline Homer, Prof Lesley M Barclay, Prof Ian Wilson, Prof Cathrine M Fowler, Dr Lynn A Kemp, A/Prof Allan M Fasher, Dr Sharon R Goldfeld, Dr Barbara A Vernon, Ms Cecelia Randles

Approved Project Title **A study investigating the feasibility of implementing a national approach to child and family health services.**

2010 \$85,000.00

2011 \$90,000.00

2012 \$65,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

APAI 1

Partner Organisations

Australian Association of Maternal Child and Family Health Nurses, Australian College of Midwives, Australian General Practice Network, Australian Practice Nurses Association, Michael Fasher, Northern Territory Department of Health and Families, NSW Department of Community Services, Qld Department of Health, Royal Australian College of General Practitioners, Victorian Department of Education and Early Childhood Development, Western Australian Department of Health

Administering Organisation University of Western Sydney

Project Summary

Understanding and strengthening the way in which universal health services are provided to pregnant women, children and families has the potential to impact over a million Australian families annually. The findings of this study will have national application as federal, state and territory governments work towards implementing a national approach to child and family health services. The findings will inform effective multidisciplinary collaboration and service integration, address service gaps and duplication and lead to increased access to services. This study will generate new knowledge about characteristics of organisations, service delivery and professions that facilitate or hinder innovation.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

University of Wollongong

LP100100672 Prof David J Ayre, Mr Andrew Denham

Approved Project Title Genetic Rescue of Australia's Arid Zone Plants

2010 \$110,000.00
2011 \$110,000.00
2012 \$110,000.00
Primary FoR 0602 ECOLOGY
APAI 1

Partner Organisations

Lower Murray Darling CMA, Murray Catchment Management Authority, NSW Department of Environment and Climate Change (DECC), Sunraysia Nurseries Pty Ltd

Administering Organisation University of Wollongong

Project Summary

Many Australian arid zone plant species have been severely damaged by grazing, loss of pollinators and other impacts and cannot survive without urgent intervention. Some exist as small fragmented populations with too little genetic variation to reproduce or adapt to further environmental change. We propose to combine surveys of genetic (DNA) diversity and the reproductive status of populations in order to identify species that could be saved by a process of 'genetic rescue'. Genetic rescue will involve experimental pollinations to produce highly fit seedlings and later transplanting of these seedlings to augment genetically deficient populations.

LP100100440 Prof Shi Xue Dou, Dr Josip Horvat, Mr Xun Xu, Dr Jeffrey W Moscrop

Approved Project Title Design, build and test a fault current limiter employing magnesium diboride (MgB2) superconducting coils

2010 \$195,000.00
2011 \$190,000.00
2012 \$195,000.00
Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING
APDI Mr Xun Xu
APAI_IT 1

Partner Organisations

Zenergy Power Pty Ltd

Administering Organisation University of Wollongong

Project Summary

Recent occurrences of blackouts around the world caused immeasurable damage to electrical network hardware in the range of \$10M, however, the losses from an unavailable network are much more. The CIs and Zenergy Power Pty Ltd (formerly Australian Superconductors) have been developing saturated core fault current limiters (FCL) since 1999. The first saturated core fault current limiter employing the Australian's entity's technology was installed in California. The aim of this proposal is to extend this technology to demonstrate next generation FCL using a newly developed superconductor magnesium diboride (MgB2) wire which is cheaper and easier to manufacture than high temperature superconductors and the CIs' group hold strong IP on nano-scale chemically doped MgB2 wires.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100236 Prof Buddhima N Indraratna, Prof Song-Ping Zhu, Dr Jan A Nemcik, Dr Shuqing Yang, Dr Winton J Gale
Approved Project Title **Study of Coupled Water-Gas-Sediment (three-phase) Flows through Jointed and Stratified Rock**

2010	\$72,000.00
2011	\$53,338.00
2012	\$53,338.00
Primary FoR	0905 CIVIL ENGINEERING
APAI	2

Partner Organisations

Strata Control Technology (SCT) Pty Ltd (Wollongong)

Administering Organisation University of Wollongong

Project Summary

Coupled Water-Gas-Sediment Flows through Rock Joints project outcomes are expected to surpass the current knowledge on ground/slope stability and water inundation, enhance engineering solutions of the associated problems and provide vital improvements to public safety. The research team will publish the research outcomes through peer-reviewed journals and conferences, nationally and internationally, raising Australia's scientific profile within the civil engineering and mining community. The Australasian Institute of Mining and Metallurgy and Institution of Engineers seminars will be organised to promote discussion with the practitioners while the Australian geotechnical community will gain expertise through the PhD program.

LP100100618 A/Prof Kashem M Muttaqi, A/Prof Sarath Perera, Prof Darmawan Sutanto, Dr Philip P Ciufo, Mr Leith A Elder
Approved Project Title **Integration of Solar, Wind and Storage Systems into Distribution Grids for Network Support**

2010	\$158,000.00
2011	\$126,000.00
2012	\$136,000.00
Primary FoR	0906 ELECTRICAL AND ELECTRONIC ENGINEERING
APAI_IT	2

Partner Organisations

Country Energy

Administering Organisation University of Wollongong

Project Summary

This project will contribute to the development and utilisation of renewable energy technologies for a sustainable future and facilitate their integration into electricity grids for network support. Innovative methodologies and technologies will be developed to reduce network problems associated with the integration of a large number of small-scale renewable energy resources into distribution grids. This project will also develop assessment tools to examine the impact of renewable energy penetration on power quality aspects, network stability and protection performance. This research will provide remedies for potential problems introduced by their integration and improve voltage support in the electricity networks.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100417 Dr Peter M Siminski, Prof Simon P Ville
Approved Project Title **The long term causal effects of Vietnam War era conscription on economic and social outcomes for Australian conscripts**

2010 \$27,000.00
 2011 \$30,000.00
 Primary FoR 1402 APPLIED ECONOMICS

Partner Organisations

Department of Veterans' Affairs

Administering Organisation University of Wollongong

Project Summary

The project will inform veterans' compensation, military and retirement income policies. A perennial policy issue is how best to re-integrate veterans into society. Our preliminary analysis suggests very different effects of conscription in Australia to the USA, particularly on employment. This may reflect different systems of benefits, which we will investigate. A greater understanding of the effects of conscription will also inform policy makers of the full cost to society of military service and participation in conflict. Since veterans are entitled to retirement pensions earlier than non-veterans, we also investigate the effects of benefit eligibility on employment outcomes amongst older men.

LP100100549 Prof Trevor A Spedding, Dr Michael D Clements, Prof Amrik S Sohal, Dr Lisa J Daniel, Prof Patrick M Dawson

Approved Project Title **Technological innovation and change in supply chain integration**

2010 \$55,000.00
 2011 \$53,338.00
 2012 \$53,338.00
 Primary FoR 1503 BUSINESS AND MANAGEMENT
 APAI 2

Partner Organisations

Compdata Pty Ltd, LG Electronics Australia Ltd, TNT Australia Ltd

Administering Organisation University of Wollongong

Project Summary

In examining emerging technology that can transform the performance of Australian industry we address the following priority goals: better understanding the processes that will advance knowledge and facilitate the development of technological innovations; the potential application of Radio Frequency Identification (RFID) technologies across an entire supply chain; and the improved management of information in the storage, distribution, and delivery of products (smart information use). Improvement in the operational efficiency and performance of the supply chain will increase national wealth while minimising environmental impacts on the environment, for example, through the better utilisation of heavy freight carriers.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100802 Dr Jia Z Wang, Prof Hua Kun Liu, Dr Konstantin K Konstantinov, Prof Zhaoxiang Wang

Approved Project Title Room Temperature Rechargeable Sulphur Batteries

2010 \$70,000.00

2011 \$58,000.00

2012 \$100,000.00

Primary FoR 0912 MATERIALS ENGINEERING

Partner Organisations

DLG Battery Co. Ltd., Nipress Tbk, PT

Administering Organisation University of Wollongong

Project Summary

The project will lead to the development of low cost sulphur rechargeable batteries for electric vehicles and hybrid electric vehicles and will contribute to the national priority goal of reducing and capturing emissions in transport to improve our environment. The project will take the incentive in establishing a leading national position in the development of low cost energy storage technology. The Partner Organisation, Nipress, has a close connection to Australia. The company has imported raw materials (metal lead, 8000 tons) from Australia every year. The success of sulphur batteries technology will increase the opportunity of Nipress using more Australian raw materials.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Victoria

Australian Catholic University

LP100100154 Prof Elizabeth A Warren, Ms Eva B De Vries, Mr Stephen L Thomson, Ms Thelma G Gertz

Approved Project Title **Young Indigenous students' numeracy learning: Oral language, mathematical representations and engagement**

2010	\$65,000.00
2011	\$110,000.00
2012	\$115,000.00
2013	\$130,000.00
Primary FoR	1302 CURRICULUM AND PEDAGOGY
APAI	1

Partner Organisations

BWGC Colman Community School, Shalom Christian College, Townsville Catholic Education Office

Administering Organisation Australian Catholic University

Project Summary

High quality early childhood education for Indigenous students is an essential precondition for school readiness, and Indigenous parents and communities are essential for success and sustainability. Our pilot results confront stereotypes by evidencing that young Indigenous students are mathematically capable learners. It is a significant social and economic loss that a section of the Australian community is not sufficiently educated to share in the wealth of the nation. Minimal progress on numeracy measures results in failure to engage in higher levels of mathematics. This research builds a foundation in mathematics that levels the assessment playing field and supports participation in higher levels of mathematics.

LP100100084 Prof Ruth P Webber, Prof Christine Bigby, Prof Barbara J Bowers

Approved Project Title **Increasing organisational capacity of community residential units to facilitate ageing in place for people with intellectual disability**

2010	\$59,000.00
2011	\$56,000.00
2012	\$57,000.00
Primary FoR	1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Catholic Homes, L.I.B. Pty Ltd as Trustee for Gill Family Foundation, National Disability Services Victoria, Office of the Public Advocate (VIC), St John of God Health Care (VIC), Wesley Mission Melbourne

Administering Organisation Australian Catholic University

Project Summary

Unique challenges face the disability, aged care and health sectors because of the increased life expectancy of people with life-long intellectual disability (ID) 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. This research will inform the development of policy and programs in the disability, aged care, and health sectors. The research aims to improve the capacity of disability group homes to respond to the health and ageing issues of older people with ID, to improve their quality of life.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Deakin University

LP100100069	Prof Colin J Barrow, Prof Andrew J Sinclair, Dr Ken Walder, Dr Jaroslav A Kralovec, Dr Harry S Ewart, Dr Jacqui L Adcock, A/Prof Margaret L Ackland, Dr Ian F Musgrave
Approved Project Title	Enzymatic synthesis, microencapsulation and biological evaluation of a new class of omega-3 derived functional food ingredients.
2010	\$150,000.00
2011	\$150,000.00
2012	\$170,000.00
Primary FoR	0908 FOOD SCIENCES
APDI	Dr Jacqui L Adcock
APAI	1

Partner Organisations

Ocean Nutrition Canada Ltd

Administering Organisation Deakin University

Project Summary

Inflammatory mediated diseases such as cardiovascular disease, type-2 diabetes, metabolic syndrome and Alzheimer's disease are major causes of death in Australia. Rates of these diseases are rising over time, partly due to poor diet including low consumption levels of healthy omega-3 fatty acids from fish. This project aims to develop healthy food ingredients from naturally occurring omega-3 fatty acid derivatives that are more stable to oxidation and more biologically active than fish derived omega-3 fatty acids. The development of these omega-3 derivatives as functional food ingredients could provide an additional strategy for helping to prevent the rapid increase in inflammatory mediated diseases in the Australian population.

LP100100311	Prof Mari A Botti, Prof Brigid C Kent, Prof Tracey K Bucknall, Prof Megan-Jane Johnstone, Prof Maxine Duke, Dr Julie Considine, Dr Rosemary J Watts, Dr Bernice Redley, Mr Richard N de Steiger
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Approved Project Title	Translation of evidence into pain management practices in acute care environments
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2010	\$40,000.00
2011	\$100,000.00
Primary FoR	1110 NURSING

Partner Organisations

Cabrini Health, Eastern Health, Epworth Healthcare

Administering Organisation Deakin University

Project Summary

This project addresses the urgent need to reduce the substantial pain experienced by patients following surgery by improving the clinical processes associated with the treatment of pain. Each year in Australia, six million people are admitted to hospital for surgery. A recent review of Australian research has shown that up to 40% of hospitalised surgical patients experience significant pain. Despite the availability of effective treatment, pain after surgery is often under-treated and is one of the main postoperative adverse outcomes. A consequence of poor pain management is that patients experience unnecessary suffering, higher incidence of postoperative complications significant risk of developing chronic post-surgical pain.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100422 A/Prof Lingxue Kong, Prof Xungai Wang, Dr Tong Lin
Approved Project Title **Formation and characterisation of continuous electrospun nanofibre yarns**

2010	\$100,000.00
2011	\$98,000.00
2012	\$100,000.00
Primary FoR	0910 MANUFACTURING ENGINEERING

Partner Organisations

Guangzhou Textile Union Group Co Ltd

Administering Organisation Deakin University

Project Summary

Australia historically has a strong fibre and textile industry that can be augmented by embracing emerging nanotechnology. The proposed research will develop a technology that can greatly improve the productivity of nanofibres. These fibres can then be spun into continuous yarns and other form of textile products. The nanostructured products offer exceptional functions for biomedical and environmental applications. This new technology has the potential to transform the Australian textile technology and fibre processing industry.

LP100100222 A/Prof Heath J McDonald, Prof Daniel C Funk, Prof Simon J Bell
Approved Project Title **The impact of new professional sporting teams on community engagement and fan development**

2010	\$88,000.00
2011	\$70,000.00
2012	\$88,000.00
2013	\$119,000.00
2014	\$32,000.00
Primary FoR	1504 COMMERCIAL SERVICES

APAI 2

Partner Organisations

Australian Football League

Administering Organisation Deakin University

Project Summary

New professional sporting teams are costly, often requiring substantial infrastructural support and government subsidies. This study of the launch of two new AFL teams will clarify the benefits gained in terms of the fan base they will stimulate as well as the well-being of the communities they enter, and identify ways to maximise both outcomes. This knowledge will increase the likelihood of AFL survival in a highly competitive global industry, and ensure governments and communities receive the best return for their investment in the new teams. A comprehensive understanding of the processes of acculturation for complex cultural services like AFL will also benefit other sporting and recreational industries that rely upon community support.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100454 A/Prof David J Mellor, Prof Marita P McCabe, A/Prof Lina A Ricciardelli, A/Prof Susan A Brumby
Approved Project Title **Implementation and evaluation of a program to reduce alcohol and related problems among farm men and women**

2010 \$80,000.00

2011 \$80,000.00

2012 \$80,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Western District Health Service

Administering Organisation Deakin University

Project Summary

Farming is pivotal to Australia's food production and economy; yet farm communities are under great stress. The Sustainable Farm Families program aims to strengthen rural communities across Australia, and our project will add an important component to it by producing an evidence-based strategy for encouraging farm men and women to adopt more positive alcohol-related behaviours that will lead to better physical and mental health. We expect that our project will reduce the level of dangerous alcohol consumption and enhance the economic, social and cultural fabric of rural Australia.

LP100100898 Prof Saeid Nahavandi, Dr Ben P Horan
Approved Project Title **Haptic realisation of visual art for the blind and visually impaired**

2010 \$55,000.00

2011 \$45,000.00

2012 \$50,000.00

Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING

Partner Organisations

3G Engineering, Australia Council for the Arts

Administering Organisation Deakin University

Project Summary

This research proposes a first-of-its-kind technological platform providing the blind and visually impaired with the ability to physically 'feel' the visual information contained within 2D visual art. Aside from facilitating equity and access to the visual arts, the ability for the blind and visually impaired to perceive the visual information contained within generic 2D images offers wider reaching benefits. The realisation of the proposed technological platform offers the radical potential to revolutionise the available technologies for assisting the blind and visually impaired. The realisation of this technological capability also offers the potential to introduce a new dimension to the communication mediums used within wider society.

LP100100049 Dr Helen Skouteris, Prof Marita P McCabe, Prof Boyd A Swinburn
Approved Project Title **Healthy eating and obesity prevention for preschoolers: A randomised controlled trial**

2010 \$70,000.00

2011 \$60,000.00

2012 \$70,000.00

Primary FoR 1701 PSYCHOLOGY

Partner Organisations

MEND Australia

Administering Organisation Deakin University

Project Summary

The cost to society of obesity is high from both a financial and psychosocial perspective. Australian researchers can take a lead in the prevention of obesity during the formative preschool years when prevention intervention strategies have been evaluated systematically and rigorously. This will be the first study in Australia to evaluate the impact of a healthy eating and childhood obesity prevention program for parents of preschool children, regardless of weight status. The findings will assist in further developing evidence-based prevention strategies that can be rolled out extensively in the Australian community for maintenance of healthy weight gain in preschool children.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100087 Dr Ken Walder, Dr Frederick M Pfeffer, Dr Nicky Konstantopoulos, Dr Guy Y Krippner
Approved Project Title **Discovery and development of novel insulin sensitising compounds for the treatment of Type 2 diabetes**

2010 \$85,000.00

2011 \$85,000.00

2012 \$130,000.00

Primary FoR 0304 MEDICINAL AND BIOMOLECULAR CHEMISTRY

Partner Organisations

Verva Pharmaceuticals Ltd

Administering Organisation Deakin University

Project Summary

Diabetes is one of the major health problems facing Australia today, and current treatments are proving inadequate to combat this disease. We previously discovered a new drug with potential for development for the treatment of diabetes. In this project, we will identify how this drug works to combat diabetes in cell and animal models, and use novel chemistry approaches to modify the drug to improve its properties and reduce potential side-effects. The outcomes of this project will be understanding of a new biological process that contributes to the development of diabetes, and the discovery and characterisation of new chemical compounds that could be developed as drugs to treat diabetes.

LP100100208 Prof Wanlei Zhou, Dr Yang Xiang
Approved Project Title **An active approach to detect and defend against peer-to-peer botnets**

2010 \$50,621.00

2011 \$52,470.00

2012 \$56,015.00

Primary FoR 0803 COMPUTER SOFTWARE

Partner Organisations

Belmont Computer Centre Pty Ltd

Administering Organisation Deakin University

Project Summary

The aim of this project is to develop an effective defence system to help organisations detect and defend against the peer-to-peer (P2P) botnets. If this research is accomplished successfully, it will be a big step forward in defeating this new but devastating malicious software widely utilised by Internet criminals and terrorists. The capability of a nation to defend against the P2P botnet attacks on its information infrastructure is central to the control of such attacks and hence to a nation's long-term survival and prosperity. The outcomes of this project can be directly used in Australian research communities and adopted by industry and government agencies.

