

Summary of Linkage Projects Proposals for Funding to Commence in 2007

Tasmania

University of Tasmania

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

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

2007 : \$ 108,000

2008 : \$ 100,000

2009 : \$ 95,000

Primary RFCD 2701 BIOCHEMISTRY AND CELL BIOLOGY

Collaborating/Partner Organisation(s)

Bestenbalt LLC

Administering Organisation University of Tasmania

Project Summary

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

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

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

2007 : \$ 120,000

2008 : \$ 115,000

2009 : \$ 110,000

Primary RFCD 2707 ECOLOGY AND EVOLUTION

Collaborating/Partner Organisation(s)

Conservation International

Parks and Wildlife Service

Department for Environment and Heritage - South Australian Government

Administering Organisation University of Tasmania

Project Summary

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

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

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

2007 : \$ 30,000

2008 : \$ 30,000

2009 : \$ 30,000

Primary RFCD 3002 CROP AND PASTURE PRODUCTION

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Joe White Maltings Pty Ltd

Administering Organisation University of Tasmania

Project Summary

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

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

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

2007 : \$ 112,000

2008 : \$ 102,000

2009 : \$ 92,000

Primary RFCD 2909 ELECTRICAL AND ELECTRONIC ENGINEERING

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Transend Networks Pty Ltd

Administering Organisation University of Tasmania

Project Summary

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

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

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

2007 : \$ 200,000

2008 : \$ 180,000

2009 : \$ 190,000

Primary RFCD 3007 FISHERIES SCIENCES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Primary Industries and Water

Southern Rocklobster Ltd

Administering Organisation University of Tasmania

Project Summary

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

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

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

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

Primary RFCD 3008 ENVIRONMENTAL SCIENCES

Collaborating/Partner Organisation(s)

Derwent Estuary Program

Norske Skog Paper Mills (Australia) Limited

Administering Organisation University of Tasmania

Project Summary

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