Summary of Successful Linkage Projects Proposals for Funding Commencing in 2013 by State and Organisation

The University of Adelaide

LP130100419 **Ankeny, A/Prof Rachel A; Umberger, A/Prof Wendy J; Tapscott, Mr Gary N; Healing, Ms Jackie; Sheridan, Dr Allan D; Tilbrook, Prof Alan J; Gunner, Ms Elizabeth**

Approved Project Title **Getting to the meat of the matter: social and economic issues in animal welfare in Australia's livestock industries**

2013	$60,105.00
2014	$99,893.00
2015	$83,698.50
2016	$43,910.50
Total	**$287,607.00**

Primary FoR 2201 APPLIED ETHICS

Partner Organisation(s)

Elders Limited, Coles Supermarkets , Department of Agriculture, Fisheries and Forestry, SA Research and Development Institute , Richard Gunner's Fine Meats Pty Ltd

Administering Organisation The University of Adelaide

Project Summary

Animal welfare in Australia's livestock industries is an issue of increasing concern to both Australian consumers and meat and livestock producers. This project will provide an understanding of both the social and economic impacts of consumer views on animal welfare and help to foster more productive dialogue between consumers and producers.

LP130100045 **Beer, Prof Andrew P; Faulkner, Dr Deborah R; Karnon, Prof Jonathan D; Beilby, Prof Justin; Fiebig, Mr Jeffrey L; Openshaw, Ms Lynn; Root, Ms Josephine M; Custance, Mr Graham; Barelds, Mr Albert**

Approved Project Title **The rise of the consumer: engagement of older people with consumer directed care**

2013	$47,108.00
2014	$115,976.00
2015	$93,868.00
2016	$25,000.00
Total	**$281,952.00**

Primary FoR 1605 POLICY AND ADMINISTRATION

Partner Organisation(s)

Aged Care & Housing Group , Australian Council on the Ageing, Resthaven Incorp, Anglicare SA Inc, Care Connect Ltd

Administering Organisation The University of Adelaide

Project Summary

Australia is adopting a new model of care for older Australians - consumer directed care. This project will provide the evidence needed by governments and service providers to create the most effective and supportive system.

Summary of Successful Linkage Projects Proposals for Funding Commencing in 2013 by State and Organisation

LP130100117 **Cazzolato, A/Prof Benjamin S; Arjomandi, Dr Maziar; Nathan, Prof Graham 'Gus' J; Walker, Dr David J; Alshroof, Dr Osama N; Denniss, Dr Tom; Murdoch, Dr Peter; Barrett, Mr Sean N; Zavtrak, Dr Serguei; Venkatesan, Mr Sudharshan**

Approved Project Title **Oscillating water column efficiency improvement through impedance matching and active latching control techniques**

2013	$59,500.00
2014	$94,500.00
2015	$70,000.00
2016	$35,000.00
Total	**$259,000.00**

Primary FoR 0906 ELECTRICAL AND ELECTRONIC ENGINEERING

Partner Organisation(s)

Oceanlinx Limited

Administering Organisation The University of Adelaide

Project Summary

The coastline of southern Australia is recognised as a world-class wave energy resource. This project will play a crucial role in seeing this resource exploited whilst simultaneously keeping Australia at the forefront of wave energy technology. Specifically, this project will develop a high-efficiency turbine technology for wave energy.

LP130100648 **Cooper, Prof Alan; Wilkinson, Prof Michael J; Gilliham, Dr Matthew; Stephen, Dr John R; Salt, A/Prof David E; Pinhasi, Prof Ron; Higham, Dr Thomas F; Densham, Mr Daniel H**

Approved Project Title **Identifying the diversity and evolution of loci associated with adaptation to aridity/heat and salinity in ancient cereal crops**

2013	$98,059.00
2014	$196,063.00
2015	$195,955.50
2016	$97,951.50
Total	**$588,029.00**

Primary FoR 0604 GENETICS

Partner Organisation(s)

Australian Genome Research Facility, Molecular Research Limited

Administering Organisation The University of Adelaide

Project Summary

This project will use ancient grains of wheat, barley and rye to find 'lost' genetic diversity at key genes associated with resistance to aridity, salt and disease. This project will make the proteins of key genes, and study their interaction with the environment over time by measuring ions in the grains to reveal the ancient environmental conditions.

