



WINN FELINE FOUNDATION

For the Health and Well-being of All Cats

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EVALUATING COMPOUNDS WITH ACTIVITY AGAINST FELINE CORONAVIRUS

PROJECT STUDY: Establishing an in vitro assay for evaluating compounds with activity against feline coronavirus

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Final Report Summary, W15-010

In a study funded by Winn Feline Foundation, these investigators developed a laboratory system to test compounds with the ability to inhibit feline coronavirus replication. This virus is the agent of the always-lethal feline infectious peritonitis. An antiviral drug would be useful to combat this disease, but a system to evaluate possible candidates needed to be developed first.

Initially, the investigators utilized a cell culture system for this purpose. Virus was propagated in the cell culture system and its inhibition by various antiviral compounds was evaluated. Twelve compounds were analyzed for ability to inhibit viral replication. They identified four drugs with potential antiviral activity.

The investigators then successfully cloned the vital viral enzyme, RNA dependent RNA polymerase and produced it in a bacterial vector. This enzyme can then be produced in large quantities and used to evaluate antiviral drug activity.

These objectives set the groundwork for development and production of an effective antiviral drug to combat FIP.

Summary prepared by Melissa A. Kennedy, DVM, PhD, DACVIM © 2016

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