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2010 ARC LINKAGE, DISCOVERY AND NHMRC PROJECT FUNDING NEWS

We are delighted to advise you of our researchers success in the ARC Linkage Project Funding for 2010, round 1. We submitted 7 applications and 4 were successful. At a 57.1% success rate, we are above the typical 44.9% national success rate. Further success with a shared ARC Linkage Project with Griffith University as the lead administering organisation has taken our success rate to 62%.

Unfortunately we did not experience the same degree of success for our Discovery Projects or Discovery Indigenous Researchers Development applications or NHMRC projects, with only one shared ARC Discovery Project application rewarded with success this year with the University of Melbourne as the lead administering institution and one shared NHMRC project with Monash University as the lead administering organisation.

Congratulations to all the research teams and support staff involved in the submissions. We look forward to working with all applicants to build on this success.

LP100100103 [A/Prof Mikel Duke \(ISI\)](#); [Prof Stephen Gray \(IS\)](#); [Dr A Groth \(Siemens Water Technology\)](#)

Improving the durability and performance of hollow fibre membranes with advanced composite materials

2010 : \$ 26,669

2011 : \$ 26,669

2012 : \$ 26,669

with \$75,000 Partner Organisation cash; \$61,300 in-kind

APA(I) Award(s): 1

LP100100554 [Prof Chris Perera \(School of Engineering and Science, FHES\)](#); [Mr A Barton \(Grampian Wimmera Mallee Water Corp\)](#)

Multi-objective Planning & Operation of Water Supply Systems Subject to Climate Change

2010 : \$ 26,669

2011 : \$ 26,669

2012 : \$ 26,669

with \$90,000 Partner Organisation cash; \$195,000 in-kind

APA(I) Award(s): 1

LP100100554 [A/Prof Yuan Miao \(School of Engineering and Science, FHES\)](#); [Prof Yanchun Zhang \(School of Engineering and Science, FHES\)](#); with [Westgate General Practice Network](#)

Data Exchange & Service Integration with Applications in Health Information Systems

2010 : \$ 104,151

2011 : \$ 104,151

2012 : \$ 104,151

with \$197,000 Partner Organisation cash; \$159,000 in-kind

LP100100558 Prof Dorothy Bruck (School of Social Science and Psychology, FAEHD); Comdr F Stockton (Victorian Metropolitan Fire Brigade)

Improving the Identification of Juvenile Firesetters at High Risk of Recidivism

2010 : \$ 26,669

2011 : \$ 26,669

2012 : \$ 26,669

with \$18,000 Partner Organisation cash; \$67,400 in-kind

APA(l) Award(s): 1

SHARED ARC LINKAGE PROJECT SUCCESS

Administering Organisation: Griffith University

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

Improving determinants of Australian sports talent identification and development: a multi-disciplinary approach

2010 \$ 112,000

2011 \$ 88,000

2012 \$ 148,000

APA(l) Award(s): 1

Partner Organisations: Australian Football League, Australian Sports Commission Institute of Sport, Cricket Australia Centre of Excellence, Tennis Australia.

SHARED ARC DISCOVERY PROJECT SUCCESS

Administering Organisation: The University of Melbourne

DP1095366 Prof MG Pandey; Prof E Seeman; A/Prof RK Begg (VU); Dr PV Lee; Dr R Zebaze

Non-invasive assessment of hip fracture risk in elderly people

2010 : \$ 145,000

2011 : \$ 180,000

2012 : \$ 220,000

Project Summary

No falls, no fractures - this will be the main benefit of the proposed research. The most significant outcome will be new computational tools to improve current understanding of the biomechanics of falls and bone fragility in elderly people, which, in turn, will help to reduce healthcare costs associated with the treatment and management of hip fractures. Realistic models and computer simulations of human movement can play a pivotal role in three of Australia's largest industries: healthcare, through the diagnosis and treatment of movement disorders; sports, through the development of personalized training programs for elite athletes; and entertainment, through the development of video/digital games and animated films.

SHARED NHMRC GRANT SUCCESS

Administering Organisation: Monash University

Investigators:

Teede HJ, Strauss B, Zierath JR, Stepto NK (VU), and Cameron J.

Project title: Insulin resistance in Polycystic Ovary Syndrome and the role of skeletal muscle and adipose tissue.

RESEARCH MENTORING SCHEME: ECR PILOT TRIAL BEGINS

The early career researcher (ECR) pilot trial has begun with two induction sessions held on 26 & 29 October at the Footscray Park Campus. Both induction sessions were well received and significant effort was placed on matching mentees with suitable mentors. Professor Michael McKenna gave an inspiring presentation on his mentoring experience as part of the induction. Thank you to all who are involved in the program.

