

Good news from survey on superbugs in animals

February 6 2014, by Robyn Mills

The existence of 'superbugs' in pets is emerging as a global public health issue - but a University of Adelaide national survey indicates the problem has not yet spread to this country.

The University of Adelaide started its [national survey](#) of bacterial samples from Australian veterinary diagnostic laboratories in January 2013 and, with more than half the testing completed, hasn't seen any resistance to the carbapenem class of antibiotics.

Carbapenems in human medicine are antibiotics of last resort - usually effective against infections when other antibacterial treatments have failed. In a recent article published in the *Journal of Antimicrobial Chemotherapy*, the researchers outlined the need for global concern about likely transmission between humans and companion animals of carbapenem-resistant superbugs.

"So far in our extensive search we've not found any carbapenem resistance in companion or production animals in Australia," says Dr Sam Abraham, Postdoctoral Research Fellow in the University's School of Animal and Veterinary Sciences at Roseworthy Campus.

"This is good news but with recent emergence of carbapenem-resistant bacteria in dogs overseas, Australia now has a limited window of opportunity to implement tight controls to prevent the development of multi-drug resistance in pets.

"Antimicrobial stewardship programs similar to those being implemented widely in the western world in human medicine must be developed rapidly for companion animal veterinary practice. We need to make better use of currently registered veterinary antibiotics and ensure that carbapenems are administered only as a last resort in [companion animals](#) for the very few cases of infection that lack other suitable alternatives."

Under the survey funded by animal health company Zoetis, all Australian veterinary diagnostic laboratories since January 2013 have been sending clinical samples of Escherichia coli and staphylococci isolated from bacterial infections to the University of Adelaide for antimicrobial resistance testing. Collection ceased at the end of January 2014 on reaching the goal of 3000 samples. With more than half of the E. coli samples fully tested, the researchers have found no resistance to carbapenems.

Building on the national survey, the University of Adelaide will lead a new project, funded by the Department of Agriculture, to develop a plan for Australia-wide antimicrobial usage and surveillance in animals.

Project leader Associate Professor Darren Trott says: "Surveillance of antimicrobial usage and resistance is an urgent priority for the ongoing benefit of primary producers, consumers, pet owners, and public health.

"We've assembled a cross-disciplinary team of leading Australian veterinary and human health experts in the field of [antimicrobial resistance](#) (including Griffith University's Professor Ramon Shaban, SA Pathology's Professor John Turnidge and Associate Professor David Jordan, NSW Department of Primary Industries) and will work with the animal health industry and other stakeholders to ensure we continue to maintain high standards of appropriate antibiotic use and [resistance](#) monitoring in [veterinary](#) practice."

Provided by University of Adelaide

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