LP100100816 Prof Wanlei Zhou, Dr Robin R Ram Mohan Doss
Approved Project Title **Secure and Efficient Communication in Vehicle-based Radio Frequency Identification Systems**

2010 \$50,621.00

2011 \$52,470.00

2012 \$56,015.00

Primary FoR 0805 DISTRIBUTED COMPUTING

Partner Organisations

Express Promotions Australia Pty Ltd

Administering Organisation Deakin University

Project Summary

The successful completion of the project will enable the deployment of RFID technologies to improve current methods of reading and processing RFID tag information in numerous real-life applications. Based on the research from this project a real-life application in asset tracking will be developed and deployed through the industry partner. Such an outcome will generate knowledge that can transform and improve current logistics systems for Australian companies and their international clients and have the potential to significantly increase the efficiency of decentralised business environments such as logistics and supply chain management particularly in the fields of inventory control, distribution and transportation.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

La Trobe University

LP100100339 Dr Benjamin P Kear, Dr Michael S Lee, Prof Patricia A Vickers-Rich, Dr Stephen McLoughlin, Mr Scott A Hocknull, Dr Thomas H Rich

Approved Project Title **Mesozoic Austral Biodiversity: Research and Regional Museum Applications**

2010	\$190,000.00
2011	\$190,000.00
2012	\$220,000.00
Primary FoR	0403 GEOLOGY

Partner Organisations

Australian Age of Dinosaurs Museum, Australian Opal Centre, Museum Victoria, Outback Gondwana Foundation, Queensland Museum, South Australian Museum

Administering Organisation La Trobe University

Project Summary

The impact of environmental alteration on Australia's biodiversity has poorly understood long-term effects. This project examines the controversial biogeography and evolution of Australia's biodiversity during the Age of Dinosaurs (mid-Cretaceous ~100 MYA) and their adaptational responses to climatic change. Fossils readily capture the public imagination and thus help promote complex scientific concepts in the global media. This project raises awareness about sustainable use of non-renewable fossil resources through public education and ecotourism fieldwork programs; these will help generate local interest and thus protection of sensitive fossil localities by highlighting them as lucrative tourism assets for regional communities.

LP100100513 Dr Roman Makarevich

Approved Project Title **Plasma layers, waves and fountains: Probing the ionosphere with over-the-horizon radars**

2010	\$68,558.00
Primary FoR	0201 ASTRONOMICAL AND SPACE SCIENCES

Partner Organisations

IPS Radio and Space Services

Administering Organisation La Trobe University

Project Summary

The ionised layers of the Earth's upper atmosphere – the ionosphere - bend radio waves emitted by HF radio communication and radar surveillance systems allowing detection of targets beyond the horizon. This research will provide direct scientific support to this infrastructure including the \$1.8B Australian coastal surveillance radars used to locate and track ships and planes in our region and radio communication links used by military personnel and civilians living or travelling in Australia's remote territories. This project will also provide training in areas highly relevant to our partners in government and defense, potentially improve efficiency of scientific and military radars, and thus contribute to improving national security.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Monash University

LP100100477 Dr Benjamin J Boyd, Dr Dennis B Rylatt, Dr Ronald C Chatelier

Approved Project Title **Novel Self Assembled Particle Systems as a Key to Next Generation Biosensor Technology**

2010 \$66,000.00

2011 \$70,000.00

2012 \$77,000.00

Primary FoR 0306 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Partner Organisations

Universal Biosensors Inc.

Administering Organisation Monash University

Project Summary

Development and commercialisation of products utilising nanotechnology is crucial to future wealth creation for Australia. The translational research in this proposal will progress innovative concepts in nanotechnology-based biosensors, with potential for substantial improvements in disease diagnosis, leading to more economical and timely therapy. The products that arise from this research will also provide further employment for Australians, building on Universal Biosensor's proven record of commercialization in Australia. The project will lead to training of Australian researchers in nanotechnology and in utilization of key Australian science infrastructure including the Australian Synchrotron and the Melbourne Centre for Nanofabrication.

LP100100078 Dr Judith L Charlton, Mr James W Langford, Dr Sjaanie N Koppel, Dr Morris S Odell, Dr Marilyn Di Stefano, A/Prof Wendy A Macdonald, A/Prof Shawn Marshall, Prof Peteris J Darzins

Approved Project Title **Managing older driver safe mobility: An international collaboration**

2010 \$258,000.00

2011 \$221,000.00

2012 \$296,000.00

2013 \$226,127.00

2014 \$204,777.00

Primary FoR 1605 POLICY AND ADMINISTRATION

APDI Dr Sjaanie N Koppel

APAI 1

Partner Organisations

Department of Justice, Victoria, Eastern Health, Road Safety Trust, Transport Accident Commission (TAC), University of Ottawa, VicRoads

Administering Organisation Monash University

Project Summary

The prevalence of medical conditions and impairments in older adults and their likely implications for crashes is considerable and will be an increasing problem into the future without appropriate intervention. There are serious gaps in knowledge about older drivers real-world driving and we cannot reliably predict those most at-risk. Current procedures for assessing driving lack scientific basis and offer clinicians little guidance about fitness-to-drive. The proposed research offers a comprehensive international collaborative approach to enhance the safe mobility and quality of life of older Australian drivers, through development of evidence-based screening for safe driving, innovative training and other management solutions.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100258 Prof Michael G Clyne, Prof Colette J Browning, Dr Marisa Cordella, Dr Hui Huang
Approved Project Title **Connecting younger second language learners and older bilinguals: Intergenerational, intercultural encounters and second language development**

2010 \$109,867.00
 2011 \$85,003.00
 2012 \$127,234.00
 Primary FoR 2004 LINGUISTICS
 APAI 2

Partner Organisations

Association of Independent Schools of Victoria, Council on the Ageing (COTA) Victoria, Department of Education and Childhood Development, Victorian Multicultural Commission

Administering Organisation Monash University

Project Summary

This project brings together upper secondary school learners of Chinese, German or Spanish and older speakers of the language, promoting mutually beneficial inter-cultural, intergenerational encounters. Valuable community language resources will be tapped to motivate and enhance the second language learning for the social, cultural and economic benefits. The model promises to make senior secondary second language learning more effective. Australia's social fabric will be enhanced by interactions between cultures and between generations. The project addresses two important goals of the research Priority II --- It is strengthening the Australian social and economic fabric and ageing well, ageing productively.

LP100100159 Prof Graham V Currie, Dr Majid Sarvi, Dr Nicholas B Hounsell, Mr Ray Kinnear
Approved Project Title **Optimising the design and implementation of public transport priority initiatives**

2010 \$57,137.00
 2011 \$60,763.00
 2012 \$64,394.00
 Primary FoR 0905 CIVIL ENGINEERING
 APAI 2

Partner Organisations

Department of Transport, Victoria, VicRoads

Administering Organisation Monash University

Project Summary

This project strengthens national approaches to a pervasive Australian problem, growing traffic congestion deteriorating liveability, environmental health & economic performance of the cities where most Australians live. Public transport can address these issues but most is provided by buses which are caught up in traffic congestion. This project improves approaches for traffic priority design to improve the effectiveness and efficiency of on-road public transport. It optimises the design of individual and groups of priority treatments and will generate diagnostic tools to better target priority treatments. Findings will better focus Australia's approach to increasingly challenging transport futures.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100508 Prof Brian G Falzon, Dr Zhiping Chen
Approved Project Title **Improving the process modelling capability for manufacturing large composite structures used on passenger aircraft.**

2010	\$35,000.00
2011	\$35,000.00
2012	\$35,000.00
Primary FoR	0901 AEROSPACE ENGINEERING
APAI	1

Partner Organisations

Boeing Research and Technology Australia

Administering Organisation Monash University

Project Summary

This proposal aims to reduce manufacturing costs by developing innovative simulation tools for the production of future lightweight composite aerostructures. The development of a reliable predictive tool to simulate the cost-effective production of resin-infused composite aerostructures, will represent a significant technical advance. The successful transfer of this technology to Boeing Aerostructures Australia would give it a distinct competitive edge when bidding for participation in future international development programmes and will yield substantial economic benefits whilst further strengthening and developing local expertise. Lightweight aircraft structures will also contribute towards reducing the environmental impact of aviation.

LP100100894 Prof Barrie C Finnin, Prof Roy M Robins-Browne, Prof Robyn H Guymer, Dr Russell J Tait, Dr Florian H Graichen, Dr Penelope J Allen, Dr Michael S OShea
Approved Project Title **Study the Utility of Novel Drug Polymer Conjugates**

2010	\$120,000.00
2011	\$120,000.00
Primary FoR	0303 MACROMOLECULAR AND MATERIALS CHEMISTRY

Partner Organisations

The Bionic Ear Institute

Administering Organisation Monash University

Project Summary

The products likely to arise from the technology described in this proposal could have application in medical, veterinary and agricultural industries. It offers the potential to treat diseases that are at present poorly treated by enabling delivery direct to the diseased organ (e.g. eye - bacterial endophthalmitis). Completion of the project will also assist a fledgling biotech company transition to a development company with a multiple product portfolio, which will have a direct economic benefit to Australia both in terms of potential export earnings and as an employer highly skilled staff. The project will also provide research training and career opportunities for developing Australian based researchers.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100066 Prof Maria Forsyth, Prof Douglas R MacFarlane, Dr Bjorn Winther-Jensen, Dr Dirk A Fiedler, Dr Patrick C Howlett

Approved Project Title **Metal-air batteries with improved rate capability and safety for hearing applications**

2010	\$150,000.00
2011	\$152,000.00
2012	\$146,000.00
Primary FoR	0912 MATERIALS ENGINEERING
APAI	2

Partner Organisations

Cochlear Ltd, VARTA Microbattery GmbH

Administering Organisation Monash University

Project Summary

Hearing impairment affects on average 20% of the adult population in western society, with the impact being as high as 50% in older adults. Effective hearing devices require a significant amount of power, supplied by a battery, to support their function. Current batteries require very frequent replacement and represent a significant impediment to advances in the technology. This project will develop improved energy and power density batteries which will lead to immediate implementation of more powerful signal processing algorithms, making hearing aids much more effective and appealing to the user. This, in turn, will improve recipient compliance and thus the quality of life for those with severe hearing impairment.

LP100100315 Dr Alexandra Gartrell, Prof Lenore H Manderson

Approved Project Title **The social and cultural context of disability in the Solomon Islands: Identifying culturally appropriate solutions to disadvantage**

2010	\$20,733.00
2011	\$46,174.00
Primary FoR	1604 HUMAN GEOGRAPHY

Partner Organisations

Australian Agency for International Development

Administering Organisation Monash University

Project Summary

"1. International relations. This research promotes Australia's relations with Pacific nations by strengthening the Solomons sole disabled peoples organisation and the Ministry of Health's Community-Based Rehabilitation Program through action-based training, provincial and local level networking.
2. Capacity-building. By better understanding people's experiences of disability, this research assists Australia's NGOs and government agencies to better formulate effective domestic and international solutions.
3. Social equity. By identifying solutions to disability-based discrimination, this research contributes to greater social equity and harmony, both critical in a context of heightened environmental risk and economic uncertainty."

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100434 Dr Roslyn M Gleadow, Prof John D Hamill, Dr Timothy R Cavagnaro, Prof Birger L Moeller
Approved Project Title **Re-balancing global resources: Manipulating toxic prussic acid (dhurrin) to improve nitrogen use efficiency in forage sorghum in a changing climate**

2010 \$90,000.00

2011 \$90,000.00

2012 \$90,000.00

Primary FoR 0607 PLANT BIOLOGY

Partner Organisations

Pacific Seeds

Administering Organisation Monash University

Project Summary

Sorghum is grown widely in Australia and world-wide for forage, grain (mostly for animal feed) and biofuels. It grows well in dry areas. The problem is that the leaves contain a toxin that releases prussic acid (cyanide) that can reduce animal production or even kill stock feeding on it, especially when water stressed. The problem will get worse with climate change. Low-cyanide plants developed by us using non-GM methods grow fast, but accumulate nitrate instead which is also toxic. This is a waste of expensive fertiliser too. We aim to develop plants that divert resources to growth instead of toxins in order to reduce fertiliser use and help prepare for the future. The fast growing plants may also be useful as a biofuel crop.

LP100100032 Prof Charmine E Hartel, Prof James C Sarros, A/Prof Andrew J Pirola-Merlo, Dr Giles Hirst, Dr Simon A Moss, Ms Katrina A Bahen, Prof Bruce Avolio

Approved Project Title **Development of psychological capital in emergency service organisations**

2010 \$80,000.00

2011 \$80,000.00

2012 \$80,000.00

Primary FoR 1503 BUSINESS AND MANAGEMENT

Partner Organisations

Victoria State Emergency Service

Administering Organisation Monash University

Project Summary

The project addresses the research priorities 'Promoting good health and well being for all Australians' and Safeguarding Australia. The project will identify ways in which the performance and wellbeing of volunteer and paid members of emergency service organisations can be enhanced, potentially diminishing the likelihood of depression, aggression, and other detrimental effects. The findings will also contribute to the quality of training provided to leaders in emergency services. Theoretically, the project will advance understanding of the mechanisms that underpin the psychological capital construct, placing Australian researchers at the forefront of this important emerging field of inquiry.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100428 Dr Jennifer M Miller, Dr Joel A Windle
Approved Project Title **Designing a model of pedagogy for low literacy refugee-background students: Connecting language, literacy and content-based learning**

2010 \$40,745.00

2011 \$57,191.00

2012 \$33,118.00

Primary FoR 1302 CURRICULUM AND PEDAGOGY

Partner Organisations

Department of Education and Early Childhood Development

Administering Organisation Monash University

Project Summary

Policy makers and schools are urgently seeking models of literacy pedagogy which maximise student engagement and positive outcomes for low literacy refugee background (LLRB) students. This project will establish a model of literacy pedagogy that is adapted to the needs of these learners and will result in higher attainment and increased retention rates. The model will facilitate students' successful transition to the secondary school curriculum and their social integration and economic participation in Australian society. The project findings will provide a solid base for planning future provision which will benefit curriculum writers, teacher educators, policy makers, funding bodies, and teachers.

LP100100448 Prof Jian-Feng Nie, Prof Wen-Jiang Ding
Approved Project Title **Development of Ultrahigh Strength Magnesium Extrusion Alloys for Manufacturing Lightweight Aircraft Framework**

2010 \$40,000.00

2011 \$40,000.00

2012 \$60,000.00

Primary FoR 0910 MANUFACTURING ENGINEERING

APAI 1

Partner Organisations

Shanghai LS Light Alloys Product CO

Administering Organisation Monash University

Project Summary

Australian Federal and State Governments and the private sector have made substantial investments in magnesium metal and alloys in the past 10 years in order to establish a magnesium industry that can bring Australia the wealth that has been generated by the iron and aluminium industries. One of the key steps to achieve this goal is to continuously and substantially increase the international demand for the magnesium metal which is currently only 1/1700 that of iron and 1/50 that of aluminium. This project has the potential to increase the international magnesium market and to provide a platform for overseas commercialisation of Australian technologies.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100889 Dr Pathegama G Ranjith, Dr Asadul Haque, Dr Jayantha K Kodikara, Dr Abdelmalek Bouazza

Approved Project Title **Influence of scale effect on the strength of rock mass for the better prediction of slope stability in large open-cut mines.**

2010 \$100,000.00

2011 \$103,000.00

2012 \$145,000.00

Primary FoR 0914 RESOURCES ENGINEERING AND EXTRACTIVE METALLURGY

APAI 1

Partner Organisations

BHP Billiton Ltd

Administering Organisation Monash University

Project Summary

The proposed project has the potential to bring national economic benefits through sustainable infrastructure and environment, commercial enterprise and community health and safety. Mining industry in Australia plays a major role for creating significant employment in regional Australia, coal-fired electricity generation, and export income which underpins the international competitiveness of the entire Australian economy. The proposed project will assist Australian mining industry in gaining a better understanding of the mechanics of failure of large open cut mines, an improved design approach for high steep slopes, and in developing a new set of guidelines which can be used to assess such a risk.

LP100100194 Dr Martin J Scanlon, Prof Michael W Parker, Dr John J Deadman, Dr David I Rhodes, Dr David K Chalmers

Approved Project Title **New approaches to inhibition of activity of HIV integrase**

2010 \$185,000.00

2011 \$180,000.00

2012 \$235,000.00

Primary FoR 0304 MEDICINAL AND BIOMOLECULAR CHEMISTRY

Partner Organisations

Avexa Ltd

Administering Organisation Monash University

Project Summary

This project aims to assist in the development of novel anti-HIV drugs that will benefit the 17000 Australians and more than 33 million people worldwide who are currently suffering with this terrible disease. The project will utilise state-of-the-art approaches in structure-based drug design to identify and synthesise compounds as leads for the development of anti-HIV drugs. Furthermore, the project will provide invaluable training for the researchers involved and enhance the relationship between the academic and commercial collaborators.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100294 Dr Cathy R Sheehan, Prof Helen De Cieri, Dr Brian K Cooper, Prof Robert D Brooks
Approved Project Title **Organisational performance during environmental uncertainty: The impact of an influential human resource function and high involvement work practices**

2010	\$26,669.00
2011	\$26,669.00
2012	\$26,669.00
Primary FoR	1503 BUSINESS AND MANAGEMENT
APAI	1

Partner Organisations

Australian Senior Human Resources Roundtable

Administering Organisation Monash University

Project Summary

Australians will benefit from the project because it will: 1) assist in the promotion of strategies that manage the productivity of critical talent at a time of environmental uncertainty; 2) promote a strategic rather than a reactive approach to the management of the Australian workforce at a time when companies may be pressured to take a short term view; 3) help to generate a positive workplace relations climate through the carriage of employee-focussed human resource management practices; and 4) provide guidance for the development of the competencies required for HRM professionals to add value for employees and for organisational performance.

LP100100746 Prof John Sheridan, A/Prof Hugh M Blackburn
Approved Project Title **Investigation into flow over complex topography and escarpments for wind turbine siting using experimental and computational methods**

2010	\$53,338.00
2011	\$53,338.00
2012	\$53,338.00
Primary FoR	0913 MECHANICAL ENGINEERING
APAI	2

Partner Organisations

Hydro Tasmania, Suzlon Energy Australia Pty Ltd

Administering Organisation Monash University

Project Summary

This project will improve national capability to optimise power production from wind turbine farms in complex terrain by improving the understanding of the flow regime. By better understanding separated regions and the turbulent structures within these regions power production can be optimised and fatigue risks associated with turbine positioning in complex sites can be reduced. This will improve confidence in wind farm site assessment techniques and consequently reduce economic risks associated with current wind farm viability assessments. By increasing national capacity to generate clean energy stationary energy emissions can be reduced. This project will also deliver high calibre graduates that will be potential future industry leaders.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100599 A/Prof Christopher J Trotter, Prof Colette J Browning, Prof Daniel W O'Connor, Prof Paul M Collier, A/Prof Rosemary J Sheehan

Approved Project Title **Ageing in prison: A strategic framework for the management of ageing offenders in the Australian criminal justice system**

2010 \$60,000.00

2011 \$72,000.00

Primary FoR 1602 CRIMINOLOGY

Partner Organisations

Department of Justice, Victoria, Victorian Association for the Care and Resettlement of Offenders (VACRO)

Administering Organisation Monash University

Project Summary

The knowledge and strategies offered by this research will contribute to significant improvements in planning of programs and facilities for Australian prisons and prisoner support services. In turn, ageing prisoners will benefit from improved mental and physical health, reduction in homelessness, and reduced recidivism. Improved knowledge of the needs of ageing prisoners will allow reduced costs, through better planning, less inefficiencies and a decreased burden on community health and welfare systems. The project will also assist government departments to ensure national and international human rights obligations are met.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

RMIT University

LP100100010 Prof John A Hawley, Prof Stuart M Phillips, Dr Trent Stellingwerff, Dr Daniel Moore, Prof Louise M Burke, Dr Vernon Coffey

Approved Project Title **Optimising Exercise and Nutrition Throughout the Life Cycle**

2010 \$109,000.00

2011 \$109,000.00

2012 \$106,851.00

Primary FoR 1106 HUMAN MOVEMENT AND SPORTS SCIENCE

APDI Dr Vernon Coffey

APAI 1

Partner Organisations

Australian Institute of Sport, McMaster University, Nestle Research Centre

Administering Organisation RMIT University

Project Summary

During the past decade the proportion of Australia's population aged 65 years and over has increased to 13% (2.7 million). During the same period, the proportion of the population aged 85 years and over has more than doubled and is now the fastest growing subpopulation in Australia. As the number of elderly persons continues to grow, sarcopenia-related conditions will have a dramatic and inevitable impact on the lives of all Australians. The novel dietary protocols developed from the results of the studies undertaken in this proposal will translate into better treatment options for reversing age-dependent muscle degeneration. This is a critical first step for improving the standard of living for a large portion of Australian society.

