

## How MSU Is Helping Ferrets

**Researchers at Michigan State University strive to increase their knowledge of ferret health.**

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Ferrets can suffer from two types of coronavirus, and sample submissions from veterinarians treating ferrets suffering from coronavirus help researchers determine the genetic changes causing the two types.

People who live with ferrets love them with abandon. Ferrets' hilarious antics, intelligent ways and affectionate personalities make them incredibly endearing. But despite how wonderful they are, ferrets tend to get the short end of the stick when it comes to veterinary research. Funding is limited when it comes to ferret health research simply because ferrets aren't as popular as dogs and cats.

Although pharmaceutical companies specializing in drugs for veterinary use spend considerable amounts of money researching dog and cat diseases, they often don't have resources available for research in ferret illnesses. The reason is simple: There are more dogs and cats in the world than ferrets, and pharmaceutical company resources are limited.

The good news is that veterinary researchers at Michigan State University College of Veterinary Medicine are working hard to give ferrets their due. Veterinary researchers at the university are dedicated to researching important and emerging diseases in ferrets, and are seeking funds to help make it happen.

### Coronavirus

As most ferret owners know, ferrets are prone to a number of illnesses that can be difficult to control and manage. One of the most notorious is coronavirus. This intestinal disease causes vomiting and diarrhea in ferrets, and is similar to coronavirus in cats. The illness often strikes in large populations of ferrets, particularly in ferret shelters or at ferret shows. Researchers have noted two different forms of the virus in ferrets, making it more complicated to find a vaccine.

Veterinarian Matti Kiupel, an associate professor of pathology at the Michigan State University College of Veterinary Medicine's Diagnostic Center for Population and Animal Health is studying coronavirus in ferrets. This research may lead to development of a vaccine against the disease.

"So far, we have completed the first step of molecular characterization of coronaviruses in ferrets," Kiupel said. "We are exploring the question of whether two distinct strains of coronavirus are out there."

Coronavirus in ferrets appears to come in two forms: enteric and systemic. Enteric coronavirus, also known as green slime disease or green diarrhea, results in lethargy, loss of appetite, vomiting and profuse diarrhea. The systemic form of the disease causes symptoms similar to the enteric form, including lethargy and loss of appetite. Ferrets with systemic coronavirus also suffer from weight loss and may develop masses in the abdomen.

Kiupel said that researchers at MSU College of Veterinary Medicine need as many sample submissions as possible from ferrets suffering from coronavirus so researchers can study the genetic changes responsible for two versions of the virus. Submissions come primarily from veterinarians who are treating ferrets suffering from coronavirus.

"We must do all this before a vaccine can be created," Kiupel said, which is the ultimate goal.