

Number of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

New South Wales

Macquarie University	9
Southern Cross University	1
The University of New England	1
The University of New South Wales	15
The University of Newcastle	4
The University of Sydney	17
University of Technology, Sydney	5
University of Western Sydney	2
University of Wollongong	5
Victor Chang Cardiac Research Institute	2

New South Wales **61**

Victoria

Australian Catholic University	1
Brain Research Institute Pty Ltd	1
Deakin University	1
La Trobe University	1
Monash University	21
Murdoch Childrens Research Institute	1
RMIT University	1
Swinburne University of Technology	3
The University of Melbourne	17
The Walter and Eliza Hall Institute of Medical Research	4

Victoria **51**

Queensland

Griffith University	4
James Cook University	2
Queensland Institute of Medical Research	2
Queensland University of Technology	4
The University of Queensland	21
University of the Sunshine Coast	1

Queensland **34**

South Australia

The Flinders University of South Australia	3
The University of Adelaide	8

South Australia **11**

Western Australia

The University of Western Australia	14
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Western Australia **14**

**Number of Successful Proposals for Future Fellowships for Funding
Commencing in 2011 by State and Organisation**

Tasmania

University of Tasmania 4

Tasmania 4

Australian Capital Territory

Commonwealth Scientific and Industrial Research Organisation 1

The Australian National University 26

University of Canberra 1

Australian Capital Territory 28

Total Number of Grants 203

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

New South Wales

Macquarie University

FT110100685 Belousova, Dr Elena

Approved Project Title Dating down under: resolving Earth's crust - mantle relationships

2011	\$88,831.00
2012	\$177,797.00
2013	\$177,797.00
2014	\$177,912.00
2015	\$89,081.00
Total	\$711,418.00

Primary FoR 0402 GEOCHEMISTRY

FT1 Dr Elena Belousova

Administering Organisation Macquarie University

Project Summary

This project will investigate the origin and evolution of the continental crust and its tectonic and genetic links to the mantle beneath it. By providing new insights into the timing and mechanisms of fluid transfer between mantle and crust, it will be directly relevant to mineral exploration targeting worldwide.

FT110100385 Lack, A/Prof Stephen G

Approved Project Title Algebraic categories and categorical algebra

2011	\$80,357.00
2012	\$162,214.00
2013	\$165,464.00
2014	\$165,464.00
2015	\$81,857.00
Total	\$655,356.00

Primary FoR 0101 PURE MATHEMATICS

FT2 A/Prof Stephen G Lack

Administering Organisation Macquarie University

Project Summary

Algebra is the study of operations, such as addition and multiplication, and the relationships between these operations. This project will study two exciting new branches of algebra, quantum algebra and postmodern algebra, which will lead to important advances in physics, geometry, and computing.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100631 Langdon, A/Prof Robyn A

Approved Project Title **Poor social functioning in schizophrenia: understanding its causes and developing better treatments**

2011	\$83,945.00
2012	\$167,890.00
2013	\$169,119.50
2014	\$169,119.50
2015	\$83,945.00
Total	\$674,019.00

Primary FoR 1701 PSYCHOLOGY

FT2 A/Prof Robyn A Langdon

Administering Organisation Macquarie University

Project Summary

This project will advance knowledge of the thinking processes and the associated neural changes that cause the lifelong social disability which characterises schizophrenia. Findings will, in turn, contribute to better identifying young people, at risk of developing schizophrenia, and inform the design of new interventions and treatments.

FT110100198 Maddox, A/Prof Marion

Approved Project Title **Religion, state and social inclusion: lessons from schools in three countries**

2011	\$77,857.00
2012	\$179,959.50
2013	\$189,905.00
2014	\$168,724.00
2015	\$80,921.50
Total	\$697,367.00

Primary FoR 2204 RELIGION AND RELIGIOUS TRADITIONS

FT2 A/Prof Marion Maddox

Administering Organisation Macquarie University

Project Summary

Social inclusion is a priority for governments in Australia and overseas. Religious schools can be exclusionary, but can also provide safe havens for religious minorities. This project analyses a range of educational controversies in France, USA and Australia to propose programs and policies that enhance inclusion in religiously diverse societies.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100609 Madin, Dr Joshua S

Approved Project Title **Integrating biomechanics and ecology: moving from an individual- to population-level understanding of the effects of environmental change**

2011	\$77,360.50
2012	\$147,536.50
2013	\$142,166.50
2014	\$143,891.50
2015	\$71,901.00
Total	\$582,856.00

Primary FoR 0602 ECOLOGY

FT1 Dr Joshua S Madin

Administering Organisation Macquarie University

Project Summary

Coral reefs, a key Australian resource, face an uncertain future due to environmental change. Up to now, environmental change research has focused on the individual level, severely limiting our predictive capacity. This project will develop a novel 'first principle' approach to solve this shortcoming and make population-level predictions possible.

FT110100924 Molina Terriza, Dr Gabriel

Approved Project Title **Understanding nature with twisted photons**

2011	\$100,982.00
2012	\$193,589.00
2013	\$193,464.00
2014	\$190,564.00
2015	\$89,707.00
Total	\$768,306.00

Primary FoR 0205 OPTICAL PHYSICS

FT2 Dr Gabriel Molina Terriza

Administering Organisation Macquarie University

Project Summary

Technological and scientific advances occur due to new tools being used to explore nature. This project will give Australia the world leadership in the study of nature through the use of twisted photons. This new tool may open the door to answer fundamental questions about the universe.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100070 Piazolo, Dr Sandra

Approved Project Title **Flow characteristics of lower crustal rocks: developing a toolbox to improve geodynamic models**

2011	\$101,787.00
2012	\$204,247.00
2013	\$204,655.00
2014	\$203,682.50
2015	\$101,487.50
Total	\$815,859.00

Primary FoR 0403 GEOLOGY

FT2 Dr Sandra Piazolo

Administering Organisation Macquarie University

Project Summary

This project will investigate in detail how rocks flow in the lowest part of the Earth's crust. The results will be used to improve sophisticated computer simulations of large-scale geological processes, allowing a better understanding of earthquakes, the formation of volcanic areas and location of energy resources.

FT110100339 Vercauteren, Dr Frederik

Approved Project Title **Homomorphic cryptography: computing on encrypted data**

2011	\$88,957.00
2012	\$174,064.00
2013	\$176,414.00
2014	\$176,414.00
2015	\$85,107.00
Total	\$700,956.00

Primary FoR 0804 DATA FORMAT

FT2 Dr Frederik Vercauteren

Administering Organisation Macquarie University

Project Summary

This project is driven by the groundbreaking applications of a new cryptographic technology that allows analysis of encrypted (scrambled) data without needing to decrypt (unscramble) it first. The results of this project can be used to enable secure remote data storage, electronic auctions and voting, and protecting medical records.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100743 Zucker, Dr Daniel B

Approved Project Title Building galaxies in our backyard: satellites and stellar streams in the Local Group

2011	\$88,520.00
2012	\$172,827.00
2013	\$170,827.00
2014	\$167,227.00
2015	\$80,707.00
Total	\$680,108.00

Primary FoR 0201 ASTRONOMICAL AND SPACE SCIENCES

FT2 Dr Daniel B Zucker

Administering Organisation Macquarie University

Project Summary

By finding and studying faint satellites and stellar streams in the Local Group, this project will address basic questions about the formation and evolution of galaxies like our Milky Way. The project will also probe the conditions of star formation in the early universe, and the properties of the dark matter which constitutes most of the mass in our universe.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Southern Cross University

FT110100130 Johnston, Dr Scott G

Approved Project Title **Sea-level rise as a driver for arsenic mobilisation: unravelling the fundamental hydro-geochemical controls**

2011	\$88,846.50
2012	\$178,033.00
2013	\$178,473.00
2014	\$176,573.00
2015	\$87,286.50
Total	\$709,212.00

Primary FoR 0402 GEOCHEMISTRY

FT1 Dr Scott G Johnston

Administering Organisation Southern Cross University

Project Summary

This project will reveal the effects of rising sea-levels on arsenic mobilisation in vulnerable coastal lowlands. By resolving coupled interactions between tides and geochemistry, this project will provide the necessary knowledge platform to underpin management responses to protect sensitive estuarine and coastal waters.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The University of New England

FT110100256 Pender, Dr Anne

Approved Project Title **Players: the lives and work of the actors who created the national theatre of Australia between 1950-2012**

2011	\$95,514.00
2012	\$184,717.50
2013	\$178,407.00
2014	\$167,060.50
2015	\$77,857.00
Total	\$703,556.00

Primary FoR 1904 PERFORMING ARTS AND CREATIVE WRITING

FT2 Dr Anne Pender

Administering Organisation The University of New England

Project Summary

The transformation of Australian theatre since the 1950's is explored through the lives and work of 80 actors working in Australia during a critical phase of Australian cultural history. This study will extend knowledge of the creative achievements of these actors and enrich understanding of our national culture and creative industries.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The University of New South Wales

FT110100067 Collins, Dr Richard N

Approved Project Title **Iron - a solution for uranium resource recovery and pollution response**

2011	\$73,427.00
2012	\$148,645.00
2013	\$152,166.00
2014	\$149,600.00
2015	\$72,652.00
Total	\$596,490.00

Primary FoR 0907 ENVIRONMENTAL ENGINEERING

FT1 Dr Richard N Collins

Administering Organisation The University of New South Wales

Project Summary

This project aims to determine key processes controlling uranium transport and fate in natural and engineered environments. This will result in improved efficiency in extracting uranium from tailings and subsurface deposits, reduced risk of contamination of water supplies, and improved management of radioactive waste repositories.

FT110100460 Conibeer, A/Prof Gavin J

Approved Project Title **Hot carrier solar cells: new approaches and demonstration of devices**

2011	\$100,607.00
2012	\$200,714.00
2013	\$198,214.00
2014	\$181,214.00
2015	\$83,107.00
Total	\$763,856.00

Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING

FT2 A/Prof Gavin J Conibeer

Administering Organisation The University of New South Wales

Project Summary

The hot carrier solar cell aims to capture a large fraction of energy from solar photons normally lost as heat. This will give much higher efficiencies, and allow fabrication of cheap high efficiency devices. This can be achieved by modifying the way electrons lose their energy as heat, by blocking the lattice vibrations which cause this loss.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100007 Donald, Prof Stephanie J

Approved Project Title Migration and mobility: the question of childhood in Chinese and European cinema since 1945

2011	\$115,505.50
2012	\$225,031.00
2013	\$219,836.50
2014	\$218,642.00
2015	\$108,331.00
Total	\$887,346.00

Primary FoR 2002 CULTURAL STUDIES

FT3 Prof Stephanie J Donald

Administering Organisation The University of New South Wales

Project Summary

This project will produce a comparative account of the migrant and mobile child in postwar film, researched in China and Europe. It will contribute deeper knowledge of how childhood has been valued in key societies since 1945, and will bring new energy to international and domestic debates on the status, image and experience of migrant children.

FT110100576 Evans, Dr Jason P

Approved Project Title How will climate change affect sub-daily precipitation?

2011	\$78,634.50
2012	\$150,202.00
2013	\$140,746.00
2014	\$140,746.50
2015	\$71,568.00
Total	\$581,897.00

Primary FoR 0401 ATMOSPHERIC SCIENCES

FT1 Dr Jason P Evans

Administering Organisation The University of New South Wales

Project Summary

This project will examine changes in sub-daily precipitation due to climate change. It will improve our understanding of the mechanisms that cause the changes at regional and local scales. Regional climate change projections produced will be freely available, and at a spatial and temporal scales suitable for impacts and adaptation studies.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100272 Free, Dr Clinton W

Approved Project Title **The ties that bind: fraudulent groups, collective action and fraud risk**

2011	\$82,254.50
2012	\$169,349.00
2013	\$174,189.00
2014	\$164,951.50
2015	\$77,857.00
Total	\$668,601.00

Primary FoR 1501 ACCOUNTING, AUDITING AND ACCOUNTABILITY

FT2 Dr Clinton W Free

Administering Organisation The University of New South Wales

Project Summary

This project investigates fraud in contemporary Australia. Drawing on multiple data sources including interviews with convicted fraud perpetrators, the study examines the opportunities, motivations and rationalisations of groups engaged in fraud and offers insights to improve the detection and prevention of fraud in practice.

FT110100041 Kahn, Dr Douglas

Approved Project Title **The natural history of media: aesthetics, nature and communications technology, from telegraphy to Google Earth**

2011	\$98,609.00
2012	\$197,793.50
2013	\$190,580.50
2014	\$182,792.00
2015	\$91,396.00
Total	\$761,171.00

Primary FoR 1901 ART THEORY AND CRITICISM

FT3 Dr Douglas Kahn

Administering Organisation The University of New South Wales

Project Summary

This project will show how people have, since the nineteenth century, observed the Earth and experienced nature through media, and how popular communications technologies have been joined with scientific instruments to help us understand changing ecological realities.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100057 Letnic, Dr Mike I

Approved Project Title **Revealing how top predators maintain healthy balanced ecosystems**

2011	\$82,143.00
2012	\$161,343.00
2013	\$157,823.50
2014	\$144,689.50
2015	\$66,066.00
Total	\$612,065.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

FT1 Dr Mike I Letnic

Administering Organisation The University of New South Wales

Project Summary

Large predators play a pivotal role in maintaining healthy, balanced ecosystems. This project will reveal how Australia's largest predator, the dingo, provides ecosystem services and benefits biodiversity.

FT110100632 Levey, Dr Geoffrey B

Approved Project Title **An Australian dilemma: liberal democracy, cultural diversity and the quest for national identity**

2011	\$68,957.00
2012	\$140,404.50
2013	\$141,948.00
2014	\$140,458.50
2015	\$69,958.00
Total	\$561,726.00

Primary FoR 1606 POLITICAL SCIENCE

FT1 Dr Geoffrey B Levey

Administering Organisation The University of New South Wales

Project Summary

This project traces how liberal nationalism and its chief rival, cultural nationalism, apply to and help make sense of Australian politics and political debate. It defends liberal nationalism as the most feasible, accommodating, and just political solution to addressing the question of national identity in Australia's multicultural democracy.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100046 **Lowe, Prof Andrew B**

Approved Project Title **Advanced macromolecular engineering: novel approaches to self-directed assembly and vesicle formation**

2011	\$108,646.00
2012	\$222,692.00
2013	\$229,592.00
2014	\$229,592.00
2015	\$114,046.00
Total	\$904,568.00

Primary FoR 0303 MACROMOLECULAR AND MATERIALS CHEMISTRY

FT3 Prof Andrew B Lowe

Administering Organisation The University of New South Wales

Project Summary

The aim of this project is to develop new approaches in nanotechnology for the preparation of well-defined polymeric particles. The research will result in the development of new methodology which has the potential to impact areas of commercial interest including those in the health-care sector.

FT110100721 **McAdam, Prof Jane**

Approved Project Title **Moving with dignity: a human rights approach to slow-onset climate change-related displacement and relocation in the Pacific**

2011	\$102,893.50
2012	\$206,914.50
2013	\$204,142.00
2014	\$200,542.00
2015	\$100,421.00
Total	\$814,913.00

Primary FoR 1801 LAW

FT3 Prof Jane McAdam

Administering Organisation The University of New South Wales

Project Summary

At the international, regional and national levels, climate change-related displacement poses a significant challenge to law and policymakers. This project examines potential legal responses to displacement resulting from slow-onset climate change and, in particular, the feasibility of en masse relocation of whole communities in the Pacific.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100483 Morgan, Prof Dr Bronwen

Approved Project Title **Between social enterprise and social movement: responses to environmental change at the intersection of rights and regulation**

2011	\$104,046.00
2012	\$206,292.00
2013	\$206,654.50
2014	\$202,637.00
2015	\$98,228.50
Total	\$817,858.00

Primary FoR 1801 LAW

FT3 Prof Dr Bronwen Morgan

Administering Organisation The University of New South Wales

Project Summary

This socio-legal project will illuminate the diverse ways in which formal law blocks or encourages the efforts of ordinary citizens to respond to the challenges of reducing our carbon footprint. It will significantly develop the foundations for designing effective governance structures to support ethically-motivated citizen initiatives.

FT110100151 Newell, A/Prof Benjamin R

Approved Project Title **Adapting cognition to a changing climate**

2011	\$81,917.00
2012	\$164,209.00
2013	\$165,959.00
2014	\$165,959.00
2015	\$82,292.00
Total	\$660,336.00

Primary FoR 1702 COGNITIVE SCIENCE

FT2 A/Prof Benjamin R Newell

Administering Organisation The University of New South Wales

Project Summary

Research indicates that public knowledge of the causes and consequences of global warming are poor, and a correct understanding is a key predictor of behaviour that reduces carbon footprints. This project applies basic principles of cognitive science to improve public knowledge and thereby increase the likelihood of reducing carbon footprints.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100523 Seidel, Dr Jan

Approved Project Title Nanoscale characterisation and manipulation of complex oxide interfaces and topological boundaries

2011	\$88,816.00
2012	\$178,132.00
2013	\$178,632.00
2014	\$178,382.00
2015	\$89,066.00
Total	\$713,028.00

Primary FoR 1007 NANOTECHNOLOGY

FT1 Dr Jan Seidel

Administering Organisation The University of New South Wales

Project Summary

Working at the forefront of complex oxide materials research, this project will explore novel material properties and develop new material application concepts. The project will specifically investigate nanoscale interfaces for potential breakthrough applications in nanoscience.