LP100100696 A/Prof Arnan Mitchell, Dr Thach G Nguyen, Dr Madhu Bhaskaran, Mr Neil J Baker

Approved Project Title **Silicon Photonic Platform for Quantum Encryption and Communications**

2010 \$97,851.00

2011 \$93,182.00

2012 \$88,182.00

Primary FoR 0205 OPTICAL PHYSICS

APDI Dr Thach G Nguyen

Partner Organisations

Quintessence Labs Pty. Ltd.

Administering Organisation RMIT University

Project Summary

The integrity of a secure communications link can mean the difference between life and death in a defence environment. In the civilian arena, the security of electronic financial transactions is also critical to guard against 'cyber' theft. Encryption of data using unique quantum 'noise' as a key has been proposed as an exceptionally strong approach. Attempts to intercept the key during transmission can easily be detected.

Quantum key transmission has been demonstrated but requires impractically expensive, bulky and exotic equipment. This project will explore low-cost, silicon chip based quantum key transfer modules. Our aim is to render quantum encryption as simple as adding an expansion card to a standard computer or portable device.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100037 Prof Lin Padgham, Dr John R Thangarajah, Dr Timothy Miller
Approved Project Title **Integrating and automating testing in multi-agent system development**

2010 \$80,000.00

2011 \$80,000.00

2012 \$70,000.00

Primary FoR 0801 ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

Partner Organisations

CAE Professional Services Australia Pty Ltd

Administering Organisation RMIT University

Project Summary

This research will provide mechanisms that facilitate easier and more thorough testing of multi-agent systems. Multi-agent technology is extremely powerful and can save businesses substantial time and effort in developing complex systems. Automated testing will ensure that systems built using this technology are more robust, and will also enable substantial savings in time required for testing. Multi agent systems are notoriously difficult to test, due to their complexity. However the approaches used in this project will enable intelligent generation of test cases that are potentially difficult, and also generation of test cases that are based on specified functionality.

LP100100609 A/Prof Trevor W Stevenson, Dr Gregory D Nugent, Prof David M Stalker
Approved Project Title **The use of in planta digestion for pretreatment of biofuel feedstock**

2010 \$93,000.00

2011 \$93,000.00

2012 \$93,000.00

Primary FoR 1003 INDUSTRIAL BIOTECHNOLOGY

APAI 2

Partner Organisations

Biomass Conversion Technologies Pty Ltd

Administering Organisation RMIT University

Project Summary

This project will develop crop plants that overcome the current technical and economic impediments to the use of crop residues as biomass for large scale biofuel production. This innovation will position rural Australia at the forefront of global efforts to develop ligno-cellulose-based fuel ethanol industries and help meet mandatory renewable energy targets and the growing demand for alternative transport fuels. This project will also provide training and professional development for three early career researchers, exposing them to a suite of cutting edge technologies applied to a real world challenge - supplying renewable fuels in a sustainable and economically viable fashion.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100404 Prof Zahir Tari, A/Prof Jiankun Hu, Dr Abdun N Mahmood
Approved Project Title **Designing Distributed Intrusion Detection Systems for Critical Industrial Infrastructures**

2010	\$90,000.00
2011	\$80,000.00
2012	\$80,000.00
Primary FoR	0801 ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING
APAI_IT	1

Partner Organisations

Australian Science and Management Academy Pty Ltd

Administering Organisation RMIT University

Project Summary

SCADA systems are computerized systems that control and monitor industrial and critical infrastructures, such as power grid, gas and water facilities and nuclear power plants. Many cyber-attacks on SCADA systems make such systems vulnerable. Also there is an increasing risk that SCADA vulnerabilities could be exploited by terrorist organizations. The security of SCADA systems of critical infrastructures has enormous and direct impact to our national security, economy and social life because of potential disasters that could happen from natural causes as well as malicious attacks. This project aims to investigate the relevant issues and provide efficient and reliable technological solutions to detect and prevent such problems.

LP100100250 A/Prof Andrew Turpin, Dr Allison McKendrick
Approved Project Title **Smart algorithms for visual field assessment**

2010	\$52,935.00
2011	\$48,013.00
2012	\$50,590.00
Primary FoR	1701 PSYCHOLOGY
APAI	1

Partner Organisations

Heidelberg Engineering

Administering Organisation RMIT University

Project Summary

Australian demographic studies show that visual impairment contributes significantly to elderly disability. Visual field loss due to glaucoma, the second leading cause of blindness in developed nations, may be slowed if detected early, but recent studies estimate 50% of Australians with glaucoma are undiagnosed. The fast and effective approaches to measuring visual fields discovered in this project will allow more accurate diagnosis and monitoring of vision loss; crucial for the ARC's priority goals of "ageing well, ageing productively" and "preventative healthcare". Developing smart algorithms in conjunction with Heidelberg Engineering creates an opportunity for the international promotion of Australia's biomedical software capabilities.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Swinburne University of Technology

LP100100526 Dr Kathy D Arthurson, Dr Anna M Ziersch

Approved Project Title **The relocation tool kit: A guide for implementing relocation policies that enhance residents health and well-being and social inclusion**

2010 \$33,000.00

2011 \$33,000.00

2012 \$33,000.00

Primary FoR 1605 POLICY AND ADMINISTRATION

Partner Organisations

VicHealth

Administering Organisation Swinburne University of Technology

Project Summary

The project aims to identify and rank in order of importance key factors affecting the health, wellbeing and social inclusion of disadvantaged groups when they are rehoused as part of housing upgrading projects. This information will increase our understanding of the impacts of changes to housing quality, social networks (familial, friends), neighbourhood environments (reputation, socio-economic mix, services) and project management models (resident involvement, community consultation processes). The expected outcome is a tool kit for policy makers to form innovative responses to promote health and well being and social inclusion amongst the most disadvantaged groups in Australian society.

LP100100622 Prof Jun Han, Prof John Grundy, Dr Jean-Guy Schneider, Dr Lars Grunske, Dr Janine E Radford

Approved Project Title **Large-Scale Emulation for Enterprise Software Systems**

2010 \$170,000.00

2011 \$145,000.00

2012 \$155,000.00

Primary FoR 0803 COMPUTER SOFTWARE

APAL_IT 1

Partner Organisations

Computer Associates

Administering Organisation Swinburne University of Technology

Project Summary

This project will deliver a key future software technology for scalable quality assurance of highly interconnected enterprise IT systems, significantly contributing to more reliable and effective business operations in all industry sectors. It will fill a market gap and give Australian businesses a world competitive advantage. The project will generate world-leading research outcomes and further cement Australia's leading research position in enterprise software systems engineering. In particular, it will make major contributions to research into complex large-scale system interaction, system performance and scalability, and system behaviour modelling. The project also provides an excellent training environment for young researchers.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The University of Melbourne

LP100100586 Dr Jonathon R Barnett, Dr Anna C Hurlimann, Prof Ruth Fincher

Approved Project Title **Equitable local outcomes in adaptation to sea-level rise**

2010 \$92,000.00

2011 \$104,000.00

2012 \$102,000.00

Primary FoR 1604 HUMAN GEOGRAPHY

Partner Organisations

Department of Sustainability and Environment, Victoria, East Gippsland Shire Council, Gippsland Coastal Board, VIC Department of Planning and Community Development, Wellington Shire Council

Administering Organisation The University of Melbourne

Project Summary

The project clearly falls within the priority goal of responding to climate change and variability in being about responding to sea-level rise. It is of direct benefit to rural communities in Gippsland that are vulnerable to sea-level rise, and the project has been identified as a priority research need by the Gippsland Coastal Board, local governments in Gippsland, and the Victorian Government, all of whom are partners in this project. The guidelines produced will contribute to improved decision making about adaptation nationally and internationally, and the project's intellectual outcomes will be of interest and values to researchers working in Australia and abroad.

LP100100825 Prof Philip Batterham, Prof Michael W Parker

Approved Project Title **Insecticide targets in the nervous system: Discovery and design for sustainable insect pest control**

2010 \$160,000.00

2011 \$180,000.00

2012 \$180,000.00

Primary FoR 0702 ANIMAL PRODUCTION

Partner Organisations

Novartis Animal Health Australasia Pty Ltd

Administering Organisation The University of Melbourne

Project Summary

Insect pests impose massive costs in food production, in human health and in the wellbeing of our companion animals. Chemical insecticides remain a major weapon in the control of these pests, but the use of insecticides has some downsides. The way in which insecticides kill insects is poorly understood and insecticide usage has negative impacts in the environment – the persistence of chemical residues and the killing of beneficial insects along with the pests. Further, insects become resistant to insecticides, so pest control is lost. This proposed research seeks to identify the 'achilles heel' in insect pests and to target them with new generation insecticides to gain safe, effective and sustainable control.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100441 Prof Roger D Cousens, Dr Nicholas S Williams, Prof Richard P Duncan
Approved Project Title **'Streamlining search and destroy': development of a robust prioritisation framework for weed eradication using Hawkweed species**

2010 \$112,225.00

2011 \$94,000.00

2012 \$96,176.00

Primary FoR 0501 ECOLOGICAL APPLICATIONS

Partner Organisations

Department of Environment and Climate Change NSW, Parks Victoria, VIC Department of Primary Industries and Fisheries

Administering Organisation The University of Melbourne

Project Summary

Introduced species are one of the greatest threats to our biodiversity and agriculture, as evidenced by the ARC's National Research Priority: Safeguarding Australia. This project will advance Australia's ability to protect itself from invaders by developing tools that guide cost-effective detection and response. Our project will have a direct effect on the planning and management of Hawkweed control in Victoria and New South Wales. The framework delivered will have direct application to numerous other weeds (and relevance to other pests and diseases) within and beyond Australia.

LP100100068 A/Prof Michael J Davern, Dr Carlin Dowling, A/Prof Robyn Moroney
Approved Project Title **Securing the future of financial services: Building a behavioural model of effective operational risk management**

2010 \$55,000.00

2011 \$55,000.00

Primary FoR 1501 ACCOUNTING, AUDITING AND ACCOUNTABILITY

Partner Organisations

National Australia Bank

Administering Organisation The University of Melbourne

Project Summary

Securing the financial services industry is fundamental to the Australian economy. Effective operational risk management is vital to this goal. It requires appropriate attitudes to operational risk and widespread buy-in to risk management practices. This project will identify managerial controllable factors that ensure more consistent and widespread deployment of effective operational risk management practices and attitudes. It will inform the monitoring activities of regulators. In turn, it will enable the financial services industry to better avoid undesirable risks and to better manage the negative effects of unexpected events. This directly contributes to the future stability of the Australian economy.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100131 Dr Elise C Davis, Prof Elizabeth B Waters, Prof Helen E Herrman, A/Prof Linda J Harrison, Prof Margaret Sims, Dr Kay E Cook, Prof Andrew J Mackinnon, A/Prof Bernard J Marshall, Ms Cathrine Mihalopoulos

Approved Project Title **An exploratory cluster trial of a sustainable capacity building intervention to promote positive child mental health in Family Day Care**

2010	\$44,508.00
2011	\$54,092.00
2012	\$58,414.00
Primary FoR	1301 EDUCATION SYSTEMS

Partner Organisations

Family Day Care Australia, Victorian Health Promotion Foundation, Windermere Child and Family Services Inc

Administering Organisation The University of Melbourne

Project Summary

Rarely is solution-oriented intervention research built and conducted with rigorous research designs in communities of extreme disadvantage. This study builds on the enthusiasm of a leading child welfare organisation in its commitment to contribute to evidence for practice-oriented solutions. The research will serve as a model for the Family Day Care and childcare sectors. The study is an essential step in the development of an intervention prior to a large-scale evaluation. With a strong evidence base, this program may be implemented widely within the sector nationally, thus addressing a key area of children's health inequalities - mental health.

LP100100296 Dr Scott Drake, Prof Arsen Melikov

Approved Project Title **Impact and Effectiveness of Personal Ventilation in Open Plan Offices: a study of the Task Air system**

2010	\$26,669.00
2011	\$26,669.00
2012	\$26,669.00
Primary FoR	1202 BUILDING
APAI	1

Partner Organisations

UCI Projects Pty Ltd

Administering Organisation The University of Melbourne

Project Summary

Centralised air-conditioning systems are the standard for commercial office buildings in Australia. These systems are energy intensive, typically accounting for around 50% of building energy use. However, lack of occupant control over set temperatures or air movement tends to reduce thermal comfort, which can adversely affect worker productivity. The benefit of this project is that it will quantify the improvements to occupant comfort and energy savings possible with a PV system. This study will enable PV systems to be evaluated as an alternative to traditional air-conditioning, thereby demonstrating their effectiveness as a means of improving the sustainability rating of commercial office buildings in Australia.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100091 Prof Robin B Gasser, Dr Aaron R Jex, Dr David T Littlewood
Approved Project Title **Mitogenomics using a massively parallel reactor platform - from barcoding to diagnostic tools for pathogens of major socioeconomic importance**

2010	\$80,000.00
2011	\$80,000.00
2012	\$80,000.00

Primary FoR 0699 OTHER BIOLOGICAL SCIENCES

Partner Organisations

Natural History Museum London

Administering Organisation The University of Melbourne

Project Summary

The national/community benefits are: (1) to develop a long-term, high quality scientific and technological program contributing to national objectives, including the maintenance of a strong capability in basic research, the development of new scientific concepts and the enhancement of international collaborative links; (2) to strengthen the links between basic and applied research; (3) to develop excellence in research by promoting collaborative research, resulting in a more efficient use of resources in a national and international context; (4) to enhance the skills-base in biology and biotechnology; (5) to substantially increase global visibility through quality research, leading to an increased investment in Australian science.

LP100100092 Prof Robin B Gasser, A/Prof Andreas Hofmann, Dr Alexander C Loukas, Prof Paul W Sternberg
Approved Project Title **Elucidating structure and function of activation-associated secreted proteins (ASPs) in blood-feeding hookworms – toward new methods of control**

2010	\$220,000.00
2011	\$190,000.00
2012	\$190,000.00

Primary FoR 0699 OTHER BIOLOGICAL SCIENCES

Partner Organisations

Sabin Vaccine Institute

Administering Organisation The University of Melbourne

Project Summary

The national/community benefits are: (1) to develop a long-term, high quality scientific and technological program contributing to national objectives, including the maintenance of a strong capability in basic research, the development of new scientific concepts and the enhancement of international collaborative links; (2) to strengthen the links between basic and applied research; (3) to develop excellence in research by promoting collaborative research, resulting in a more efficient use of resources in a national and international context; (4) to enhance the skills-base in biology and biotechnology; (5) to substantially increase global visibility through quality research, leading to an increased investment in Australian science.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100223 Dr Lisa F Gibbs, Prof Elizabeth B Waters, Dr Andrea M de Silva-Sanigorski, A/Prof Mark G Gussy, Ms Lisa C Gold, Prof Laurence A Moore, Prof Richard G Watt, Dr Christine M Armit, Adj/Prof Hanny Calache

Approved Project Title **Teeth tales: A culturally competent community intervention for child oral health in low SES area of urban Melbourne**

2010 \$151,000.00

2011 \$123,000.00

2012 \$150,000.00

2013 \$67,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Arabic Welfare, Dental Health Services Victoria 205, Moreland City Council , Moreland Community Health Service Inc , Pakistan Australia Association, Melbourne Inc, Victorian Arabic Social Services

Administering Organisation The University of Melbourne

Project Summary

Dental caries represent the highest burden of disease for pre-school children. Disadvantaged, refugee and migrant communities face an estimated increased prevalence of 60%. Community-based health solutions that are evidence based and cross-sectoral are urgently needed. The potential impact of improved child oral health on social, emotional and learning outcomes is compelling. The child health and service change outcomes of this study will be of direct benefit to the community and will have clear applications for other culturally diverse local government areas in Australia and other developed countries. The findings will directly inform policy/funding decision making by Dental Health Services Victoria for Victorian families and services.

LP100100392 A/Prof Geoffrey J Howlett, Dr Terrence D Mulhern, Dr Daniel M Hatters

Approved Project Title **Biophysical identification of natural human antibody targets**

2010 \$100,000.00

2011 \$100,000.00

2012 \$100,000.00

Primary FoR 1102 CARDIOVASCULAR MEDICINE AND HAEMATOLOGY

Partner Organisations

Patrys Ltd

Administering Organisation The University of Melbourne

Project Summary

A natural human antibody, PAT-SM6, isolated using technology developed by the partner organisation (Patrys), offers promise as a therapy to reduce mortalities due to cancer, the leading cause of death in Australia. The novelty of the approach pioneered by Patrys is the direct production of human antibodies which avoids undesirable side effects associated with the use of antibodies containing non-human components. This project is to discover the specificity of PAT-SM6 for proteins and protein complexes and how these interactions lead to tumour cell death. This work will enhance the effectiveness of human antibody therapies and help in the development of this fast growing area within the biotechnology industry in Australia.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100193 Prof Graham L Hutchinson, Dr Philip A Collier, A/Prof Linlin Ge, Dr Xiaojing Li
Approved Project Title **A new approach to structural design that incorporates the effect of non-structural components**

2010	\$60,000.00
2011	\$57,697.00
2012	\$60,000.00
Primary FoR	0905 CIVIL ENGINEERING
APAI	2

Partner Organisations

C.R. Kennedy and Company Pty Ltd, Leica Geosystems, Survey21 Land and Engineering Surveyors

Administering Organisation The University of Melbourne

Project Summary

The construction industry is a significant contributor to the Australian economy. Each year billions of dollars are spent erecting new high rise buildings. Further, Australian engineering firms bid on major construction projects throughout the world, particularly in Asia and the Middle East. The research described here promises to deliver economies to the Australian construction industry as well as equipping local firms involved in structural design to better compete for offshore work .

Community benefits will take the form of reduced construction costs and the capacity for a more complete and up to date knowledge of the structural performance and risk of aging assets, thereby increasing community confidence and safety.

LP100100503 Prof Jack P Keating, A/Prof John Polesel, Mr Eric N Sidoti, Prof Brian J Galligan, Ms Rosalyn Black, Dr Lucas L Walsh, Ms Maree L Dressing

Approved Project Title **Federalism in Australian schooling: Its impact upon quality and equity**

2010	\$55,167.00
2011	\$80,486.00
2012	\$71,024.00
Primary FoR	1301 EDUCATION SYSTEMS

Partner Organisations

Department of Education and Early Childhood Development, Foundation for Young Australians

Administering Organisation The University of Melbourne

Project Summary

The project is designed to support the objectives for schooling in Australia that have been identified by the Council of Australian Governments. These objectives are in the face of growing inequities in the distribution of educational resources, growing concentrations of students with high levels of educational needs, and imbalances in the distribution of resources across key stages, especially in early childhood education. By examining the ways in which federalism contributes to the structural barriers to these objectives and by developing and validating a set of structural reforms the project will contribute to these national objectives.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100800 A/Prof Spas D Kolev, Prof Caixian Tang, A/Prof Peter W Sale, A/Prof Manuel Miro, Mr Desmond C Tan, Mr Brian L Myles, Dr Barry Warwick

Approved Project Title **Phytoextraction approaches for mitigating heavy metal release from unlined and loosely capped rural landfills**

2010 \$101,976.00

2011 \$86,024.00

2012 \$130,000.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

APAI 1

Partner Organisations

Double-E Enviclean Pty Ltd, EPA Victoria, Pyrenees Shire Council, University of the Balearic Islands

Administering Organisation The University of Melbourne

Project Summary

Australian rural landfills are used for storing hazardous wastes which contain toxic metals. Impermeable clay caps are often utilized to encapsulate these wastes and prevent release of pollutants into the environment. The integrity of these caps is crucial and requires constant care. The project aims to develop novel approaches which will improve substantially the long-term environmental safety of rural landfills and deliver additional economic benefits. These approaches involve the use of high-value tree crops and plants capable of extracting toxic metals. Utilization of these plants will create a valuable resource on an otherwise derelict area and this will be of considerable local/regional benefit and national significance.

