Trichomonosis is a highly prevalent feline disease of cats that is caused by the protozoal pathogen, *Tritrichomonas foetus*. *T. foetus* was definitively identified as a cause of chronic large bowel diarrhea in cats in 2003 and since then its prevalence has been increasingly recognized. Although *T. foetus* has the potential to infect any cat, the prevalence of *T. foetus* is especially high (up to 30%) in young purebred cats that are maintained in high-density housing environments (e.g., shelters, catteries, breeding facilities). 1 No breed of cat is known to be resistant to infection. The clinical signs of feline *T. foetus* infection have been well described; however, the mechanisms by which *T. foetus* causes diarrheal disease in cats is not understood. Following experimental infection, *T. foetus* infects the distal ileum and large intestine of cats and causes a chronic, often waxing and waning diarrhea. 2 Cats can remain asymptomatic and undergo long periods of remission that permit the spread of the infection. 3,4 Transmission of feline *T. foetus* is presumed to occur by the fecal-oral route. Despite the lack of environmentally stable cysts, *in vitro* studies have demonstrated that *T. foetus* can survive in moist cat feces and cat food at ambient temperatures for a prolonged period. 5

**Clinical Signs**

Clinically affected cats often exhibit waxing and waning, malodorous, “cow patty”-like diarrhea. Mucus and/or frank blood may also be observed in the diarrheic feces. Young, severely affected cats may also have signs of proctitis, fecal incontinence, and/or rectal prolapse. 5,6 Although exclusively large bowel diarrhea is a more common finding, infected cats may also have weight loss, anorexia, and/or vomiting. 6 *T. foetus*-induced diarrhea may resolve with antibiotic administration but returns following discontinuation of antimicrobial therapy. Untreated cats may develop new onset signs (or demonstrate relapse) following stressful events (diet change, new cat introduced into household, etc.). Infected cats generally present in good body condition unless they are immunocompromised (young, FELV/FIV, etc.) or have a concurrent disease.

**Diagnosis**

Testing for *T. foetus* is recommended for any cat with chronic diarrhea, particularly young purebred cats, cats raised in a high-density housing facility, and/or cats that have developed diarrhea following introduction of a new cat into the household. There are several diagnostic tests that can be used for diagnosis of *T. foetus* infection. Identification of feline Tf infection can prove to be a diagnostic challenge for private practitioners and shelter veterinarians. The best sample to evaluate for the presence of *T. foetus* is one obtained by a colonic flush. Feces should be diarrheic and antibiotics should be discontinued a minimum of 14 days prior to testing. Direct smear light microscopy is the most widely available and inexpensive assay for the diagnosis of *T. foetus*. However, direct smear has a low sensitivity (positive in only 14% of naturally infected cats1) and misdiagnosis may be common given that feline *T. foetus* is often present as a co-infection with *Giardia*. 1,5,7,8 Misdiagnosis can result in delay of therapy and/or risk of side effects in cats who receive inappropriate treatment. Other diagnostics have been developed to improve sensitivity and specificity for diagnosing feline *T. foetus*. The In-Pouch™ TF-Feline test (Bio-Med Diagnostics) has an improved sensitivity (50%) compared to light microscopy; 9 however, like light microscopy, pouch culture requires viable trichomonads (cannot use refrigerated fecal samples) and can result in bacterial overgrowth if too much fecal material is applied to the culture. False positives in the presence of other trichomonads (e.g., *Pentatrichomonas hominis*) may also result in misdiagnosis. 10 PCR is the gold standard assay for diagnosis of feline Tf; 11 however, results may take up to 1–2 weeks and may not be a viable financial option for some owners and shelters. With the support of the Winn Feline Foundation, our laboratory is trying to develop a rapid and inexpensive bedside assay. I will share preliminary results of these studies during the presentation.

Negative test results should be interpreted with caution. Repeated testing is advised if a strong clinical suspicion exists in the face of a negative test result. *Giardia* is often confused for *T. foetus* and vice versa. Cats that do not respond to appropriate anti-giardial therapy or that have exclusively large bowel signs should be tested for *T. foetus*. Co-infections are common in *T. foetus*-infected cats. 12 Thus, additional enteric infectious disease testing (e.g., *Giardia* spp, coccidia) is recommended in cats testing positive for *T. foetus*. Other chronic causes of large bowel diarrhea (antibiotic-responsive diarrhea, inflammatory bowel disease, enteric parasitic and fungal infections like histoplasmosis if appropriate differential for the area, colonic neoplasia, etc.) should also be included among the differentials.
**Therapeutic Plan**

There are limited effective and safe treatment strategies for feline trichomonosis.\(^{13,14}\) Ronidazole (30 mg/kg PO q24hr for 14 days),\(^ 13\) the only treatment identified to be effective in some cats with trichomonosis, has been associated with neurotoxicity and development of drug resistance.\(^ {15-18}\) Doses above 30 mg/kg SID are not recommended. Thus, there is a compelling need for the development of novel therapies for the treatment of feline trichomonosis. With the support of private foundation support including the Winn Feline Foundation, our laboratory has been working on the development of novel, safe, and effective treatments for feline trichomonosis. Results from those studies will be shared during this presentation.

Untreated cats may experience resolution of clinical signs; however, they often remain infected and can spread the organism to previously uninfected cats. Therefore, if concern for transmission to uninfected cats exists, the author recommends that infected cats be treated or be isolated from uninfected cats until shedding ceases (based on multiple negative PCR results).

**New Research on the Horizon**

With the support of the Winn Feline Foundation and others, our laboratory has identified 3 surface proteins and 3 protease inhibitors that could be used for the diagnosis and treatment of feline Tf. The results of these exciting studies will be discussed.

**References**