STUDYING EFFICACY OF VIRUS PROTEASE INHIBORS AGAINST FELINE CORONAVIRUSES

PROJECT STUDY:
_In vivo_ efficacy study of virus protease inhibitors against feline coronaviruses in a mouse model

Yunjeong Kim DVM, MS, PhD, ACVM; Kansas State University

_Final report summary (sponsored), W13-020 (Bria Fund Study)_

The goal of this project was to evaluate the ability of various inhibitors of certain viral enzymes to act as antiviral drugs for treatment of feline coronavirus infections. The drugs tested had been found to work on the virus when grown in cell culture in the lab. Next these investigators wanted to test the drugs against a similar virus in mice. They first evaluated the potential toxicity of the drugs in mice when given high doses; no evidence of toxicity or negative side effects was observed. They next evaluated the ability of these drugs to inhibit a virus similar to feline coronavirus, mouse hepatitis virus, in infected mice. With both drugs tested, virus titers were significantly reduced in the mice treated vs. mice given no treatment. In addition, tissue damage was significantly reduced in mice receiving treatment with the viral enzyme inhibitors.

The investigators concluded that these two drugs warrant further investigation as possible treatment for feline coronavirus infection and FIP in cats.

_Summary prepared by Melissa A. Kennedy, DVM, PhD, DACVIM © 2014_