FT110100200 Setterlund, A/Prof Per B

Approved Project Title Vesicles stabilised by compressed carbon dioxide as nanoreactors and templates for radical polymerisation

2011	\$101,557.00
2012	\$190,114.00
2013	\$184,089.00
2014	\$186,814.00
2015	\$91,282.00
Total	\$753,856.00

Primary FoR 0303 MACROMOLECULAR AND MATERIALS CHEMISTRY

FT2 A/Prof Per B Setterlund

Administering Organisation The University of New South Wales

Project Summary

A new environmentally friendly method for synthesis of surfactant vesicles involving stabilisation using low pressure carbon dioxide will be applied to the synthesis of hollow polymeric nanoparticles and polymer of well-defined structure. The resulting polymeric structures will have applications in drug delivery and nano-engineered materials.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100328 Sivakumar, Dr Bellie

Approved Project Title **Development of a generic catchment classification framework in hydrology**

2011	\$102,044.50
2012	\$183,964.00
2013	\$163,839.00
2014	\$163,839.00
2015	\$81,919.50
Total	\$695,606.00

Primary FoR 0406 PHYSICAL GEOGRAPHY AND ENVIRONMENTAL GEOSCIENCE

FT2 Dr Bellie Sivakumar

Administering Organisation The University of New South Wales

Project Summary

Hydrologic models play a vital role in water resource planning and management, but identification of a suitable model for a given catchment remains a basic problem. This research develops a generic framework to classify catchments into groups and sub-groups, and will offer a significantly better way for hydrologic model development and application.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The University of Newcastle

FT110100178 Elder, Dr Murray J

Approved Project Title **Algorithmic and computational advances in geometric group theory**

2011	\$71,701.50
2012	\$141,367.50
2013	\$141,367.50
2014	\$141,367.50
2015	\$69,666.00
Total	\$565,470.00

Primary FoR 0101 PURE MATHEMATICS

FT1 Dr Murray J Elder

Administering Organisation The University of Newcastle

Project Summary

This project aims to combine new algorithmic ideas, high performance computing and experimental mathematics to answer many outstanding questions in the field of geometric group theory. This project will put Australia at the forefront of new computer-assisted research, and give new insights into complex mathematical problems.

FT110100295 Ireland, Dr Peter M

Approved Project Title **Triboelectric separation - fundamentals and practice**

2011	\$86,843.50
2012	\$166,417.00
2013	\$153,229.50
2014	\$147,062.00
2015	\$73,406.00
Total	\$626,958.00

Primary FoR 0203 CLASSICAL PHYSICS

FT1 Dr Peter M Ireland

Administering Organisation The University of Newcastle

Project Summary

Triboelectric separation is a novel way to refine mineral ores without using scarce water resources, based on the familiar generation of electrostatic charge by friction. This project will provide a practical dry particle separation process, and a better understanding of a common and important problem in electrostatics.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100195 Johnson, Dr Sarah J

Approved Project Title **New high-performance iterative error correction codes**

2011	\$85,063.50
2012	\$168,444.50
2013	\$155,819.50
2014	\$143,194.50
2015	\$70,756.00
Total	\$623,278.00

Primary FoR 1005 COMMUNICATIONS TECHNOLOGIES

FT1 Dr Sarah J Johnson

Administering Organisation The University of Newcastle

Project Summary

This project develops new error correction codes to underpin the success of next-generation communications technologies. The nature of the project presents significant potential for project outcomes to be beneficial to the Australian telecommunications industry in a wide range of application areas from optical communication to digital broadcasting.

FT110100746 Kellett, Dr Christopher M

Approved Project Title **A general framework for the stability and robustness of dynamical systems**

2011	\$89,077.00
2012	\$177,154.00
2013	\$177,154.00
2014	\$173,004.00
2015	\$83,927.00
Total	\$700,316.00

Primary FoR 0102 APPLIED MATHEMATICS

FT2 Dr Christopher M Kellett

Administering Organisation The University of Newcastle

Project Summary

Stability and robustness are crucial properties of well-engineered dynamical systems. This project aims to unify several notions of stability and robustness and to expand these notions to the emerging area of hybrid systems, which includes next generation electricity distribution networks.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The University of Sydney

FT110100082 Buhl, Dr Jerome

Approved Project Title **From individuals to mass organisation: aggregation, synchronisation and collective movement in locusts**

2011	\$84,916.00
2012	\$172,482.00
2013	\$173,482.00
2014	\$153,592.00
2015	\$67,676.00
Total	\$652,148.00

Primary FoR 0602 ECOLOGY

FT1 Dr Jerome Buhl

Administering Organisation The University of Sydney

Project Summary

By combining field biology, robotics and mathematics, this project will determine how animals flock or swarm and, in particular, how locust nymphs control their collective movement over their lifetime. The mathematical models derived during the project will be directly applied to controlling outbreaks of locusts in Australia, South and North Africa.

FT110100116 Canning, Prof John

Approved Project Title **Optical fibre nanophotonics for sensing**

2011	\$115,518.50
2012	\$231,760.00
2013	\$232,622.50
2014	\$232,762.00
2015	\$116,381.00
Total	\$929,044.00

Primary FoR 1007 NANOTECHNOLOGY

FT3 Prof John Canning

Administering Organisation The University of Sydney

Project Summary

This project will develop a new generation of chemical and biological optical waveguide sensors for monitoring energy consumption and the environment, including water and health, that are compatible with SmartGrids. This will be done through an understanding of the evanescent field and its control on the nanoscale, together with advanced material research.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100316 Chaston, Dr Christopher C

Approved Project Title **Wave energy transport, conversion and dissipation in near-Earth space**

2011	\$93,834.50
2012	\$186,783.50
2013	\$178,396.00
2014	\$170,896.50
2015	\$85,449.50
Total	\$715,360.00

Primary FoR 0201 ASTRONOMICAL AND SPACE SCIENCES

FT2 Dr Christopher C Chaston

Administering Organisation The University of Sydney

Project Summary

The near-Earth space environment is characterised by cycles of energy transport, conversion and release through particle acceleration that lead to dazzling aurora and damaged spacecraft and communication systems. This research seeks to identify how this energy is transported through space and the means through which it is converted and released.

FT110100150 Clifford, Prof Colin W

Approved Project Title **Parallel and generative binding in human visual cortex**

2011	\$116,396.00
2012	\$232,792.00
2013	\$232,792.00
2014	\$232,792.00
2015	\$116,396.00
Total	\$931,168.00

Primary FoR 1701 PSYCHOLOGY

FT3 Prof Colin W Clifford

Administering Organisation The University of Sydney

Project Summary

Imagine watching a group of children running around in brightly coloured T-shirts. How does your brain keep track of which colour goes with which T-shirt goes with which child? This project will use magnetic resonance imaging to identify where in our brains information about colour, shape and motion gets put together.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100909 Colyvan, Prof Mark

Approved Mathematical explanation
Project Title

2011	\$99,123.50
2012	\$197,183.00
2013	\$197,183.00
2014	\$197,029.00
2015	\$97,905.50
Total	\$788,424.00

Primary FoR 2203 PHILOSOPHY

FT3 Prof Mark Colyvan

Administering Organisation The University of Sydney

Project Summary

The best mathematical proofs tell us why some mathematical fact holds, not simply that it holds. However to understand how one piece of mathematics explains another piece of mathematics is poorly understood. This project will develop a philosophical account of mathematical explanation. In particular, it will show how mathematics can explain further mathematics as well as how it can explain physical phenomena.

FT110101005 Crozier, Dr Ivan

Approved Culture-bound syndromes, koro, and the emergence of 'cosmopolitan' psychiatry
Project Title

2011	\$83,627.00
2012	\$171,848.50
2013	\$175,507.50
2014	\$167,608.50
2015	\$80,322.50
Total	\$678,914.00

Primary FoR 2202 HISTORY AND PHILOSOPHY OF SPECIFIC FIELDS

FT2 Dr Ivan Crozier

Administering Organisation The University of Sydney

Project Summary

This historical study examines the concepts of ethnicity used by psychiatrists by focusing on the ways in which one culture-bound syndrome, koro, moved from being exclusively South-East Asian to being found in a number of cultures. It will develop significant understandings of psychiatric conceptions of cultural difference.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110101007 Heinrich, Dr Larissa N

Approved Project Title **The new medical body in contemporary Chinese imaginaries**

2011	\$76,640.50
2012	\$146,683.50
2013	\$143,370.00
2014	\$137,643.00
2015	\$64,316.00
Total	\$568,653.00

Primary FoR 2005 LITERARY STUDIES

FT1 Dr Larissa N Heinrich

Administering Organisation The University of Sydney

Project Summary

Advances in organ transplant, blood transfusion, and related practices not only affect understandings of the human body in medical and scientific communities, but in society at large. This project will analyse contemporary Chinese literature, cinema, art, and popular media to better understand the impact of medical innovations on Chinese culture.

FT110100504 Henderson, Dr Anthony

Approved Project Title **Springer fibres, nilpotent cones and representation theory**

2011	\$81,672.00
2012	\$166,281.50
2013	\$169,046.50
2014	\$164,106.50
2015	\$79,669.50
Total	\$660,776.00

Primary FoR 0101 PURE MATHEMATICS

FT2 Dr Anthony Henderson

Administering Organisation The University of Sydney

Project Summary

This project will address new ideas and famous unsolved problems in the field of algebra known as representation theory, by studying the geometry of spaces called Springer fibres and nilpotent cones. This will keep Australian mathematics in the forefront of developments in this internationally active field, which is central to modern mathematics.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100236 **Liao, A/Prof Xiaozhou**

Approved Project Title **The effect of structure and size on the mechanical behaviour of III-V semiconductor nanowires**

2011	\$102,857.00
2012	\$205,714.00
2013	\$205,714.00
2014	\$203,214.00
2015	\$100,357.00
Total	\$817,856.00

Primary FoR 0912 MATERIALS ENGINEERING

FT2 A/Prof Xiaozhou Liao

Administering Organisation The University of Sydney

Project Summary

The project aims to apply in-situ deformation transmission electron microscopy to investigate the mechanical behaviour of compound semiconductor nanowires and the effect of structure and geometry on the behaviour. The results will uncover the fundamental mechanical properties of nanowires and will guide the design of nanowire-based devices.

FT110101119 **Lu, Dr Duanfang**

Approved Project Title **Mapping China's urban crisis: the politics of land and resettlement**

2011	\$85,457.00
2012	\$170,264.00
2013	\$170,254.00
2014	\$171,154.00
2015	\$85,707.00
Total	\$682,836.00

Primary FoR 1205 URBAN AND REGIONAL PLANNING

FT2 Dr Duanfang Lu

Administering Organisation The University of Sydney

Project Summary

This project aims to examine the spatial, political, and social restructuring of the urban margins of Chinese cities by unravelling complexities and tensions involved in the recent rural settlement transition, during which numerous villages were demolished and converted into arable land.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110101046 McKenna, A/Prof Mark B

Approved Project Title **Australia: the search for a foundational history**

2011	\$84,137.50
2012	\$173,369.00
2013	\$169,462.50
2014	\$163,130.50
2015	\$82,899.50
Total	\$672,999.00

Primary FoR 2103 HISTORICAL STUDIES

FT2 A/Prof Mark B McKenna

Administering Organisation The University of Sydney

Project Summary

The first history of Australia's search for a foundational past, this project examines the historical debates that have divided Australian society since the late twentieth century. Set against the background of Indigenous and non-Indigenous understandings of history and place, it provides a groundbreaking study of history in Australian culture.

FT110101037 Pelusi, Dr Mark D

Approved Project Title **Broadband compensation of nonlinear signal distortion in optical fibre communications**

2011	\$83,316.00
2012	\$160,132.00
2013	\$161,632.00
2014	\$170,132.00
2015	\$85,316.00
Total	\$660,528.00

Primary FoR 0205 OPTICAL PHYSICS

FT1 Dr Mark D Pelusi

Administering Organisation The University of Sydney

Project Summary

This project will investigate novel optical technologies for overcoming the approaching data capacity limits of global optical communication networks that are caused by transmission errors from nonlinear signal distortion in optical fibre. The research will show that light propagation through specially designed waveguides can cancel the distortion.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100043 Rafferty, Dr Michael

Approved Project Title Risk shifting, retirement and low-paid work

2011	\$70,482.50
2012	\$144,165.50
2013	\$144,471.00
2014	\$140,257.50
2015	\$69,469.50
Total	\$568,846.00

Primary FoR 1605 POLICY AND ADMINISTRATION

FT1 Dr Michael Rafferty

Administering Organisation The University of Sydney

Project Summary

This project will respond to the pressing need for greater understanding of the new socio-economic terrain of social risk shifting. The project will situate retirement financing within a discourse of risk shift to households and individuals, which is seeing social roles and identities tied, in cultural as well as monetary ways, into global finance.

FT110100121 Saul, A/Prof Ben

Approved Project Title The emerging international law of terrorism

2011	\$91,727.00
2012	\$177,164.00
2013	\$171,154.00
2014	\$169,074.00
2015	\$83,357.00
Total	\$692,476.00

Primary FoR 1801 LAW

FT2 A/Prof Ben Saul

Administering Organisation The University of Sydney

Project Summary

This project examines how international law responds to terrorism and critiques the legitimacy and effectiveness of those responses. The project will improve the international community's knowledge about the effective regulation of terrorist violence within a rule of law framework, and identify opportunities for improving international responses.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100642 Wallace, A/Prof Lee M

Approved Project Title **Reconceiving the queer public sphere: an interdisciplinary analysis of same-sex couple domesticity**

2011	\$93,547.00
2012	\$187,942.00
2013	\$184,764.00
2014	\$168,226.00
2015	\$77,857.00
Total	\$712,336.00

Primary FoR 2002 CULTURAL STUDIES

FT2 A/Prof Lee M Wallace

Administering Organisation The University of Sydney

Project Summary

Using literary, biographical and photographic sources, this project will produce a ground-breaking history of same-sex domestic environments across the twentieth century. Critically analysing queer home life, this project will transform current understandings of the relation between homosexuality, private life and the public sphere.

FT110100511 Williams, Dr Stefan B

Approved Project Title **Delivering information suitable for studying spatial and temporal variability in benthic habitats using autonomous underwater vehicles**

2011	\$102,212.00
2012	\$204,319.00
2013	\$195,599.00
2014	\$175,599.00
2015	\$82,107.00
Total	\$759,836.00

Primary FoR 0801 ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

FT2 Dr Stefan B Williams

Administering Organisation The University of Sydney

Project Summary

This project will develop the tools required to transform observations, made from autonomous underwater vehicles (AUV) of benthic habitats, into information that supports a better understanding of variability in benthic environments. This will allow for a coordinated and collaborative approach for data analysis and mapping to be undertaken.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100996 Young, A/Prof Paul M

Approved Project Title An attack from all angles! Multiphase particle systems that target respiratory infection

2011	\$102,122.00
2012	\$200,744.00
2013	\$199,744.00
2014	\$200,744.00
2015	\$99,622.00
Total	\$802,976.00

Primary FoR 1115 PHARMACOLOGY AND PHARMACEUTICAL SCIENCES

FT2 A/Prof Paul M Young

Administering Organisation The University of Sydney

Project Summary

This project will result in advanced inhaled medicines for lung infection. Micron-particles will be engineered to have sustained drug release when deposited at sites of infection, yet avoid natural clearance and defence mechanisms. To study these systems, a series of characterisation, in vitro cell and in silico tools will be developed.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

University of Technology, Sydney

FT110100875 Bibby, Dr Thomas S

Approved Project Title **Enhanced algal biofuel production: optimising photosynthesis in Australian strains of marine algae**

2011	\$79,316.00
2012	\$164,007.00
2013	\$169,507.00
2014	\$169,882.00
2015	\$85,066.00
Total	\$667,778.00

Primary FoR 0607 PLANT BIOLOGY

FT1 Dr Thomas S Bibby

Administering Organisation University of Technology, Sydney

Project Summary

Algal biofuel produces a sustainable liquid fuel to help meet our future energy needs. This project will pioneer a multifaceted approach in molecular biology and photophysiology to engineer the best biofuel producers from Australian marine algae and will advance innovation in Australia's biofuel biotechnology development.