LP100100854 A/Prof Christopher Leckie, Prof Ramamohanarao Kotagiri

Approved Project Title **Carrier-scale defence against distributed denial-of-service attacks**

2010 \$72,000.00

2011 \$70,000.00

2012 \$70,000.00

Primary FoR 1005 COMMUNICATIONS TECHNOLOGIES

Partner Organisations

PowerGuard Pty Ltd

Administering Organisation The University of Melbourne

Project Summary

Distributed Denial-of-Service (DDoS) attacks are one of the most persistent and damaging threats to services on the Internet. In recent years, there has been widespread use of DDoS attacks for both financial and political advantage by attackers. The challenge for our Australian industry partner (PowerGuard Pty Ltd) is to continue to scale their DDoS defence platform so that it can be used in much higher bandwidth environments, such as carriers' backbone networks, or large government and commercial networks that have multiple high-speed links to the Internet. The results of this project will provide an Australian company with a leading position in this important and growing market.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100291 Prof Joseph Lo Bianco, Dr Trevor T Hay, Prof David L Holm
Approved Project Title **Intercultural Approaches to Teaching Chinese: A basis for pedagogical innovation**

2010 \$100,000.00

2011 \$90,000.00

2012 \$100,000.00

Primary FoR 2003 LANGUAGE STUDIES

Partner Organisations

Asia Society, Beijing Language and Culture University, Collingwood College, Department of Education and Early Childhood Development, Guizhou University, HAVEN Insurance Service, NanJing University, Office of Chinese Language Council International (Hanban), Victorian Curriculum and Assessment Authority, VoVa Economic and Trade Co Ltd

Administering Organisation The University of Melbourne

Project Summary

The nation in general will benefit by having a better prepared and more competent population of Chinese teachers, learners and professionals, whose exposure to Chinese language and culture will encompass the multiplicity of identities in a contemporary, multicultural society. This research will establish Australia as a major innovator in Chinese language pedagogy and will equip Australians to better understand our region and our world. A unique feature of the project is the provision for assessment of cultural awareness derived from study of language, ensuring that students who do not persevere with Chinese language will have a 'surrender value' declaration, recording competency in knowledge of Chinese culture.

LP100100797 Prof Timothy L McCormack, Prof Nicholas J Crofts, Prof Stuart B Kaye
Approved Project Title **Substance Use in Prisons and Other Closed Settings: Identifying appropriate and effective legislative frameworks for a harm reduction approach**

2010 \$26,669.00

2011 \$26,669.00

2012 \$26,669.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

APAI 1

Partner Organisations

Australian Red Cross

Administering Organisation The University of Melbourne

Project Summary

Influencing laws on drugs in closed settings to reflect public health approaches will directly benefit incarcerated individuals and wider communities in Cambodia and in Australia. Australian Red Cross has a long-standing commitment to improving vulnerable peoples' lives as well as a deep-seated community identity; it will facilitate the implementation of its research findings through its prisons programs. Collaborations with AusAID-funded HIV prevention, substance abuse and criminal justice reform initiatives (including HIV/AIDS Asia Regional Program (HAARP) and Cambodia Criminal Justice Assistance Program (CCJAP)) will strengthen Australia's contribution to civil society and public health in Cambodia, and simultaneously reinforce Australia's reputation as a leader on substance use and harm reduction issues.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100805 Dr Janet K McGaw, Dr Emily C Potter, Dr Anoma D Pieris, Prof Graham W Brawn
Approved Project Title **Indigenous Placemaking in Central Melbourne: Representations, practices and creative research**

2010 \$81,000.00

2011 \$81,000.00

2012 \$81,000.00

Primary FoR 1201 ARCHITECTURE

Partner Organisations

Melbourne City Council, Reconciliation Victoria, Victorian Traditional Owners Land Justice Group

Administering Organisation The University of Melbourne

Project Summary

This project will contribute to making a place of belonging, gathering and cultural exchange for and with Indigenous Australians in Melbourne, through dialogic research processes aimed at generating a more inclusive and dynamic understanding of Indigenous identity. It will provide a platform for reconciliatory activities in Victoria with the support of Victorian Indigenous Communities, Reconciliation Victoria, and the Melbourne City Council and educate the public regarding the need for such a facility. It will increase Melbourne's national and international profile by contributing to the provision of a world class cultural centre that engages international tourists and informing future institutional programs.

LP100100756 Em/Prof Thomas A McMahon, Prof David J Karoly
Approved Project Title **Narrowing the scatter and assessing the uncertainty of climate change projections of Australian river flows**

2010 \$80,000.00

2011 \$80,000.00

2012 \$80,000.00

Primary FoR 0406 PHYSICAL GEOGRAPHY AND ENVIRONMENTAL GEOSCIENCE

Partner Organisations

Bureau of Meteorology, Melbourne Water

Administering Organisation The University of Melbourne

Project Summary

Recent prolonged dry conditions in south-eastern Australia have triggered water restrictions in major cities, zero irrigation allocations in the Murray-Darling region and highlighted the importance of water to this country. This project represents an integrated package of research that will enhance our understanding of the uncertainty of future annual river flows, leading to more informed decision making for the sustainable management of Australia's increasingly scarce water resources. The outcomes from this project are highly relevant to the national research priority "An Environmentally Sustainable Australia", particularly priority goals "Water - a critical resource" and "Responding to climate change and variability".

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100388 Dr Robyn U Pierce, Dr Helen L Chick, Dr Ian R Gordon, Mr Michael Dalton, Prof Jane M Watson
Approved Project Title **Statistical literacy in the education workplace: Barriers and enablers for school personnel making data-driven decisions**

2010 \$48,618.00

2011 \$61,994.00

2012 \$58,219.00

Primary FoR 1302 CURRICULUM AND PEDAGOGY

Partner Organisations

Department of Education and Early Childhood Development, Victorian Curriculum and Assessment Authority

Administering Organisation The University of Melbourne

Project Summary

Using quantitative data to monitor workplace processes and improve quality requires both strong statistical literacy and commitment to such decision-making processes. This study of data usage by school personnel will contribute to the success of the National Assessment Program that monitors progress towards the National Goals for Schooling in the 21st Century. It will provide evidence from which to enhance professional learning in data interpretation for both pre- and in-service teachers. The resulting research template has application for examining (a) statistical literacy needs in other sectors and (b) workers' perceptions of quantitative data used to inform decision-making. This will enhance the smart use of data in the workplace.

LP100100076 A/Prof Matthew Pinnuck, Prof Gregory Clinch, Prof Carol A Adams, Prof Ivan Marusic, Prof Gordon Richardson, Prof Peter M Clarkson, Dr Michael J Brear

Approved Project Title **The reliability of corporate reporting of greenhouse gas estimates: Determinants, consequences, training for accountants and policy Initiatives**

2010 \$44,000.00

2011 \$44,000.00

2012 \$44,000.00

Primary FoR 1501 ACCOUNTING, AUDITING AND ACCOUNTABILITY

Partner Organisations

CPA Australia

Administering Organisation The University of Melbourne

Project Summary

Fundamental to the successful re-allocation of resources to address climate change is that greenhouse gas estimates reported by firms are reliable. The first outcome from this research is the development of tools to assist and train the Australian accountancy profession in the estimation of reliable emissions. The second outcome is identification of factors associated with the inaccuracy and bias of greenhouse gas emissions reported by companies and the consequences of the inaccuracies for the share market's valuation of emission liabilities. These research findings will identify issues that need to be addressed by regulators to ensure that the greenhouse gas estimates reported by companies are reliable.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100524 Prof Steven Praver, Dr Andrew D Greentree, Dr Raymond G Beausoleil, Dr Charles Santori

Approved Project Title **Designing the Quantum-Classical Interface: Technologies for the Diamond Quantum Co-Processor**

2010 \$230,000.00

2011 \$190,000.00

2012 \$230,000.00

Primary FoR 0206 QUANTUM PHYSICS

APAI 1

Partner Organisations

HP Laboratories

Administering Organisation The University of Melbourne

Project Summary

Diamond is already seen as the front-runner for practical, high temperature, quantum information processing tasks. This proposal places the technological spotlight firmly on diamond and partnering with Hewlett-Packard will ensure that the promise of diamond is explored in an industrially relevant (rather than just academic) fashion. HP brings enormous experience and infrastructure, as well as a proven path to prototype and market for successful technologies. This proposal is an outstanding opportunity to increase the relevance of Australian academic research, increase the training and employment options for Australian graduates, and to expand Australian funding opportunities by improving access to US research funds.

LP100100017 Prof Robin G Room, A/Prof David Moore, Dr Sarah MacLean, Mr Brian R Vandenberg, Ms Karen Goltz

Approved Project Title **Understanding and reducing alcohol-related harm among young adults in urban settings: Opportunities for intervention**

2010 \$80,182.00

2011 \$80,182.00

2012 \$80,182.00

Primary FoR 1605 POLICY AND ADMINISTRATION

APDI Dr Sarah MacLean

Partner Organisations

Hume City Council, Municipal Association of Victoria, VicHealth, Victorian Department of Human Services, Yarra City Council

Administering Organisation The University of Melbourne

Project Summary

Alcohol use is a major contributing factor to injury and death, with 2634 young Australians dying from alcohol-related causes in the decade to 2004. Local governments (LGs) urgently require research evidence on which to base policy to reduce alcohol-related harms. The project will provide an analysis of patterns of alcohol consumption by young adults in inner and peri-urban (growth corridor) LG areas, along with information about how young adults view alcohol use. In collaboration with industry partners VicHealth, the Victorian Department of Human Services, the Municipal Association of Victoria and LGs in Hume and Yarra, specific policy recommendations for implementation at LG, state and national levels will be developed and disseminated.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100307 Prof David M Studdert, A/Prof Jane E Pirkis, Prof Graham E Sewell
Approved Project Title **Learning from Preventable Deaths: A prospective evaluation of reforms to Coroners' recommendation powers in Victoria**

2010 \$86,000.00

2011 \$92,000.00

2012 \$91,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Department of Justice, Office of the State Coroner

Administering Organisation The University of Melbourne

Project Summary

Coroners in Australia investigate nearly 13,000 deaths each year and have a unique vantage point on health and safety risks. The public as a whole will benefit from information that helps translate those insights into system changes that work to prevent injuries and accidents from occurring. This project is designed to produce such information. It will also serve stakeholders at several other levels. By illuminating circumstances in which coroners recommendations produce positive change, project findings will help coroners shape and disseminate their prevention messages for maximum effect. Also, for states interested in modifying or boosting coroners' recommendation powers, our findings will help guide reforms.

LP100100127 A/Prof Ian R van Driel, Dr Louise M Judd, Prof Andrew Giraud

Approved Project Title **New genes and models for inflammatory bowel disease**

2010 \$115,000.00

2011 \$110,000.00

2012 \$105,000.00

Primary FoR 1107 IMMUNOLOGY

Partner Organisations

CSL Ltd

Administering Organisation The University of Melbourne

Project Summary

Inflammatory bowel disease affecting millions of people world-wide and results in a significant economic burden (\$100M in Australia per year). In collaboration with Australia's largest biotechnology company, CSL, we will use a novel approach to discover the causes of inflammatory bowel disease. This work will lead to the development of new animal models of inflammatory bowel disease that are vital for analysing the disease and testing treatment options. In addition, this work may lead to new approaches to treating this disease. The project will result in a greater understanding of inflammatory bowel disease, the training of highly skilled scientists and potentially lead to economically valuable knowledge.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100546 Dr Yongping Wei, Prof John Langford, Prof Raymond L Ison, Prof Qi Feng, Dr John D Colvin
Approved Project Title **Systemic and adaptive water governance: lessons for Australia from China and South Africa**

2010	\$106,851.00
2011	\$106,851.00
2012	\$106,851.00
Primary FoR	0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT
APDI	Dr Yongping Wei
APAI	1

Partner Organisations

Cold and Arid Regions Environment and Engineering Research Institute, Goulburn Broken Catchment Management , Khanya-African Institute for Community-Driven , Southern Rural Water

Administering Organisation The University of Melbourne

Project Summary

The way we manage catchments under climate change is one of Australia's major public policy challenges. This project will give new direction to catchment management by developing a science-policy linked, systemic and adaptive water governance mechanism. By recommending policy options for more sustainable water use and creating favourable social-institutional factors for the implementation of these policy options in two Australian catchment authorities through comparative and parallel research in China and South Africa. This project directly addresses the national priority goals of "Water - a critical resource" and "Responding to climate change". This project will also stress Australia's important role in this globally significant issue.

University of Ballarat

LP100100045 Prof John Smyth, A/Prof John J McDonald
Approved Project Title **Re-engaging disadvantaged young people with learning**

2010	\$50,000.00
2011	\$50,000.00
2012	\$50,000.00
Primary FoR	1608 SOCIOLOGY

Partner Organisations

Department of Education and Early Childhood Development - Grampians Region

Administering Organisation University of Ballarat

Project Summary

Having significant numbers of young people, especially those from contexts of socio-economic disadvantage, not experiencing a satisfying and worthwhile education, is a personal, social and economic loss the nation can ill-afford. This research will provide insights into the impediments confronting these young people, the circumstances in which they re-engage with formal learning, and the benefits of having done so. This will enable new policy and practice responses in the direction of reducing economic costs while seeking to ameliorate personal, health and social consequences. Reducing educational inequalities is one of the most salient ways of strengthening Australia's social and economic fabric.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Victoria University

LP100100558 Prof Dorothy Bruck, Cmdr Frank Stockton

Approved Project Title Improving the identification of juvenile firesetters at high risk of recidivism

2010 \$26,669.00

2011 \$26,669.00

2012 \$26,669.00

Primary FoR 1701 PSYCHOLOGY

APAI 1

Partner Organisations

Country Fire Authority, Victoria Metropolitan Fire Brigade

Administering Organisation Victoria University

Project Summary

Young firesetters are not only responsible for some fifth of all fires, they also are at risk of becoming adult arsonists. Australian fire services provide educational programs for young firesetters but about a third may continue to light fires. This project will allow clarification of variables most associated with ongoing firesetting behaviour (recidivism), better prediction of high risk juveniles, understanding of the predictive value of a screening tool, valid assessment of recidivism rates and an increased understanding of mental health agency involvement with firesetter families. These outcomes will help improve programs involving juvenile firesetters, thereby reducing arson and the high cost of uncontrolled fire.

LP100100103 A/Prof Mikel C Duke, Prof Stephen R Gray, Dr Andrew M Groth

Approved Project Title Improving the Durability and Performance of Hollow Fibre Membranes with Nanocomposite and Inorganic/organic Hybrid Materials

2010 \$26,669.00

2011 \$26,669.00

2012 \$26,669.00

Primary FoR 0904 CHEMICAL ENGINEERING

APAI 1

Partner Organisations

Siemens Water Technologies

Administering Organisation Victoria University

Project Summary

Water is a critical resource for societies worldwide and Australia is one of the driest nations on Earth. Options to treat 'used' or lower quality waters for reuse are becoming a necessity. This project aims to implement advanced nanotechnology solutions to improve performance characteristics of widely adopted water treatment membranes, which have the potential to reduce water treatment costs in Australia. This is made possible by the collaboration with Australia's largest manufacturer of water treatment membranes. The outcomes will lead towards a lower maintenance water treatment technology available to communities, at lower cost. The application of such a technology will span from local small scale to major installations worldwide.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100624 A/Prof Yuan Miao, Prof Yanchun Zhang

Approved Project Title **Data Exchange and Service Integration with Applications in Health Information Systems**

2010 \$104,151.00

2011 \$104,151.00

2012 \$104,151.00

Primary FoR 0806 INFORMATION SYSTEMS

APAI_IT 1

Partner Organisations

Westgate General Practice Network

Administering Organisation Victoria University

Project Summary

This project will research and develop an innovative new approach to facilitate real data exchange and service integration across different medical organisations. This approach will significantly improve the quality of health care by providing a solid foundation for integrated medical services, offering on demand and effective access to fragmentally stored patients medical information and minimise the number of data entry errors injected into the medical information systems. The novel integration model will also enable a new autonomous approach for demographic data collection which is essential for evidenced resource allocation, policy making and disease prevention.

LP100100554 Prof Chris Perera, Dr Andrew F Barton

Approved Project Title **Multi-Objective Planning and Operation of Water Supply Systems Subject to Climate Change**

2010 \$26,669.00

2011 \$26,669.00

2012 \$26,669.00

Primary FoR 0905 CIVIL ENGINEERING

APAI 1

Partner Organisations

Grampians Wimmera Mallee Water Corporation trading as GWM Water

Administering Organisation Victoria University

Project Summary

Water is precious, and increasingly scarce. Many Australians – householders, businesses, farmers, those concerned about sustainability and the environment, among others – have diverse preferences about water allocation. Yet the operating rules that water supply system managers currently use were designed when water was comparatively plentiful. This project will assist system managers to develop contemporary rules for water allocation decision-making. A case study of the Grampians headworks system in Victoria will provide the opportunity to trial methods that account for diverse stakeholder preferences in the context of climate change and climate variability, including drought events.

**Summary of Successful Linkage - Projects Proposals for Funding to
Commence in 2010 by State and Organisation**

Queensland

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Griffith University

LP100100411 Prof Michael S Balfour, Prof Bruce V Burton, Dr Merrelyn J Bates, A/Prof Penelope J Bundy, Dr Julie P Dunn, Prof Keithia L Wilson

Approved Project Title **Developing refugee resilience and effective settlement through drama-based interventions**

2010 \$28,000.00

2011 \$26,000.00

2012 \$20,000.00

Primary FoR 1904 PERFORMING ARTS AND CREATIVE WRITING

Partner Organisations

MultiLink Community Services Inc

Administering Organisation Griffith University

Project Summary

The proposed research will impact on national priorities to assist refugees to better negotiate the settlement experience, develop self-sufficiency and resilience, and engage fully with mainstream society (DIMA, 2006). A positive outcome has significant social and economic ramifications as it will address the disproportionate levels of unemployment in Humanitarian entrants, which currently stands at 13.2 per cent (4.5 per cent for other migrants). The social benefits of an effective approach to working with refugees will be the empowerment to make choices that lead to positive pathways, and thus help individuals to live healthy, productive and fulfilling lives in Australia.

LP100100205 Prof Lorelle K Frazer, Dr Scott K Weaven, A/Prof Debra A Grace

Approved Project Title **Survival of the fittest: The performance of franchised versus independent small business during economic uncertainty and recovery**

2010 \$72,000.00

2011 \$60,000.00

Primary FoR 1503 BUSINESS AND MANAGEMENT

Partner Organisations

Department of Innovation, Industry, Science and Research, Franchise Council of Australia

Administering Organisation Griffith University

Project Summary

The contribution of small business to the Australian economy is substantial. There are almost two million small businesses, representing 96% of all businesses in Australia. As the small business sector is Australia's largest employer, providing jobs for 46 percent of the private sector, it is important that they succeed. This research will analyse survival factors during economic uncertainty in order to identify sustainable and enduring success strategies. The study will compare the performance of independently owned and franchised small businesses in both regional and urban communities. Benefits will include improved knowledge about the key factors that drive superior independent and franchised small business performance.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100344 Prof Brendan J Gleeson, Dr Matthew I Burke, Prof William K Mummery, Dr Mitchell J Duncan, Dr Carolyn Whitzman, Dr Paul J Tranter, Prof Carey A Curtis, Dr Christine M Armit
Approved Project Title **iMATCH: Independent mobility, active travel and children's health**

2010	\$60,000.00
2011	\$85,000.00
2012	\$80,000.00
2013	\$10,000.00
Primary FoR	1604 HUMAN GEOGRAPHY
APAI	2

Partner Organisations

Moreland City Council , Moreland Community Health Service Inc , QLD Department of Transport and Main Roads, Queensland Health

Administering Organisation Griffith University

Project Summary

Policy interventions are used across Australia to improve children's independent mobility, to increase children's physical activity levels and social interaction, and to generate more sustainable travel behaviour, particularly for the journey to school. iMATCH provides a holistic and inter-disciplinary evaluation of policy interventions than is undertaken for most evaluations of school travel and children's travel behaviour policies and programs. By controlling for the influence of the built and social environment, the project will provide the necessary support to justify these policy interventions and to identify key improvements for their delivery, supporting more sustainable and healthy lifestyles for Australia's children.

