EFFICACY OF NOVEL DRUGS AGAINST FELINE TRITRICHOMONAS FOETUS

PROJECT STUDY: Utilization of an in vitro luciferase assay to determine efficacy of novel 5-nitroimidazole derivatives and proton pump inhibitors against ronidazole-resistant and susceptible feline Tritrichomonas foetus isolates

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The investigators examined the potential for a variety of drugs as chemotherapeutic agents against important protozoal pathogens of cats. These drugs fall into several different categories or classes of compounds – anti-nucleoside analogs, 5-nitro-imidazoles, and an FDA approved drug (auronafin). The investigators identified several compounds that had potent activity against all three parasites examined (human Trichomonas vaginalis, bovine Tritrichomonas foetus, and feline Tritrichomonas foetus).

The findings lay the groundwork for future studies to develop these compounds for use in cats. In addition, the investigators are characterizing the genomic sequence for these parasites which will also reveal potential candidates for chemotherapeutics against them. The sum total of this project has laid the groundwork for development of effective drugs to combat this parasitic agent.

A manuscript on the adenosine analogs is in process and one more planned as the result of the new 5-nitroimidazole studies done here.

Summary prepared by Melissa A. Kennedy, DVM, PhD, DACVIM © 2015