UPGRADE OF UPGRADE OF CONFOCAL SCANNING MICROSCOPE

Optical Technology Research Laboratory with the Centre for Telecommunications and Microelectronics (CTME), Footscray Park Campus.

Around 10 years ago the then Faculty of Engineering and Science and School of Communications and Informatics purchased an Olympus IX70 confocal scanning microscope; it was "opened" by the then PVC Research on 13th July, 1999. Since that time this facility has been used primarily for the quantitative measurement of important optical parameters such as refractive index, birefringence and rare-earth dopant distribution within the core of optical fibres. This research has led to advances in our understanding of topics such as the growth and quality of Bragg gratings, and how to achieve optimal efficiency of high power fibre lasers, and several ARC Discovery Grants have supported the work.

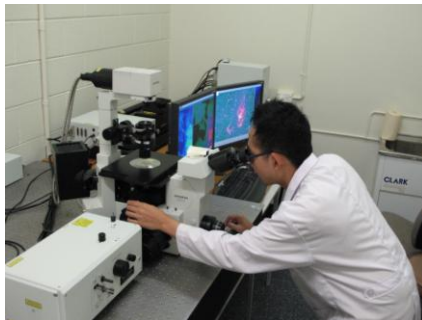
RIBG funding for 2008, supported by the Faculty of Health, Engineering and Science and CTME, has provided a significant upgrade of the existing system. This upgrade involved replacement of the outdated scanning unit and computer, and has provided VU with a fully useable and high quality imaging system.

The upgraded Olympus IX-70 confocal microscope is capable of being used in many areas, not just for the imaging of optoelectronic materials. It allows one to see deep within a biological tissue by scanning a laser through fluorescently labelled biological samples. The instrument is especially useful for studies of thick specimens and provides three-dimensional projections as well as images of individual planes and samples.

Housed in the newly refurbished space within the interdisciplinary CTME, level 1 of Building G at the Footscray Park Campus, the confocal microscope is already used by researchers from School of Biomedical & Health Sciences as well as within the Centre.

Research scientists from VU are using the confocal microscope for a variety of interesting biophysics projects, including investigating the roles of structural, mechanochemical and regulatory proteins in the assembly and function of the force-generating structure of skeletal muscle. This multidisciplinary research, integrates molecular biology, cell biology, biophysics, confocal microscopy with the study of molecular motors in skeletal muscles. Furthermore, it includes determining structural changes that take place in aqueous whey protein – pectin mixtures associated with chemo-physical treatments.

CTME is particularly delighted to further pursue collaborative projects involving use of this microscope with other centres and/or institutes within Victoria University.



Mokhamad Nur, a Master in Food Science student uses the confocal microscope to localise whey proteins and aggregates.

Further information:

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GRANT WIN FOR OUR PHD STUDENTS

PhD candidates Annett Finger and Nicole Filby from the School of Ecology and Sustainability have already begun developing successful grant histories. Both students have won grants from Holsworth Wildlife Research Endowment (ANZ Trustees Foundation). Annett's research project is the first study to investigate trace metals in the blood of little penguins along the Victorian coastline of Australia. Nicole's study is on the impact and management of the dolphin-swim industry in Port Phillip Bay. Currently, the long-term biological consequences for bottlenose dolphin from cetacean tourism are largely unknown. Congratulations to both Annett and Nicole.

ERA NEWS: NEW STAFF APPOINTMENT

The Office for Research has employed **Dr Melanie McGuire** as the ERA Project Officer to assist with ERA preparations over the next nine months. Melanie will be contacting the Associate Deans (Research and Research Training) and other research leaders shortly to discuss the processes for compiling the 2010 ERA submissions. In the coming months, Melanie will be visiting Academic Staff in order to assist them with understanding the ERA data requirements and ensuring that the University achieves the best possible ERA outcome.

Melanie can be contacted through the Office for Research on 9919 4704 or by email: melanie.mcguire@vu.edu.au. More information on ERA is available from <http://research.vu.edu.au/era.php>



Dr Melanie McGuire, ERA Project Officer with the Office for Research.

VICTORIA UNIVERSITY IN CHILE

A senior level VU delegation recently visited Chile to explore possible bilateral education and research links. During the visit delegation visited 11 higher education institutions and Chilean government agencies responsible for research and tourism. Late 2008 Chilean government announced Becas Chile postgraduate scholarship program which award 1500 scholarships per each year until 2013. Australia has been allocated 500 of these scholarships as well as additional places for academic/ scholar exchange. Chilean government is hoping to strengthen its human capital development and improve the scope and quality of higher education, scientific and technological research and innovation through this program.



