

South Australia

The University of Adelaide

LP0883746 Dr AA Johnson; Prof MA Tester; A/Prof JC Stangoulis

Approved Project Title **Cell type-specific transgene expression to increase Fe content in cereal grains**

2008 : \$ 19,500

2009 : \$ 42,500

2010 : \$ 23,000

Primary RFCD 3002 CROP AND PASTURE PRODUCTION

Collaborating/Partner Organisation(s)

HarvestPlus Challenge Program

Administering Organisation The University of Adelaide

Project Summary

The grains industry forms a vital part of the Australian economy and farm sector. Increased iron concentrations of wheat and other cereal grains would greatly increase their nutritional value for people worldwide, thereby increasing their market value and profitability for farmers. High iron wheat would also lower the production costs of many Australian wheat products by reducing or eliminating the need for iron fortification of wheat flour. High iron cereals promote healthy development of young Australians and can improve preventative healthcare by reducing the incidence of iron deficiency anaemia and biochemical deficiency.

LP0883930 A/Prof JD Karnon; Prof J Beilby; Ms CH Holton; Mr PH Hakendorf; Prof DI Ben-Tovim; Prof P Ryan; A/Prof SD Eckermann; Prof MG Sawyer; Dr NP Roos; Mr AL Woollacott; Mr DM Banham; Dr R Pegram; Ms S Thompson; Mr AG Elshaug

Approved Project Title **Evaluating the long-term costs and benefits of community-based initiatives**

2008 : \$ 50,000

2009 : \$ 100,000

2010 : \$ 100,000

2011 : \$ 50,000

Primary RFCD 2301 MATHEMATICS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Department of Health SA

Department of Education and Children's Services

Central Northern Adelaide Health Service

Administering Organisation The University of Adelaide

Project Summary

The ultimate benefit from the research is a more efficient allocation of public funds to provide public services, i.e. an increase in the gain derived from the government budget. The relative advantages of alternative methods of delivering government services are subject to significant uncertainty, which means that policy decisions are often poorly informed. Improvements in the accuracy of predicting the costs and benefits of complex community-based initiatives will help policymakers identify the set of initiatives that provide the best outcomes for the community they serve, as well as informing the optimal specification of the individual initiatives.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0883453 Dr DJ Walker; Dr J Davis

Approved Project Title **Sediment capture and deposition processes in coastal lagoons**

2008 : \$ 12,813

2009 : \$ 25,627

2010 : \$ 25,627

2011 : \$ 12,813

Primary RFCD 2908 CIVIL ENGINEERING

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Murray Darling Basin Commission

Administering Organisation The University of Adelaide

Project Summary

Intermittently closed and open lagoons and lakes are an increasing problem for coastal managers around Australia: they can limit fish migration, and lead to degraded water quality and an increased risk of flooding. The Murray mouth, for example, closed in 1981 and still exists in a congested state. Closure would have disastrous consequences for the area in general and the Coorong in particular, with significant damage to Australia's environmental reputation. An optimised dredging operation at the mouth (currently costing \$4.6 m annually), together with better management of river discharges, will have the potential to improve conditions in the area.

LP0883451 Dr C Wu; Prof DJ Oehlers; Dr N Burman; Dr M Rebenrost; Prof AS Whittaker

Approved Project Title **Blast resistance of flexural ultra-high performance concrete members**

2008 : \$ 25,627

2009 : \$ 51,254

2010 : \$ 51,254

2011 : \$ 25,627

Primary RFCD 2908 CIVIL ENGINEERING

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

VSL Australia

Administering Organisation The University of Adelaide

Project Summary

Ultra high performance concrete (UHPC) has high material strengths, high material deformation and high toughness, making it an ideal material for resisting blast effects. Since there are great differences between the mechanical properties of UHPC and conventional concrete, traditional guidelines need to be significantly adapted to accommodate UHPC. This project will facilitate the development of design procedures for reinforced UHPC members. It will enable design engineers to take advantage of the desirable properties of UHPC for anti-terrorism. The application of this project will lead to saving lives, reducing the extent of injury and minimizing social and economic disruption.