

The Janus Corner

Australian Wallaby Compounds: The Key To Fighting Superbugs?

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Pharmacognostic agents have a history of providing us with antibiotic agents, usually arising from plants or fungal and bacterial organisms.^[1] Whilst the number of vertebrate derived pharmacognostical agents is relatively small, examples do exist of vertebrate derived medicines. Recent reports in the Australian media indicate that peptides from wallabies (an Australian marsupial) may provide us with the next round of agents to combat antibiotic resistant bacteria.^[2, 3] Wallabies give birth to immature young which do not have a fully functioning immune system. Instead, they rely on maternal antimicrobial agents delivered via the milk to assist their immune system in combating microbial infection. It was recently reported that a compound isolated from wallaby milk was a very potent antibiotic against dangerous bacteria, including multidrug resistant strains of *Pseudomonas aeruginosa*,

Klebsiella pneumonia and *Acinetobacter baumannii*. The research team is now working on a method to deliver the peptide to dairy cattle as a treatment for mastitis, as well as further exploring the medicinal potential of this peptide.

1. Cock IE, Pharmacognosy Communications: The scope of Pharmacognosy, Pharmacognosy Communications. 2011; 1(1): 1-3.
2. Dayton L, Wallabies help get the jump on super bugs, The Australian. September 3, 2011, <http://www.theaustralian.com.au/news/health-science/wallabies-help-get-the-jump-on-super-bugs/story-e6frg8y6-1226128447574>, accessed 16/9/2011.
3. McArthur G, Breakthrough by Victorian scientists could hold the key to combat superbugs, Herald Sun, September 5, 2011, <http://www.heraldsun.com.au/news/more-news/breakthrough-by-victorian-scientists-could-hold-key-to-combat-superbugs/story-fn7x8me2-1226129816552>, accessed 16/9/2011.
4. Wang J, Wong ESW, Whitley JC, Li J, Stringer JM, et al. Ancient Antimicrobial Peptides Kill Antibiotic-Resistant Pathogens: Australian Mammals Provide New Options. PLoS ONE. 2011; 6(8): e24030.

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