LP100100163 Dr Frederic D Leusch, A/Prof Richard Lim, Prof Dayanthi Nugegoda, Dr Louis A Tremblay, A/Prof Heather F Chapman, Dr Vincent Pettigrove, Dr Stephen J Blockwell, Dr Tarren J Reitsema, Dr Heather M Coleman
Approved Project Title **Investigation of endocrine disruption in Australian aquatic environments**

2010	\$170,000.00
2011	\$150,000.00
2012	\$75,000.00
Primary FoR	0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT
APAI	1

Partner Organisations

Landcare Research, Melbourne Water Corporation, QLD Department of Environment and Resource Management, South East Queensland Water Corporation, Sydney Water, Water Quality Research Australia Ltd, Western Australia Department of Water

Administering Organisation Griffith University

Project Summary

Water is a vital resource. The disposal of wastes is often associated with the release of contaminants like endocrine disruptors into the environment. These contaminants can impact the health of our waterways and lead to potential risks to fish populations and ultimately public health. The hazards resulting from endocrine disruptors have been well defined globally and to a lesser extent in Australia in the last decade, however we have very limited information about possible effects in Australian waterways or reservoirs. This research project will investigate the state of endocrine disruption in our waters. The knowledge gained will address this gap and provide a benefit to the national community, risk managers and importantly our waterways.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100396 A/Prof Darryl C Low Choy
Approved Project Title **Incorporating Indigenous Landscape Values into Regional Planning Processes**

2010	\$115,000.00
2011	\$100,000.00
2012	\$26,669.00
Primary FoR	1205 URBAN AND REGIONAL PLANNING
APAI	1

Partner Organisations

Department of Infrastructure, Energy and Resources, SEQ Catchments Inc., South East Queensland Traditional Owners Alliance Ltd

Administering Organisation Griffith University

Project Summary

Following on from the successful indigenous engagement in this project's pilot study, the proposed research has the potential to make significant contributions to Australia's reconciliation process. It will work towards an equitable and balanced approach to the way our society manages the landscape, through inclusion of the aspirations, priorities and values of indigenous communities. This elevation of indigenous landscape values, which by and large have been excluded from traditional planning processes, will facilitate cross-cultural understanding and can extend into associated fields of community development. Achieving these proactive outcomes will significantly improve landscape management whilst strengthening community ties.

LP100100324 Prof Kristine Toohey, Prof Daniel C Funk, A/Prof Geoffrey W Woolcock, Dr Clare MacMahon, Prof Allan G Hahn, Prof Christopher J Auld, Dr Damian T Farrow, Prof Adrian Bauman, Dr Juanita R Weissensteiner, Dr Jason P Gulbin

Approved Project Title **Improving determinants of Australian sports talent identification and development: a multi-disciplinary approach**

2010	\$112,000.00
2011	\$88,000.00
2012	\$148,000.00
Primary FoR	1106 HUMAN MOVEMENT AND SPORTS SCIENCE
APAI	1

Partner Organisations

Australian Football League, Australian Sports Commission Institute of Sport, Cricket Australia Centre of Excellence, Tennis Australia

Administering Organisation Griffith University

Project Summary

Sport is important to many Australians. Our sport successes enhance our national identity, generate community pride and attract mega sport events. Currently our sport talent identification and development (TID) systems have been surpassed by our international rivals who borrowed from and improved our knowledge. This project will help regain Australia's international advantage and again make Australian TID the international benchmark. Results will highlight the role of TID practices in improving recreational participation and maximising, attracting, developing and retaining sport talent. This will result in improved use of sports limited TID funding by providing greater understanding of factors that influence elite selection and sport development.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

James Cook University

LP100100033 Prof Christopher N Johnson, Dr Sarah M Legge, A/Prof Michael J Lawes, Dr John C Woinarski, Prof
Iain J Gordon, Dr Ian J Radford

Approved Project Title **Mammal declines in northern Australia: science for conservation and recovery**

2010 \$350,000.00

2011 \$345,000.00

2012 \$275,000.00

2013 \$140,000.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

APAI 3

Partner Organisations

Australian Wildlife Conservancy, NT Department of Natural Resources Environment, the Arts and Sport, QLD Department of Environment and Resource Management, Western Australia Department of Environment and Conservation

Administering Organisation James Cook University

Project Summary

Australia's unique mammal fauna is a rich biological heritage for the nation. It provides a wealth of ecosystem services, and many mammal species have special cultural or aesthetic value. However, our mammals are sadly depleted, and we already have the worst record of recent mammal extinction of any nation. Preventing further mammal extinctions, and managing environments to allow declined mammals to recover, will be of great benefit to Australian biodiversity and to the ecosystem processes and human values that depend on it.

LP100100619 Prof Robert L Pressey, Prof Helene D Marsh

Approved Project Title **Innovative systematic conservation planning for Indigenous Land and Sea Country: Torres Strait as a case study**

2010 \$90,000.00

2011 \$80,000.00

2012 \$80,000.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

Partner Organisations

Torres Strait Regional Authority

Administering Organisation James Cook University

Project Summary

Australia's Indigenous communities have responsibilities for managing their Land and Sea Country in partnership with governments. Much of Australia's globally significant biodiversity occurs in Indigenous country. Effective management requires plans to be developed using both western science and Traditional Knowledge to enable local communities to protect both their culture and biodiversity. This project will develop innovative scientific tools to assist Indigenous communities and governments to design and implement systematic conservation planning initiatives 'on country', using Torres Strait as a case study. The tools that are developed will have general relevance to Australian Indigenous communities and developing countries.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Queensland University of Technology

LP100100575 Prof David A Atchison, Mr Ankit Mathur, Dr Saulius R Varnas

Approved Project Title **Vision performance in relationship to spectacle lens design**

2010	\$80,182.00
2011	\$80,182.00
2012	\$80,182.00
Primary FoR	1113 OPTOMETRY AND OPHTHALMOLOGY
APDI	Mr Ankit Mathur

Partner Organisations

Carl Zeiss Vision Australia Holdings Ltd

Administering Organisation Queensland University of Technology

Project Summary

Refractive errors such as short-sightedness, long-sightedness or presbyopia (age related decline in near vision) are the leading causes of visual impairment in the world. Of these, presbyopia affects almost 100% of the population above 45 years of age. This represents over 40% of all Australians. Although spectacles provide a safe and easy means of correcting refractive errors, they affect quality of life due to distorted vision, discomfort such as head and neck ache and cosmetic effects. The goals of the project are to better understand the visual performance of young and old people who wear glasses and to develop improved spectacle lens designs to provide clear and comfortable vision over a range of distances.

LP100100302 Dr Jason J Ford, Dr Luis Mejias Alvarez, Prof Rodney A Walker, Prof Peter J O'Shea

Approved Project Title **Automated vision-based aircraft collision warning technologies**

2010	\$292,000.00
2011	\$263,000.00
Primary FoR	0906 ELECTRICAL AND ELECTRONIC ENGINEERING

Partner Organisations

Boeing Defence Australia

Administering Organisation Queensland University of Technology

Project Summary

Australia is a sparsely populated country with a number of unique airspace features. This project will investigate novel vision-based collision warning systems that can improve safety for piloted aircraft and also help achieve integration of UASs (Uninhabited Aerial Systems) into national airspace. The benefits of UAS technologies are particularly relevant to Australia, as governments and industry struggle to cope with providing equivalent levels of service to remote communities over vast distances (or border protection of vast regions). The population base of Australia requires that cost-effective solutions are sought to meet this end.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100232 A/Prof Marcus Foth, Prof Gregory N Hearn, Ms Jaz Hee-jeong Choi, A/Prof Eli B Blevis, Prof Younghui Kim, Dr Tad Hirsch

Approved Project Title **Eat, cook, grow: Ubiquitous technology for sustainable food culture in the city**

2010 \$106,851.00
 2011 \$106,851.00
 2012 \$106,851.00
 Primary FoR 0806 INFORMATION SYSTEMS
 APDI Ms Jaz Hee-jeong Choi
 APAI_IT 1

Partner Organisations

Cityfood Growers Pty Ltd, Food Connect Pty Ltd, Intel Australia Pty Ltd, James Street Cooking School, Queensland Health

Administering Organisation Queensland University of Technology

Project Summary

Raising people's awareness of healthy and ecological food options with nutritional data and educational information does not foster a sustained practice towards a more environmentally friendly food culture. This study seeks to develop a better understanding how to go beyond just informing and into supporting and sustaining action and change. Drawing on interaction design, ubiquitous computing and real-time information, the study will deliver research findings that inform viable new design approaches and information interfaces which will strengthen Australia's position to resolve the problems of obesity, malnutrition and ecological issues of mass food processing, and contribute to the sustainability of life in Australian cities.

LP100100565 Prof Kerrie L Mengersen, Prof Ian W Turner, Dr Robert J Denham

Approved Project Title **Making the most of remotely sensed data: Bayesian spatio-temporal models for enhanced natural resource management and design**

2010 \$120,000.00
 2011 \$119,000.00
 2012 \$121,000.00
 Primary FoR 0104 STATISTICS
 APAI_IT 1

Partner Organisations

Queensland Department of Natural Resources and Water

Administering Organisation Queensland University of Technology

Project Summary

This research will provide methods for cost-efficient spatio-temporal data collection and analysis, with increased capacity for better decision-making about managing Australia's natural resources. Through the Linkage partners' networks, these benefits will be disseminated throughout regional bodies, government agencies and research groups across and outside Australia. The statistical techniques derived in this project will enhance Australia's capability in the national priority area of mathematical sciences, and will contribute to knowledge in a wide range of disciplines including natural resources, medicine and genetics.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100570 Prof Kerrie L Mengersen, A/Prof Gavin Turrell, A/Prof Peter D Baade
Approved Project Title **Bayesian statistical models for understanding outcomes and improving decision-making for women screened for breast cancer**

2010	\$26,669.00
2011	\$26,669.00
2012	\$26,669.00
Primary FoR	0104 STATISTICS
APAI_IT	1

Partner Organisations

BreastScreen Queensland, Cancer Council Queensland

Administering Organisation Queensland University of Technology

Project Summary

This project has two key benefits: (i) the development of frontier statistical methods for spatio-temporal analysis and data synthesis, which are imperative in a wide range of disciplines; and (ii) the application of these methods for improved understanding of breast cancer outcomes for women screened in Queensland. The project results will lead to direct health and financial benefits through targeted policies for increasing screening uptake and reducing cancer morbidity and mortality and therefore health spending in this area. Importantly, the project represents an excellent training opportunity to develop a PhD candidate into an experienced interdisciplinary researcher.

LP100100713 Prof Justin O'Brien, Prof Seumas R Miller, Prof Keith A Houghton, Mr Steven A Mark, Mr Graham J Ezzy

Approved Project Title **The Future of Financial Regulation: Enhancing integrity through design**

2010	\$93,000.00
2011	\$98,000.00
2012	\$94,000.00
Primary FoR	2201 APPLIED ETHICS
APAI	1

Partner Organisations

Ernst and Young, Office of the Legal Services Commissioner

Administering Organisation Queensland University of Technology

Project Summary

The global financial crisis and the attendant collapse of major financial institutions have called into question the efficacy of financial regulation and the standards of conduct of the key actors in the financial services sectors and financial markets. Ethical conduct is fundamental to the integrity of Australia's financial services sector and financial markets. This project will make a valuable and innovative contribution to the national priority goal of strengthening Australia's social and economic fabric by assisting market actors fulfil their professional roles in an ethical manner. By so doing it accords with the national priority goals of promoting an innovation culture and economy, and safeguarding Australia.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100292 A/Prof Helen L Partridge, A/Prof Sylvia L Edwards, Prof Christine S Bruce, Dr Gary E Day, Ms Helen M Cooper
Approved Project Title **Understanding health information literacy in Australia's ageing population: A qualitative study**

2010	\$60,000.00
2011	\$60,000.00
2012	\$55,000.00
Primary FoR	0807 LIBRARY AND INFORMATION STUDIES
APAI	1

Partner Organisations

Health Contact Centre- QLD Health

Administering Organisation Queensland University of Technology

Project Summary

Australians need to know how to find and use information to help them age well. This research will establish a national Health Information Literacy Framework that will be an evidence-based guide for community agencies to use in creating resources and services to support the information needs of ageing Australians. Ageing Australians who are healthy and active are able to participate in the workforce, engage in the community while easing the burden on the national health care system. The research will place Australia at the forefront of health prevention and information literacy research. The research will be undertaken as a partnership between QUT, Griffith University and the Health Contact Centre.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The University of Queensland

LP100100394 Prof Kirill Alexandrov

Approved Project Title Development of a novel high yield cell-free protein expression system

2010 \$145,000.00

2011 \$145,000.00

2012 \$145,000.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

Partner Organisations

Jena Bioscience GmbH

Administering Organisation The University of Queensland

Project Summary

Recombinant proteins are used as vaccines, drugs, and research tools, as well as food and detergent additives, comprising a A\$100 billion international market. Their production requires laborious, expensive, and time-consuming construction of transgenic organisms or cells. Alternatively, recombinant proteins can be produced in extracts prepared from cells or organisms. The aim of this proposal is to develop a new technology that will make cell-free production of recombinant proteins rapid, cheap, and scalable. This will advance Australia's intellectual leadership in the area of biotechnology and will bring numerous economic benefits by accelerating pharmaceutical development.

LP100100659 Dr Stevens M Brumbley, Dr Kristi D Snell, Prof Lars K Nielsen

Approved Project Title Redirecting Carbon Flow through Mesophyll and Bundle Sheath Cells of Sugarcane to Produce Poly-3-Hydroxybutyrate

2010 \$385,000.00

2011 \$325,000.00

2012 \$400,000.00

2013 \$340,000.00

2014 \$228,558.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

Partner Organisations

BSES Ltd, Metabolix

Administering Organisation The University of Queensland

Project Summary

This project is part of the National Priorities "Frontier Technologies for Building and Transforming Australian Industries." Using innovative plant metabolic engineering technologies combined with sophisticated computer modeling we are generating green plants that produce renewable, biodegradable, bioplastics possessing properties such that they are suitable replacements for petroleum-derived products in many applications. During the course of these studies, we are increasing our basic level of understanding of plant metabolism of important bioenergy crops. The production of renewable, bioplastics in sugarcane will help to diversify the Australian sugarcane industry by providing a value-added product with significant world-wide markets.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100375 Dr Dave P Callaghan, A/Prof Tom E Baldock, A/Prof Peter Nielsen
Approved Project Title **Development of an adaptive statistical model for oceanic flooding hazards along the East Australian coast.**

2010	\$75,000.00
2011	\$68,000.00
2012	\$70,000.00
Primary FoR	0911 MARITIME ENGINEERING
APAI	1

Partner Organisations

DHI Water and Environment Pty Ltd, NSW Department of Environment and Climate Change (DECC)

Administering Organisation The University of Queensland

Project Summary

Planning of invaluable coastal infrastructure and housing is critical to the economic and social well-being of Australian communities. Devastating flooding along coasts and estuaries in Australia frequently occurred before 1980, but has been less common since. However, the risks are clear and enormous as demonstrated in recent disasters like Hurricane Katrina and the 2004 Boxing Day tsunami. Climate change makes flood predictions even more difficult. This project will develop a new adaptive model which accounts for both the present and future climate and also regional variability. The research will be in collaboration with the NSW Dept of Climate Change to enable rapid government action to improve community trust in flood protection.

LP100100650 Dr Norman C Duke, Dr Ian R Tibbetts, Dr Kathy A Townsend, Adj/Prof Michael W White
Approved Project Title **Using biodiesel cleanup agents to reduce impacts on mangroves and tidal wetland ecosystems from oil spills**

2010	\$40,000.00
2011	\$40,000.00
2012	\$40,000.00
Primary FoR	0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT
APAI	1

Partner Organisations

Australian Maritime Safety Authority

Administering Organisation The University of Queensland

Project Summary

This Linkage project will demonstrate Australia's commitment towards minimisation of the ecological impacts of key pollutants like oil in the marine environment. It will also advance Australia's leadership position in the management of oil spill remediation and will, through the robust partnership developed with Australian Maritime Safety Authority build a skilled team better able to respond effectively when such disasters occur. The challenge is to maintain this research focus and create some stability and continuity of the knowledge and experiences gained at the University of Queensland. Significantly the project will provide career-oriented research training opportunities in a field that clearly underpins National Research Priorities.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100755 Prof Craig E Franklin
Approved Project Title **Movement patterns and behavioural strategies of Estuarine Crocodiles: A long-term remote monitoring study using an underwater acoustic array.**

2010 \$115,000.00

2011 \$115,000.00

2012 \$115,000.00

Primary FoR 0602 ECOLOGY

Partner Organisations

Australia Zoo

Administering Organisation The University of Queensland

Project Summary

The on-going recovery of the estuarine crocodile population is creating a paradox for Australians. Although a salient species, an iconic animal, and a firm tourist attraction, estuarine crocodiles pose a significant risk to the public. Knowledge of where crocodiles go, what they do when they get there, and why they select particular habitats at certain times is critical for sustaining the Australian crocodile population, whilst ensuring public safety. This long term study will utilise the latest advancement in underwater acoustic technology to monitor the behavioural and physiological strategies used by estuarine crocodiles in occupying critical habitats, providing vital information for resource managers and policy makers.

LP100100225 Prof Robert G Gilbert
Approved Project Title **The first structure/function-derived starches for the food and related industries**

2010 \$82,000.00

2011 \$82,000.00

2012 \$82,000.00

Primary FoR 0303 MACROMOLECULAR AND MATERIALS CHEMISTRY

APAI 1

Partner Organisations

DSM Nutritional Products

Administering Organisation The University of Queensland

Project Summary

The project will use equipment and theory, developed in Australia, to create the first understanding of the characteristics that govern the performance of complex polymers as emulsifiers. The insights so gained will be a key step towards developing improved modified starches for the food and other industries. These advances will also provide the science by which new modified starches can be produced from sorghum, a drought-resistant crop well suited to Australia.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100495 Prof Graeme L Hammer, Dr Carlos D Messina, Dr David R Jordan, Dr Scott C Chapman
Approved Project Title **Enabling Molecular Plant Breeding for Drought Adaptation Using Genome-to-Phenome Modelling Technologies**

2010	\$240,280.00
2011	\$235,000.00
2012	\$235,000.00
Primary FoR	0607 PLANT BIOLOGY
APAI	1

Partner Organisations

Pioneer Hi-Bred International, Inc., Qld Department of Primary Industries and Fisheries

Administering Organisation The University of Queensland

Project Summary

Effective molecular plant breeding for improved water productivity of sorghum would generate significant economic and social benefits for rural communities in NE Australia. There is a significant opportunity to expand the sorghum industry in the region. Despite the global financial crisis, global demand for meat continues to increase, generating strong demand from intensive livestock industries for feed grain. Price is projected to return to high levels given continuing use of major feed grains for biofuel. A 10% increase in sorghum production would add net value of \$48M annually, much via employment. The scientific content of this project positions Australia at the leading edge globally in this emerging research field.

