



Bioplatforms Australia aims to reverse the cycle of mammal extinction

Australia holds the record of having the highest rate of mammal extinction on the planet. It is an alarming fact. Australia is recognised as one of only 17 ‘megadiversity’ countries in the world that have extraordinarily high levels of biodiversity, and collectively these countries account for around two-thirds of the world’s biodiversity. Bioplatforms Australia (BPA) through the Commonwealth Government NCRIS programme has committed \$1 million to the Oz Mammal Genomes Initiative, which will support genomic data collection, data access and international collaboration in an endeavour to reduce extinction rates of Australia’s unique mammal fauna.

This funding enables all Australian museums, as well as a wide number of Australian university researchers, to collaborate with international organisations such as the British Natural History Museum, the Smithsonian, UC Berkeley Museum of Vertebrate Zoology, other US Universities such as Louisiana State and Montana, and end user organisations such as Australian Wildlife Conservancy and Bush Heritage Australia.

“Spectacular, globally significant discoveries about evolution have already been made from the in-depth study of the genomes of a few marsupials and monotremes,” said BPA General Manager, Andrew Gilbert. “Given the unique history and biology of Australian mammals, this work is just the tip of the iceberg. This BPA-funded project will enable a comprehensive understanding of the relationships of our mammal species – including those recently extinct – which will underpin both the study of their evolution as well as improving our understanding of extinction risk.”

Australian marsupials are genetically distinct and developmentally unique. Their genomes contain a vast array of information including novel antimicrobials, information on sex chromosome evolution and are an especially important comparative resource for understanding mammalian diversity worldwide.

“Whilst this project is Australian-centric, the uniqueness of the species being analysed make it of interest to the international research community,” said Gilbert. “We are building a data collection of national and global significance, with increased access.”

In Australia, the project will further actively collaborate with the Atlas of Living Australia, the CSIRO through the National Research Collections of Australia, the Threatened Species Recovery Hub, Government and state agencies and NGOs. Internationally, the project is also involved with Genome 10K, EDGE and IUCN Conservation Genetics.

“BPA pilot funds have already made substantial progress towards sequencing and assembling the koala genome, with significant learnings along the way,” said Gilbert. “We have an engaged international community now with the capacity to tackle collaboratively the urgent problem of mammal extinction.”

Further information:

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