FT110101044 Bremner, Dr Michael J

Approved Project Title **Supra-classical quantum simulation in physically restricted models of quantum computation**

2011	\$78,788.00
2012	\$149,354.00
2013	\$142,354.00
2014	\$142,354.00
2015	\$70,566.00
Total	\$583,416.00

Primary FoR 0802 COMPUTATION THEORY AND MATHEMATICS

FT1 Dr Michael J Bremner

Administering Organisation University of Technology, Sydney

Project Summary

Quantum computation evolved from the revolutionary twentieth century theories of Quantum Mechanics and Computer Science, offering computational power that potentially transcends traditional computing models. This project will accelerate the delivery of the promised benefits of quantum computation through advancing the theory of quantum simulation.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100753 Forbes, Dr Shari L

Approved Project Title **Establishing an accurate chemical volatile profile of decomposition for use in victim recovery in mass disaster and forensic investigations**

2011	\$102,857.00
2012	\$205,714.00
2013	\$205,714.00
2014	\$205,714.00
2015	\$102,857.00
Total	\$822,856.00

Primary FoR 0399 OTHER CHEMICAL SCIENCES

FT2 Dr Shari L Forbes

Administering Organisation University of Technology, Sydney

Project Summary

This project will advance forensic science by identifying a complete chemical profile of human decomposition scent. It will result in the development of a more accurate training scent aid to enhance the response of cadaver detection dogs deployed to scenes of mass disasters involving human remains.

FT110100455 Hutvagner, Dr Gyorgy

Approved Project Title **Dissecting key steps of the miRNA-mediated gene regulation and its implication in immune response and cancer**

2011	\$79,316.00
2012	\$157,632.00
2013	\$157,632.00
2014	\$157,632.00
2015	\$78,316.00
Total	\$630,528.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

FT1 Dr Gyorgy Hutvagner

Administering Organisation University of Technology, Sydney

Project Summary

This project will characterise in detail one of the most important ways that genes are turned off in humans. This process is involved in many diseases including cancer and infections. The result will provide potential novel drug targets to prevent and treat such diseases.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100800 Wang, Prof Guoxiu

Approved Project Title Lithium-air battery: a green energy source for the sustainable future

2011	\$115,361.00
2012	\$231,722.00
2013	\$232,722.00
2014	\$227,547.00
2015	\$111,186.00
Total	\$918,538.00

Primary FoR 0912 MATERIALS ENGINEERING

FT3 Prof Guoxiu Wang

Administering Organisation University of Technology, Sydney

Project Summary

Electrification of vehicles and the implementation of smart electric grids can dramatically reduce greenhouse gas emissions and realise sustainable development. Lithium-air batteries have the highest energy density among all battery systems and are therefore a promising power source for electric vehicles and stationary energy storage.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

University of Western Sydney

FT110100418 Bubbio, Dr Paolo D

Approved Project Title The quest for the 'I': reaching a better understanding of the self through Hegel and Heidegger

2011	\$77,370.50
2012	\$152,805.50
2013	\$152,805.50
2014	\$144,439.00
2015	\$67,068.50
Total	\$594,489.00

Primary FoR 2202 HISTORY AND PHILOSOPHY OF SPECIFIC FIELDS

FT1 Dr Paolo D Bubbio

Administering Organisation University of Western Sydney

Project Summary

The conception of the 'I' is central to our lives. The more multicultural a country is, the more pressing becomes the question of the conception of the self. Focusing on the thought of Hegel and Heidegger, this project aims to offer a richer account that avoids individualism and allows thinking of the formation of the self as a collective enterprise.

FT110101098 de Chazal, Dr Philip

Approved Project Title Minimally invasive monitoring of sleep for disease management

2011	\$112,321.00
2012	\$221,052.00
2013	\$219,962.00
2014	\$218,442.00
2015	\$107,211.00
Total	\$878,988.00

Primary FoR 0903 BIOMEDICAL ENGINEERING

FT3 Dr Philip de Chazal

Administering Organisation University of Western Sydney

Project Summary

Sleep, diet and exercise are the three pillars of wellbeing with poor sleep associated with medical issues such as obesity and congestive heart failure. This project will advance sleep analysis by researching new ways of monitoring that are highly accurate and convenient, enabling physicians to improve the monitoring of significant health issues.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

University of Wollongong

FT110100586 Ecroyd, Dr Heath W

Approved Project Title **Small heat shock proteins: front-line defenders and therapeutic targets**

2011	\$81,816.00
2012	\$163,632.00
2013	\$163,632.00
2014	\$163,632.00
2015	\$81,816.00
Total	\$654,528.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

FT1 Dr Heath W Ecroyd

Administering Organisation University of Wollongong

Project Summary

Small heat-shock chaperone proteins play a key role as front line defenders against protein aggregation, a process linked to ageing and disease. This project spans fields from protein chemistry to cell biology to generate an unprecedented insight into the links between the structure, function and therapeutic potential of these chaperone proteins.

FT110100170 Kim, Dr Jung Ho

Approved Project Title **Development of a solid nitrogen cooled magnesium diboride (MgB₂) magnet for persistent-mode operation**

2011	\$89,286.00
2012	\$178,577.00
2013	\$177,827.00
2014	\$175,427.00
2015	\$86,891.00
Total	\$708,008.00

Primary FoR 0912 MATERIALS ENGINEERING

FT1 Dr Jung Ho Kim

Administering Organisation University of Wollongong

Project Summary

Soaring price for liquid helium has increased demand for cryogen-free superconducting magnets more than ever. If magnetic resonance imaging magnets, which represent over 50 per cent of the world superconducting markets, could be operated without liquid helium, magnetic resonance imaging would be much more affordable and enable reduced health care costs.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100249 Mitchell, Dr Todd W

Approved Project Title Lipidomics of vision

2011	\$89,229.50
2012	\$178,466.50
2013	\$177,346.50
2014	\$175,406.50
2015	\$87,297.00
Total	\$707,746.00

Primary FoR 1101 MEDICAL BIOCHEMISTRY AND METABOLOMICS

FT1 Dr Todd W Mitchell

Administering Organisation University of Wollongong

Project Summary

Presbyopia and cataract are the major causes of visual impairment worldwide. Nevertheless, our understanding of lens ageing at both a cellular and molecular level is limited. This project will gain new insight into the effect of age on lens membrane lipids and their role in the development of presbyopia and cataract.

FT110100752 Solowij, Dr Nadia

Approved Project Title Cannabis and the brain: the good, the bad and the unknown

2011	\$102,307.00
2012	\$204,614.00
2013	\$204,644.00
2014	\$204,674.00
2015	\$102,337.00
Total	\$818,576.00

Primary FoR 1701 PSYCHOLOGY

FT2 Dr Nadia Solowij

Administering Organisation University of Wollongong

Project Summary

Cannabis is the most widely used illicit drug but much remains unknown about how it affects the brain. This research will examine effects on brain cells through to whole brain function in humans to determine how cannabis use may lead to impaired thinking or psychological symptoms and why cannabis might affect individuals in different ways.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100034 Yu, Dr Haibo

Approved Project Title Computational enzymology: exploring the free energy landscape of enzymatic catalysis

2011	\$87,283.50
2012	\$155,779.50
2013	\$135,512.00
2014	\$136,467.00
2015	\$69,451.00
Total	\$584,493.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

FT1 Dr Haibo Yu

Administering Organisation University of Wollongong

Project Summary

Most biochemical reactions depend on enzyme catalysis and understanding how enzymes work at the molecular level remains a central question. This project will develop a suite of computational models to study the mechanisms of enzyme-catalysed reactions and such knowledge holds promise for technological benefits in the form of new drugs and novel catalysts.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Victor Chang Cardiac Research Institute

FT110100075 Hill, Dr Adam P

Approved Project Title **Using high performance computing to probe the genesis of cardiac arrhythmias**

2011	\$87,066.00
2012	\$153,382.00
2013	\$133,444.50
2014	\$132,944.50
2015	\$65,816.00
Total	\$572,653.00

Primary FoR 1102 CARDIOVASCULAR MEDICINE AND HAEMATOLOGY

FT1 Dr Adam P Hill

Administering Organisation Victor Chang Cardiac Research Institute

Project Summary

Disturbances to the normal rhythm of the heart beat cause approximately 15 per cent of deaths in Australia. The project aims to understand how electrical signals in the heart can become chaotic. The project will use computer models of heart rhythm disturbances to help us understand when and how arrhythmias occur.

FT110100836 Kikuchi, Dr Kazu

Approved Project Title **Dissecting endocardial signals required for cardiac muscle regeneration in zebrafish**

2011	\$88,366.00
2012	\$170,182.00
2013	\$166,682.00
2014	\$166,682.00
2015	\$81,816.00
Total	\$673,728.00

Primary FoR 0604 GENETICS

FT1 Dr Kazu Kikuchi

Administering Organisation Victor Chang Cardiac Research Institute

Project Summary

Unlike humans, zebrafish have an extraordinary ability to regenerate their damaged hearts. This project will study the endocardium, a thin layer of cells lining the inner heart, to find important genes for regeneration. Results from this study may provide insights into proper repair of human hearts after injury.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Victoria

Australian Catholic University

FT110100254 Hardikar, A/Prof Anandwardhan

Approved Project Title RNA-based analysis for prediction of islet death in diabetes

2011	\$101,857.00
2012	\$203,714.00
2013	\$204,064.00
2014	\$204,664.00
2015	\$102,457.00
Total	\$816,756.00

Primary FoR 0604 GENETICS

FT2 A/Prof Anandwardhan Hardikar

Administering Organisation Australian Catholic University

Project Summary

Death of insulin-producing cells is a common feature in diabetes. Presently, a blood glucose test remains the only blunt instrument to diagnose diabetes. The RNA-based analysis for prediction of islet death in diabetes (RAPID) study links with eight clinical trials to test this newly developed non-invasive assay for predicting diabetes. Early diagnosis will help to reduce diabetic complications in later life.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Brain Research Institute Pty Ltd

FT110100726 Calamante, A/Prof Fernando

Approved Project Title **Advanced magnetic resonance imaging methods for the characterisation of brain structure and function**

2011	\$92,887.00
2012	\$184,664.00
2013	\$184,114.00
2014	\$183,764.00
2015	\$91,427.00
Total	\$736,856.00

Primary FoR 1109 NEUROSCIENCES

FT2 A/Prof Fernando Calamante

Administering Organisation Brain Research Institute Pty Ltd

Project Summary

Magnetic resonance imaging (MRI) is a non-invasive method that has revolutionised the development of neuroscience and neurology. The goal of this project is to develop advanced MRI methods for the study of brain structure and function which will be applied to the investigation of epilepsy and stroke.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Deakin University

FT110100345 Renzaho, A/Prof Andre M

Approved Project Title **Reducing the social, economic and health burden associated with obesity-related chronic diseases among socio-economically disadvantaged populations**

2011	\$89,557.00
2012	\$178,739.00
2013	\$177,914.00
2014	\$177,689.00
2015	\$88,957.00
Total	\$712,856.00

Primary FoR 1111 NUTRITION AND DIETETICS

FT2 A/Prof Andre M Renzaho

Administering Organisation Deakin University

Project Summary

This project will develop new methods and approaches for reducing obesity-related chronic diseases (OCDs) among socially disadvantaged populations in Australia, using prevention models. These prevention models will improve the evidence base in this field as well as inform public health policy and practice in Australia (and other industrialised countries).

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

La Trobe University

FT110100690 Horvath, Dr Robert G

Approved Project Title **Reaping the patriotic whirlwind: managed nationalism and the rise of militant xenophobia in Russia**

2011 \$82,539.50

2012 \$161,644.50

2013 \$152,855.00

2014 \$146,042.50

2015 \$72,292.50

Total **\$615,374.00**

Primary FoR 2103 HISTORICAL STUDIES

FT1 Dr Robert G Horvath

Administering Organisation La Trobe University

Project Summary

This project examines the relationship between 'managed nationalism' and upsurges of ultranationalist activism and racially-motivated violence. This research will enhance our understanding of politics, diplomacy, and alternative governance.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Monash University

FT110100602 Beringer, A/Prof Jason

Approved Project Title Vulnerability of Australian savannas to climate change and variability

2011	\$102,654.00
2012	\$201,761.50
2013	\$200,807.00
2014	\$189,322.50
2015	\$87,623.00
Total	\$782,168.00

Primary FoR 0699 OTHER BIOLOGICAL SCIENCES

FT2 A/Prof Jason Beringer

Administering Organisation Monash University

Project Summary

Australian savannas are productive and are culturally and biologically significant landscapes, but they are vulnerable to climate change. This project will determine savanna function (carbon and water balance) for the present and assess how sensitive they have been to past climate variability. The project will then address how they may respond to future climate change.

FT110100152 Bhosale, Dr Sheshanath V

Approved Project Title The development of yoctowells on magnetic nanoparticles as both tiny chemical reactors and biological models

2011	\$86,316.00
2012	\$167,382.00
2013	\$170,382.00
2014	\$176,132.00
2015	\$86,816.00
Total	\$687,028.00

Primary FoR 0303 MACROMOLECULAR AND MATERIALS CHEMISTRY

FT1 Dr Sheshanath V Bhosale

Administering Organisation Monash University

Project Summary

This project seeks to develop an innovative and cutting-edge research program in biomimicry by studying a surface functionalised system - the so called yoctowells - on magnetic nanoparticles, by studying their inclusion behaviour and utilising the intrinsic magnetic properties for isolation and manipulation in catalysis, medicine and electronics.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100223 Borg, Dr Natalie

Approved Project Title **The regulation of anti-viral immunity by host and viral proteins**

2011	\$79,316.00
2012	\$158,632.00
2013	\$158,632.00
2014	\$158,632.00
2015	\$79,316.00
Total	\$634,528.00

Primary FoR 1107 IMMUNOLOGY

FT1 Dr Natalie Borg

Administering Organisation Monash University

Project Summary

Anti-viral immunity is initially triggered when specific immune sensors detect viral components within the cell. This project will use a combined functional/structural approach to investigate the specifics of immune activation by a pivotal immune sensor and use this information to understand how influenza A sabotages this specific immune response.

FT110100019 Casey, Dr Maryrose

Approved Project Title **Performing nations and cultures: rethinking authenticity in the performing arts**

2011	\$80,855.00
2012	\$152,765.00
2013	\$145,570.00
2014	\$140,476.00
2015	\$66,816.00
Total	\$586,482.00

Primary FoR 1904 PERFORMING ARTS AND CREATIVE WRITING

FT1 Dr Maryrose Casey

Administering Organisation Monash University

Project Summary

This project examines how notions of cultural authenticity have been deployed and changed over time within national and transnational contexts in relation to cross-cultural performances produced by Indigenous Australians and American Indian people between 1800-1950. This research offers a new perspective on Australian and US cultural histories.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100132 Corbould, Dr Clare

Approved Project Title **Talking slavery in the new deal: re-examining the origins of American social history**

2011	\$88,279.00
2012	\$167,542.00
2013	\$153,183.00
2014	\$140,985.00
2015	\$67,065.00
Total	\$617,054.00

Primary FoR 2103 HISTORICAL STUDIES

FT1 Dr Clare Corbould

Administering Organisation Monash University

Project Summary

Debate about the nature of American slavery has had a significant impact on American public life, especially ideas about justice, equality, rights and the role of government. By examining anew the archive on which slave history has been based, this project will advance understanding and stimulate new angles in public discussion of slavery's legacy.

FT110100545 Funston, Dr Alison M

Approved Project Title **Photonic circuitry from the noble metals: nanocrystal coupling**

2011	\$89,315.50
2012	\$178,596.00
2013	\$178,584.00
2014	\$178,532.00
2015	\$89,228.50
Total	\$714,256.00

Primary FoR 0306 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

FT1 Dr Alison M Funston

Administering Organisation Monash University

Project Summary

Linear arrays of crystalline nanoparticles are able to act in a manner analogous to an optical fibre, but with much smaller dimensions. This project will investigate the underlying principles of waveguiding within the arrays and aims to build and test sections of such optical fibres, thereby assessing their use in optical circuits.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100612 Izgorodina, Dr Ekaterina I

Approved Project Title Towards ab initio molecular dynamics simulations of proton and electron transfer processes

2011	\$72,520.00
2012	\$145,040.00
2013	\$141,126.00
2014	\$137,212.00
2015	\$68,606.00
Total	\$564,504.00

Primary FoR 0307 THEORETICAL AND COMPUTATIONAL CHEMISTRY

FT1 Dr Ekaterina I Izgorodina

Administering Organisation Monash University

Project Summary

Electrochemical technologies seek design capabilities to enable the discovery of novel electrolytes with valuable properties. This project will develop new advanced computational methods to understand electron and proton transfer in electrolytes and thereby allow us to enhance performance of electrochemical devices and control metal deposition.

FT110100384 Levin, Dr Yuri

Approved Project Title Gravitational-wave astrophysics of binary black holes

2011	\$76,936.00
2012	\$147,323.50
2013	\$142,774.00
2014	\$143,274.00
2015	\$70,887.50
Total	\$581,195.00

Primary FoR 0201 ASTRONOMICAL AND SPACE SCIENCES

FT1 Dr Yuri Levin

Administering Organisation Monash University

Project Summary

Do black holes live alone, or form lasting gravitational partnerships? This question is of immense significance to astronomers. The emerging field of gravitational-wave astronomy is set to provide the answers. This project aims to develop innovative strategies to search for black hole pairs using leading technologies built with Australian expertise.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100341 **Li, A/Prof Dan**

Approved Project Title **Novel graphene-based soft materials for versatile applications**

2011	\$97,007.00
2012	\$198,804.00
2013	\$201,804.00
2014	\$199,804.00
2015	\$99,797.00
Total	\$797,216.00

Primary FoR 0912 MATERIALS ENGINEERING

FT2 A/Prof Dan Li

Administering Organisation Monash University

Project Summary

This research program will develop new techniques to convert natural graphite into new carbon nanomaterials for use in energy storage/conversion devices, water purification, sensors and biomedical devices. It will enable many technological innovations in related areas and enhance Australia's engineering and manufacturing innovations.