LP100100380 Prof Brian W Head, Dr Adrian Cherney, Prof Paul R Boreham
Approved Project Title **The utilisation of social science research in policy development and program review**

2010	\$145,000.00
2011	\$84,000.00
2012	\$143,000.00
Primary FoR	1605 POLICY AND ADMINISTRATION

Partner Organisations

Australian Bureau of Statistics, Productivity Commission, QLD Department of Communities, QLD Department of Employment, Economic Development and Innovation, Qld Department of Health, QLD Department of Premier and Cabinet, VIC Department of Planning and Community Development

Administering Organisation The University of Queensland

Project Summary

This project will enhance the use of evidence in social policy and improve the relevance of applied social research. It will produce new insights into factors affecting the success of evidence-based decision-making by examining social research utilisation within various agencies at federal and state levels. National and community benefits centre on how to improve the policy uptake of social research. This will contribute to the development of improved support systems to enhance the consideration of evidence-based policy. Outcomes will be applicable to governments, policy-makers and academics in Australia and abroad. Ways to improve research partnerships between academic social scientists and public sector agencies will be identified.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100418 Prof Karen E Healy, Dr Michele M Foster, Dr Gai Harrison
Approved Project Title **A study of best practice in workplace support and development of newly qualified community services workers**

2010	\$42,000.00
2011	\$42,000.00
2012	\$48,000.00
Primary FoR	1607 SOCIAL WORK
APAI	1

Partner Organisations

Lifeline Community Care Queensland , Queensland Council of Social Services

Administering Organisation The University of Queensland

Project Summary

Community service systems are under strain, leaving many vulnerable Australians at risk. Between 2001 and 2006, the Australian community services workforce increased by 35.6%, making it one of the fastest growing sectors of employment in the country. The combination of workforce growth, ageing and turnover in this sector hampers its capacity to respond to the growing demand for, and complexity of, service delivery. Our project will contribute to the sustainability of the Australian community services workforce by building a practical knowledge base for workplace support and development of newly qualified workers entering the sector.

LP100100400 Prof Paul W Hodges, Prof James A Ashton-Miller, Prof Christos E Constantinou, Prof Robert A Gardiner, Dr Geoff D Coughlin, Mrs Ruth Sapsford
Approved Project Title **Urinary continence and incontinence in men: New insight through new technologies**

2010	\$100,000.00
2011	\$95,000.00
2012	\$90,000.00
Primary FoR	1116 MEDICAL PHYSIOLOGY

Partner Organisations

GE Healthcare, Mungovan, Breckenridge Physiotherapy and Associates

Administering Organisation The University of Queensland

Project Summary

Healthy ageing in men is largely overlooked. Disorders of continence are surprisingly common with increasing age, and are socially debilitating. To understand changes in continence and address healthy ageing it is first necessary to gain an understanding of continence mechanisms in healthy men. Continence in women has received wide attention, but anatomy and function differ, as do the challenges throughout life (childbirth vs. prostate disease). Using novel methods we will test a new hypothesis of male continence with the goal to provide new physiological discoveries, new methods, and baseline data upon which strategies to enhance healthy ageing and reduce the economic burden of disorders of continence can be developed and refined.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100156 Prof Jane L Hunter, Dr Andreas Zankl, Dr Yuan-Fang Li
Approved Project Title **Skeletome - A Curated Online Knowledge Base Integrating Clinical and Biological Information on Skeletal Dysplasias and Related Conditions**

2010 \$95,000.00
 2011 \$90,000.00
 2012 \$88,000.00
 Primary FoR 0807 LIBRARY AND INFORMATION STUDIES
 APAI_IT 1

Partner Organisations

Royal Brisbane and Women's Hospital DHS

Administering Organisation The University of Queensland

Project Summary

The skeletal dysplasia knowledge base will:

- * establish Australia as a world-leader in skeletal dysplasia research;
- * provide researchers with an extensible and comprehensive online knowledge-base related to skeletal dysplasias;
- * enhance clinicians' understanding of the diagnosis, treatment and management of skeletal dysplasias;
- * facilitate collaborative discussions by patients, clinicians and researchers around specific cases to improve training, management and diagnosis; and
- * enhance Australia's research expertise in Semantic Web and social networking technologies.

LP100100614 Dr Joan Leach, Dr Richard D Fitzgerald, Ms Jennifer E Metcalfe
Approved Project Title **But does it work? Evaluation of science communication activities in Australia**

2010 \$26,669.00
 2011 \$26,669.00
 2012 \$26,669.00
 Primary FoR 2099 OTHER LANGUAGE, COMMUNICATION AND CULTURE
 APAI 1

Partner Organisations

Econnect Communication

Administering Organisation The University of Queensland

Project Summary

Public science communication activities such as talks, blogs, and social evenings are numerous and drawing larger audiences. But how do we measure their success? This project will collect existing evaluations and develop guidelines for science communication evaluation. The evaluation guidelines developed in this project will assist professional science communicators as well as researchers who wish to communicate the results of their scientific research, impacting a range of Australian audiences for science. This project aims to inform science communicators to create better science engagement activities, better ways of evaluating them, and, ultimately, audiences who are more engaged with the results of Australian scientific research.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100408 Dr Barbara M Masser, Dr Katherine M White, Dr Liliana L Bove, Prof Deborah J Terry
Approved Project Title **The initiation and maintenance of plasma and platelet donation in Australia: An analysis of the role of donor identity and commitment**

2010	\$99,000.00
2011	\$111,000.00
2012	\$161,000.00
Primary FoR	1701 PSYCHOLOGY

Partner Organisations

Australian Red Cross Blood Service

Administering Organisation The University of Queensland

Project Summary

Australia strives to be self-sufficient in the provision of plasma and platelets in a context where demand is forecast to grow. Our research will be of significant social and applied benefit to Australia in identifying the key psychosocial determinants of plasma and platelet (apheresis) donation initiation and maintenance. In addition, our research will design and assess practical interventions to facilitate the recruitment and retention of apheresis donors. Greater understanding of the determinants of apheresis donor behaviour will help to increase the numbers of Australians choosing to become regular apheresis donors. This will allow Australia to ultimately meet its goal of self-sufficiency in providing critical medical resources.

LP100100738 Dr Clive A McAlpine, Mr Jozef I Syktus
Approved Project Title **Impact of reforestation on the mitigation of climate extremes in eastern Australia resulting from global warming**

2010	\$154,621.00
2011	\$150,020.00
2012	\$80,359.00
Primary FoR	0401 ATMOSPHERIC SCIENCES

APAI 1

Partner Organisations

QLD Department of Environment and Resource Management

Administering Organisation The University of Queensland

Project Summary

This project will provide new information for climate change policy development and the goal of an Environmentally Sustainable Australia. It has a strong policy-management imperative, investigating the need for the maintenance and restoration of healthy native vegetation cover as part of Australia's climate change mitigation and adaptation strategies. Our previous research has shown that land clearing has contributed to climate change, including more severe and persisting droughts, in eastern Australia. Successful implementation of the research findings will lead to an increased ability of regional landscapes to buffer against a more extreme future climate driven by increased concentrations of greenhouse gases.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100761 Prof Peter D Renshaw, Dr Ron Tooth
Approved Project Title **Storythread pedagogy: transforming teachers' and students' knowledge and values regarding environmental sustainability**

2010 \$46,222.00

2011 \$47,408.00

2012 \$48,593.00

Primary FoR 1302 CURRICULUM AND PEDAGOGY

Partner Organisations

Education Queensland

Administering Organisation The University of Queensland

Project Summary

In this project an innovative teaching method, Storythread, is investigated as an effective way of developing in primary school-aged students a commitment to the values and practices of sustainability. Acquiring knowledge about the environment is important but not sufficient to transform everyday practices and values. Storythread not only assists students to develop relevant knowledge, but links that knowledge to specific actions and consequential decisions that people make with regard to the environment. By assisting teachers to use Storythread effectively with diverse groups of students, this project will provide a way of developing future citizens with clear environmental values and practices so necessary in contemporary society.

LP100100356 Dr Justin G Ryan, Dr Paul J Dargusch, Dr John N Callow, Dr Paul A Lawrence
Approved Project Title **Testing the potential of integrated vegetation bands to increase water retention, buffer climate extremes, sequester carbon and enhance production**

2010 \$80,182.00

2011 \$80,182.00

2012 \$80,182.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

APDI Dr Justin G Ryan

Partner Organisations

QLD Department of Environment and Resource Management, SEQ Catchments Inc.

Administering Organisation The University of Queensland

Project Summary

The project will integrate a complex set of functions into one landscape restoration design which will benefit production and conservation objectives. These functions are improved use of surface runoff using native vegetation to reduce velocities and increase infiltration, improved soil and catchment condition through decreased erosion, lowering wind speeds which desiccate landscape and erode valuable topsoil, providing a system of corridors for biodiversity, and sequestering carbon in woody biomass. IVB's configuration captures the beneficial structural and functional attributes of vegetation while minimising competitive interactions. This will increase the resilience and productivity of Australian farming landscapes in a changing climate.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100165 Dr Karen M Steel, Prof Edward T White, Dr Luca Pala
Approved Project Title **Development of a novel process for recovering fluoride from spent pot-lining as AlF₂(OH) using industrial waste solutions**

2010 \$26,669.00

2011 \$26,669.00

2012 \$26,669.00

Primary FoR 0914 RESOURCES ENGINEERING AND EXTRACTIVE METALLURGY

APAI 1

Partner Organisations

Fluorsid SpA

Administering Organisation The University of Queensland

Project Summary

Every year approximately 40,000 tonnes of a hazardous waste known as spent pot-lining is generated by Australia's aluminium industry. It contains significant levels of leachable cyanide and fluoride and is currently being stored awaiting a suitable treatment technology. This project will develop a novel low-energy and low-cost process for extracting the fluoride as a useful aluminium fluoride product that can be recycled back into the aluminium industry; destroy the cyanide; and recover other components for use in the metallurgical industry. If commercialised the benefit will be an end to the stockpiling of spent pot-lining in Australia, a more sustainable aluminium industry, and protection of the world's natural fluoride resources.

LP100100342 Dr Scarla J Weeks, Dr Peter R Fearn, Dr Gene C Feldman, Dr Zhongping Lee, Dr Miles J Furnas

Approved Project Title **Improved tools for comprehensive monitoring of water-clarity and light availability in coral reef ecosystems**

2010 \$162,624.00

2011 \$111,424.00

2012 \$111,424.00

Primary FoR 0909 GEOMATIC ENGINEERING

APAI_IT 1

Partner Organisations

Great Barrier Reef Foundation, NASA Goddard Space Flight Center

Administering Organisation The University of Queensland

Project Summary

The Great Barrier Reef is a World Heritage Area, home to over 1 million species and provides Australia with \$6 billion in annual revenue. The capacity to monitor Australia's natural resources and changes in condition are integral components of a sustainably and adaptively managed resource. By providing key synoptic tools to comprehensively monitor water quality and ecosystem status, the project will contribute directly to an Environmentally Sustainable Australia and improve national capacity for responding to climate change and variability in coral reef environments. It will enable Australian remote sensing scientists to contribute knowledge and tools to the international community for application to coral reef and coastal waters globally.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100325 Prof Zhiguo Yuan, Dr Raymond J Zeng, Prof Jurg Keller, Dr Eva G Abal, A/Prof James W Udy
Approved Project Title **Nitrous oxide and methane emissions from South East Queensland waterways and influence of wastewater discharges**

2010 \$120,000.00

2011 \$98,000.00

2012 \$75,000.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

APAI 2

Partner Organisations

SEQWater, South East Queensland Healthy Waterways Partnership

Administering Organisation The University of Queensland

Project Summary

Climate change caused by greenhouse gas emissions is one of the most serious challenges facing mankind. Substantial emission reduction must be achieved, with responsibilities to be shared by all sectors. Rivers, estuaries and water storages contribute considerably to global nitrous oxide and methane emissions, much of which is anthropogenic contributed by urban and agricultural run-off and wastewater discharges. Through an in-depth study on several rivers, estuaries and reservoirs in South East Queensland, this project will provide data to enable reliable estimation of such emissions in Australia, and deliver knowledge and tool support for the development of strategic catchment management strategies.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

South Australia

The Flinders University of South Australia

LP100100876 A/Prof Claire E Smith, A/Prof Heather D Burke

Approved Project Title **Archaeology in the Long Grass: Understanding Contact Through the Analysis of Urban Aboriginal Fringe Camps**

2010	\$26,669.00
2011	\$26,669.00
2012	\$26,669.00
Primary FoR	2101 ARCHAEOLOGY
APAI	1

Partner Organisations

Larrakia Nation Aboriginal Corporation

Administering Organisation The Flinders University of South Australia

Project Summary

This research will contribute to the priority goal of Strengthening Australia's Social and Economic Fabric through: 1) conceptual and methodological advances in archaeology; 2) making a substantive contribution to Native Title debates; 3) contributing to Closing the Gap of Indigenous disadvantage; 4) developing Indigenous research capacity; and 5) increasing public understandings of Aboriginal culture. The Larrakia Nation Aboriginal Corporation will benefit from new data to inform policy decisions and recommendations, interpretive materials for planned tourism ventures and enhanced research capacity through the quality training of Aboriginal research associates.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The University of Adelaide

LP100100613 Prof Pavel Bedrikovetski, Prof Anthony J Roberts, Dr Andrei G Kotooussov, A/Prof Phillip Pendleton, Mr Keith S Boyle, Mr Jose T Rodrigues

Approved Project Title **Development of innovative technologies for oil production based on the advanced theory of suspension flows in porous media**

2010 \$150,000.00

2011 \$148,000.00

2012 \$150,000.00

Primary FoR 0914 RESOURCES ENGINEERING AND EXTRACTIVE METALLURGY

Partner Organisations

Santos Ltd

Administering Organisation The University of Adelaide

Project Summary

The project will significantly improve the commercial and technological competitiveness of the Australian oil industry and will result into immediate financial benefits for the largest Australian oil company SANTOS. The outcomes will find their application in a number of developing environmental and chemical engineering technologies, which fall into Australian Research Priorities such as clean water production, emission reduction and storage of green house gas, and industrial waste management. The new theory and models to be developed in this project will provide quantitative tools for comprehensive assessment of large-scale geological and industrial projects. The project will also train a high quality research and engineering personnel.

LP100100704 A/Prof Peng Bi, A/Prof Dino L Pisaniello, Prof Alison L Kitson, Prof Jonathan W Newbury, Dr Monika Nitschke, Mr Brenton J Keen

Approved Project Title **Adaptive capabilities in the elderly during extreme heat events in South Australia**

2010 \$80,000.00

2011 \$80,000.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

Partner Organisations

SA Department of Health, South Australia State Emergency Service

Administering Organisation The University of Adelaide

Project Summary

This study, using first hand accounts of experiences and perceptions of the extreme heat event of 2009 in South Australia, will provide a valuable insight into the heat adaptive capability of the ageing population, factors affecting susceptibility, and ways to curb the predicted increase in often life-threatening heat exacerbated illnesses, many of which require extended hospital stays. It is envisaged that findings will help inform health policy and contribute to the formulation of a National Heatwave Response plan. Study findings will be disseminated widely at government (state and federal), non-government, and community levels and will help to raise the awareness of heat exacerbated illness in general.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100215 Dr Jennie Fluin, Dr John Tibby
Approved Project Title **Establishing baseline ecological conditions for the Lower Lakes, South Australia: the applications of palaeoecology to sustainable resource management**

2010 \$75,000.00

2011 \$70,000.00

Primary FoR 0406 PHYSICAL GEOGRAPHY AND ENVIRONMENTAL GEOSCIENCE

Partner Organisations

SA Department of Environment and Heritage, South Australian Murray Darling Basin Natural Resource Management Board

Administering Organisation The University of Adelaide

Project Summary

The Lower Lakes of the Murray River are in a critical ecological state due to record low water levels. Management of these lakes needs to integrate water security demands with maintaining healthy ecosystem functions. Proposed management options such as allowing seawater incursion and the construction of a weir to impede freshwater flows are based on assumptions about what the Lakes were like naturally (pre-European). This study will reconstruct environmental variability within the Lower Lakes over the past 7000 years, concentrating on salinity to document the extent of marine incursion, and pH to examine the impacts of acid sulphate release from exposed sediments during low flow events.

LP100100668 Prof Robert A Gibson, A/Prof Brian K O'Neill
Approved Project Title **Novel technologies for biodiesel production from meat processing waste streams**

2010 \$208,426.00

2011 \$207,299.00

2012 \$207,272.00

Primary FoR 1003 INDUSTRIAL BIOTECHNOLOGY

Partner Organisations

Dalriada Meat Pty Ltd

Administering Organisation The University of Adelaide

Project Summary

Deriving products from all levels of the agricultural production chain to achieve zero-waste, greatly increases profitability and optimises sustainability. In the meat industry, new opportunities are opening to use by-products such as tallow for the production of novel, cleaner energy-producing biodiesel fuel by way of cutting-edge technologies. Production by these technologies greatly enhances cost benefits, fuel properties and energy security. In this proposal we will partner with a large South Australian regional abattoir and rendering facility to develop these technologies initially at the laboratory scale, and then up-scaling to pilot and full production levels.

LP100100153 A/Prof Bronwyn M Gillanders, Dr Travis S Elsdon
Approved Project Title **Linking fish recruitment and habitat use to ecosystem processes**

2010 \$32,000.00

2011 \$32,000.00

Primary FoR 0602 ECOLOGY

Partner Organisations

Kangaroo Island Natural Resource Management Board

Administering Organisation The University of Adelaide

Project Summary

Estuaries are transition zones between fresh and marine waters and form key nursery areas for fisheries. Understanding what makes an estuary a nursery area, and how dependent fish are on estuaries, is difficult because we lack vital information on fish recruitment and migrations. We will utilise chemical and genetic techniques to determine patterns of recruitment and migration of fish and link these patterns to biological characteristics of fish and physical variables of surrounding landscapes. Outcomes will provide managers with key landscape attributes than require conservation. Such information is vital for continued sustainability of fish and estuarine resources and will benefit rural coastal communities.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100791 Prof Anton J van den Hengel, Dr Anthony R Dick

Approved Project Title **Image search for simulator content creation**

2010 \$100,000.00

2011 \$100,000.00

2012 \$100,000.00

Primary FoR 0801 ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

APAI_IT 1

Partner Organisations

Sydac Pty Ltd

Administering Organisation The University of Adelaide

Project Summary

The World Wide Web contains tens of billions of images, with personal and industrial collections stretching to many times that number. The potential economic value of these image-based resources is enormous, but largely untapped as we have no practical way of recovering the images we need. This project will develop image search technologies which will allow Australian industry to exploit these important resources. Some of the wide variety of possible applications might include the searching of surveillance video for objects of interest, vision-based guidance of unmanned vehicles, smart-phone and smart-home systems which understand their environments, and stock tracking systems which can detect spoilage.