Summary of Successful Linkage Projects Proposals for Funding Commencing in 2013 by State and Organisation

LP130100646 **Cooper, Prof Alan; Suter, Dr Catherine M; Wilkinson, Prof Michael J; Hiendleder, Prof Stefan G; Llamas, Dr Bastien; Stephen, Dr John R; Taylor, Prof Jeremy F; Densham, Mr Daniel H**

Approved Project Title **The role of epigenetic modifications in bovid adaptation to environmental change**

2013	$109,729.50
2014	$196,396.00
2015	$167,593.00
2016	$80,926.50
Total	**$554,645.00**

Primary FoR 0603 EVOLUTIONARY BIOLOGY

Partner Organisation(s)

Australian Genome Research Facility, Molecular Research Limited

Administering Organisation The University of Adelaide

Project Summary

This project will explore the role of epigenetic change, where gene expression is regulated without changing the deoxyribonucleic acid (DNA) sequence, in how animals adapt to rapid climate change. This project will trace epigenetic markers in ancient bison and cows through 30,000 years of climate change, and identify key adaptive genes for the cattle industry.

LP130100154 **Dick, Dr Anthony R; Reid, Prof Ian D; Kelsey, Mr Tim J**

Approved Project Title **Visual tracking with environmental constraints**

2013	$60,000.00
2014	$117,500.00
2015	$112,500.00
2016	$55,000.00
Total	**$345,000.00**

Primary FoR 0801 ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

Partner Organisation(s)

Champion Data Holdings Pty Ltd

Administering Organisation The University of Adelaide

Project Summary

By incorporating high level scene understanding into visual tracking, this project will improve the capacity to monitor and analyse complex patterns of activity in video. This has many applications in public safety and security, but the project will demonstrate it on the challenging task of tracking players during an Australian Football League (AFL) game to gather statistics on their performance.

Summary of Successful Linkage Projects Proposals for Funding Commencing in 2013 by State and Organisation

LP130100600 **Fincher, Prof Geoffrey B; Burton, A/Prof Rachel A; Eglinton, A/Prof Jason K; Whelan, Prof James M; Stewart, Dr Doug C; Skadhauge, Dr Birgitte**

Approved Project Title **Physiology and genetics of barley grain germination in the malting and brewing industries**

2013	$112,500.00
2014	$225,000.00
2015	$225,000.00
2016	$112,500.00
Total	**$675,000.00**

Primary FoR 0601 BIOCHEMISTRY AND CELL BIOLOGY

Partner Organisation(s)

Viterra Ltd , Carlsberg Breweries A/S

Administering Organisation The University of Adelaide

Project Summary

An international research team will provide new scientific information on barley grain germination. This detailed basic knowledge will be immediately applied in breeding programs that are aimed at improving malting and brewing quality in a commercial context. At the same time, the industry's carbon footprint will be significantly reduced.

LP130101055 **Garnett, Dr Trevor P; Heuer, Dr Sigrid; Roessner, Dr Ute; Small, Prof Michael; Rafalski, Dr Jan A; Dhugga, Dr Kanwarpal S; Kuchel, Dr Haydn**

Approved Project Title **Control points in nitrogen uptake: enhancing the response of cereals to nitrogen supply and demand**

2013	$87,296.50
2014	$171,804.50
2015	$175,062.50
2016	$90,554.50
Total	**$524,718.00**

Primary FoR 0604 GENETICS

Partner Organisation(s)

Dupont Pioneer, Australian Grain Technologies

Administering Organisation The University of Adelaide

Project Summary

Vast amounts of nitrogen fertiliser are applied to cereal crops to maintain yields. By uncovering what limits nitrogen uptake in cereals, this project will provide the scientific basis for improving nitrogen use efficiency and decreasing fertiliser use, with significant economic and environmental benefits.

Summary of Successful Linkage Projects Proposals for Funding Commencing in 2013 by State and Organisation

LP130100567 **Lambert, Prof Martin F; Simpson, Prof Angus R; Zecchin, Dr Aaron; Simmons, Mr Stephen C**

Approved Project Title **Combining transient micro-reflections and multi-sensor arrays for condition assessment of buried pipes**

2013	$45,000.00
2014	$92,500.00
2015	$97,500.00
2016	$50,000.00
Total	**$285,000.00**

Primary FoR 0905 CIVIL ENGINEERING

Partner Organisation(s)

Detection Services Pty Limited

Administering Organisation The University of Adelaide

Project Summary

This project will develop an accurate and reliable approach for assessing the condition of pipelines. This new approach will reduce costs and save considerable amounts of water each year, as it will assist utilities in preventing major failures such as pipe bursts, and performing strategically targeted maintenance, replacement and rehabilitation.

