



**FOR IMMEDIATE RELEASE**

**CONTACT:** Michelle Curley, 513-602-3463  
[michelle.curley@cincinnati-zoo.org](mailto:michelle.curley@cincinnati-zoo.org)

## **Cincinnati Zoo Scientists Advance Non-Surgical Contraceptive Alternative for Cats**

*Breakthrough findings may eliminate need for spaying domestic cats*

CINCINNATI, OH (\_\_\_\_, 2023) – Scientists at Cincinnati Zoo & Botanical Garden’s Center for Conservation and Research of Endangered Wildlife (CREW) and collaborators from Massachusetts General Hospital (MGH) and Horae Gene Therapy Center recently published findings from a study funded by The Joanie Bernard Foundation and its Give Them Ten Movement and The Michelson Found Animals Foundation that demonstrates the efficacy of a non-surgical alternative to spaying

domestic cats. The research findings, which can be found in the latest issue of *Nature Communications*, showed that a single dose of Anti-Müllerian Hormone (AMH) gene therapy can induce long-term contraception in female cats. This groundbreaking study represents a major milestone toward humanely reducing free-roaming cat populations and eliminating shelter euthanasia of healthy cats.



[Video](#) | [Photos](#)

While it's impossible to know the exact number, experts estimate there are between 30 and 80 million free-roaming cats in the United States. Many of these cats experience stressful lives and face possible euthanasia in animal shelters. Animal welfare experts have long identified sterilization as a key component to humanely reduce free-roaming cat populations. Currently there are no contraceptives capable of producing permanent sterilization in companion animals. Spaying, the surgical removal of the ovaries and uterus, is the most widely used strategy to control unwanted reproduction in female cats.

“The trap, neuter [spay], return model is difficult to achieve on a large scale because surgery requires general anesthesia, an adequately equipped surgical facility, and more veterinarians than are currently available,” said senior author and CREW’s Director of Animal Research, Dr. Bill Swanson (DVM, PhD).

Six female cats at CREW were treated with AMH gene therapy and three untreated females served as controls. A single injection of the treatment caused the cats’ muscle cells to produce AMH (which is normally only produced in the ovaries) and raised the overall level of AMH about 100 times higher. Two 4-month-long breeding trials were performed one and two years post-treatment to test the efficacy of the AMH gene therapy. “Evidence for the effectiveness of this treatment is strong. All of the control (non-treated) cats produced kittens, but none of the cats treated with the gene therapy became pregnant,” said Dr. Lindsey Vansandt (DVM, PhD), lead author on the paper and Director of CREW’s Imperiled Cat Signature Project.

The treated cats have been monitored for more than three years to also assess the safety of the treatment, including regular physical exams, abdominal ultrasounds, and bloodwork. There were no adverse effects observed in any of the treated cats, demonstrating that at the doses tested, the gene therapy was safe and well tolerated.

“A non-surgical sterilant for community and companion animals is long overdue and will transform animal welfare,” said Gary K. Michelson (MD), founder and co-chair of the Michelson Found Animals Foundation, which helped fund the study. “This breakthrough discovery is a major milestone in our quest to provide pet owners with an alternative to surgical spay and neuter.”

Following the conclusion of the study, all of the study cats became eligible for adoption. Several of them have already found their forever homes with Cincinnati Zoo staff members and volunteers, including three cats that were adopted by Dr. Swanson. “We are cat lovers, which is

one of the reasons we're excited about what this new technology can do to improve the lives of domestic cats," said Swanson.

It's not just cats that stand to benefit from this breakthrough. Cats are prolific hunters and their outdoor presence can have devastating consequences for wildlife populations, including North American Songbirds. "Cat predation is a major source of mortality in wild birds. Outdoor cats also contribute indirectly through fear, resource competition, and disease transmission," said Jenny Gainer, Curator of Birds & African Animals at Cincinnati Zoo & Botanical Garden. The Cincinnati Zoo serves as a program partner to Saving Animals From Extinction North American Songbird (SAFE NAS). The goal of SAFE NAS is to reduce the threats to songbirds and secure sustainable wild populations. "Controlling and reducing the population of free-roaming cats will make a major difference for declining songbird populations."

"I'm both a domestic cat advocate and a wildlife advocate. Our technology has the potential to significantly improve the welfare of both," said Vansandt. "This safe and effective non-surgical solution has tremendous potential to win the fight against pet overpopulation and end shelter euthanasia of healthy animals."

*To find out more about adopting one of the cats from the study, email [CREWcat@cincinnati-zoo.org](mailto:CREWcat@cincinnati-zoo.org) or visit this [link](#).*

***About CREW** - The Lindner Center for Conservation and Research of Endangered Wildlife (CREW) at the Cincinnati Zoo & Botanical Garden is a global leader in wildlife conservation. Established in 1991 as the first facility of its kind focused on both plant and animal conservation research, CREW is dedicated to "Saving Species with Science". World renowned for its accomplishments with its four Signature Projects - endangered rhinoceroses, imperiled cats, exceptional plants and threatened polar bears - CREW also provides professional training to the world's next generation of conservation scientists. CREW's multi-institutional collaborations and multi-disciplined approaches have a track record of success in expanding our understanding of species biology, improving health and longevity, enhancing propagation and genetic management, and ensuring a future for wildlife.*