

Scientists testing oral contraceptives for animals

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If you're a land owner and animals such as coyotes or wild pigs are driving you hog wild, help may soon be on the way to control their numbers in a humane way – in the form of a birth control pill for animals being developed at Texas A&M University's College of Veterinary Medicine & Biomedical Sciences. The concept would be to get it to wild animals through baited food, researchers say.

Researchers are testing oral contraceptives – used in much the same way as in humans – and the results are promising, says Duane Kraemer, a professor in veterinary physiology and pharmacology and a world leader in embryo transfer who has been involved in cloning four different species in recent years.

Kraemer, one of the pill's creators, and other members of the research team are testing the contraceptive for use on wild animals, but the applications could most likely be used in pets, he believes.

“No one method will be useful in all situations,” he stresses.

“This approach inhibits maturation of the egg and therefore prevents fertilization. The animals continue to cycle, so it will not yet be ideal for many pet owners. But there is an advantage for use in wild and feral animals.”

Kraemer says the research team has recently started tests on domestic models for predators – animals such as feral pigs and cougars – but if

successful, it could be used on a wide variety of animals, including dogs and cats, he explains. The team also has submitted grant applications for similar projects on coyotes and deer.

“A spinoff of this contraceptive could probably be used on many different species,” he adds.

The \$90,000 project is being funded by the U.S. Department of Agriculture and private donations.

The pill works by inhibiting the maturation of the egg, not the entire cycle, Kraemer says. The technical name for the drug is called a phosphodiesterase 3 inhibitor, and it is one member of a family of drugs being tested.

Similar compounds have been tested in laboratories elsewhere in mice and monkeys, and similar results have been obtained by in vitro (in laboratory) methods in cattle and humans.

The compound can be mixed with animal feed and must be eaten daily during the critical time. It may also be encapsulated to decrease the frequency it has to be consumed, Kraemer says.

“We believe we are the first to test this compound for this specific purpose,” Kraemer notes. “We’re trying new uses for this previously approved compound.”

When perfected, the pill could eventually be used as an oral contraceptive for pets, but that may be a bit in the future, Kraemer says. In dogs, for example, the ovulation process is especially complex, but researchers are confident such a birth control pill can one day be successfully developed.

The need is apparent: According to the American Humane Society, about 7 million dogs and cats are euthanized each year at animal shelters. One female cat can lead to the production of 420,000 offspring in her lifetime.

In Texas, feral hogs have become a severe nuisance to farmers and ranchers, and the state has an estimated 3-4 million feral hogs, by far the most in the country. Deer are also becoming a problem to more communities each year because of overpopulation of deer herds.

Other species such as coyotes and even wild horses also need sufficient management control, experts note.

“The need for such an animal contraceptive is certainly there,” Kraemer adds.

“We are confident we can develop this pill in the not too distant future, but we still have plenty of tests to complete. It’s an exciting and much-needed project, but more funds will be needed, especially since deer and wild pigs are consumed by humans. One of the more interesting challenges will be to develop methods for feeding it to the target animals without affecting other species.”

Source: Texas A&M University

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