FT110100319 **Lupton, Dr David W**

Approved Project Title **Extending the frontiers of organocatalysis: new reactions involving nucleophilic carbenes**

2011	\$88,916.00
2012	\$178,082.00
2013	\$177,282.00
2014	\$177,232.00
2015	\$89,116.00
Total	\$710,628.00

Primary FoR 0305 ORGANIC CHEMISTRY

FT1 Dr David W Lupton

Administering Organisation Monash University

Project Summary

High technology solutions to the problems of today and tomorrow require new materials designed for specific activities. This project will deliver new technologies for the rapid and efficient assembly of materials designed for function.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100427 Nakashima, Dr Philip N

Approved Project Title Interatomic bonding in aluminium alloys

2011	\$73,787.50
2012	\$151,068.50
2013	\$153,689.00
2014	\$149,544.00
2015	\$73,136.00
Total	\$601,225.00

Primary FoR 0204 CONDENSED MATTER PHYSICS

FT1 Dr Philip N Nakashima

Administering Organisation Monash University

Project Summary

This project proposes a new theory about the formation of strengthening precipitates in alloys. It will be tested using new techniques for measuring bonds between atoms and Australia's most advanced electron microscopes. It will remove the guesswork from the processing and design of commercial alloys.

FT110100505 Peters, Dr Anne-Marie

Approved Project Title Constrained or strategic? Causes and consequences of variation in self-maintenance in wild birds

2011	\$81,674.50
2012	\$163,344.00
2013	\$161,185.00
2014	\$159,735.50
2015	\$80,220.00
Total	\$646,159.00

Primary FoR 0602 ECOLOGY

FT1 Dr Anne-Marie Peters

Administering Organisation Monash University

Project Summary

To live long and healthy lives, animals must defend themselves from diseases and repair damage due to wear and tear. This project will address what prevents animals from achieving optimal defences, and what the consequences are for ageing and survival.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100560 Schellart, Dr Wouter P

Approved Project Title **The Cenozoic tectonic evolution of East and Southeast Asia: interplay between the India-Eurasia collision and the Pacific and Sunda subduction zones**

2011	\$95,557.00
2012	\$197,393.00
2013	\$188,643.00
2014	\$173,614.00
2015	\$86,807.00
Total	\$742,014.00

Primary FoR 0404 GEOPHYSICS

FT2 Dr Wouter P Schellart

Administering Organisation Monash University

Project Summary

This project investigates how the Indo-Australian and Pacific tectonic plates have interacted with the Eurasian plate to form the largest continental deformation zone on Earth in East Asia, stretching from the Himalayas to Indonesia and eastern Siberia. This is important for understanding how mountain ranges form and how continents are torn apart.

FT110100951 Sgro, Dr Carla M

Approved Project Title **Integrating evolution and plasticity into predictions of population persistence in a changing climate: adaptation or extinction?**

2011	\$89,200.00
2012	\$176,729.00
2013	\$174,308.00
2014	\$173,884.50
2015	\$87,105.50
Total	\$701,227.00

Primary FoR 0603 EVOLUTIONARY BIOLOGY

FT1 Dr Carla M Sgro

Administering Organisation Monash University

Project Summary

To effectively manage biodiversity at a time of rapid environmental change, Australia needs accurate predictions of how human alterations to climate and habitat will affect species. This project integrates evolution and spatial ecology to develop new tools for predicting and understanding how species will respond to environmental change.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100084 Spencer, Dr Sarah J

Approved Project Title **Developmental programming of adult stress responses: early life nutrition permanently alters stress and immune function**

2011	\$88,197.00
2012	\$177,085.50
2013	\$177,860.00
2014	\$176,813.00
2015	\$87,841.50
Total	\$707,797.00

Primary FoR 1111 NUTRITION AND DIETETICS

FT1 Dr Sarah J Spencer

Administering Organisation Monash University

Project Summary

Obese children are more likely to grow up to be obese adults than normal-weight children are. Their early life diet may be at least partly to blame. Early life nutrition can also compromise ability to respond to stress or inflammation. This project will investigate how this occurs and if these effects are specific to the developmental period.

FT110100768 Stasch, Dr Andreas

Approved Project Title **New reactivity from unusual main group compounds**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 0302 INORGANIC CHEMISTRY

FT1 Dr Andreas Stasch

Administering Organisation Monash University

Project Summary

This project will develop new, fundamentally important, yet unusual main group compounds and investigate their reactivity. The project will lead to important fundamental advance in main group chemistry and will form the basis for cheaper and cleaner future synthetic methodologies and technologies.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100957 Thompson, Dr Ross M

Approved Project Title **Explaining biodiversity**

2011	\$88,994.00
2012	\$170,252.50
2013	\$170,267.50
2014	\$161,641.00
2015	\$72,632.00
Total	\$663,787.00

Primary FoR 0602 ECOLOGY

FT1 Dr Ross M Thompson

Administering Organisation Monash University

Project Summary

Why are there many species in some places and not in others? The aim of this project is to understand this in order to protect species, understand invasion and restore ecological systems. Using published food webs, this project will determine what factors underlie biodiversity, then use experiments to understand effects of habitat loss and climate change on food web structure.

FT110100625 Twomey, A/Prof Christina L

Approved Project Title **Detention: the humanitarian and imperial origins of internment and concentration camps**

2011	\$96,646.00
2012	\$179,852.00
2013	\$176,863.00
2014	\$181,454.00
2015	\$87,797.00
Total	\$722,612.00

Primary FoR 2103 HISTORICAL STUDIES

FT2 A/Prof Christina L Twomey

Administering Organisation Monash University

Project Summary

This project examines the colonial origins of the concentration camp system and its previously unexplored links with protection policies for Indigenous and immigrant groups. It will make an important contribution to the way we understand the history of non-criminal and non-citizen detention, humanitarianism and human rights.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100065 Wanless, A/Prof Ian M

Approved Project Title **Towards the prime power conjecture**

2011	\$84,705.00
2012	\$169,573.00
2013	\$172,748.50
2014	\$168,926.00
2015	\$81,045.50
Total	\$676,998.00

Primary FoR 0101 PURE MATHEMATICS

FT2 A/Prof Ian M Wanless

Administering Organisation Monash University

Project Summary

This project attacks a famous and long standing conjecture in pure mathematics that has important ramifications in many applied areas. The project aims to determine when it is possible to produce more efficient codes for electronic communication and statistically balanced designs for experiments in areas as diverse as agriculture and psychology.

FT110100854 Weller, Dr Sally A

Approved Project Title **Regional dimensions of the transition to a low carbon economy**

2011	\$73,366.00
2012	\$158,310.00
2013	\$169,200.00
2014	\$157,925.00
2015	\$73,669.00
Total	\$632,470.00

Primary FoR 1604 HUMAN GEOGRAPHY

FT1 Dr Sally A Weller

Administering Organisation Monash University

Project Summary

This project's examination of the impacts of carbon-reduction policies in two vulnerable regions will identify the social, political, economic and cultural changes needed to promote the revitalisation of regional economies and communities.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100054 Whittaker, A/Prof Andrea M

Approved Project Title Borders, babies and biotechnologies: cross border reproductive travel in Asia and Australia

2011	\$95,803.50
2012	\$185,688.50
2013	\$187,128.00
2014	\$178,664.50
2015	\$81,421.50
Total	\$728,706.00

Primary FoR 1608 SOCIOLOGY

FT2 A/Prof Andrea M Whittaker

Administering Organisation Monash University

Project Summary

A growing number of patients travel internationally to undertake assisted reproductive care such as commercial surrogacy, egg donation or sex selection. The project aims to study the extent of this trade in Australia, Thailand and India and the cross cultural ethical, legal and social context surrounding it.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Murdoch Childrens Research Institute

FT110101036 Brown, Asst Prof Stephanie J

Approved Project Title Closing the gap in Aboriginal maternal and child health outcomes

2011	\$99,751.50
2012	\$196,058.50
2013	\$194,089.00
2014	\$192,139.00
2015	\$94,357.00
Total	\$776,395.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

FT2 Asst Prof Stephanie J Brown

Administering Organisation Murdoch Childrens Research Institute

Project Summary

This project will build the evidence base needed to design and implement effective strategies to close the gap in Aboriginal maternal and child health outcomes and reduce Indigenous disadvantage across the life course.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

RMIT University

FT110100760 O'Mullane, Dr Anthony P

Approved Project Title **Surface modification of semiconducting organic charge transfer complexes with metal nanoparticles to create a new class of multifunctional materials**

2011 \$77,316.00

2012 \$153,132.00

2013 \$145,132.00

2014 \$138,632.00

2015 \$69,316.00

Total **\$583,528.00**

Primary FoR 0306 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

FT1 Dr Anthony P O'Mullane

Administering Organisation RMIT University

Project Summary

This project aims to deliver a facile and cheap method to produce a class of nanostructured composite materials to be used in applications which will have environmental and social benefits such as photocatalyst development for water purification, biosensing and the creation of antibacterial fabrics to prevent the spread of infection.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Swinburne University of Technology

FT110100639 Blake, Dr Christopher A

Approved Project Title **Measuring the physics of the universe with Australian galaxy surveys**

2011	\$72,284.00
2012	\$143,875.00
2013	\$142,925.00
2014	\$142,625.00
2015	\$71,291.00
Total	\$573,000.00

Primary FoR 0201 ASTRONOMICAL AND SPACE SCIENCES

FT1 Dr Christopher A Blake

Administering Organisation Swinburne University of Technology

Project Summary

Observations by astronomers over the last fifteen years have produced one of the most startling discoveries in physical science: the expansion of the universe, originally triggered by the Big Bang, has begun to speed up. This project aims to capitalise on new Australian technology to understand what is driving this mysterious result.

FT110101038 Chon, Dr James W

Approved Project Title **Image correlation spectroscopy on gold nanorod based plasmonic random media for nanophotonic applications**

2011	\$86,641.00
2012	\$173,259.00
2013	\$173,259.00
2014	\$175,832.00
2015	\$89,191.00
Total	\$698,182.00

Primary FoR 1007 NANOTECHNOLOGY

FT1 Dr James W Chon

Administering Organisation Swinburne University of Technology

Project Summary

The push for high capacity storage and high speed plasmonic switching beyond terahertz (THz) is continuing, but the question remains whether this limit can be overcome. This project tackles these issues using plasmonic random media, which will help realise the elusive terabyte storage capacity and THz switching speed.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100263 Graham, A/Prof Alister W

Approved Project Title **The hearts of galaxies**

2011	\$77,857.00
2012	\$155,714.00
2013	\$155,714.00
2014	\$155,714.00
2015	\$77,857.00
Total	\$622,856.00

Primary FoR 0201 ASTRONOMICAL AND SPACE SCIENCES

FT2 A/Prof Alister W Graham

Administering Organisation Swinburne University of Technology

Project Summary

The centres of galaxies harbour fascinating astrophysical objects, such as black holes one thousand million times more massive than our Sun. This project will measure the damage that they have caused, searching for binary black holes, and helping to determine the extent to which galaxies have collided.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The University of Melbourne

FT110100112 Bailey, A/Prof James

Approved Project Title Smart comparison and assessment of prediction models for better health using next generation data mining

2011	\$93,199.00
2012	\$176,381.00
2013	\$166,364.00
2014	\$168,158.00
2015	\$84,976.00
Total	\$689,078.00

Primary FoR 0806 INFORMATION SYSTEMS

FT2 A/Prof James Bailey

Administering Organisation The University of Melbourne

Project Summary

Prediction models can be used to provide early warning of events, such as adverse medical outcomes. This project will develop principles for the smart management of large collections of prediction models using data mining, enabling more timely medical interventions for Australians to live healthier and longer.

FT110100218 Crack, Dr Peter J

Approved Project Title Understanding the contribution of neuroinflammation in acute and chronic neural injury

2011	\$86,266.00
2012	\$175,532.00
2013	\$178,582.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$708,328.00

Primary FoR 1109 NEUROSCIENCES

FT1 Dr Peter J Crack

Administering Organisation The University of Melbourne

Project Summary

A major focus of this project will be investigating the involvement of neuroinflammation in neural cell damage. It will explore how neuroinflammation contributes to this damage in both acute and chronic neuropathologies.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100199 Drew, Dr Simon C

Approved Project Title Enhancing our understanding of metallochemistry in neurobiology with modern electron paramagnetic resonance (EPR) spectroscopy

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 0306 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

FT1 Dr Simon C Drew

Administering Organisation The University of Melbourne

Project Summary

Many neurological diseases involve protein accumulation that appears causally linked to abnormal levels of metal ions in the brain. This project will use a special technique called electron paramagnetic resonance to uncover how these metals interact with specific proteins at the molecular level and how drug treatments can modify these interactions.

FT110100658 Fine, Dr Cordelia

Approved Project Title Sexism in scientific and pseudo-scientific explanations of sex inequality: an empirical, ethical and educative approach

2011	\$67,913.50
2012	\$134,827.00
2013	\$133,827.00
2014	\$133,827.00
2015	\$66,913.50
Total	\$537,308.00

Primary FoR 1701 PSYCHOLOGY

FT1 Dr Cordelia Fine

Administering Organisation The University of Melbourne

Project Summary

Neuroscientific explanations of sex inequality are scientifically premature, and lead to popular exaggerations that sustain inequality through self-fulfilling effects. This project will increase understanding of these harmful consequences, and bring about essential improvements in both the quality of scientific research, and public understanding.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100225 Gibson, Dr Brant C

Approved Project Title **Hybrid diamond materials for next generation sensing, biodiagnostic and quantum devices**

2011	\$89,316.00
2012	\$178,632.00
2013	\$166,132.00
2014	\$153,632.00
2015	\$76,816.00
Total	\$664,528.00

Primary FoR 1007 NANOTECHNOLOGY

FT1 Dr Brant C Gibson

Administering Organisation The University of Melbourne

Project Summary

Nanodiamond mixed with non-diamond materials will revolutionise quantum-photonics spawning a step change in nanoscale bio-chemical and remote sensing. The outcomes of this work will have a significant impact on the prognosis of diseases, security, and communications and will enhance Australia's reputation as a world leader in nano-materials.

FT110100088 Hester, Dr Robert L

Approved Project Title **Examining the neural mechanisms underlying cognitive control and its application to clinical syndromes featuring dyscontrol**

2011	\$99,615.00
2012	\$198,890.00
2013	\$190,310.00
2014	\$188,810.00
2015	\$97,775.00
Total	\$775,400.00

Primary FoR 1701 PSYCHOLOGY

FT2 Dr Robert L Hester

Administering Organisation The University of Melbourne

Project Summary

This project will examine the cognitive control and its underlying neural mechanisms. Understanding this relationship is of major scientific interest because cognitive control dysfunction is related to a number of Australia's major social and economic problems, including drug dependence.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100432 Hutchins, Dr Nicholas

Approved Project Title **Environmentally sustainable shipping through improved understanding and management of wall-bounded turbulence**

2011	\$89,217.50
2012	\$178,529.50
2013	\$178,595.00
2014	\$178,574.50
2015	\$89,291.50
Total	\$714,208.00

Primary FoR 0915 INTERDISCIPLINARY ENGINEERING

FT1 Dr Nicholas Hutchins

Administering Organisation The University of Melbourne

Project Summary

The thin region of turbulent flow that is pulled along by a ship's hull as it moves through the water accounts for up to 90 per cent of the overall resistance and a large amount of the fuel burnt. This project aims to control or tame recurrent flow patterns within these turbulent regions to reduce resistance, overall fuel cost and emissions from shipping.

FT110100265 Johnston, Dr Angus P

Approved Project Title **Bridging the interface between nanoengineered materials and biological systems**

2011	\$89,316.00
2012	\$178,632.00
2013	\$166,382.00
2014	\$142,882.00
2015	\$65,816.00
Total	\$643,028.00

Primary FoR 0903 BIOMEDICAL ENGINEERING

FT1 Dr Angus P Johnston

Administering Organisation The University of Melbourne

Project Summary

Advances in nanotechnology have the potential to revolutionise how we treat many diseases. Nanoengineered drug carriers can deliver drugs to the areas in the body where they are required, limiting harmful side effects. This project will investigate how nanomaterials interact with biological systems and understand any potential side effects.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100110 Lewis, Prof Jennifer M

Approved Project Title What counts is what is counted: performance measurement and its consequences

2011	\$114,828.50
2012	\$223,695.50
2013	\$223,927.50
2014	\$211,456.50
2015	\$96,396.00
Total	\$870,304.00

Primary FoR 1605 POLICY AND ADMINISTRATION

FT3 Prof Jennifer M Lewis

Administering Organisation The University of Melbourne

Project Summary

Measuring public sector performance is important as it potentially improves services and saves money, but it has become increasingly time and resource consuming. This project will analyse performance measurement and its consequences, and generate information on how governments can contain its growth and reduce its undesirable consequences.