LP130101133 **Monro, Prof Tanya M; Withford, Prof Michael J; Johnson, Mr Peter A**

Approved Project Title **Compact and versatile chip lasers for three-dimensional mine surveying**

2013	$60,000.00
2014	$120,000.00
2015	$120,000.00
2016	$60,000.00
Total	**$360,000.00**

Primary FoR 0205 OPTICAL PHYSICS

Partner Organisation(s)

Maptek Pty Ltd

Administering Organisation The University of Adelaide

Project Summary

This project will bring together a world leading mine survey company, The University of Adelaide and Macquarie University researchers, to develop an 'eye-safe' micro laser for high resolution three-dimensional laser-mapping. The recently developed and patented 'chip' laser will allow the realisation of a compact, enhanced range laser-radar with unmatched resolution.

Summary of Successful Linkage Projects Proposals for Funding Commencing in 2013 by State and Organisation

LP130100859 **Scriver, Dr Peter C; Bartsch, Dr Katharine A; Jones, Dr Philip; Rashid, A/Prof Mizanur**

Approved Project Title **The architecture of Australia's Muslim pioneers**

2013	$26,842.00
2014	$60,225.50
2015	$64,428.50
2016	$31,045.00
Total	**$182,541.00**

Primary FoR 1201 ARCHITECTURE

Partner Organisation(s)

South Australian Museum, International Islamic University Malaysia

Administering Organisation The University of Adelaide

Project Summary

This project will survey the remnant architecture of Australia's Muslim cameleers who played a vital role in the discovery, exploration and settlement of Australia. The project will generate three-dimensional visualisations of these settlements and academic publications in addition to material for the public education programs operated by the South Australian Museum.

LP130100736 **Trott, Dr Darren J; Schembri, Prof Mark A; Norris, A/Prof Jacqueline; Gibson, Dr Justine S; Beatson, Dr Scott A; Page, Dr Stephen; Allen, Dr Andrew G; Platell, Dr Joanne L; Jordan, A/Prof David; Buller, Dr Nicky**

Approved Project Title **Superbugs and veterinary drugs: are multidrug-resistant zoonotic pathogens residing in Australian animals?**

2013	$88,075.50
2014	$176,151.00
2015	$176,851.00
2016	$88,775.50
Total	**$529,853.00**

Primary FoR 0707 VETERINARY SCIENCES

Partner Organisation(s)

Pfizer Australia Pty Ltd, Luoda Pharma Pty Ltd, NSW Department of Primary Industries, Queensland Department of Agriculture, Fisheries and Forestry, WA Department of Agriculture and Food

Administering Organisation The University of Adelaide

Project Summary

Antibiotic resistance is a growing problem affecting human health that is now emerging in animals and veterinary hospitals. This project will integrate surveillance with novel treatments and preventatives to develop effective strategies to limit the impact of resistant bacteria to animal health and prevent transfer between humans and animals.

Summary of Successful Linkage Projects Proposals for Funding Commencing in 2013 by State and Organisation

LP130101064 **van den Hengel, Prof Anton J; Dick, Dr Anthony R; Reid, Prof Ian D; Jateff, Ms Emily A**

Approved Project Title **Accessing Australia's photographic history**

2013	$40,000.00
2014	$75,000.00
2015	$35,000.00
Total	**$150,000.00**

Primary FoR	0801	ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

Partner Organisation(s)

Maritime Museum

Administering Organisation The University of Adelaide

Project Summary

This project aims to bring to life the rich historical record that is stored in our museum's collections of photographs. Using novel image analysis techniques, this project will enable the creation of three-dimensional models from these photographs, which can then be used for public exhibits or viewed interactively at home through a web browser.

LP130100156 **van den Hengel, Prof Anton J; Shen, Dr Chunhua; Eriksson, Dr Anders P; Shi, Dr Qinfeng J; Buglak, Mr Rostyslav**

Approved Project Title **Semantic change detection through large-scale learning**

2013	$59,500.00
2014	$121,500.00
2015	$129,000.00
2016	$67,000.00
Total	**$377,000.00**

Primary FoR	0801	ARTIFICIAL INTELLIGENCE AND IMAGE PROCESSING

Partner Organisation(s)

BAE SYSTEMS Australia

Administering Organisation The University of Adelaide

Project Summary

This project aims to develop technologies which understand the content of images before higher-level analysis is performed. This approach is intended to allow more accurate and reliable decisions to be made using automated image analysis than has previously been possible. The project will particularly investigate the detection of change in the contents of an image.