



# Research uncovers origins of diseases

THE genes of two iconic Australian animals, the kangaroo and the platypus, have been used to uncover the mysterious origins of two debilitating human diseases.

Research by Australian National University (ANU) scientists is the first to prove that two rare genetic conditions evolved in humans much more recently than first thought.

The team studied the genes that

are abnormal in Prader-Willi Syndrome, a complex disorder which causes learning difficulties and obesity, and Angelman Syndrome, which is marked by severe mental retardation and inappropriate laughter.

Eminent ANU geneticist, Professor Jenny Graves, led a study by student researchers Rob Rapkins and Tim Hore to investigate the origins of the conditions by studying the genomes

of two very different creatures, the kangaroo and the platypus.

The researchers were able to find the AS gene in both creatures but, says Prof Graves, it was not what they expected.

Their discoveries, detailed in *PloS Genetics*, shows that gene imprinting is a relatively recent development in evolutionary terms.