FT110100250 McCaw, Dr James

Approved Project Title Developing mathematical models of infection and transmission to link biology, epidemiology and public health policy

2011	\$83,491.00
2012	\$161,357.00
2013	\$155,732.00
2014	\$161,957.00
2015	\$84,091.00
Total	\$646,628.00

Primary FoR 0102 APPLIED MATHEMATICS

FT1 Dr James McCaw

Administering Organisation The University of Melbourne

Project Summary

Infectious diseases constitute a significant burden on the health of the population. Understanding how best to control them requires a multi-faceted approach, combining data from biology, medicine and population health with mathematical and computational models of disease transmission. This project will investigate the "flu" and other diseases.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100646 McLeod, A/Prof Julie E

Approved Project Title **Youth identity and educational change in Australia since 1950: digital archiving, re-using qualitative data and histories of the present**

2011	\$93,558.00
2012	\$188,817.50
2013	\$184,978.00
2014	\$182,371.00
2015	\$92,652.50
Total	\$742,377.00

Primary FoR 1608 SOCIOLOGY

FT2 A/Prof Julie E McLeod

Administering Organisation The University of Melbourne

Project Summary

This is an historical and longitudinal study of Australian youth and education since the 1950s. It creates a digital archive of the study for future researchers and re-examines earlier qualitative studies to better understand generational changes in youth pathways and educational inequalities.

FT110100214 Orford, Prof Anne M

Approved Project Title **From famine to food security: the role of international law**

2011	\$100,640.00
2012	\$203,000.50
2013	\$201,691.00
2014	\$191,226.50
2015	\$91,896.00
Total	\$788,454.00

Primary FoR 1801 LAW

FT3 Prof Anne M Orford

Administering Organisation The University of Melbourne

Project Summary

This project addresses the pressing question of how the international governance framework might be reformed to avoid future food crises. It will make a major contribution to debates about the role that international law and international institutions can play in addressing current threats to food security.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100411 Qiao, Prof Greg G

Approved Project Title **Engineering macromolecular architectures for targeted applications**

2011	\$108,557.50
2012	\$224,953.50
2013	\$232,792.00
2014	\$232,792.00
2015	\$116,396.00
Total	\$915,491.00

Primary FoR 0303 MACROMOLECULAR AND MATERIALS CHEMISTRY

FT3 Prof Greg G Qiao

Administering Organisation The University of Melbourne

Project Summary

The purpose of the project is to use intelligent design to synthesise highly complex polymer architectures for targeted applications. The advances of this research will be expanded to target ultrathin gas separation membranes, self-assembling star polymers for drug delivery and fluorinated macromonomers for in-vivo biodistribution studies.

FT110100617 Shaw, Dr Kate S

Approved Project Title **Twenty-first century urban renewal: rethinking Australian planning and building regulations and their effects on the life of the city**

2011	\$84,347.00
2012	\$164,594.00
2013	\$162,994.00
2014	\$162,994.00
2015	\$80,247.00
Total	\$655,176.00

Primary FoR 1604 HUMAN GEOGRAPHY

FT1 Dr Kate S Shaw

Administering Organisation The University of Melbourne

Project Summary

This project compares legislative, regulatory and financing approaches to large scale urban renewal projects in Germany, Canada and Australia. It assesses their varying capacities to enable socially diverse uses of inner cities, and will advise on ways of reducing the place-based social divisions that are increasing as Australian cities expand.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100729 Smith, Prof Michael S

Approved Project Title Bayesian copula modelling of multivariate dependence: getting to grips with data that is far from normal

2011	\$92,646.00
2012	\$189,067.00
2013	\$189,692.00
2014	\$186,542.00
2015	\$93,271.00
Total	\$751,218.00

Primary FoR 1403 ECONOMETRICS

FT3 Prof Michael S Smith

Administering Organisation The University of Melbourne

Project Summary

Copula models are very popular tools that are changing the way analysts deal with information rich data in fields as diverse as marketing, finance and transport studies. This project aims to improve and extend these tools, so that more accurate and reliable models can be employed, resulting in improved evidence-based decision-making.

FT110100585 Verbruggen, Dr Heroen

Approved Project Title Evolutionary dynamics of the algae: understanding adaptive potential under environmental change

2011	\$89,316.00
2012	\$178,632.00
2013	\$177,132.00
2014	\$174,632.00
2015	\$86,816.00
Total	\$706,528.00

Primary FoR 0603 EVOLUTIONARY BIOLOGY

FT1 Dr Heroen Verbruggen

Administering Organisation The University of Melbourne

Project Summary

Ecological niches and trace metal availability have large influences on the role of marine algae as a sink for anthropogenic carbon dioxide. This interdisciplinary project will characterise the evolution of ecological niches and trace metal utilisation in marine algae to better predict the fate of anthropogenic carbon dioxide and coastal ecosystems.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100629 Zhou, A/Prof Sanming

Approved Project Title **Expander graphs, isoperimetric numbers, and forwarding indices**

2011	\$86,656.50
2012	\$174,488.50
2013	\$172,313.50
2014	\$165,688.50
2015	\$81,207.00
Total	\$680,354.00

Primary FoR 0101 PURE MATHEMATICS

FT2 A/Prof Sanming Zhou

Administering Organisation The University of Melbourne

Project Summary

Expanders are sparse but well connected networks. With numerous applications to modern technology, they have attracted many world leaders in mathematics and computer science. This project aims at substantial advancement on some important problems on expanders and related areas. It will put Australia at the forefront of this topical field.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The Walter and Eliza Hall Institute of Medical Research

FT110100169 Babon, Dr Jeffrey J

Approved Project Title **Inhibiting pathological signalling in haematopoietic disease**

2011	\$79,316.00
2012	\$158,632.00
2013	\$151,682.00
2014	\$151,682.00
2015	\$79,316.00
Total	\$620,628.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

FT1 Dr Jeffrey J Babon

Administering Organisation The Walter and Eliza Hall Institute of Medical Research

Project Summary

Certain leukaemias and other blood diseases are caused by the mutation of one particular molecule, called Janus Kinase (JAK), inside our bodies. This project aims to understand the biochemical details of these diseases by studying this mutated molecule in detail. The project will aim to provide the information for developing effective therapeutics against these diseases.

FT110100283 Belz, Dr Gabrielle

Approved Project Title **Cellular and molecular networks controlling protective immunity**

2011	\$116,396.00
2012	\$232,292.00
2013	\$232,292.00
2014	\$232,792.00
2015	\$116,396.00
Total	\$930,168.00

Primary FoR 1107 IMMUNOLOGY

FT3 Dr Gabrielle Belz

Administering Organisation The Walter and Eliza Hall Institute of Medical Research

Project Summary

This research aims to understand how a handful of master-regulator genes act to program immune cells required for immune responses to microbes, vaccination and to prevent cancer. It will provide a fundamental advance in our understanding of immune cell development and impact strategies aimed at the prevention and treatment of pathogen infections.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100891 Coultas, Dr Leigh

Approved Project Title Determining the molecular regulation of blood vessel development and angiogenesis

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

FT1 Dr Leigh Coultas

Administering Organisation The Walter and Eliza Hall Institute of Medical Research

Project Summary

Abnormal blood vessel growth is associated with diseases including cancer, macular degeneration, diabetic retinopathy and chronic inflammation. This project focuses on understanding normal blood vessel growth in order to gather clues to help discover ways of preventing abnormal blood vessel growth during disease.

FT110100889 McCormack, Dr Matthew P

Approved Project Title Studying precancerous stem cells that cause T cell leukaemia

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 1112 ONCOLOGY AND CARCINOGENESIS

FT1 Dr Matthew P McCormack

Administering Organisation The Walter and Eliza Hall Institute of Medical Research

Project Summary

Recent research has identified abnormal stem cells that are the cause of T cell leukaemia. They are also resistant to therapeutics suggesting that they could be a cause of relapse. The aim of this project is to determine the abnormal pathways that cause these cells to become immortal and to determine new therapeutic strategies to eliminate them.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Queensland

Griffith University

FT110100513 **Kielpinski, A/Prof David**

Approved Project Title **Broadband quantum networking with trapped ions**

2011	\$101,107.00
2012	\$201,814.00
2013	\$202,464.00
2014	\$200,614.00
2015	\$98,857.00
Total	\$804,856.00

Primary FoR 0206 QUANTUM PHYSICS

FT2 A/Prof David Kielpinski

Administering Organisation Griffith University

Project Summary

Banks and governments are now using short-range quantum communication to transmit data with secrecy guaranteed by the laws of physics. This project aims to develop the key ingredient for future broadband quantum networks: high-speed transmitters delivering quantum light pulses over present-day fibre-optic telecom infrastructure.

FT110100185 **Poulsen, A/Prof Sally-Ann**

Approved Project Title **Development of small molecule primary sulfonamides as new drugs for malaria**

2011	\$102,857.00
2012	\$205,714.00
2013	\$205,714.00
2014	\$205,714.00
2015	\$102,857.00
Total	\$822,856.00

Primary FoR 0304 MEDICINAL AND BIOMOLECULAR CHEMISTRY

FT2 A/Prof Sally-Ann Poulsen

Administering Organisation Griffith University

Project Summary

Malaria is a major global health threat, causing approximately 800,000 deaths annually. Lives can be saved if patients are treated. The use of current antimalarial drugs is limited by drug resistance, low activity and poor safety. This project investigates the effectiveness of a new class of molecule as a safe drug treatment option to kill malaria parasites.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100378 Pryde, A/Prof Geoffrey J

Approved Project Title **Fundamental quantum science for advancing optical quantum technologies**

2011	\$102,779.50
2012	\$204,933.00
2013	\$204,843.50
2014	\$203,160.50
2015	\$100,470.50
Total	\$816,187.00

Primary FoR 0206 QUANTUM PHYSICS

FT2 A/Prof Geoffrey J Pryde

Administering Organisation Griffith University

Project Summary

Quantum science promises a technology revolution comparable to the emergence of the information age. This project will advance the quantum technology revolution by uncovering new concepts in fundamental quantum science, and applying them to the development of absolutely secure communications, ultraprecise measurements, and ultrafast information processing.

FT110101048 Ulett, Dr Glen C

Approved Project Title **New models as tools for defining mechanisms of microbe survival in the urogenital tract**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 1108 MEDICAL MICROBIOLOGY

FT1 Dr Glen C Ulett

Administering Organisation Griffith University

Project Summary

Bacteria that infect the human urogenital tract can cause serious disease and these infections represent a large cost to the health-care system world-wide. This study will focus on how bacteria survive in the human urogenital tract and this will impact on strategies aimed at preventing and treating these infections.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

James Cook University

FT110100226 **Daly, Dr Norelle L**

Approved Project Title **Development of disulphide-rich peptides for drug design**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 0304 MEDICINAL AND BIOMOLECULAR CHEMISTRY

FT1 Dr Norelle L Daly

Administering Organisation James Cook University

Project Summary

Peptides are an outstanding source of potential drug leads. This project seeks to build on earlier breakthroughs by developing stable, peptide-based drugs to combat cancer and autoimmune diseases. The peptides, derived from natural sources, are anticipated to provide drug leads that can ultimately lead to treatments for these diseases.

FT110100635 **Lopata, Dr Andreas L**

Approved Project Title **Molecular and immunological approaches to managing Australia's seafood allergy epidemic**

2011	\$79,641.00
2012	\$164,307.00
2013	\$169,482.00
2014	\$169,632.00
2015	\$84,816.00
Total	\$667,878.00

Primary FoR 1107 IMMUNOLOGY

FT1 Dr Andreas L Lopata

Administering Organisation James Cook University

Project Summary

Seafood is an increasingly important cause of food allergy. Novel insight into the functions of why and how proteins from seafood develop to potent allergens will lead to the development of better diagnostics and therapeutics. This will assist patients to better manage their serious food allergy.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Queensland Institute of Medical Research

FT110100831 **Harrich, A/Prof David**

Approved Project Title **Regulation of human immunodeficiency virus type 1 (HIV-1) replication by viral and cellular proteins**

2011	\$102,782.00
2012	\$205,614.00
2013	\$205,664.00
2014	\$205,664.00
2015	\$102,832.00
Total	\$822,556.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

FT2 A/Prof David Harrich

Administering Organisation Queensland Institute of Medical Research

Project Summary

Using a mouse model, human cells will be treated with a very powerful antiviral protein using a gene therapy approach so as to block the human immunodeficiency virus (HIV) from growing. By learning how this antiviral protein works, this project will assist in the development of new strategies to treat HIV infection.

FT110100548 **Medland, Dr Sarah E**

Approved Project Title **Elucidating the genetics of attention deficit hyperactivity disorder by integrating pathway and prediction analyses**

2011	\$76,066.00
2012	\$150,882.00
2013	\$150,882.00
2014	\$150,882.00
2015	\$74,816.00
Total	\$603,528.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

FT1 Dr Sarah E Medland

Administering Organisation Queensland Institute of Medical Research

Project Summary

Attention deficit hyperactivity disorder (ADHD) is the most common psychiatric disorder in children; while treatments are available they are ineffective for many patients. This project will develop methods for predicting genetic effects at the level of the biological mechanism to assist in identifying new drug targets and behavioural interventions.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Queensland University of Technology

FT110100884 Bartlett, Prof Selena E

Approved Project Title Determining the role of neuronal nicotinic acetylcholine receptor subunits in the development of addictive behaviours

2011	\$116,396.00
2012	\$232,792.00
2013	\$232,792.00
2014	\$232,792.00
2015	\$116,396.00
Total	\$931,168.00

Primary FoR 1701 PSYCHOLOGY

FT3 Prof Selena E Bartlett

Administering Organisation Queensland University of Technology

Project Summary

The economic and health burden of substance abuse in Australia exceeds \$31.5 billion and there are currently few treatment options. Nicotinic receptors (nAChRs) are a common target for the interaction of alcohol and nicotine in the brain. This project aims to determine the role of nAChRs in the development of addiction to alcohol and nicotine.

FT110101117 Hutmacher, Prof Dietmar W

Approved Project Title Frontiers in bone and joint regeneration

2011	\$116,396.00
2012	\$232,792.00
2013	\$232,792.00
2014	\$232,792.00
2015	\$116,396.00
Total	\$931,168.00

Primary FoR 0903 BIOMEDICAL ENGINEERING

FT3 Prof Dietmar W Hutmacher

Administering Organisation Queensland University of Technology

Project Summary

Key outcomes of this project will deliver innovative strategies for scaffold-based bone and cartilage engineering whilst contributing to the education of a new generation of bioengineers, biomaterial scientists and tissue engineers with a strong international profile.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100166 Klein, Dr Travis J

Approved Project Title **Regenerating articular cartilage with smart hydrogels and fabrication technologies**

2011	\$84,316.00
2012	\$168,632.00
2013	\$166,132.00
2014	\$151,012.00
2015	\$69,196.00
Total	\$639,288.00

Primary FoR 0903 BIOMEDICAL ENGINEERING

FT1 Dr Travis J Klein

Administering Organisation Queensland University of Technology

Project Summary

Osteoarthritis affects over 1.6 million Australians and a cure remains elusive. Tissue engineering promises to regenerate joints, but issues with tissue quality, organisation and cost have led to limited clinical application. This project will develop new tissue fabrication technologies to engineer cartilage with appropriate organisation and lower costs.

FT110100463 Torgler, Prof Benno

Approved Project Title **The role of moral sentiments and emotions in human nature: an interdisciplinary empirical approach**

2011	\$110,087.00
2012	\$220,613.00
2013	\$216,960.00
2014	\$210,270.00
2015	\$103,836.00
Total	\$861,766.00

Primary FoR 1402 APPLIED ECONOMICS

FT3 Prof Benno Torgler

Administering Organisation Queensland University of Technology

Project Summary

This project investigates the effects of moral sentiments and emotions on decision processes. It will identify states of physiological arousal, determine whether a significant genetic effect is present, assess the relevance of individuals' environment and inherited values, and provide a better biological micro-foundation for human behaviour.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The University of Queensland

FT110100490 Anderson, A/Prof Brian P

Approved Project Title **Two-dimensional quantum turbulence in superfluid atomic gases**

2011	\$102,857.00
2012	\$205,714.00
2013	\$205,714.00
2014	\$205,714.00
2015	\$102,857.00
Total	\$822,856.00

Primary FoR 0206 QUANTUM PHYSICS

FT2 A/Prof Brian P Anderson

Administering Organisation The University of Queensland

Project Summary

This project will controllably generate and study turbulence in two-dimensional superfluids. With quantum fluids as models to understand two-dimensional fluid dynamics, this project aims to provide a better generic understanding of physical mechanisms behind phenomena as diverse as cyclone dynamics and the stability of the planet Jupiter's Great Red Spot.

