

Single dose of contraceptive vaccine controls fertility in cats for years

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(PhysOrg.com) -- University of Florida researchers, in collaboration with the U.S. Department of Agriculture, report that a single dose of an immunocontraceptive vaccine controls fertility over multiple years in adult female cats.

The scientists hope their findings will aid in the registration and use of the [vaccine](#), called GonaCon, to help manage overabundant feral cat populations humanely.

“Millions of free-roaming feral [cats](#) exist in the United States and in other countries around the world,” said Julie Levy, the lead researcher and director of the Maddie’s Shelter Medicine Program at UF.

“Unfortunately, their welfare is not always adequate, and they can have a negative impact on public health and the environment.

“We’re hoping this research will lead to a nonlethal method of control for feral cat populations that is less expensive, labor-intensive, and invasive than current methods, such as surgical sterilization,” Levy said.

Funded by Morris Animal Foundation, a nonprofit organization that advances veterinary research to protect, treat and cure animals, the five-year study was published in August online in the scientific journal *Theriogenology*.

GonaCon was developed by researchers at the USDA Animal and Plant Health Inspection Service National Wildlife Research Center. The

NWRC is the federal institution devoted to resolving problems caused by the interaction of wild animals and society. The UF researchers involved in the testing do not have any licensing agreements with the USDA or any commercial interests in the vaccine.

In the study, 15 adult female cats received a single dose of the vaccine while five received a placebo. After the injections, the female cats were allowed access to a breeding male cat. All five placebo females became pregnant within seven to 28 days.

Cats injected with the vaccine, on the other hand, remained infertile from five months to more than five years. All of the cats were adopted at the end of the study.

“A total of 93 percent of the cats treated with GonaCon remained infertile for the first year,” Levy said. “In subsequent years, we saw a steady and expected decline in infertility as antibodies to the vaccine decreased. However, numbers were still quite high, with 73 percent of the cats remaining infertile during the second year, 53 percent in year three, 40 percent in year four, and 27 percent in year five when we ended the study.”

Although permanent sterilization is ideal, the relatively short lifespan of many free-roaming feral cats suggests that a contraceptive that blocks fertility for several years may be successful in reducing the population.

Joyce Briggs, president of the Alliance for Contraception in Cats & Dogs, a group advocating for nonsurgical birth control methods, called Levy “a key player in efforts to advance new methods of fertility control.”

“We are intrigued by this study,” Briggs said. “Although a permanent sterilant would be ideal, a long-acting contraceptive could be an effective

tool for managing feral cat populations, especially where surgery is unavailable or impractical.”

GonaCon is currently registered by the U.S. Environmental Protection Agency for use on female white-tailed deer; however, the vaccine has also proved successful with numerous other mammal species including feral horses, bison, elk, prairie dogs and ground squirrels.

The single-shot, multiyear vaccine stimulates the production of antibodies that bind to GnRH, a hormone in an animal’s body that signals the production of sex hormones, such as estrogen, progesterone and testosterone. By binding to GnRH, the antibodies reduce its ability to stimulate the release of these sex hormones. All sexual activity is inhibited, and animals remain in a nonreproductive state as long as a sufficient level of antibody activity is present.

Provided by University of Florida

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