Examples of Future Fellowships projects commencing in 2013

Tasmania

Tasmanian research organisations will receive more than $4 million through the Australian Research Council Future Fellowships scheme for 5 new research projects commencing in 2013.

Some examples of the TAS projects are provided below.

To view the summaries of all successful projects, visit the [ARC announcements page](#).

**University of Tasmania**

*Future Fellow:* Dr Catia Domingues (FT130101532)  
**Summary:** Increasing sea levels and ocean temperatures provide critical evidence of long term warming of the climate system. This project will investigate geographical changes in the vertical distribution of heat uptake by the ocean and contribution to sea level changes, including understanding of physical mechanisms and the role of human activity and other natural external and internal factors. The expected outcomes will contribute to place more rigorous constraints on the likelihood of future warming and sea level rise projections, and are aligned with scientific deliverables required to address key questions in support of Australia’s climate change policy.  
**ARC funding:** $709,920 over four years

**University of Tasmania**

*Future Fellow:* Associate Professor Michael Breadmore (FT130100101)  
**Summary:** This project will develop three unique chemical approaches that will each overcome a challenge to the creation of advanced miniaturised analytical devices with sample-in/answer-out capability. This will provide substantial improvements in speed, cost, portability, and operational simplicity and safety. New technology for analysing drugs in body fluids will be critical to enabling people to closely match their pharmaceutical consumption with their individual requirements. The advance will have implications for all patients, particularly those in remote and rural Australian populations. The same technology is likely to find applications in environmental monitoring of emerging pharmaceutical pollutants.  
**ARC funding:** $871,645 over four years

**University of Tasmania**

*Future Fellow:* Dr Andrew Bowie (FT130100037)  
**Summary:** Oceans play a vital role in Earth’s climate through the control of atmospheric carbon dioxide. An important component of this system is the iron cycle, in which iron-rich dust is transported from the land via atmosphere to ocean; iron is a key micronutrient for marine phytoplankton, the scarcity of which limits essential biogeochemical processes and ocean fertility. This project will conduct an integrated oceanographic and atmospheric observational program for trace elements in the oceans around Australia. This will provide the critical information on iron supplied from atmospheric dust for ocean productivity and marine ecosystem health, providing the science for predicting a key factor in the future impact of the oceans on climate.  
**ARC funding:** $869,625 over four years