From left to right: Barry O'Mahony, Meneka Premakumar, Helen Borland, Bhanuka Wanasinghe, Karol Trautmann (University of Technology Santa Maria), Chris Downes and Michelle Towstowless.

MANILA POLICY FORUM ON CLIMATE CHANGE ADAPTATION: VU RESEARCHER INVITATION

Prof Roger Jones, Professorial Research Fellow with the Centre for Strategic Economic Studies was invited by the Ambassador to the Philippines, the Hon Rod Smith to be the key note speaker at an Asia Pacific Policy Forum on Climate Change Adaptation, held by the Australian Embassy in Manila on the 20th of August 2009. Also speaking at the Forum was Senator Loren Legardo, Governor Joey Salceda and the "father" of climate change policy in the Philippines, Heherson Alvarez. Following the Forum a meeting was held between AusAid other funding bodies and researchers involved in Disaster Risk Reduction in the Philippines. The following day Prof Jones had meetings with the Asia Development Bank, Neric Acosta the lead convenor of the Philippine Climate Imperative, Attorney Antonio Oposa noted environmental lawyer and government representatives.

CLIMATE SCIENTISTS AUSTRALIA GROUP: PARLIAMENTARY VISIT

Despite the overwhelming scientific evidence that climate change is real and urgent there remain serious shortcomings in the way this scientific information is used to inform decision making. At the political level the science is still called into question, take up of the information by business is mixed at best and the media continues to represent climate change in a confrontational manner between those "for" and those "against". Individual climate sceptics receive attention even though their arguments could be easily refuted by the science; and there continue to be co-ordinated campaigns by some sections of the business community that see action on climate change as a threat to their future business. As a result, the use of science in decision making on climate change lags far behind the state of scientific understanding itself - it's clear that there is an enormous gap between scientific knowledge, the actions politicians and the public take and the urgency they feel about the issue.

Recognizing the urgent need to bridge this gap between science and those who need to use that science in decision making, ClimateWorks Australia is supporting a group of world leading Australian climate scientists with a mission to provide balanced, scientifically based information on climate related issues of relevance to policy makers, business leaders, the media and the public.

At a time when there is so much "noise" around climate issues there is a critical need for a credible body to ensure the debate remains grounded in fact and that the public understands the very serious consequences of what climate science is telling us.

The following are founding members of Climate Scientists Australia:

Ann Henderson-Sellers - Macquarie University
Lesley Hughes - Macquarie University
Andy Pitman - University of NSW
Tony McMichael - Australian National University
Matthew England - University of NSW
Amanda Lynch - Monash University
Neville Nicholls - Monash University
Dave Griggs - Monash University
David Karoly - University of Melbourne
Nathan Bindoff - University of Tasmania
Roger Jones - Victoria University
Ove Hoegh-Guldberg - University of Queensland
Will Steffen - Australian National University

On Wednesday October 21 eight scientists from the newly formed group Climate Scientists Australia visited Parliament House Canberra at the invitation of the Hons Mark Dreyfus and Mal Washer to brief Members and Senators individually and as a group on the science of climate change. Attending were Griggs, Hughes, England, Nicholls, Bindoff, **Jones** and Steffen.

Lateline and Margot O'Neill covered the group's visit to Parliament House and you can watch the clip at:

<http://www.abc.net.au/lateline/content/2008/s2720699.htm>

<http://www.climatescientistsaustralia.org.au>

IEEE SCIENCE AND ENGINEERING GRADUATE RESEARCH EXPO 2009

The IEEE Science and Engineering Graduate Research Expo 2009 organized by the University of Melbourne was aimed to capture the imaginations of postgraduate students of universities in Victoria. It provided a platform for science and engineering postgraduate students to demonstrate their research capabilities as well as enable them to receive valuable feedback and informed ideas from experts in their relevant fields. The event featured an interactive knowledge transfer process among various postgraduate student communities through key note speeches, research demonstrations, poster presentations, panel discussions and job opportunity seminars covering different areas of science and engineering.

From many initial applications from universities across Victoria, only 7 were selected for computer demonstrations and 7 for poster presentations. Among the seven shortlisted for posters, two were from the Faculty of Health, Engineering and Science, whose research projects were in Water Resources. These two posters were from **Shishutosh Barua** and **Nyoman Marleni** of the School of Engineering and Science. The best poster presentation was awarded to Shishutosh Barua for his poster on "Drought Forecasting: A Case Study within the Yarra River Catchment in Victoria, Australia". The event was held on 25th September.



Left to Right: Mr Shishutosh Barua, PhD Student with School of Engineering and Science and Professor Jamie Evans, Head of the Department of Electrical and Electronic Engineering, The University of Melbourne.

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THANK YOU to all who contributed to the content of the Research Matters bulletin. 😊