

Eureka Prize short list covers wide spectrum of science

The Australian Museum has just shortlisted its finalists for the 2011 Eureka Awards. They include a team of scientists attempting to save the Tasmanian devil from extinction, a researcher developing a cheaper way of desalinating water, and three CSIRO scientists making contributions to the nation's health.



Credit: Wikimedia Commons/Wayne McLean

The team working to save the Tasmanian devil from Devil Facial Tumour Disease (DFTD) is led by Dr Menna Jones from the University of Tasmania.

‘We’re investigating the suitability of devil insurance populations for reintroduction in case of extinction of the species in the wild, as well as a potential vaccine against DFTD,’ Dr Jones said.

‘We’re also exploring any possible genetic resistance or tolerance against DFTD, and genetic restoration.’

Another finalist is The University of Western Australia's Associate Professor Ben Corry, who is developing a new material that could be used to reduce the cost of seawater desalination.

‘Currently, one in eight people on the globe lack access to clean reliable water and demands on water supplies are likely to increase due to population growth, intensifying agriculture and industry, and climatic shifts,’ said Associate Professor Ben Corry.

‘As a consequence, many communities are turning to the desalination of salty or brackish water to meet their needs. However, this process requires large amounts of energy and is a costly means of obtaining clean water.’

Assoc. Prof. Corry has developed new semi-permeable membranes with low water resistance that can also block the passage of charged salts, allowing desalination to occur using less energy. The research grew out of his initial work in

biology on ion channels in nerve cells.

Three research groups from CSIRO's Materials Science and Engineering (CMSE) have also been shortlisted.

CSIRO's Mr John Arkwright and Dr Philip Dinning from Flinders University have been developing a pressure-sensing catheter that provides real-time measurements of pressure in the gastrointestinal tract.

This enables the detection of abnormal muscular activity (e.g. an abnormal swallowing reflex) in the diagnosis of functional gastrointestinal disorders.

Another shortlisted team from CSIRO and the University of New South Wales has developed 'Elast-Eon' polyurethanes for medical implants. Since the introduction of first clinical use of Elast-Eon for cardiac pacemakers, over three million devices have been implanted.

Winners of the Australian Museum Eureka Prizes will be announced at the annual Award Dinner in Sydney on 6 September.

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