LP100100792 Prof Anton J van den Hengel, Dr Anthony R Dick

Approved Project Title **Real-time special effects in live video**

2010 \$61,858.00

2011 \$64,000.00

2012 \$65,000.00

Primary FoR 0801 ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

Partner Organisations

Holopoint Interactive Pty Ltd, MONKEYSTACK

Administering Organisation The University of Adelaide

Project Summary

Allowing a user to model objects in the real world in real time greatly improves the efficiency of the large-scale modelling process. A user might thus generate a model of a city block by navigating it, construct a 3D model of a factory by traversing it, generate a simulation of an industrial process by carrying it out, or design a new building directly upon the space it will occupy. The augmentation of reality will be a critical component of the future of video cameras, computers and phones. The business opportunities associated with developing technologies in these areas offer significant prospects for Australian ICT industries.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100212 A/Prof Alfred Yawson, Prof Ralf Zurbruegg, Mr John G Tretola
Approved Project Title **The adequacy and sustainability of self-managed superannuation funds: Governance, performance, asset allocation, fee structure and compliance**

2010 \$30,993.00

2011 \$28,969.00

2012 \$27,940.00

Primary FoR 1503 BUSINESS AND MANAGEMENT

APAI 1

Partner Organisations

SMSF Professionals' Association of Australia Ltd

Administering Organisation The University of Adelaide

Project Summary

This project will provide research to aid decision makers in policy formation and setting on governance, regulatory and performance issues relating to Self-Managed Superannuation Funds (SMSFs), which now make up the largest proportion of superannuation assets, accounting for over 30% of the total \$1.1 trillion of superannuation assets in Australia. Empirically driven advice to the Government and the general community on these issues is of substantial importance given the need for retirees to be self-financing and the current adverse conditions experienced in today's financial environment. Research stemming from this project will highlight the value proposition SMSFs may or may not be providing to the superannuation industry.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

University of South Australia

LP100100321 Dr Sarah L Blunden, Prof Timothy S Olds, Dr James Dollman, Dr Carol A Maher, Mr John Petkov, Ms Michele A Herriot

Approved Project Title **A randomised controlled trial assessing the effects of a school-based sleep intervention in Year 6 and 7 students**

2010 \$50,000.00

2011 \$50,000.00

2012 \$26,669.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

APAI 1

Partner Organisations

SA Department of Health

Administering Organisation University of South Australia

Project Summary

Inadequate sleep is associated with a wide range of health problems in children, including obesity and poor performance at school. Children are sleeping less than ever before, and there is an increasing pattern of "yo yo sleeping" (sleep deprivation on school days followed by catch up sleeps on weekends). This study will trial a school-based program designed to improve the sleeping habits of children. Better sleep is expected to result in improved alertness, better life satisfaction, and improved weight status.

LP100100890 Dr Lia Bryant, Dr Matthew W Rofe, Prof Guy M Robinson

Approved Project Title **People, Pumps and Pipes: A social study of change in the collaborative supply of irrigation services**

2010 \$54,581.00

2011 \$54,041.00

2012 \$54,041.00

Primary FoR 1205 URBAN AND REGIONAL PLANNING

Partner Organisations

Primary Industries and Resources South Australia (PIRSA), Renmark Irrigation Trust , Social Inclusion Unit - SA

Administering Organisation University of South Australia

Project Summary

The research addresses key National Priorities and Priority Goals relating to improved sustainable water management in Australia's foremost river system. The research offers deeper understanding of the social dimensions of National Water Initiative reforms, and specifically motivations for irrigators' decisions contributing to more sustainable water use following legislative reforms. The project links understanding of the nexus between policy and environmental behaviour to advance knowledge of more sustainable water use. Given the current demands on water in the Murray-Darling system and the systems national significance, the research will make a vital contribution to management of this critical national resource.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100449 Prof Maureen F Dollard, Prof Anthony H Winefield, A/Prof Anne W Taylor, Dr Peter M Smith, Prof Andrew Nafalski, Prof Dr Arnold Bakker, Prof Dr Christian Dormann
Approved Project Title **State, organisational, and team interventions to build psychosocial safety climate using the Australian Workplace Barometer and the StressCafe**

2010	\$128,000.00
2011	\$106,000.00
2012	\$106,000.00
Primary FoR	1701 PSYCHOLOGY
APAI_IT	1
APAI	1

Partner Organisations

SafeWork SA, SA Health (Public Health and Clinical Coordination)

Administering Organisation University of South Australia

Project Summary

The project is inspired by the nationally agreed target of 40% reduction in workplace injuries by 2012. Informed by leading indicators assessed through the Australian Workplace Barometer, this research will build evidence-based interventions at both a state, organisation, and team level to reduce risks and psychological injury. This project is promoting good health and well being, Preventative healthcare, and Strengthening Australia's social and economic fabric. An innovative platform will be built, the StressCafe', for the translation of research into policy and practice, through better access by stakeholders to information and discoverable data.

LP100100272 Dr Dusan Losic, Dr Craig I Priest, Mr David T Wang
Approved Project Title **Microchip Impedance Biosensor for Biomedical Diagnostics**

2010	\$40,000.00
2011	\$40,000.00
2012	\$39,000.00
Primary FoR	0301 ANALYTICAL CHEMISTRY
APAI	1

Partner Organisations

Inphaze Pty Ltd

Administering Organisation University of South Australia

Project Summary

This research proposal uses an innovative engineering approach based on novel nanomaterials with the aim of developing a new and generic biosensing technology with the potential to be widely applied in many areas including medical diagnostics, environmental control, industry and biosecurity. The outcomes from this project will benefit Australia by contributing through the development of novel materials, new technologies and new devices. The development of technological innovations based on fabricated nanomaterials, will also enhance capacity in frontier technology such as nanotechnology, and build Australia's strength in using new biosensing technologies.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100616 Prof Robert D Short, Prof Nicolas H Voelcker, Prof Joseph G Shapter, A/Prof Linda Y Zou, Dr Amanda V Ellis, Dr Manrico (Rick) Fabretto, Dr John A van Leeuwen, Dr Christopher W Chow, Ms Mary Drikas

Approved Project Title **Materials Engineering Solutions for Tomorrow's Water Resources**

2010 \$300,000.00

2011 \$288,765.00

2012 \$307,486.00

Primary FoR 0912 MATERIALS ENGINEERING

Partner Organisations

Australian Water Quality Centre, SA WATER, South Australian State Government, United Water International Pty Ltd

Administering Organisation University of South Australia

Project Summary

This proposal concerns the development of advanced technologies informed by knowledge management systems to ensure the continued provision of high-quality drinking water to Australian. This is particularly important as we see the impacts from climate change and extreme weather variability with catastrophic consequences such as recently seen in Victoria and in Queensland on water catchments and water quality and supply. The challenges of adequate water resourcing, both in quantity and quality, for Australians who wish to lead healthy and productive lives are serious and require collaboration between industry, government and research providers such as is proposed here.

LP100100863 Dr Natalie Sinn, Prof Kerin O'Dea, Prof Peter R Howe, Mr Patrick J Cooper

Approved Project Title **Effects of omega-3 fatty acids and micronutrients on learning and behaviour of Indigenous Australian children from a remote community school**

2010 \$175,000.00

2011 \$25,395.00

Primary FoR 1111 NUTRITION AND DIETETICS

Partner Organisations

NT Department of Education and Training, Vifor Pharma Vifor AG

Administering Organisation University of South Australia

Project Summary

Indigenous Australian children have disproportionate health problems that are largely related to malnutrition, which affects physical health and may also impact on their emotional health, learning and behaviour. Indigenous Australian children in remote rural communities are performing well below national benchmarks, and the government has earmarked improved education in this population as a top national priority. To date research has not addressed the impact of nutrition on learning in this population. Improving the nutritional status of these children could assist them to derive greater benefit from educational opportunities, and in turn greater equality of access to occupational opportunities later in life.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100340 Dr Michelle R Tuckey, Prof Anthony H Winefield, Prof Helen R Winefield, Mr Quentin C Black
Approved Project Title **Helping retail employees deal with threatening situations at work: Coping with acute and chronic stressors**

2010 \$80,000.00

2011 \$80,000.00

2012 \$80,000.00

Primary FoR 1701 PSYCHOLOGY

APAI 1

Partner Organisations

Shop Distributive Association

Administering Organisation University of South Australia

Project Summary

This research will develop best practice protocols in the retail sector for employee training in handling and responding to difficult customers and stressful and traumatic incidents. In addition, this research proposes to develop best practice protocols for employer responding and for assessment and treatment of employees in the retail sector. The national benefit will be a healthier, happier and more productive retail sector workforce. The results are likely to be applicable to other sectors of the Australian workforce and thus have broad national/community benefits.

**Summary of Successful Linkage - Projects Proposals for Funding to
Commence in 2010 by State and Organisation**

Western Australia

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Curtin University of Technology

LP100100285 A/Prof Cynthia A Joll, A/Prof Anna Heitz, Prof Urs von Gunten

Approved Project Title **Novel water treatment technologies for minimisation of bromide and iodide in drinking water**

2010	\$125,000.00
2011	\$125,000.00
2012	\$150,000.00
2013	\$110,000.00
Primary FoR	0301 ANALYTICAL CHEMISTRY
APAI	1

Partner Organisations

Water Corporation of WA, Water Quality Research Australia Ltd

Administering Organisation Curtin University of Technology

Project Summary

This project will develop innovative new water treatment processes to selectively remove bromide and iodide from potable source waters. The project promotes Australia as a leader in water treatment technology. Successful outcomes will have excellent potential for international commercialisation by spin-off companies and will provide economic benefits and prestige locally. Economic benefits include lower costs to water utilities through the availability of improved technology for treatment of marginal quality water supplies and improved ability to comply with water quality guidelines. Public perception and confidence in water supply quality will be enhanced, due to reduction in taste and odour issues and disinfection by-products.

LP100100798 A/Prof Richard Midford, Dr Helen W Cahill, A/Prof Tanya Chikritzhs, Prof David R Foxcroft

Approved Project Title **School drug education for junior high school students in Victoria - Assessing the impact of a state-wide, evidence-based intervention**

2010	\$131,716.00
2011	\$76,276.00
2012	\$69,206.00
Primary FoR	1117 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisations

Department of Education and Early Childhood Development

Administering Organisation Curtin University of Technology

Project Summary

Young people are faced with numerous and powerful influences to use both legal and illicit drugs, and drug education can play an important counterbalancing role in shaping a normative culture of safety, moderation and informed decision making in this group. The research will develop, implement and evaluate one all encompassing, evidence-based, drug education program for junior high school students across Victoria. The study is unique in its size and scope and will be of national benefit because its findings will influence the nature of future drug education in all secondary schools in Australia.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100734 Prof Hamid R Nikraz, Dr Peerapong Jitsangiam, Mr David B Harris, Mr Ross Keeley
Approved Project Title **Performance, Evaluation, and Enhancement of Hydrated Cement Treated Crushed Rock Base (HCTCRB) as a Road Base Material for Western Australian Roads**

2010	\$30,000.00
2011	\$30,000.00
2012	\$30,000.00
Primary FoR	0905 CIVIL ENGINEERING
APAI	1

Partner Organisations

Main Roads Western Australia

Administering Organisation Curtin University of Technology

Project Summary

The development of knowledge of HCTCRB, an advanced material in the pavement engineering discipline, will underpin growth in the highway and road construction industry. The key outcomes of this study will enhance and change highway and road organisations, contractors, engineers and others interested in the use and design of pavement materials. This is particularly so in light of the recent change to a new era of analytical approaches, rather than the empirical approach of the past. When the outcomes of this project are applied, they will result in an improvement in overall road and highway quality.

LP100100433 Prof Sven E Nordholm, Dr Yee Hong Leung
Approved Project Title **Improved design of hearing protection devices with binaural voice pick-up and hearing loss compensation**

2010	\$110,000.00
2011	\$110,000.00
2012	\$138,000.00
Primary FoR	0906 ELECTRICAL AND ELECTRONIC ENGINEERING
APAI_IT	2

Partner Organisations

Sensear Pty Ltd

Administering Organisation Curtin University of Technology

Project Summary

Hearing protection is essential to industries operating under extreme noise conditions. However, conventional hearing protection devices such as earplugs and earmuffs inhibit face-to-face communications. Sensear has developed and marketed a world-first product that, apart from overcoming the aforesaid limitation, also gives the wearer a perception of his surrounding sound field. This project seeks to extend Sensear's products to include compensation for people with hearing loss. This will give Sensear a competitive edge in hearing protection products, and enhance Australia's reputation in assistive hearing technology. The project also presents a number of opportunities to provide industry-focussed research training to PhD students.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100266 Prof Sherry Sagers, Prof Helen R Wildy, Prof Thiagarajan Sitharthan, Dr Amanda G Wilson, A/Prof Katherine M Conigrave, Dr Tim Marchant, Ms Anne C Hampshire, A/Prof Jagdish K Dua, Ms Carmen Acosta, Mr Allan Colthart

Approved Project Title **What difference does treatment make? Psychometric properties of a measure of young people's progress in residential rehabilitation**

2010 \$52,000.00

2011 \$62,000.00

2012 \$55,000.00

Primary FoR 1601 ANTHROPOLOGY

Partner Organisations

Department of Health WA, Mission Australia, NSW Health, Sydney Southwest Health, Ted Noffs Foundation

Administering Organisation Curtin University of Technology

Project Summary

This research is expected to: enhance evidence-based treatment outcome measures in residential rehabilitation services in WA, NSW and the ACT; provide high-quality research training for alcohol and other drug service staff; and contribute to long-term collaborative relationships between five partner organisations, five universities, and addiction specialists which will assist ongoing service quality improvement. Enhancing the effectiveness of alcohol and other drug treatments for young people will also address the National Health Priority of injury prevention as young people are one of three groups at higher risk of harm.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Murdoch University

LP100100160 A/Prof Una M Ryan, Dr Paul T Monis

Approved Project Title **Innovative approaches to managing and understanding taste and odour in drinking water systems**

2010 \$70,000.00

2011 \$70,000.00

2012 \$70,000.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

Partner Organisations

Australian Water Quality Centre, Water Corporation of WA

Administering Organisation Murdoch University

Project Summary

Taste and odour (T/O) problems resulting from Cyanobacteria can change consumers' perception of product safety, resulting in many complaints, soaring management and treatment costs, and large financial losses, yet little is known about how they arise.

This project will provide the Australian Water Industry with cost-effective, sensitive, specific, rapid and practical tools for managing and understanding T/O episodes, and will also benefit the aquaculture and food sectors, and the research community. An improved ability to manage geosmin in drinking water, will also have positive repercussions on the Australian environment, by eliminating the need to use environmentally controversial control methods such as copper sulphate dosing.

LP100100837 Dr Amanda J Third, Dr Ingrid Richardson, Dr Jane M Burns, Dr Lucas L Walsh, Ms Philippa J Collin

Approved Project Title **Young People, Technology, and Wellbeing Research Facility**

2010 \$77,000.00

2011 \$69,000.00

2012 \$55,000.00

Primary FoR 2001 COMMUNICATION AND MEDIA STUDIES

APAI 1

Partner Organisations

Foundation for Young Australians, Inspire Foundation, MySpace, National Children's and Youth Law Centre, NSW Commission for Children and Young People, Telstra Foundation

Administering Organisation Murdoch University

Project Summary

Large numbers of initiatives now mobilise technology to support the wellbeing of young Australians. However, amongst communities undertaking this work, there is currently significant duplication and insufficient sharing of research and best practice models. A Research Facility that consolidates existing research, and guides new research and initiatives will improve service delivery to young Australians by: reducing duplication between organizations working with young people; providing an accessible interface with research that can help address the community's concerns about the role of technology in young people's lives, and inform future policy and programs; and model effective cross-sector knowledge brokering to Australian industry.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100776 Prof Richard C Thompson, Mr Robert F Steuart, Dr Tim A Paget, Dr Richard J Lipscombe, Prof Andre G Buret

Approved Project Title **Functional proteomics of Giardia**

2010 \$85,000.00

2011 \$85,000.00

2012 \$85,000.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

APAI 1

Partner Organisations

Proteomics International Pty Ltd

Administering Organisation Murdoch University

Project Summary

This project will use the latest tools for dissecting and comparing genes and their protein products from one of the most common parasites infecting people, their pets, livestock and wildlife. This protozoan parasite Giardia is also of evolutionary and biological significance in terms of understanding the origin of higher animals from bacteria as well as fundamental questions about the parasitic way of life. Giardia proteins will be identified and characterised on the basis of their value in understanding disease processes and treatment, and by working with appropriate industry partners, proteins of commercial value will be exploited.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The University of Western Australia

LP100100793 Dr Peter G Arthur, Dr Richard J Lipscombe, Prof Miranda D Grounds

Approved Project Title **Proteomic techniques to assess oxidative stress in muscle wasting diseases**

2010 \$26,669.00

2011 \$26,669.00

2012 \$26,669.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

APAI 1

Partner Organisations

Proteomics International Pty Ltd

Administering Organisation The University of Western Australia

Project Summary

Australia will experience a significant increase in the proportion of its population that is over 65 years of age over the next 50 years. There will be an increased demand for health services related to injury from falls unless effective preventive strategies are put in place. Loss of muscle mass contributes to falls, so development of preventative strategies has the potential for considerable benefits. Oxidative stress is a key intermediary in muscle wasting. This PhD project examines a possible mechanism by which oxidative stress causes muscle wasting. An appropriately tailored therapy to minimise oxidative stress has the potential to ameliorate loss of muscle mass.

LP100100438 Dr Boris C Baer, Prof Andrew H Millar, Prof Leigh W Simmons, Mr John C Davies

Approved Project Title **Better bees for tomorrow: A proteomic and physiological characterization of male fertility in managed versus feral honeybees in Western Australia**

2010 \$160,000.00

2011 \$160,000.00

2012 \$160,000.00

2013 \$160,000.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

Partner Organisations

Better Bees of Western Australia

Administering Organisation The University of Western Australia

Project Summary

The importance of honeybees for food production is often undervalued as they pollinate more than 80 crops of economic interest. However, honeybee populations are on a worldwide decline and the beekeepers struggle to survive economically. Australia has so far been spared of major collapses but this seems merely a question of time. The work proposed initiates a close collaboration between the only honeybee-breeding organization in Western Australia and the University of Western Australia. Scientific research to ensure a future supply of managed and healthy honeybees is initiated to understand honeybee reproduction, diseases and immunity in more detail. The results are expected to be of interest for the entire Australian honeybee industry.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100647 Prof Mark E Barley, Prof Thompson C McCuaig, A/Prof Klaus Gessner, Dr John M Miller, Dr Eric Tohver, Dr Michael P Doublier, Dr Sandra S Romano, Mr Stephen Wyche, Dr Nicolas Thebaud
Approved Project Title **Tectonic evolution and lode gold mineralisation in the Southern Cross district, Yilgarn Craton (Western Australia): a study of the meso- to Neoarchean missing link**

2010 \$70,000.00
 2011 \$90,000.00
 Primary FoR 0403 GEOLOGY

Partner Organisations

Geological Survey of Western Australia

Administering Organisation The University of Western Australia

Project Summary

In the December quarter 2008, Gold export earnings increased by 2 per cent to \$3.9 billion. Over the past 20 years and despite an increase in exploration expenditure to around \$50 million per year, the discovery rates have been declining. Although the easy targets have been found, there remains considerable potential for future major discoveries. This project addresses the pressing need for new data and improved exploration techniques to enable industry to target new discoveries. As the Southern Cross district is located in remote communities such discoveries also have major benefits for regional Australia.

