

Wallaby Milk contains powerful weapon against human superbugs

Researchers from the Department of Primary Industries (DPI) have discovered an antimicrobial compound 100 times more effective than penicillin in killing antibiotic resistant 'superbugs', Minister for Agriculture, Bob Cameron, announced recently.



Mr Cameron said the DPI research team, led by Dr Ben Cocks, uncovered the super-potent compound - AGG01 - in wallaby milk.

"Recent testing has revealed the extremely high potency of the AGG01 compound, and Dr Cocks' team have also discovered its potential to fight off bacteria and fungus is much broader than first estimated," Mr Cameron said.

"This includes a relative of the hospital superbug, MRSA - often referred to as 'golden staph' - and other important disease-causing bacteria including E. coli; Streptococci, Salmonella, Bacillus subtilus; Pseudomonas spp; Proteus vulgaris; and Staphylococcus aureus," Mr Cameron said.

Dr Cocks said this scientific discovery, could have a profound impact on both animal and human health.

"The discovery came from a "mammary gland genome" project at the DPI analysing bovine and wallaby lactation" Dr Cocks said.

Funded through the Victorian Government's \$620 million Science, Technology and Innovation Initiative (STI Initiative), the project was a predecessor to the international kangaroo (Tamar wallaby) genome sequencing project.

The compound has the potential to be commercially synthesised and may prove vital in the war against increasingly resistant human and animal diseases.

The DPI scientists have been researching the chemical properties of the breast milk of Tamar wallabies to pinpoint how their immune-deficient newborns build up resistance to bacteria during their growth in the pouch.

They identified more than 30 anti-microbial factors using an advanced computer system and bioinformatics technologies.

The international kangaroo (Tamar wallaby) genome sequencing project is collaborative research between the Australian Genome Research Facility and the US National Institutes of Health.