

## More sex for mums leads to healthier babies: Study

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Promiscuous females are more likely to give birth to healthier offspring, researchers at The Australian National University have found.

The team based at the School of Botany and Zoology (BoZo) at ANU has for the first time proven that promiscuity increases the survival rate of offspring in an animal species. The findings were published in the latest edition of *Nature*.

"Scientists have developed many theories to explain why some female animals have multiple sex partners: whether it's trading sex for food and protection, dealing with infertile males, or avoiding the negative effects of inbreeding in species that can't recognise their relatives," team leader Dr Diana Fisher said.

"Another theory is that mating with multiple males would result in sperm competition. This means that males with the strongest sperm are more likely to become sires and father better quality offspring. Until now, this theory hasn't been demonstrated convincingly."

The researchers found the first compelling evidence for this sperm competition theory among brown antechinuses. These are mouse-sized, insect-eating marsupials that are common in the forests of south-eastern Australia. They are rarely seen, because they are quick, nocturnal, and nest in tree hollows.

The team brought male and female antechinuses into captivity for the



mating seasons in two successive years. Some females were only allowed one mate, while others had three. Groups of three males were mated (one at a time) with three different promiscuous females, so that paternity tests could reveal their success at sperm competition.

"In one year, we released families back into the wild when the babies were still in the mother's pouch," Dr Fisher said. "The result was that survival of babies with promiscuous mothers was almost three times as high as those in the monogamous group."

"The next year, we kept families in captivity until the babies were almost weaned. Again, babies of promiscuous mothers did much better. Paternity tests showed that the sperm of some males were far more successful than others, and, most important of all, that babies fathered by these males were twice as likely to survive."

The research team also included Professor Andrew Cockburn, Mike Double and Michael Jennions from BoZo, and Simon Blomberg from the Centre for Resource and Environmental Studies at ANU.

Source: ANU

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