



Native animals solve disease origin riddle

THE genes of two 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 (PWS) and Angelman syndrome (AS).

Both diseases are caused by an error in imprinted genes when only the genes from the mother or the father – not both – work but the relevant gene for each disease is either missing or mutated.

People with PWS have



IMPRINT: The platypus is helping gene research.

a problematic copy from their father and, for Angelman sufferers, their mother.

ANU geneticist Professor Jenny Graves led a study to investigate the origins of the conditions by studying the genomes of the kangaroo and the platypus.

The two animals offer important clues because they both have very different reproduction systems.

The study is detailed in the scientific journal *PloS Genetics*. AAP