

Researchers Find a Cause Of Chronic Feline Diarrhea

But an effective treatment is yet to be found.

By **Don Vaughan**
For Veterinary Practice News

A cross-disciplinary team of researchers at the North Carolina State University College of Veterinary Medicine in Raleigh has identified one of the primary causes of chronic feline diarrhea. And now investigators are working on an effective treatment.

Chronic diarrhea commonly affects cats less than 1 year of age and is characterized by recurrent loose stools, reports Jody Gookin, DVM, Ph.D., Dipl. ACVIM (Internal Medicine), assistant professor at the NCSU College of Veterinary Medicine.

The disease is usually spread from cat to cat via the fecal-oral route.

"These animals have a normal-functioning small bowel, so typically there is no weight loss and the cats continue to thrive," Dr. Gookin notes.

"But they defecate several times a day and have foul-smelling cow-pie-to-liquid stools, often containing fresh blood and mucus."

Chronic feline diarrhea is common where cats are housed in high density, Gookin says.

National prevalence is unknown, but a survey of purebred-cattery owners attending a recent international cat show disclosed that 70 percent of the catteries had experienced feline diarrhea within the previous six months, Gookin says.

"Once this disease gets into a cattery, there is no way to eliminate it," warns parasitologist Michael G. Levy, Ph.D., a professor at the NCSU School of Veterinary Medicine.

"Many cattery owners simply opt to depopulate."

Questions and Answers

For years, one of the biggest questions about chronic feline diarrhea was its cause. Early studies detected the presence of trichomonads in the feces of infected cats, but researchers discounted them as nonpathogenic.

Gookin thought otherwise and turned to Levy for assistance.

After three years of study, Gookin's team finally identified the culprit—*Tritrichomonas foetus*, a protozoa that causes spontaneous abortions in cattle. The finding came as a surprise.

"This culprit was difficult to pinpoint for several reasons," notes Gookin.

"First, *T. foetus* had never before been recognized as an intestinal pathogen in cats.

"Secondly, the organism is very similar in size and appearance to *Giardia*, which also causes diarrhea in young cats. So veterinarians invariably mis-

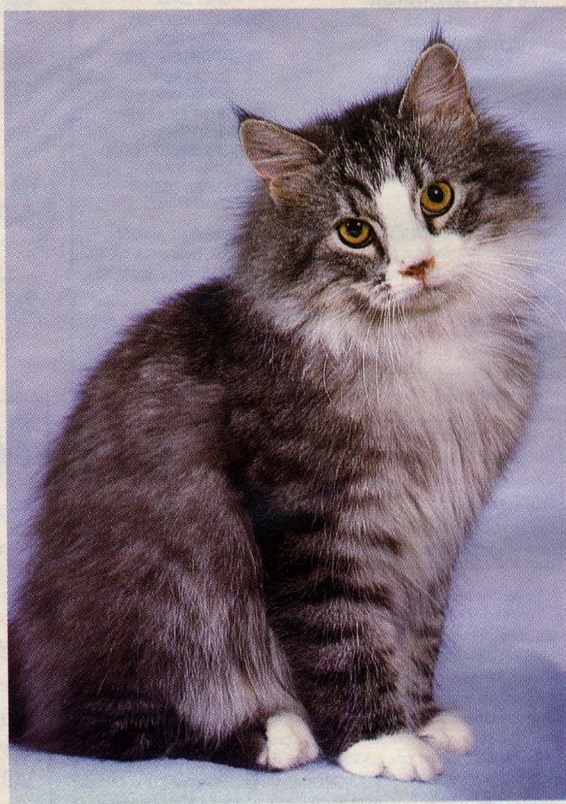
somal genes in an attempt to more closely identify it. *Pentatrichomonas* and *Tritrichomonas* have morphologies that are fairly similar and difficult to distinguish, but when we examined the organism's ribosomal DNA gene, lo and behold what came up was not *Pentatrichomonas* but *Trichomonas foetus*.

"I was very surprised."

Finding Solutions

One benefit of the research team's work is a new molecular diagnostic test for *T. foetus* in feline stools.

"It's an extremely sensitive test to detect the



CRIS KELLY

N.C. State researchers are on the path to helping cure cats with chronic diarrhea.

presence of DNA from these organisms," Levy says.

"We can pick up the genetic material even when the levels might be too low for microscopic examination. Practitioners collect a stool sample, mix it with alcohol to preserve it and send it to us for testing. A lot of practitioners have taken advantage of it."

There is also a commercial test that cattlemen use to confirm the infection in their livestock called In Pouch TF, manufactured by Biomed Diagnostics in White City, Ore., Levy adds. It has proven effective in detecting *T. foetus* in feline fecal samples and though not as sensitive as the PCR test, it can be performed in-clinic.

The identification of *T. foetus* as the cause of chronic feline diarrhea is a notable breakthrough, but more research is needed for the disease continues