FT110100292 Claudianos, Dr Charles

Approved Project Title **The role of synapse development in cognitive disorder**

2011	\$89,141.00
2012	\$177,955.00
2013	\$177,911.50
2014	\$176,233.50
2015	\$87,136.00
Total	\$708,377.00

Primary FoR 1109 NEUROSCIENCES

FT1 Dr Charles Claudianos

Administering Organisation The University of Queensland

Project Summary

In humans, intellectual disability occurs when nerve cells in the brain fail to connect. The project examines fundamental molecular processes involved in synapse development of neurons. The use of insect models provides a generalised biological template to understand how synaptic molecules contribute to behaviours that underlie cognitive disorder.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100972 Coin, Dr Lachlan J

Approved Project Title Development of population-level algorithms for modelling genomic variation and its impact on cellular function in animals and plants

2011	\$89,316.00
2012	\$162,132.00
2013	\$146,632.00
2014	\$146,632.00
2015	\$72,816.00
Total	\$617,528.00

Primary FoR 0104 STATISTICS

FT1 Dr Lachlan J Coin

Administering Organisation The University of Queensland

Project Summary

The purpose of this project is to develop mathematical and computational tools which will enable researchers to model high-throughput biological data at the population level. These models will be used to uncover the effect that genetic variation has on the physiology of the cell and the organism.

FT110100191 Fisher, Dr Diana O

Approved Project Title The role of life history and food supply in the extinction of carnivorous marsupials

2011	\$86,351.50
2012	\$166,073.00
2013	\$160,343.00
2014	\$148,607.00
2015	\$67,985.50
Total	\$629,360.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

FT1 Dr Diana O Fisher

Administering Organisation The University of Queensland

Project Summary

This project will test why marsupial predators show exceptionally diverse species lifespan and reproductive traits, reveal how these are affected by prey supply and climate change, and how they are linked to alarming species declines in our north. Understanding causes of vulnerability will help to focus conservation efforts to avert extinctions

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100478 Gambin, Dr Yann

Approved Project Title Single-molecule optofluidics: streamlining high-throughput engineering and analysis of proteins and protein assemblies

2011	\$87,516.00
2012	\$175,032.00
2013	\$174,032.00
2014	\$174,032.00
2015	\$87,516.00
Total	\$698,128.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

FT1 Dr Yann Gambin

Administering Organisation The University of Queensland

Project Summary

This project aims at creating novel technologies for high-throughput engineering and analysis of proteins with single-molecule sensitivity. The platform will considerably accelerate the generation of protein-based diagnostics, new vaccines and therapeutics; it will foster collaborations with industry putting Australia at the forefront of protein research.

FT110100114 Gelber, A/Prof Katharine P

Approved Project Title Freedom of speech in the post 9/11 era

2011	\$96,276.00
2012	\$190,147.50
2013	\$185,569.00
2014	\$184,884.50
2015	\$93,187.00
Total	\$750,064.00

Primary FoR 1801 LAW

FT2 A/Prof Katharine P Gelber

Administering Organisation The University of Queensland

Project Summary

This project will assess the place of freedom of speech in political attitudes in a post 9/11 world. It will show that, and how, liberal democracies both undermine and simultaneously assert the importance of the fundamental human rights that are the very basis for their perceived vulnerability to terrorists.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100097 Hilliard, Dr Massimo A

Approved Project Title **Molecules and mechanisms regulating axonal degeneration and regeneration in Caenorhabditis elegans neurons**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 1109 NEUROSCIENCES

FT1 Dr Massimo A Hilliard

Administering Organisation The University of Queensland

Project Summary

Understanding the molecular mechanisms underlying nerve degeneration and regeneration is essential to tackle and provide treatment for neurodegenerative diseases and injury of the nervous system. This project aims to discover, using a genetic approach and a simple animal model system, the molecules regulating these crucial biological processes.

FT110100557 Huang, A/Prof Han

Approved Project Title **Mechanisms and innovative technologies for machining nanoscale multilayered thin film solar panels**

2011	\$102,507.00
2012	\$205,314.00
2013	\$205,414.00
2014	\$205,424.00
2015	\$102,817.00
Total	\$821,476.00

Primary FoR 0910 MANUFACTURING ENGINEERING

FT2 A/Prof Han Huang

Administering Organisation The University of Queensland

Project Summary

This project addresses an important manufacturing bottleneck in the solar energy industry by addressing significant limitations in machining multilayered solar panels. A successful outcome will provide an important breakthrough in machining technology applicable not only to solar panels but other material science applications.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100238 Jetten, Prof Jolanda

Approved Project Title A social cure: how multiple social groups are key to health and wellbeing

2011	\$105,146.00
2012	\$209,292.00
2013	\$209,292.00
2014	\$209,292.00
2015	\$104,146.00
Total	\$837,168.00

Primary FoR 1701 PSYCHOLOGY

FT3 Prof Jolanda Jetten

Administering Organisation The University of Queensland

Project Summary

Building on the increased recognition that social factors affect both mental and physical health, the research will examine how and when social identities and group membership determine wellbeing. The work is at the forefront of current societal concerns relating to coping with social disadvantage and life-transitions.

FT110100083 Jimmieson, A/Prof Nerina L

Approved Project Title Supervisor strategies for managing employee stress and strain: a national approach to psychosocial risk management

2011	\$89,776.00
2012	\$180,183.00
2013	\$178,514.00
2014	\$186,960.00
2015	\$98,853.00
Total	\$734,286.00

Primary FoR 1701 PSYCHOLOGY

FT2 A/Prof Nerina L Jimmieson

Administering Organisation The University of Queensland

Project Summary

This research aims to identify supervisor strategies for managing occupational stress in their work teams. Expected outcomes include reduction in the number of employees reporting that they are exposed to stress and suffering from the effects of ill-health, thereby reducing workers' compensation claims for stress and lowering associated costs.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100724 McGuigan, Dr Katrina L

Approved Project Title Understanding phenotypes: contributions from studying mutations in a model organism

2011	\$89,316.00
2012	\$178,602.00
2013	\$178,322.00
2014	\$178,022.00
2015	\$88,986.00
Total	\$713,248.00

Primary FoR 0603 EVOLUTIONARY BIOLOGY

FT1 Dr Katrina L McGuigan

Administering Organisation The University of Queensland

Project Summary

The distribution of fish across aquatic habitats will be determined jointly by the swimming speed and endurance requirements imposed by features of the environment, such as water flow, and by the swimming capacity of the fish. This project will use zebrafish to characterise how body shape and physiology interact to determine swimming capacity.

FT110100203 Mills, Prof Martin D

Approved Project Title School retention and second chance schooling

2011	\$103,018.00
2012	\$209,344.00
2013	\$213,695.50
2014	\$213,695.50
2015	\$106,326.00
Total	\$846,079.00

Primary FoR 1303 SPECIALIST STUDIES IN EDUCATION

FT3 Prof Martin D Mills

Administering Organisation The University of Queensland

Project Summary

This project is concerned with ensuring that students who experience systemic disadvantage are not excluded from the benefits of a formal education. It provides an account and critique of the growth of second chance schooling options catering to such students in both Australia and the UK.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100925 Mobli, Dr Mehdi

Approved Project Title Automated structural analysis of proteins by nuclear magnetic resonance (ASAP-NMR): a leap forward in structural studies of proteins using NMR spectroscopy

2011	\$88,066.00
2012	\$175,382.00
2013	\$164,632.00
2014	\$154,632.00
2015	\$77,316.00
Total	\$660,028.00

Primary FoR 0306 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

FT1 Dr Mehdi Mobli

Administering Organisation The University of Queensland

Project Summary

Proteins form the machinery that makes life possible, and this research will revolutionise study of their three-dimensional structure by making the process faster and cheaper. This approach will be applied to study proteins isolated from animal venoms in order to identify and develop novel pharmaceuticals and bio-insecticides.

FT110100216 Namdas, Dr Ebinazar B

Approved Project Title Organic-inorganic hybrid electronic devices and logic circuits

2011	\$89,316.00
2012	\$178,632.00
2013	\$172,132.00
2014	\$165,632.00
2015	\$82,816.00
Total	\$688,528.00

Primary FoR 1007 NANOTECHNOLOGY

FT1 Dr Ebinazar B Namdas

Administering Organisation The University of Queensland

Project Summary

This project will create the next generation of opto-electronic devices and logic circuits using solution-based organic-inorganic hybrid materials with the potential to be extremely cheap, recyclable, and mechanically flexible. This project aims to position Australia as a leader in printed electronics.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100887 Scott, Dr Ethan K

Approved Project Title Neural mechanisms of motor learning

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 0608 ZOOLOGY

FT1 Dr Ethan K Scott

Administering Organisation The University of Queensland

Project Summary

The cerebellum is the part of the brain responsible for smooth body movements, but many details of how it works are still unclear. This project is aimed at learning how the cerebellum communicates with the rest of the brain, and what parts of this communication are necessary for coordinated movement.

FT110100496 Smith, Dr Kelly A

Approved Project Title Genetic dissection of cardiac morphogenesis

2011	\$87,616.00
2012	\$174,282.00
2013	\$168,382.00
2014	\$162,482.00
2015	\$80,766.00
Total	\$673,528.00

Primary FoR 0604 GENETICS

FT1 Dr Kelly A Smith

Administering Organisation The University of Queensland

Project Summary

The human heart is critical for survival and yet, despite its importance, we still lack a basic understanding of how it forms. This project aims to discover new genes involved in cardiac development so we can understand how to build a heart. Armed with this information, this research will assist in devising strategies for the repair of congenital and acquired heart disease.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100372 Steptoe, Dr Raymond J

Approved Project Title A new approach to reversing and preventing immune-mediated diseases

2011	\$79,316.00
2012	\$158,632.00
2013	\$158,632.00
2014	\$158,632.00
2015	\$79,316.00
Total	\$634,528.00

Primary FoR 1107 IMMUNOLOGY

FT1 Dr Raymond J Steptoe

Administering Organisation The University of Queensland

Project Summary

Chronic inflammatory diseases affect up to 20 per cent of Australians. These diseases reduce wellbeing and life potential and shorten lifespan. This project addresses the urgent need for effective therapies and focuses on developing strategies for disease cure and prevention.

FT110100284 Thurecht, Dr Kristofer J

Approved Project Title Traceable theranostics: tools for visualising drug delivery and therapeutic benefit in vivo

2011	\$85,526.50
2012	\$169,360.00
2013	\$165,193.50
2014	\$164,273.50
2015	\$82,913.50
Total	\$667,267.00

Primary FoR 0303 MACROMOLECULAR AND MATERIALS CHEMISTRY

FT1 Dr Kristofer J Thurecht

Administering Organisation The University of Queensland

Project Summary

Forty-three thousand people died from cancer in Australia in 2010. The aim of this project is to advance the concept of 'personalised-therapy' through the development of novel imaging devices based on polymers that can 'switch-on' and deliver drugs in specific tissues, allowing more sensitive and earlier detection and monitoring of diseases and therapies.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100327 Wilhelm, Dr Dagmar

Approved Project Title Towards a new understanding of the reproductive system

2011	\$89,316.00
2012	\$178,532.00
2013	\$178,432.00
2014	\$174,882.00
2015	\$85,666.00
Total	\$706,828.00

Primary FoR 0604 GENETICS

FT1 Dr Dagmar Wilhelm

Administering Organisation The University of Queensland

Project Summary

The proposed analysis of the reproductive system will provide important new knowledge of gene regulation driving organ development. The insights and technologies developed in this program will be widely applicable in biotechnological and pharmacogenomic research in Australia and worldwide, and assert Australia's leadership in this area of research.

FT110100851 Williams, Dr Craig M

Approved Project Title Developing a paradigm shift in new pharmaceutical and agrochemical design

2011	\$102,257.00
2012	\$204,364.00
2013	\$203,814.00
2014	\$204,014.00
2015	\$102,307.00
Total	\$816,756.00

Primary FoR 0304 MEDICINAL AND BIOMOLECULAR CHEMISTRY

FT2 Dr Craig M Williams

Administering Organisation The University of Queensland

Project Summary

This project will provide a paradigm shift in the design of new medicines and farming chemicals. The outcome of this research will be the efficient generation of diverse chemicals having real possibilities to improve global health and food security in the future.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100332 Woodruff, Dr Trent M

Approved Project Title **Investigating the role of the innate immune complement system in the abnormal development of the central nervous system**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 1109 NEUROSCIENCES

FT1 Dr Trent M Woodruff

Administering Organisation The University of Queensland

Project Summary

Past research has discovered a surprising link between the immune system, dietary folate deficiency and the development of the embryonic brain. This project will investigate the immune system in the developing brain, in order to understand the causes of developmental defects such as neural tube defects, and the role dietary folate plays in this process.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

University of the Sunshine Coast

FT110100990 Cummins, Dr Scott F

Approved Project Title Decoding the rules of fate, attraction and cell migration in perciform fish

2011	\$83,940.50
2012	\$170,556.50
2013	\$165,682.00
2014	\$157,632.00
2015	\$78,566.00
Total	\$656,377.00

Primary FoR 0606 PHYSIOLOGY

FT1 Dr Scott F Cummins

Administering Organisation University of the Sunshine Coast

Project Summary

This project will interrogate primordial germ cell migration to reveal new insights into the molecular basis of cell migration and chemosensory communication. Key residues needed for ligand-receptor binding and environmental impacts on migration will be investigated with valuable implications in reproductive developmental biology and applied science.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

South Australia

The Flinders University of South Australia

FT110100573 **Arthurson, Dr Kathy D**

Approved Project Title **Reconceptualising urban planning and the built form: comparative international policies and evidence to reduce health inequities and social exclusion**

2011	\$75,566.00
2012	\$150,322.00
2013	\$150,322.00
2014	\$145,382.00
2015	\$69,816.00
Total	\$591,408.00

Primary FoR 1205 URBAN AND REGIONAL PLANNING

FT1 Dr Kathy D Arthurson

Administering Organisation The Flinders University of South Australia

Project Summary

Where people live affects their opportunities to lead productive lives and feel socially included. This project explores how different aspects of urban planning, rebuilding housing and neighbourhoods, shapes residents' health and wellbeing. The findings will assist Australian government and aims to strengthen socio-economically disadvantaged communities.

FT110100099 **Harmer-Bassell, Dr Sarah L**

Approved Project Title **The microbe factory: a novel approach to benign minerals processing**

2011	\$81,396.00
2012	\$161,332.00
2013	\$163,242.00
2014	\$162,842.00
2015	\$79,536.00
Total	\$648,348.00

Primary FoR 0306 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

FT1 Dr Sarah L Harmer-Bassell

Administering Organisation The Flinders University of South Australia

Project Summary

The purpose of this project is to reduce the environmental impact of current mining practices. The anticipated outcome of this project is the replacement of toxic chemicals used in the separation of minerals with the novel use of environmentally benign microbes.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100373 Meech, Dr Robyn

Approved Project Title Ageing and the muscle stem cell niche

2011	\$89,216.00
2012	\$175,082.00
2013	\$173,082.00
2014	\$172,432.00
2015	\$85,216.00
Total	\$695,028.00

Primary FoR 0604 GENETICS

FT1 Dr Robyn Meech

Administering Organisation The Flinders University of South Australia

Project Summary

Adult stem cells are critical for repair and maintenance of tissues and ageing tissues show reduced stem cell function. This project will focus on how ageing leads to disruption of communication between muscle stem cells and their niche. The project aims to identify new therapeutic targets for age-related muscle wasting and reduced mobility in the elderly.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The University of Adelaide

FT110100623 Bradley, A/Prof Andrew P

Approved Project Title Multi-modal virtual microscopy for quantitative diagnostic pathology

2011	\$103,101.00
2012	\$196,802.00
2013	\$188,802.00
2014	\$188,802.00
2015	\$93,701.00
Total	\$771,208.00

Primary FoR 0801 ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

FT3 A/Prof Andrew P Bradley

Administering Organisation The University of Adelaide

Project Summary

This project will contribute to the next generation of virtual microscopy systems that provide innovative features capable of significantly increasing the adoption of digital imaging technology throughout the field of diagnostic pathology. These tools will especially contribute to the screening and diagnosis of cervical, lung and bladder cancer.

FT110100306 Bradshaw, Prof Corey J

Approved Project Title Solving the problems of estimating extinction rates in recent and geological time

2011	\$106,571.00
2012	\$216,622.00
2013	\$218,752.00
2014	\$212,057.00
2015	\$103,356.00
Total	\$857,358.00

Primary FoR 0502 ENVIRONMENTAL SCIENCE AND MANAGEMENT

FT3 Prof Corey J Bradshaw

Administering Organisation The University of Adelaide

Project Summary

Human activity is causing species to go extinct at rates not seen for at least 65 million years: this is the sixth mass extinction event in the history of the Earth. This project will use state-of-the-art modelling tools applied to Australian and global species and land-use change data to quantify humanity's influence on recent and future extinctions.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110101050 Gerrans, A/Prof Philip S

Approved Project Title The emotional construction of self representation

2011	\$85,507.00
2012	\$173,914.00
2013	\$176,814.00
2014	\$174,414.00
2015	\$86,007.00
Total	\$696,656.00

Primary FoR 2203 PHILOSOPHY

FT2 A/Prof Philip S Gerrans

Administering Organisation The University of Adelaide

Project Summary

This project develops and defends the novel idea that self representation is an artefact of emotional processing. The account will involve case studies of psychiatric disorder characterised by developmental or acquired problems of self representation such as depersonalisation disorder and personality disorders.

