

Hidden koala blood parasites offer new clue for their illness

December 6 2018



Dr Amanda Barbosa and colleague. Credit: Lone Pine Koala Sanctuary, Brisbane

A new test for detecting multiple parasites in koalas has been developed by a Perth veterinarian and post-doctoral scientist.

The technology will help us understand why so many of the iconic Australian species are becoming sick and dying.

Koalas have suffered population declines of over 50 per cent in some Australian states.

Infections with Chlamydia and koala retrovirus are known to play an important role in their decline, but until now, it's been difficult to identify multiple bugs in their systems.

"For the first time, we were able to show that co-infections with up to five species of a parasite called Trypanosoma are common in koalas," says Dr. Amanda Barbosa.

"This parasite is known to cause serious animal and human diseases worldwide—for example surra, Chagas disease and sleep sickness—although its effects in koalas need to be further investigated.

"Trypanosomes may also reduce the immune competence of their hosts, predisposing them to the negative effects of other pathogens."

The test could simultaneously detect DNA sequences of multiple parasite species in the blood of 168 hospitalized koalas and their ticks in eastern Australia.

The ability to successfully describe the whole community of trypanosomes harboured by [koalas](#) is a crucial step towards better understanding what ultimately makes koala sick and die.

The research was published in *PLoS One* in July 2017.

More information: Amanda D. Barbosa et al. Increased genetic diversity and prevalence of co-infection with *Trypanosoma* spp. in koalas (*Phascolarctos cinereus*) and their ticks identified using next-generation sequencing (NGS), *PLOS ONE* (2017). [DOI: 10.1371/journal.pone.0181279](#)

Provided by Freshscience

Citation: Hidden koala blood parasites offer new clue for their illness (2018, December 6) retrieved 6 May 2024 from <https://phys.org/news/2018-12-hidden-koala-blood-parasites-clue.html>

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