LP100100640 Prof David G Blair, Prof Grady J Venville, Dr Nancy E Longnecker, A/Prof Marjan G Zadnik, A/Prof David M Coward

Approved Project Title **Measuring the effectiveness of specialist science enrichment programs**

2010 \$250,000.00
 2011 \$190,000.00
 2012 \$300,000.00
 Primary FoR 1301 EDUCATION SYSTEMS

APAI 3

Partner Organisations

Graham (Polly) Farmer Foundation, Gravity Discovery Centre Foundation

Administering Organisation The University of Western Australia

Project Summary

Australia faces critical problems in science education with student attitudes to science in decline and a shortage of science teachers. We also face significant problems in indigenous education. This project will determine the ability of science enrichment centres to change student attitudes and to motivate them towards science using exciting and innovative new education facilities. Results will provide valuable data to allow future funding priorities to be optimised.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100436 Prof Thomas Braunl, Prof John H Taplin, Prof David N Harries, Mr/s Karl D Mischewski, Mr Terrence J Mader, Mr Luke A O'Donoghue

Approved Project Title **Analysis and modeling of driving patterns for limited-range electric vehicles**

2010	\$101,000.00
2011	\$64,000.00
2012	\$64,000.00
Primary FoR	0902 AUTOMOTIVE ENGINEERING
APAI	2

Partner Organisations

AEVA - Perth Branch, CO2Smart, Gull Petroleum WA, WA Department for Planning and Infrastructure

Administering Organisation The University of Western Australia

Project Summary

The electrification of the personal transport sector seems to be only a matter of time. It is important to study and model the effects of this sector now, in order to recommend decision makers on issues like standardization and infrastructure planning. Understanding and being able to predict EV driving and charging patterns will allow us to provide planning assistance for:

- Effects of day-time dependent energy pricing structure on EV charging behavior
- Optimal energy pricing to encourage off-peak charging
- Optimal number and location of EV charging stations
- Expected uptake of PHEV/EVs depending on petrol, electricity and conversion cost
- Expected additional energy demand for EVs and PHEVs with day-time energy usage pattern

LP100100620 Prof Richard J Hobbs, Dr Kingsley W Dixon, Dr Siegfried L Krauss

Approved Project Title **Managing evolutionary-ecological process in restoring Banksia woodland resilient to global environmental changes**

2010	\$155,000.00
2011	\$135,000.00
2012	\$118,000.00
2013	\$53,000.00
Primary FoR	0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

Partner Organisations

Botanic Gardens and Parks Authority, Rocla Quarry Products

Administering Organisation The University of Western Australia

Project Summary

By manipulating genetic diversity, local selection and gene flow in restored plant communities, this project will establish suitable regimes to manage evolutionary processes in large-scale restoration, thereby improving success and resilience to future changes. It will significantly advance our understanding of evolutionary processes operating in restoration efforts, and lead to improved restoration success, better long-term ecological functioning in restored ecosystems, better investment of resources, and maintenance of Australia's biodiversity in the face of rapid environmental change. These findings should be of relevance to broader restoration initiatives managed by the government, community, and industry nationally and internationally.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100812 Prof Colin L Raston, Prof Charles S Bond, Prof Sarah A Dunlop, Dr Killugudi L Swaminatha-Iyer, Prof Fiona M Wood

Approved Project Title **Processing Pearl Nacre for Bio-Nanotechnology**

2010 \$158,000.00

2011 \$159,000.00

2012 \$162,000.00

Primary FoR 0303 MACROMOLECULAR AND MATERIALS CHEMISTRY

APAI 3

Partner Organisations

Pearl Technology Pty Ltd

Administering Organisation The University of Western Australia

Project Summary

Nanotechnology has exciting potential to solve major health challenges of the 21st century. The proposed research focuses on developing health care products, derived from a renewable waste stream resource from the pearling industry, en route to establishing products to benefit the rural community, and beyond. The processed pearl nacre provides the possibility of alleviating problems associated with neurotrauma following injury, and for skin regeneration following burns. The recently established powerful multidisciplinary research team in partnership with Pearl Technology combines expertise in chemical processing, nanotechnology, biochemistry, neuroscience and tissue engineering, also providing a basis for quality research training.

LP100100150 Dr Michael Rosenberg, Dr Kathryn E Smith, Dr Rebecca Braham, Dr James Dimmock, Prof Timothy R Ackland

Approved Project Title **Improving health and lifestyle of indigenous Australians in the Western Desert**

2010 \$120,000.00

2011 \$100,000.00

2012 \$200,000.00

2013 \$160,000.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

APAI 2

Partner Organisations

BHP Billiton Ltd, Newcrest Mining Ltd, Office of Aboriginal Health

Administering Organisation The University of Western Australia

Project Summary

This program aims to develop knowledge, skills and attitudes, whilst providing a supportive environment, to better the health of the Martu people through the provision of activities and services and strengthening of partnerships between service agencies and the local community. By developing the Indigenous workforce and building the community capacity to self-manage health, a reduction in the discrepancy in health indicators between Indigenous and other Australians can be achieved. The findings from this research will provide important information regarding methods to provide for better health for Indigenous Australians and develop a template for intervention design in other remote communities.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Tasmania

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

University of Tasmania

LP100100529 Dr Frank S Hay, Dr Sarah J Pethybridge, Dr David H Gent

Approved Project Title Meeting the challenges of Sclerotinia crown rot in a perennial production system - pyrethrum

2010 \$122,000.00

2011 \$122,000.00

2012 \$122,000.00

Primary FoR 0607 PLANT BIOLOGY

Partner Organisations

Botanical Resources Australia

Administering Organisation University of Tasmania

Project Summary

The Australian pyrethrum industry has undergone rapid growth in the last decade, which has seen it become the second largest producer of natural insecticidal pyrethrins in the world. Current production supplies 60% of the global market, with further expansion planned. Sclerotinia crown rot is a major disease that results in plant death; reducing yields and the life of the perennial crop. This project aims to develop more cost effective and environmentally sustainable methods of managing this disease. This will help to ensure consistent supply of pyrethrin to the world market, reduce the costs of production and increase the net return to growers.

LP100100050 Dr Gregory J Jordan, Dr Susan C Baker, Dr Thomas A Spies, Dr Christopher P Burrridge, Dr Timothy J Wardlaw, Prof Jerry F Franklin

Approved Project Title Managing variable retention harvesting to maintain forest biodiversity—effects of forest influence and successional stage on recolonisation

2010 \$103,000.00

2011 \$136,000.00

2012 \$116,000.00

Primary FoR 0705 FORESTRY SCIENCES

APDI Dr Susan C Baker

Partner Organisations

Forestry Tasmania, Forests and Forest Industries Council of Tasmania

Administering Organisation University of Tasmania

Project Summary

The project will provide the ecological evidence that will allow forest harvesting practices to be designed to sustain the full range of biodiversity in managed forest systems. It therefore will provide the basis for sustainable forest management, with extensive economic implications. It will specifically test the biodiversity implications of the new and increasingly important variable retention methods of forest harvesting, and provide the basis for optimising these methods. In addition, the large database of DNA barcodes for forest beetles developed as a by-product by this project will provide a basis for less expensive and more accurate biodiversity assessments in sustainable management of forest systems in general.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100700 Dr Jane E Sargison, A/Prof Paul A Brandner, Ms Jessica M Andrewartha, Dr Alan D Henderson, Prof Gustaaf M Hallegraeff, Dr Jonathan E Osborn, Prof Gregory J Walker
Approved Project Title **Freshwater biofouling of hydraulic conduits: impact, mitigation, and control, and the consequences of Climate Change**

2010 \$53,338.00

2011 \$53,338.00

2012 \$53,338.00

Primary FoR 0607 PLANT BIOLOGY

APAI 2

Partner Organisations

Hydro Tasmania

Administering Organisation University of Tasmania

Project Summary

National economic and environmental benefits will flow from increased outputs of renewable energy from hydroelectric power systems. Improved performance of canals and pipelines will enable energy and water losses to be reduced and will provide the National Electricity Market with additional renewable energy, lowering the requirement for fossil fuels. Knowledge of the impacts of Climate Change will enable industry to manage changes in rainfall pattern and conduit biofouling. An improved understanding of biofilms can be applied to achieve wider national benefit in water reticulation, irrigation systems and maritime applications. The team will develop research skills and technical expertise and train PhD students and industry counterparts.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

Northern Territory

Charles Darwin University

LP100100073 A/Prof Lindsay B Hutley, A/Prof Jason Beringer, Dr Stephen J Livesley, Dr Stefan K Arndt, Dr Guy S Boggs

Approved Project Title **Impacts of deforestation and afforestation on greenhouse gas emissions, and carbon and water resources in the Daly River catchment, north Australia**

2010 \$120,000.00

2011 \$98,000.00

2012 \$90,000.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

APAI 1

Partner Organisations

Department of Climate Change, NT Department of Business and Employment, NT Department of Natural Resources Environment, the Arts and Sport, NT Department of Regional Development, Primary Industries, Fisheries and Resources

Administering Organisation Charles Darwin University

Project Summary

Over the last decade, north Australia have been viewed as a potentially exploitable resource, given issues of salinisation, soil acidification, over-allocation of water resources and rainfall declines in south Australian agricultural regions. Improved pastures and plantation forestry are two land uses that may expand in the NT. Clearing of savanna vegetation would be required, with implications for greenhouse gas emissions, soil health, water resources and dry season environmental flows. This project will track greenhouse emissions and water use from uncleared and cleared savanna that has been converted to pasture and timber plantations, providing critical understanding of the environmental implication of such land use change in savanna.

**Summary of Successful Linkage - Projects Proposals for Funding to
Commence in 2010 by State and Organisation**

Australian Capital Territory

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

The Australian National University

LP100100741 Prof Andrew W Blakers, Dr Kylie R Catchpole, Dr Matthew J Stocks, A/Prof Klaus J Weber, Dr Sudha S Mokkaapati

Approved Project Title **Advanced Sliver Solar Cells**

2010 \$215,000.00

2011 \$215,000.00

2012 \$280,000.00

Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING

APAI_IT 2

APDI Dr Sudha S Mokkaapati

Partner Organisations

Origin Energy CSG Ltd

Administering Organisation The Australian National University

Project Summary

The expected outcome of the proposed research is the development of second generation Sliver solar cell technology, encouraging large commercial impact, which would be of substantial benefit to Australia in terms of export income and employment. Origin Energy has committed >\$60 million to the development and commercialisation of the first generation Sliver cell technology. Substantial further commercial investment is expected during scale-up for full scale manufacturing. Successful implementation of technology developed during the research will result in the displacement of fossil fuel technologies and corresponding greenhouse gas emissions reduction, assisting Government in its objective to make major cuts to greenhouse gas emissions.

LP100100808 Prof Andrew W Blakers, Dr Vernie A Everett, Dr Marta Vivar, Mr Peter K LeLievre

Approved Project Title **Efficient PV-Thermal Micro-concentrator**

2010 \$60,000.00

2011 \$58,000.00

2012 \$60,000.00

Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING

Partner Organisations

Chromasun Pty Ltd

Administering Organisation The Australian National University

Project Summary

Australia must reduce its dependence on carbon sources for electricity, heating, and cooling. The PV-thermal hybrid micro-concentrator development will deliver a light-weight, low-profile, cost-effective system that can be installed in almost any situation, with versatile output that can deliver electricity at grid parity as well as providing water heating, space heating, industrial process heat, and solar cooling capabilities. The nation will benefit through enhanced energy independence, international research recognition, and reduced greenhouse gas emissions. Further, successful commercialisation of this technology will enhance Australia's research standing and provide a good royalty income that will fund future research and development.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100143 Dr Lindell D Bromham, Prof David J Cantrill, Dr Daniel J Murphy, Prof Dr Timothy J Flowers, Prof Darren M Crayn
Approved Project Title **Evolution of halophytes: a phyloinformatic approach to understanding and exploiting the traits underlying salt-tolerance in plants**

2010	\$80,000.00
2011	\$80,000.00
2012	\$73,000.00
Primary FoR	0603 EVOLUTIONARY BIOLOGY
APAI	1

Partner Organisations

Qld Department of Primary Industries and Fisheries, Royal Botanic Gardens and National Herbarium of Victoria, University of Sussex

Administering Organisation The Australian National University

Project Summary

Salinity is an increasing burden on the Australian economy & environment, with >2 million ha of salt-affected land, at an annual cost to agriculture over \$187 million. One solution is to exploit naturally salt-tolerant plants to increase productive agricultural land and restore salt-affected environments. To do this, we must increase basic knowledge of the diversity & distribution of salt-tolerance. This project is the first to use DNA sequences from thousands of species to understand the evolution of salt-tolerance in order to provide the foundation for the development of new crop varieties, selection of species that can be developed for bioremediation, and identification of traits that will be profitable targets for breeding programs.

LP100100172 Dr David A Jones, Mr Des J McGrath
Approved Project Title **Protecting tomato crops from Fusarium wilt through the efficient application of new genetic resources.**

2010	\$26,669.00
2011	\$26,669.00
2012	\$26,669.00
Primary FoR	0607 PLANT BIOLOGY
APAI	1

Partner Organisations

Primary Industries and Fisheries

Administering Organisation The Australian National University

Project Summary

The tomato industry is a major horticultural industry in Australia, and Queensland is the major producer of tomatoes for the fresh food market. In Queensland, the tomato industry has expanded in the face of the threat that Fusarium wilt could re-emerge as a major disease problem. This research will ensure that measures can be taken quickly and efficiently to protect existing genetic resources used to control Fusarium wilt. It will also improve our knowledge about the mechanisms plants use to defend themselves against Fusarium wilt diseases.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100588 Prof Rodney A Kennedy, Mr Ramtin Shams, A/Prof Alistair P Rendell, Dr Parastoo Sadeghi, A/Prof Henry J Gardner, Dr Naga Govindaraju, Dr Paul England, Dr Lidong Zhou, Dr Eric I Chang, Dr Shipeng Li, Dr Feng-hsiung Hsu

Approved Project Title **Advancing Medical Image Analysis through High Performance Heterogeneous Computing, Numerical Simulation, and Novel Human Computer Interfaces**

2010	\$265,000.00
2011	\$255,000.00
2012	\$285,000.00
Primary FoR	0803 COMPUTER SOFTWARE
APAI_IT	2

Partner Organisations

Microsoft Research Asia

Administering Organisation The Australian National University

Project Summary

This project will link Australian researchers with a major multi-national IT company. The engagement of world-class personnel from Microsoft will provide unprecedented opportunities for graduate students to experience research in both an academic and an industrial setting. The participation of Microsoft product division offers the potential to transform the outcomes of this project into widely-used software solutions. The project will pave the way for more widespread and reliable evidenced-based computer-aided diagnosis and image-guided treatment. It will produce well-trained and sought-after graduates and research associates with extensive inter-disciplinary knowledge of medical image analysis and high-performance computing.

LP100100467 Prof David B Lindenmayer

Approved Project Title **Best practice temperate woodland assessment, management and monitoring**

2010	\$50,000.00
2011	\$50,000.00
2012	\$98,000.00
2013	\$120,000.00
Primary FoR	0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

Partner Organisations

Murray Catchment Management Authority, NSW Department of Environment and Climate Change (DECC), NSW Department of Environment Climate Change and Water

Administering Organisation The Australian National University

Project Summary

This ARC proposal is central to the goals of National Research Priority #1 – An environmentally sustainable Australia. The loss of biodiversity in agricultural landscapes in rural Australia is a major social, economic and ecological issue. Australian governments and local communities invest considerable money restoring temperate woodlands in agricultural landscapes. However, there remains considerable uncertainty about the effectiveness of this investment. This project will produce an unparalleled evidence-base for individuals and organisations that make long-term investments in these landscapes for conservation.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100427 Prof Ann M McGrath, Dr Shino A Konishi, Prof Peter J Read, Dr Denis R Byrne, Dr Luke Taylor, Dr Darryl J McIntyre
Approved Project Title **Deepening Histories of Place: Exploring indigenous landscapes of national and international significance**

2010	\$190,000.00
2011	\$180,000.00
2012	\$170,000.00
Primary FoR	2103 HISTORICAL STUDIES
APAI	3

Partner Organisations

Director of National Parks, National Film and Sound Archives , NSW Department of Environment and Climate Change (DECC), Ronin Films

Administering Organisation The Australian National University

Project Summary

Deeper knowledge of Australian landscapes and their interconnected histories of place will enhance the social well-being of the Indigenous and wider community. This regional and landscape-focused history project provides quality research outcomes that meet tourism industry demands for deeper historical insights into significant landscapes. Indigenous histories of people and land will be collaboratively researched. This project provides multi-media history training for both PhD students and local Indigenous people. It will see historians and other experts working with parks and major collections institutions towards richer interpretations of landscape. This innovative project renders Australia's complete history more accessible.

LP100100721 Dr Robert G Schwab, Dr Janet E Hunt
Approved Project Title **Philanthropy and Indigenous people: Enhancing Indigenous education outcomes**

2010	\$26,669.00
2011	\$26,669.00
2012	\$40,000.00
Primary FoR	1605 POLICY AND ADMINISTRATION
APAI	1

Partner Organisations

Melbourne Community Foundation

Administering Organisation The Australian National University

Project Summary

Indigenous Australians suffer a disparity in educational outcomes that frays the social fabric of the nation. While there is abundant evidence that education is empowering and the social and economic benefits of improving educational outcomes are significant, past and current efforts to increase educational attainment and enhance outcomes among the nation's most disadvantaged citizens have not achieved the gains most expected. A promising new pathway exists in creative and innovative approaches to the support of Indigenous education by a small number of philanthropic bodies. This research will examine philanthropy in this area and will provide important practical insights of value to the nation.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

LP100100106 Dr Lyndall Strazdins, Prof Dorothy H Broom, Mr John D Glover, Dr Catherine Banwell, Dr Jane M Dixon, Dr Amy L Griffin, Dr Rosemary Korda, Miss Megan A Shipley, Dr Francesco Paolucci, Dr Marian T Esler, Dr Stephen J Corbett

Approved Project Title **Time scarcity in Australian families: another inequity?**

2010	\$71,000.00
2011	\$103,000.00
2012	\$81,000.00
2013	\$70,000.00
Primary FoR	1117 PUBLIC HEALTH AND HEALTH SERVICES
APAI	1

Partner Organisations

Department of Families, Housing, Community Services and Indigenous Affairs , Sydney West Area Health Service

Administering Organisation The Australian National University

Project Summary

The globalising economy, financial uncertainties and major democratic changes are all affecting family time. Parent's time is a resource on which children depend, but time scarcity has become a widespread problem for families. Our study helps focus policy attention on this problem. We deliver new methods to assess the experience of time scarcity in families, identifying those who are most likely to experience it, where they live, and how time scarcity affects them. This evidence can help support policy approaches to time, benefiting the twin economic and social policy goals of encouraging workforce participation while supporting the health and wellbeing of families.

LP100100567 Prof Ian White, Prof Michael F Hutchinson, Mr Mike Williams, Mr David Hoey, Mr John-Paul Williams, Mr Dawit Berhane

Approved Project Title **Climate variability, water allocation and land use change impacts on surface-groundwater interactions and salinity discharge**

2010	\$115,000.00
2011	\$145,000.00
2012	\$190,000.00
2013	\$168,004.00
Primary FoR	0406 PHYSICAL GEOGRAPHY AND ENVIRONMENTAL GEOSCIENCE
APAI	1

Partner Organisations

NSW Department of Water and Energy

Administering Organisation The Australian National University

Project Summary

This project contributes to the national research priority of an Environmentally Sustainable Australia and its three sub-priorities: Water-a critical resource; Overcoming salinity and acidity; and Responding to climate change and variability as well as to the National Water Initiative goal: connected surface and groundwater resources managed as a single resource. These embody the clear imperative in Australia to improve the management and use of our stream and groundwater systems in the face of long-term climate variability and changing water use. Knowledge gained from this study of coupled surface-groundwater systems in nationally important catchments will be used to improve water allocation and use strategies and salinity mitigation.

Summary of Successful Linkage - Projects Proposals for Funding to Commence in 2010 by State and Organisation

University of Canberra

LP100100810 Prof Laurie J Brown, Prof Ann M Harding, Dr Geetha Ranmuthugala, Prof Ruth M Hancock, Dr Philip R Anderson

Approved Project Title **Financing aged care in Australia: Mitigating fiscal gaps and maintaining intergenerational equity**

2010 \$85,000.00

2011 \$85,000.00

2012 \$105,000.00

Primary FoR 1403 ECONOMETRICS

APAI 1

Partner Organisations

Department of Health

Administering Organisation University of Canberra

Project Summary

Aged care has been identified as a significant contributor to the growing fiscal problems predicted for Australian government finances during the next 10 to 20 years. This project will develop the cutting-edge modelling tools needed to allow Australia to make informed decisions about possible reforms in aged care financing. It will create significant national benefits by allowing detailed assessment of the distributional impact of a wide range of possible reforms, including how the outcomes of any policy change will affect disadvantaged sections of our society, whether different generations will be fairly treated, and the impact by gender.