

Research shows SA koalas with high disease

November 25 2014, by Robyn Mills

University of Adelaide research has shown that South Australian koalas may have a much higher prevalence than thought of the two key infectious diseases threatening koala populations across Australia. The findings have important implications for koala conservation nationwide.

The study found very high levels (77%) of koala retrovirus (an HIV/AIDS-like virus) and 32% Chlamydia in the 31 [koalas](#) tested. Chlamydia is a bacterial infection which causes urinary and reproductive tract disease.

"While [koala populations](#) in Queensland and NSW have 100% incidence of retrovirus, the Mount Lofty Ranges koala population has been considered to be a thriving population with a low incidence of disease," says Jessica Fabijan, Honours student with the University's School of Animal and Veterinary Sciences who conducted the study. "But these results show disease is a significant factor in our local koalas."

Koala retrovirus may cause immunosuppression and is associated with lymphoma and leukaemia cancers. Chlamydia causes significant disease and mortality in the Eastern States populations. The study was carried out in rescued koalas at the new Adelaide Koala and Wildlife Hospital in Plympton.

"Until Jess's project, it wasn't known what impact these two infectious diseases were having in South Australia," says Dr Natasha Speight, who leads the University's Koala Research Group and co-supervised the study.

"While the study was based on samples from the koala hospital and therefore could have some bias in the results, her findings make clear that koalas in SA also are seriously affected. We need to investigate further – this shows the increased urgency for research and conservation efforts nationwide for koalas.

"The Mt Lofty population also has a high rate of kidney disease, called oxalate nephrosis, which is another serious health threat for koalas in the State."

The Adelaide study was carried out as part of a Queensland-based project under the Queensland Department of Environment and Heritage Protection's Koala Research Grant Program. This program is addressing the decline of koala populations in Queensland with concentrated research efforts.

Project leader Dr Greg Simmons, from the University of Queensland, is visiting the University of Adelaide to discuss future research directions: "Like South Australian koalas, many Queensland populations have high levels of both chlamydial disease as well as cancer, which is thought to be due to the high prevalence of retroviral infection. However many of these retrovirus positive koalas are able to live happily into old age with few signs of disease, suggesting the disease mechanisms are complex," he says.

"Further research is vital in order to shed more light on the impact of this potentially devastating virus on the long term future of koala populations throughout Australia."

Provided by University of Adelaide

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