

# Researchers take koala vaccine to the wild

Scientists hope for a breakthrough to prevent chlamydia wiping out Australia's iconic marsupial

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medical reporter

QUEENSLAND scientists are preparing to launch the first field trials of a koala chlamydia vaccine.

Microbiologist Peter Timms, who has been working on the vaccine for years, says he expects to start testing it on koalas in the Gold Coast hinterland early next year.

The koalas will be fitted with radio collars so they can be tracked, allowing scientists to assess the effectiveness of the experimental vaccine.

Professor Timms, of the Queensland University of Technology, says he is hopeful of its benefits after trials at Brisbane's Lone Pine Koala Sanctuary and at Australia Zoo Wildlife Hospital, near Beerwah, in the Sunshine Coast hinterland.

"We give the animals the vaccine and make sure it's safe and it doesn't cause any bad reactions and we get the right type of immune responses," he explains. "That worked well."

The new trial will assess its ability to reduce infection levels in vaccinated animals and whether it improves the ability of female koalas to reproduce.

Based at QUT's Institute of Health and Biomedical Innovation, Timms says chlamydia is a significant factor in dwindling koala populations in Queensland and northern NSW.

He says a recent study shows the

sexually transmitted disease, caused by the chlamydia bacterium, is just as big a threat to the marsupials as loss of habitat.

While vaccinating every koala in the wild would be well nigh impossible, Timms says the thousands of animals brought to koala care centres and wildlife hospitals every year can be inoculated. "If it shows good benefits, then you could look at vaccinating particular populations that are in decline," he says.

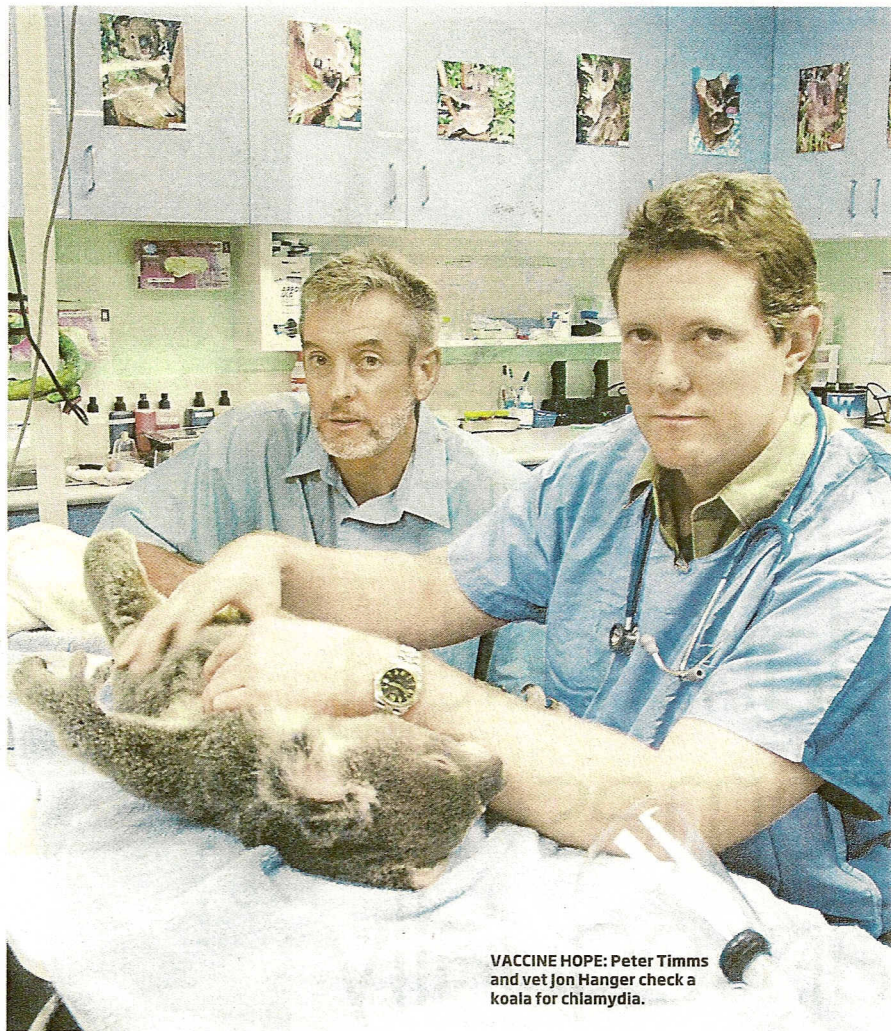
Research into chlamydia in koalas, which can cause infertility and blindness, is throwing light on a parallel project to develop a human vaccine.

The QUT Chlamydia Research Alliance project has received a \$1.88 million Queensland Government grant to work with Indian and Canadian researchers.

Timms says the researchers are looking at trialling different delivery approaches, such as administering the vaccine by way of a nasal puffer, rather than a needle, to test whether it affects the strength of the immune response at key sites.

"In koalas, we take a blood sample to look for antibodies but we also swab the genital tract and eyes and look for the immune response from those sites," Timms says.

While the koala vaccine is progressing well, trials of a corresponding human product are probably years away.



**VACCINE HOPE:** Peter Timms and vet Jon Hanger check a koala for chlamydia.

The need for a human vaccine is pressing. New chlamydia infections in Queensland rose from 12,241 in 2006 to 19,217 last year.

Queensland Health senior communicable diseases director Christine Selvey says she believes much of the increase is a result of more screening, but not all.

She says a human vaccine would prevent hospital admissions and the need for emergency surgery, given chlamydia increases a woman's chances of having an ectopic pregnancy – when a fertilised egg implants outside the uterus, usually in the fallopian tubes.

"If the pregnancy causes the tube



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to burst, and that's not treated properly, you can then have somebody who dies from blood loss," Selvey says.

Australian Medical Association Queensland president Richard Kidd says a human vaccine would also prevent a great deal of heartbreak, as the sexually transmitted infection can cause infertility in men and women.

But he says the best way of preventing chlamydia is for people to practise safe sex. "It's important to remind people that using condoms is the best way to prevent any sexually transmitted disease," he says.

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