FT110100429 Leistner, Dr Thomas

Approved Project Title Holonomy groups and special structures in pseudo-Riemannian geometry

2011	\$64,316.00
2012	\$132,257.00
2013	\$135,757.00
2014	\$136,332.00
2015	\$68,516.00
Total	\$537,178.00

Primary FoR 0101 PURE MATHEMATICS

FT1 Dr Thomas Leistner

Administering Organisation The University of Adelaide

Project Summary

The project studies mathematical models used in physical theories, such as general relativity and string theory, to create a global picture of the universe. The outcomes will enhance the role that Australia plays in these developments and contribute to the mathematical knowledge which lies at the foundations of modern technologies.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100711 Losic, A/Prof Dusan

Approved Project Title **Carbon nanotube based chromatography**

2011	\$102,857.00
2012	\$205,714.00
2013	\$205,714.00
2014	\$205,714.00
2015	\$102,857.00
Total	\$822,856.00

Primary FoR 1007 NANOTECHNOLOGY

FT2 A/Prof Dusan Losic

Administering Organisation The University of Adelaide

Project Summary

This project will reveal new insights into fundamental phenomena of molecular separation processes by carbon nanotubes and underpinning the development of a new generation of microchip separation devices that have the potential to revolutionise chromatographic techniques currently applied in genomics, proteomics, forensics and biotechnology.

FT110100793 McInerney, Asst Prof Francesca A

Approved Project Title **Palaeoclimate reconstructions from the isotopic signatures of fossilised leaf waxes**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,630.50
2014	\$178,577.00
2015	\$89,262.50
Total	\$714,418.00

Primary FoR 0402 GEOCHEMISTRY

FT1 Asst Prof Francesca A McInerney

Administering Organisation The University of Adelaide

Project Summary

This project develops a method for using the chemical signature of fossilised leaf waxes to reconstruct hydrologic change in south-eastern Australia during the Holocene (last 10,000 years) and Eocene (56-34 million years ago). Understanding climate in the geologic past is essential for testing models and projecting future climate with rising carbon dioxide.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100431 **Navarro, Dr Daniel J**

Approved Project Title **How is information organised in the mind? Learning structured mental representations from data**

2011	\$75,461.50
2012	\$147,244.50
2013	\$144,327.00
2014	\$144,457.00
2015	\$71,913.00
Total	\$583,403.00

Primary FoR 1702 COGNITIVE SCIENCE

FT1 Dr Daniel J Navarro

Administering Organisation The University of Adelaide

Project Summary

One of the biggest questions in psychology is to understand the principles that the mind uses to organise information. This project is both a search for these underlying psychological laws, and an attempt to develop new statistical technologies and mathematical tools that can be used to organise information in applied settings.

FT110100078 **Rosser, A/Prof Andrew J**

Approved Project Title **Realising socio-economic rights: law and the politics of access to public services in Indonesia**

2011	\$88,782.00
2012	\$175,184.00
2013	\$173,754.00
2014	\$175,484.00
2015	\$88,132.00
Total	\$701,336.00

Primary FoR 1606 POLITICAL SCIENCE

FT2 A/Prof Andrew J Rosser

Administering Organisation The University of Adelaide

Project Summary

This project seeks to identify the conditions under which justiciable legal frameworks or socio-economic rights are effective in promoting realisation of these rights in developing countries. The empirical focus is on Indonesia during the post-Suharto era and rights related to free basic education, water, and free health care for the poor.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Western Australia

The University of Western Australia

FT110100105 Baer, A/Prof Boris C

Approved Project Title **Linking evolutionary and molecular biology to safeguard Australian honeybees**

2011	\$102,057.00
2012	\$204,714.00
2013	\$202,964.00
2014	\$202,964.00
2015	\$102,657.00
Total	\$815,356.00

Primary FoR 0608 ZOOLOGY

FT2 A/Prof Boris C Baer

Administering Organisation The University of Western Australia

Project Summary

Honeybee populations are declining globally but their pollination services are of central importance for food production. This project will study honeybee proteins that influence both fertility and immunity and their effects in vivo. This knowledge is of interest for the bee breeding industry to avoid or combat bee declines in managed Australian bees.

FT110100176 Davies, Dr Wayne L

Approved Project Title **Investigating the molecular mechanisms underlying non-visual photoreception and their implications in the treatment of human neurological disease**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 1109 NEUROSCIENCES

FT1 Dr Wayne L Davies

Administering Organisation The University of Western Australia

Project Summary

The ability of organisms to detect light is fundamental for survival and has been a major driver in evolution. The project will investigate the genetic origins of the various visual and non-visual systems and will explore its implications for the bioengineering of therapeutics for the treatment of neurological disease in humans.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100241 **Fiorentini, Dr Marco**

Approved Project Title **From core to ore: emplacement dynamics of deep-seated nickel sulphide systems**

2011	\$85,616.00
2012	\$169,532.00
2013	\$167,732.00
2014	\$167,632.00
2015	\$83,816.00
Total	\$674,328.00

Primary FoR 0402 GEOCHEMISTRY

FT1 Dr Marco Fiorentini

Administering Organisation The University of Western Australia

Project Summary

This project will investigate the genesis of ore deposits containing nickel, copper and the immensely valuable platinum group elements. These systems provide insights into fundamental questions regarding the evolution and dynamics of the Earth system, because these ore deposits are windows into the deep mantle of our planet.

FT110100304 **Flematti, Dr Gavin R**

Approved Project Title **Discovery of signalling molecules that mediate communication in the environment**

2011	\$89,150.00
2012	\$176,766.00
2013	\$172,698.50
2014	\$168,448.50
2015	\$83,366.00
Total	\$690,429.00

Primary FoR 0305 ORGANIC CHEMISTRY

FT1 Dr Gavin R Flematti

Administering Organisation The University of Western Australia

Project Summary

This project aims to further our understanding of chemical compounds that mediate communication in the environment. The project will identify a broad range of new compounds that have significant potential to provide new products such as anti-bacterials, pesticides and plant growth regulators for the benefit of Australia.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110101049 **Hammond, Dr John P**

Approved Project Title **Advancing our understanding of plant responses to low phosphorus availability beyond the transcriptome**

2011	\$86,816.00
2012	\$173,632.00
2013	\$165,782.00
2014	\$154,782.00
2015	\$75,816.00
Total	\$656,828.00

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

FT1 Dr John P Hammond

Administering Organisation The University of Western Australia

Project Summary

Phosphorus is essential for plant growth. Plants have evolved mechanisms to cope with the poor availability of phosphorus in many soils. This project will improve Australia's knowledge of how plants alter the expression of genes and proteins to activate their mechanisms for coping with poor phosphorus availability in some soils.

FT110100528 **Hemmi, Dr Jan M**

Approved Project Title **Neuro-ecology: information processing under natural conditions**

2011	\$89,240.00
2012	\$178,376.00
2013	\$178,205.00
2014	\$177,620.50
2015	\$88,551.50
Total	\$711,993.00

Primary FoR 0608 ZOOLOGY

FT1 Dr Jan M Hemmi

Administering Organisation The University of Western Australia

Project Summary

Not enough is known about how sensory information is processed through the brain under natural environmental conditions. This project will shed light on how information processing changes with context and will help explain why even those animals with the smallest brains are much more versatile and robust than our most advanced robots.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100201 Lowe, A/Prof Ryan J

Approved Project Title Physical processes in complex coastal reef environments: the dynamics of wave- and tide-dominated systems

2011	\$88,096.00
2012	\$176,482.00
2013	\$175,362.00
2014	\$164,317.00
2015	\$77,341.00
Total	\$681,598.00

Primary FoR 0405 OCEANOGRAPHY

FT1 A/Prof Ryan J Lowe

Administering Organisation The University of Western Australia

Project Summary

Coastal reefs are ubiquitous features of Australia's coastline, yet the dynamics controlling water motion on reefs still remain poorly understood. This project will significantly advance our understanding of coastal processes within reef environments, thus improving predictions of the impacts of extreme storms and climate change on our coasts.

FT110100392 McFerran, Dr John J

Approved Project Title A southern hemisphere ground station for the Atomic Clock Ensemble in Space mission

2011	\$66,591.00
2012	\$133,927.00
2013	\$133,477.00
2014	\$133,007.00
2015	\$66,866.00
Total	\$533,868.00

Primary FoR 1005 COMMUNICATIONS TECHNOLOGIES

FT1 Dr John J McFerran

Administering Organisation The University of Western Australia

Project Summary

Australia is aiming for membership in the high-profile space mission involving atomic clocks on-board the International Space Station. The mission will test aspects of special and general relativity, searching for tell-tale signs of new physics. This project will construct an atomic fountain clock and install a microwave-satellite link to meet the goal.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100242 Millar, Prof Andrew H

Approved Project Title **Regulation and role of metabolic networks for respiration in plants**

2011	\$114,556.00
2012	\$230,202.00
2013	\$231,542.00
2014	\$231,792.00
2015	\$115,896.00
Total	\$923,988.00

Primary FoR 0607 PLANT BIOLOGY

FT3 Prof Andrew H Millar

Administering Organisation The University of Western Australia

Project Summary

This project aims to understand the regulation of respiration in plants which underpins the energy provision that cells need to operate. Understanding respiration and how it responds to the changing environment is a building block needed for rational engineering of our future food from plants.

FT110100246 Murphy, A/Prof Daniel V

Approved Project Title **Ecosystem response to climate and anthropogenic disturbances: implications for greenhouse gas emissions and nutrient cycling**

2011	\$102,574.50
2012	\$203,874.00
2013	\$204,119.00
2014	\$204,119.00
2015	\$101,299.50
Total	\$815,986.00

Primary FoR 0503 SOIL SCIENCES

FT2 A/Prof Daniel V Murphy

Administering Organisation The University of Western Australia

Project Summary

Humanity is challenged with climate change, greenhouse gas emissions, declining fertiliser reserves and a need to feed the world's growing population. This project will result in greater understanding of how ecosystems can respond to these challenges and provide a framework to help Australia manage its agricultural and natural reserves.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100352 Skrzypek, Dr Grzegorz D

Approved Project Title How warm and how wet? New perspectives on paleoclimate records and hydrological regimes in arid zones of Australia

2011	\$88,966.00
2012	\$177,607.00
2013	\$175,757.00
2014	\$175,457.00
2015	\$88,341.00
Total	\$706,128.00

Primary FoR 0402 GEOCHEMISTRY

FT1 Dr Grzegorz D Skrzypek

Administering Organisation The University of Western Australia

Project Summary

This project will develop a new and precise palaeotemperature record for southern Australia, and will investigate the hydrologic dynamics of inland Australia. Together, this research will lead to new discoveries in the way Australian ecosystems respond to climate variability and will enable better understanding of its impacts.

FT110100896 Small, A/Prof Michael

Approved Project Title Complex dynamical systems: inferring form and function of interacting biological systems

2011	\$103,696.00
2012	\$208,592.00
2013	\$203,342.00
2014	\$199,542.00
2015	\$101,096.00
Total	\$816,268.00

Primary FoR 0102 APPLIED MATHEMATICS

FT3 A/Prof Michael Small

Administering Organisation The University of Western Australia

Project Summary

Often in biology a large number of simple parts interacting according to simple rules can result in behaviour that is rich and varied. This project aims to develop the mathematics of complex systems theory to describe how such collections of simple interacting parts can form large complicated structures, and to deduce what dynamical behaviour can result.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100500 Tomkins, Dr Joseph L

Approved Project Title **Threshold evolution: conceptualising decisions as traits**

2011	\$101,828.50
2012	\$204,260.00
2013	\$204,903.00
2014	\$204,818.00
2015	\$102,346.50
Total	\$818,156.00

Primary FoR 0603 EVOLUTIONARY BIOLOGY

FT2 Dr Joseph L Tomkins

Administering Organisation The University of Western Australia

Project Summary

All organisms make decisions, yet the diversity of decision rules across the spectrum of life can be understood through a few key evolutionary models. This project will test these models and then apply them to understanding topics as diverse as pest outbreaks, human twinning, sex ratio evolution and disease spread as a consequence of climate change.

FT110100174 Wernberg, Dr Thomas

Approved Project Title **Climatic forcing of ecological function in temperate marine habitats: bridging the gaps**

2011	\$87,543.00
2012	\$175,080.00
2013	\$174,519.00
2014	\$173,709.00
2015	\$86,727.00
Total	\$697,578.00

Primary FoR 0602 ECOLOGY

FT1 Dr Thomas Wernberg

Administering Organisation The University of Western Australia

Project Summary

This project will use novel approaches to integrate work on past, present and future ecological change in response to climatic forcing in temperate marine ecosystems. This will facilitate continued conservation and sustainable use of valuable ecosystem services in a changing world.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Tasmania

University of Tasmania

FT110100276 **Ding, A/Prof Changhai**

Approved Project Title **Translational research in osteoarthritis: from epidemiological studies to clinical interventions**

2011	\$99,552.00
2012	\$195,804.00
2013	\$190,804.00
2014	\$186,804.00
2015	\$92,252.00
Total	\$765,216.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

FT2 A/Prof Changhai Ding

Administering Organisation University of Tasmania

Project Summary

Currently the only treatment for osteoarthritis is to relieve pain. However, there are some factors that may affect the progression of this disease. This project will examine these factors including inflammation, metabolism, and physical inactivity, and find potential modifying therapies such as vitamin D supplementation for osteoarthritis.

FT110100572 **Edmonds, Dr Penelope C**

Approved Project Title **Reform in the antipodes: Quaker humanitarians, imperial journeys and early histories of human rights**

2011	\$79,045.00
2012	\$151,938.50
2013	\$145,435.00
2014	\$143,164.00
2015	\$70,622.50
Total	\$590,205.00

Primary FoR 2103 HISTORICAL STUDIES

FT1 Dr Penelope C Edmonds

Administering Organisation University of Tasmania

Project Summary

This study adds an important new chapter to the history of human rights by examining Quaker humanitarian tours to the antipodean colonies of Australia, Mauritius, and the Cape Colony, which led to major imperial reforms in the treatment of slaves, Indigenous peoples, convicts and indentured labourers in the British Empire.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100207 King, Dr Matthew A

Approved Project Title **Improving models of West Antarctic glacial isostatic adjustment through a new surface velocity field**

2011	\$102,407.00
2012	\$204,264.00
2013	\$204,414.00
2014	\$204,164.00
2015	\$101,607.00
Total	\$816,856.00

Primary FoR 0909 GEOMATIC ENGINEERING

FT2 Dr Matthew A King

Administering Organisation University of Tasmania

Project Summary

This project seeks to "fix the scales" being used to weigh changes in the Antarctic ice sheet. Present measurements are biased by a failure to accurately account for mass changes beneath the ice and within the Earth itself. This project seeks to use new measurements of the changes in the shape of the Earth to calibrate out that bias.

FT110100597 Wapstra, Dr Erik

Approved Project Title **Climate change: bridging the gap between environmental induced phenotypic change, population dynamics, and long-term evolution**

2011	\$91,557.00
2012	\$186,214.00
2013	\$189,934.00
2014	\$186,334.00
2015	\$91,057.00
Total	\$745,096.00

Primary FoR 0602 ECOLOGY

FT2 Dr Erik Wapstra

Administering Organisation University of Tasmania

Project Summary

It is becoming impossible to ignore the impact of global climate change on organisms around the world from changes in migration, distribution to extinction events - yet there is much to understand. This project examines the role of a changing environment during developmental and its effects on ecological and evolutionary outcomes.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

Australian Capital Territory

Commonwealth Scientific and Industrial Research Organisation

FT110100234 Baker, Dr Michelle L

Approved Project Title **The role of the innate immune response in the asymptomatic nature of viral infections in bats**

2011	\$102,857.00
2012	\$205,714.00
2013	\$205,714.00
2014	\$203,214.00
2015	\$100,357.00
Total	\$817,856.00

Primary FoR 0608 ZOOLOGY

FT2 Dr Michelle L Baker

Administering Organisation Commonwealth Scientific and Industrial Research Organisation

Project Summary

Bats are natural reservoirs to a variety of viruses, including many that are lethal in humans and other mammals. This project will generate fundamental information on the mechanisms involved in the asymptomatic nature of viral infections in bats and contribute towards the development of new antiviral strategies for other susceptible species.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

The Australian National University

FT110100728 **Borger, Dr James M**

Approved Project Title **Towards a new concrete theory of cohomology: a fundamental concept in geometry**

2011	\$68,316.00
2012	\$136,632.00
2013	\$136,632.00
2014	\$136,632.00
2015	\$68,316.00
Total	\$546,528.00

Primary FoR 0101 PURE MATHEMATICS

FT1 Dr James M Borger

Administering Organisation The Australian National University

Project Summary

This project will develop a geometric linearisation method related to Witt vectors, an exotic but important number system. This will let us take one more step towards solving a fifty-year-old mystery: to find the elusive universal linearisation in algebraic geometry, which is the linearisation that controls all the others.

FT110100853 **Choi, Dr Duk-Yong**

Approved Project Title **A silicon-compatible light source on a silicon-on-insulator platform**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 0205 OPTICAL PHYSICS

FT1 Dr Duk-Yong Choi

Administering Organisation The Australian National University

Project Summary

Silicon is emerging as an important photonic material owing to the cheap processing methods developed for electronics. This project aims to capture key technology for integrating photonic components onto silicon. It can bring social and commercial benefits to Australia such as high-level research as well as opportunities for commercialisation.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100108 Crocker, Dr Roland M

Approved Project Title **The galactic centre: a laboratory for starburst galaxies**

2011	\$81,448.00
2012	\$156,009.00
2013	\$144,894.00
2014	\$139,894.00
2015	\$69,561.00
Total	\$591,806.00

Primary FoR 0201 ASTRONOMICAL AND SPACE SCIENCES

FT1 Dr Roland M Crocker

Administering Organisation The Australian National University

Project Summary

The Milky Way's centre is one of its most captivating regions; here star-formation, and potentially, the region's supermassive black hole, inject enormous amounts of energy and drive a powerful wind of plasma and cosmic rays above the galactic plane. This project will elucidate these processes and help us understand other galactic nuclei.

FT110100587 Deger, Dr Jennifer

Approved Project Title **Digital relations: new media in Arnhem Land**

2011	\$89,224.00
2012	\$177,133.00
2013	\$177,174.00
2014	\$178,358.00
2015	\$89,093.00
Total	\$710,982.00

Primary FoR 1601 ANTHROPOLOGY

FT1 Dr Jennifer Deger

Administering Organisation The Australian National University

Project Summary

Digital media provide powerful new ways for remote Indigenous Australians to participate in a globalising world. Research partnerships between clan groups, community-based Aboriginal organisations, and international institutes will reveal how Yolngu are creatively re-articulating contemporary social concerns and identities via new media forms.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100604 Doron, Dr Assa

Approved Project Title **Recycling modernity: an anthropological study of India's mobile phone repair and recycling economies**

2011	\$67,216.00
2012	\$144,467.00
2013	\$158,752.00
2014	\$155,287.00
2015	\$73,786.00
Total	\$599,508.00

Primary FoR 1601 ANTHROPOLOGY

FT1 Dr Assa Doron

Administering Organisation The Australian National University

Project Summary

This project helps us understand the implications that consumer capitalism and e-waste has on emerging economies. It will be the first anthropological study to examine the repair and recycling economies of India, seeking a new theoretical framework for understanding the paradox of India's consumer culture.

FT110101065 Fitzpatrick, A/Prof Daniel J

Approved Project Title **The resilience of property: inundation, displacement and local relocation in the Asia-Pacific**

2011	\$86,707.50
2012	\$182,806.00
2013	\$196,945.50
2014	\$183,039.00
2015	\$82,192.00
Total	\$731,690.00

Primary FoR 1801 LAW

FT2 A/Prof Daniel J Fitzpatrick

Administering Organisation The Australian National University

Project Summary

This project responds to increased risks of population movement as a result of natural disasters and climate change in the Asia-Pacific. The project analyses local relocations in Indonesia and Solomon Islands, in order to support sustainable resettlement of displaced persons in their home environments.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100754 Fu, Dr Lan

Approved Project Title **High performance compound semiconductor nanowire optoelectronic devices**

2011	\$88,966.00
2012	\$177,932.00
2013	\$177,807.00
2014	\$177,682.00
2015	\$88,841.00
Total	\$711,228.00

Primary FoR 1007 NANOTECHNOLOGY

FT1 Dr Lan Fu

Administering Organisation The Australian National University

Project Summary

Semiconductor nanowires are emerging nano-materials with substantial opportunities for novel photonic and electronic device applications. This project aims at developing a new generation of high performance nanowire-based light-emitting diodes (LEDs), lasers and photodetectors, which will make great contribution to the nation in the areas of science, technology and industry.

FT110100805 Holcombe, Dr Sarah E

Approved Project Title **Global Indigenous rights and local effect in Central Australia: tracing relations of power and locating potentialities**

2011	\$70,194.00
2012	\$147,445.00
2013	\$155,131.00
2014	\$145,121.00
2015	\$67,241.00
Total	\$585,132.00

Primary FoR 1601 ANTHROPOLOGY

FT1 Dr Sarah E Holcombe

Administering Organisation The Australian National University

Project Summary

This ethnographic study investigates the practice of Indigenous rights in central Australia by exploring the apparently entrenched disjunctures between the declaration of rights and social fact. Working with Aboriginal people, government and non-government organisations will reveal how rights are understood and negotiated, thus locating new pathways for change.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100475 Karakas, Dr Amanda I

Approved Project Title **The origin and evolution of heavy elements in the early universe**

2011	\$85,790.00
2012	\$157,860.00
2013	\$147,965.00
2014	\$147,608.00
2015	\$71,713.00
Total	\$610,936.00

Primary FoR 0201 ASTRONOMICAL AND SPACE SCIENCES

FT1 Dr Amanda I Karakas

Administering Organisation The Australian National University

Project Summary

Everything in our Solar System, including all life on Earth, was created long ago out of material forged inside fiery stellar furnaces. The latest theoretical simulations of element production in red giant stars reveals the processes that gave us our existence, as well as help us to understand the origin of the galaxy that we inhabit.

FT110101052 Kewley, A/Prof Lisa J

Approved Project Title **The formation and evolution of galaxies: breaking ground with new Australian technology**

2011	\$111,059.00
2012	\$224,746.00
2013	\$220,986.50
2014	\$219,288.50
2015	\$111,989.00
Total	\$888,069.00

Primary FoR 0201 ASTRONOMICAL AND SPACE SCIENCES

FT3 A/Prof Lisa J Kewley

Administering Organisation The Australian National University

Project Summary

This project will combine the latest Australian optical and infrared telescope technology with galaxy clusters to form nature's largest magnifying glass to gain an unparalleled understanding of how galaxies like our Milky Way formed from clumps of gas shortly after the Big Bang and evolved into the dynamic galaxies that we see today.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100453 Kruuk, Prof Loeske E

Approved Project Title Evolution in a changing environment

2011	\$106,671.00
2012	\$207,367.00
2013	\$200,992.00
2014	\$201,117.00
2015	\$100,821.00
Total	\$816,968.00

Primary FoR 0603 EVOLUTIONARY BIOLOGY

FT3 Prof Loeske E Kruuk

Administering Organisation The Australian National University

Project Summary

Climate change is having dramatic effects on wild animal populations. This project will investigate how and why these effects occur, and whether populations will be able to evolve to adapt to a changing environment.

FT110100680 Macdonald, Dr Daniel H

Approved Project Title The science and engineering of defects and impurities in photovoltaic silicon

2011	\$98,815.50
2012	\$197,631.00
2013	\$197,631.00
2014	\$197,631.00
2015	\$98,815.50
Total	\$790,524.00

Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING

FT2 Dr Daniel H Macdonald

Administering Organisation The Australian National University

Project Summary

This project will create the knowledge and techniques that are essential to make low-cost, impure silicon suitable for producing highly efficient solar cells. This will help to drive down the cost of solar electricity, since the silicon material itself is a significant component of the overall cost of most photovoltaic modules.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100457 Meir, Prof Patrick W

Approved Project Title **The causes and effects of mortality in tropical Australian trees**

2011	\$116,281.00
2012	\$232,662.00
2013	\$230,277.00
2014	\$229,267.00
2015	\$115,371.00
Total	\$923,858.00

Primary FoR 0607 PLANT BIOLOGY

FT3 Prof Patrick W Meir

Administering Organisation The Australian National University

Project Summary

Drought can cause the widespread death of tropical trees resulting in large emissions of carbon dioxide to the atmosphere, but predictions of tree death during drought remain rudimentary. This project will combine new data and modelling on how Australian tropical trees respond to drought to improve estimates of tree mortality risk and its impacts.

FT110100037 Miroshnichenko, Dr Andrey E

Approved Project Title **Resonant nanophotonics: tailoring resonant interaction of light with nanoclusters**

2011	\$74,403.50
2012	\$145,553.00
2013	\$143,799.00
2014	\$143,799.00
2015	\$71,149.50
Total	\$578,704.00

Primary FoR 0205 OPTICAL PHYSICS

FT1 Dr Andrey E Miroshnichenko

Administering Organisation The Australian National University

Project Summary

This project will unlock new ways of controlling resonant light-matter interaction in nanostructured materials for the next generation of integrated nanophotonic devices. The project outcomes will support Australia's leadership in the development of energy efficient components for advanced photonic networks and optical communications.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100871 Niemeyer, Dr Simon J

Approved Project Title **Deliberative democracy and climate change: building the foundations of an adaptive system**

2011	\$83,468.50
2012	\$169,887.50
2013	\$166,760.50
2014	\$144,657.50
2015	\$64,316.00
Total	\$629,090.00

Primary FoR 1606 POLITICAL SCIENCE

FT1 Dr Simon J Niemeyer

Administering Organisation The Australian National University

Project Summary

This project will find mechanisms for improving public debate regarding climate change and the ability to respond to the challenge, as well as the politics surrounding it. It will make recommendations about the approaches needed to transform the issue and at the same time achieve better democratic outcomes.

FT110100064 Ostrovskaya, Dr Elena A

Approved Project Title **Nonlinear polaritonics: harnessing collective behaviour of half-light half-matter**

2011	\$82,983.50
2012	\$151,927.00
2013	\$145,537.00
2014	\$145,537.00
2015	\$68,943.50
Total	\$594,928.00

Primary FoR 0206 QUANTUM PHYSICS

FT1 Dr Elena A Ostrovskaya

Administering Organisation The Australian National University

Project Summary

This project will advance polaritonics - the cutting-edge interdisciplinary science that aims to harness novel and fascinating properties of strong light-matter interaction in superconductors. The outcomes will underpin the development of the next generation optoelectronic devices for emitting and controlling light.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100665 Pryke, Dr Sarah R

Approved Project Title **Adapting to a changing world: mothers as drivers of evolutionary change**

2011	\$89,177.00
2012	\$178,361.00
2013	\$178,213.00
2014	\$178,195.50
2015	\$89,166.50
Total	\$713,113.00

Primary FoR 0603 EVOLUTIONARY BIOLOGY

FT1 Dr Sarah R Pryke

Administering Organisation The Australian National University

Project Summary

This project will improve our understanding of how organisms will adapt to the unprecedented speed and magnitude of human-induced environmental change. By identifying how mothers modify their offspring to better match the prevailing environment, it will address the role of mothers in directing and accelerating adaptation in our changing world.

FT110100188 Ridley, Dr Amanda R

Approved Project Title **Group dynamics, Allee effects and population regulation in cooperative breeders**

2011	\$84,148.50
2012	\$167,497.00
2013	\$166,934.50
2014	\$166,834.50
2015	\$83,248.50
Total	\$668,663.00

Primary FoR 0602 ECOLOGY

FT1 Dr Amanda R Ridley

Administering Organisation The Australian National University

Project Summary

Understanding population dynamics is crucial for effective conservation biology. In many cases breeding is limited by high density, but in social species the opposite is true, exposing small groups to high extinction risk. However, analyses of population dynamics in social species is rare, limiting our ability to effectively conserve such species.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100919 Sellars, Dr Matthew J

Approved Project Title Solid-state quantum communication technology

2011	\$92,810.50
2012	\$184,471.00
2013	\$175,621.00
2014	\$166,871.00
2015	\$82,910.50
Total	\$702,684.00

Primary FoR 0206 QUANTUM PHYSICS

FT2 Dr Matthew J Sellars

Administering Organisation The Australian National University

Project Summary

This project will develop the quantum information devices required to create a quantum communication network for the ultra-secure transmission of data. The key technological challenge is to entangle the quantum state of two crystals separated by kilometres, and maintain this entanglement for many seconds.

FT110100757 Smyth, A/Prof Bruce M

Approved Project Title The high conflict post-divorce shared-time family

2011	\$100,582.00
2012	\$199,663.00
2013	\$197,655.50
2014	\$186,424.50
2015	\$87,850.00
Total	\$772,175.00

Primary FoR 1605 POLICY AND ADMINISTRATION

FT2 A/Prof Bruce M Smyth

Administering Organisation The Australian National University

Project Summary

Since the 2006 family law reforms encouraging shared-time parenting after separation, Australia has seen a marked increase in shared-time parenting where parents are in high conflict, and even where there are safety concerns. This project will examine how the children fare under shared-time parenting where their parents remain in conflict.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100698 Solomon, Dr Peter S

Approved Project Title **The identification of Mycosphaerella graminicola effectors that promote pathogenicity on wheat**

2011	\$100,657.00
2012	\$201,289.00
2013	\$203,229.00
2014	\$200,304.00
2015	\$97,707.00
Total	\$803,186.00

Primary FoR 0607 PLANT BIOLOGY

FT2 Dr Peter S Solomon

Administering Organisation The Australian National University

Project Summary

Fungal diseases are one of the greatest challenges to sustainable wheat production in the 21st century. Septoria tritici blotch is one such disease as it inflicts millions of tonnes in yield losses per annum. This project will identify the molecular basis of Septoria tritici blotch and assess its potential as an Australian biosecurity threat.

FT110100686 Strazdins, Dr Lyndall

Approved Project Title **Addressing time scarcity: feasible strategies for a healthy future**

2011	\$78,988.50
2012	\$154,006.50
2013	\$151,394.50
2014	\$153,340.50
2015	\$76,964.00
Total	\$614,694.00

Primary FoR 1117 PUBLIC HEALTH AND HEALTH SERVICES

FT1 Dr Lyndall Strazdins

Administering Organisation The Australian National University

Project Summary

Lack of time is the main reason people say they don't exercise, take public transport or eat healthy food, and for many Australians (especially parents who combine working with raising children) time pressure is acute. This program of research will provide ways to reduce time barriers, to make healthy and sustainable living more feasible.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100305 Swaminathan, Asst Prof Vishwanathan

Approved Project Title **Optimisation for next generation machine learning**

2011	\$96,387.00
2012	\$184,024.00
2013	\$179,274.00
2014	\$178,274.00
2015	\$86,637.00
Total	\$724,596.00

Primary FoR 0801 ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

FT2 Asst Prof Vishwanathan Swaminathan

Administering Organisation The Australian National University

Project Summary

As more and more data are being collected, it is important to build intelligent systems which will can analyse these data efficiently. This project will take design and analyse new algorithms which take advantage of emerging paradigms in hardware such as multicore processors, graphic processing units (GPU), and cluster computers to achieve this goal.

FT110100072 Tan, Dr Hark H

Approved Project Title **Selective area nano-epitaxy**

2011	\$102,857.00
2012	\$205,714.00
2013	\$205,714.00
2014	\$205,714.00
2015	\$102,857.00
Total	\$822,856.00

Primary FoR 1007 NANOTECHNOLOGY

FT2 Dr Hark H Tan

Administering Organisation The Australian National University

Project Summary

A new major program will be initiated to investigate the epitaxial growth of certain semiconductor nanowires on patterned substrates, without the use of a catalyst. It will result in the ability to produce nanowires of high quality and uniformity. This will lead the way for new and advanced concept nanowire-based devices for future applications.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

FT110100524 Tomlinson, Dr Matthew A

Approved Project Title **Divine power in Indigenous Christianity: translation, theology, and Pacific politics**

2011	\$81,603.50
2012	\$161,632.00
2013	\$163,157.00
2014	\$162,837.00
2015	\$79,708.50
Total	\$648,938.00

Primary FoR 1601 ANTHROPOLOGY

FT1 Dr Matthew A Tomlinson

Administering Organisation The Australian National University

Project Summary

This project analyses missionary activities and theological education in Oceania to understand how Indigenous political activity is shaped by Christian theological principles. Oceania has politically influential Christian churches and increasingly fragile governments. An understanding of their interconnections is needed for Australia's benefit.

FT110100310 Tscharke, Dr David C

Approved Project Title **Virus and host genes and the outcome of infection**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,632.00
2014	\$178,632.00
2015	\$89,316.00
Total	\$714,528.00

Primary FoR 0605 MICROBIOLOGY

FT1 Dr David C Tscharke

Administering Organisation The Australian National University

Project Summary

Viruses cause infection of all animals including people and the outcome of infection is highly variable. This project aims to use genetics to explain why some animals are more susceptible to particular virus infections and some strains of virus cause more severe diseases. The project will also explore whether all cells are similarly susceptible to killing by viruses.

Summary of Successful Proposals for Future Fellowships for Funding Commencing in 2011 by State and Organisation

University of Canberra

FT110100733 Ezaz, Asst Prof Tariq

Approved Project Title **Discovering sex determining genes in a reptile with genetic and environmental sex determination**

2011	\$89,316.00
2012	\$178,632.00
2013	\$178,601.00
2014	\$178,356.00
2015	\$89,071.00
Total	\$713,976.00

Primary FoR 0604 GENETICS

FT1 Asst Prof Tariq Ezaz

Administering Organisation University of Canberra

Project Summary

Reptile sex determination is particularly fascinating because it is triggered either by genes on sex chromosomes or by the nest temperature. This project will identify and characterise candidate sex determining genes in a model reptile to understand how genes control sexual differentiation and how they interact with temperature.