

EveryCat Health Foundation 2022 Grant Awards

Total funding \$294,208

EC22-002: "Is platelet Toll-like receptor 4 the silent partner of thrombosis in cats with hypertrophic cardiomyopathy? Investigating the immunothrombotic interactions between histones and platelets."

Principal Investigator(s): Ronald Hak Long Li, DVM, PhD, DACVECC; Wan Khoon Avalene Tan, BVSc, DAVECC; Joshua A. Stern, DVM, PhD, DACVIM (Cardiology); University of California Davis, School of Veterinary Medicine. \$32,017

Heart disease is common in cats, and many develop blood clots that prove fatal. This study investigates a new theory of blood clot formation in cats with heart disease. If proven, new drugs can be developed to treat or prevent this deadly complication.

EC22-003: "Thromboelastography in cats with hypertrophic cardiomyopathy." Principal Investigator(s): Giulio Menciotti, DVM, MS, PhD; Ashley Wilkinson, DVM, MS, DACVIM (SAIM); Virginia-Maryland College of Veterinary Medicine, Virginia Tech. \$31,297 (*Ricky Fund*)

Many cats with heart disease develop fatal blood clots for unknown reasons. One theory is that these cats have an increased tendency to form clots. This investigation uses a new method to measure this and determines if it's more pronounced in cats with more advanced heart disease.

EC22-004: "Testing for Clopidogrel Resistance in Cats Presenting to First Opinion Practices." Principal Investigator(s): Anthony Abrams-Ogg; Matthew Kornya; Ontario Veterinary College, University of Guelph. \$13,867 (*Ricky Fund*)

Many cats are prescribed Plavix (Clopidogrel) to prevent blood clot formation from various ailments, especially heart disease, but up to 20% are resistant to it. Currently this can only be diagnosed at a veterinary school. This study evaluates both in-house and reference lab tests so these cats can more readily be identified and appropriately treated.

EC22-005: "Acute phase protein and micro-RNA signatures for the diagnosis and prognosis of feline infectious peritonitis." Principal Investigator(s): Professor Danielle Gunn-Moore (DGM), BSc(Hon), BVM&S, PhD, MANZCVS, FHEA, FRSB, FRCVS, RCVS Specialist in Feline Medicine; Royal (Dick) School of Veterinary Studies and The Roslin Institute, The University of Edinburgh. \$7500 (*Bria Fund*)

Feline Infectious Peritonitis (FIP) is a serious viral disease that has no diagnostic test and was, until recently, invariably fatal. But with the recent discovery of effective treatments, diagnosing affected cats is critical. This study evaluates two new possibilities, acute phase proteins and micro-RNA, to determine if they can be used to develop an accurate diagnostic test.

EC22-007: "EIDD-2801 (Molnupiravir): establishing an oral dose and evidence for efficacy in cats with FIP."

Principal Investigator(s): Brian Murphy, DVM, PhD, Dip ACP; Krystle Reagan, DVM, PhD, Dip ACVIM (SAIM); School of Veterinary Medicine, University of California, Davis. \$33,550 (*Bria Fund*)

With the recent discovery of effective treatments, Feline Infectious Peritonitis (FIP) is no longer considered a fatal disease in cats. But these treatments are not yet legally available, so this study evaluates the efficacy of a similar FDA approved antiviral drug, molnupiravir, which can be legally prescribed by veterinarians.

EC22-015: "Effect of EPA and DHA supplementation on renal function biomarkers and systolic blood pressure of proteinuric and borderline proteinuric cats diagnosed with chronic kidney disease." Principal Investigator(s): Ana Luisa Guimarães Dias Lourenço, DVM, PhD, Dipl. ECVCN; Tomás Rodrigues Magalhães, DVM, PhD Student; Department of Zootechnics, University of Trás-os-Montes and Alto Douro, Portugal. \$33,942 [*Feline Kidney Disease Fund in honor of Vicki Thayer, DVM, DABVP (Feline) – Board Designated Match*] (Sponsored by Zoetis)

While many animals, including people and dogs, are commonly given essential fatty acids (EFAs) as part of their treatment for kidney disease, this has never been investigated in cats. These researchers in Portugal will evaluate the effect of EFAs to determine if this therapy will benefit cats with kidney disease.

EC22-018: "Characterization and causative investigation of Feline Gastrointestinal Eosinophilic Sclerosing Fibroplasia." Principal Investigator(s): Victoria Watson, DVM, PhD, Diplomate ACVP; Michigan State University; Jared Jaffey, DVM, MS, Diplomate ACVIM; Midwestern University. \$9,026

Although rare, feline gastrointestinal eosinophilic sclerosing fibroplasia (FGESF) is a debilitating gastrointestinal disease of cats with an unknown cause. By collecting samples from across the world, these researchers will investigate possible causes, including parasites and cancer, leading to potential treatments.

EC22-021: "Comprehensive mutational profiling of the oncogenomic landscape of commonly-occurring cancers in domestic cats to pave the way for precision veterinary medicine and understanding cancer biology." Principal Investigator(s): Dr. Louise van der Weyden; Dr. David Adams; Wellcome Sanger Institute, Cambridge, United Kingdom. \$31,426 (\$28,296 *EveryCat Health Foundation*, \$3,130 *Cancer/Oncology Fund*) (Sponsored by IDEXX)

Targeted cancer treatments are successfully used in humans to treat a variety of neoplasia with few side effects. To do this in cats, these researchers in the UK will evaluate the genetic makeup of three common feline neoplasias (lymphoma, mammary cancer, and oral cancer) to pave the way to develop targeted feline cancer therapies.

EC22-023: "The obesity-microbiome connection - determine gut flora signatures of obese cat." Principal Investigator(s): Xu Wang; Auburn University College of Veterinary Medicine. \$34,583

Prior investigations of these researchers identified markedly different bacteria present in the intestinal tract of obese versus normal weight cats. This study will attempt to develop a diagnostic test to identify these bacteria, leading to potential novel treatments for obesity in cats as well as people.

EC22-028: "Unravelling the blood bacterial microbiome in healthy and febrile domestic cats via 16S rRNA metagenomics." Principal Investigator(s): Ananda Muller, Ross University School of Veterinary Medicine; Katrin Hartmann, Ludwig-Maximilians-Universität München. \$32,000

The bacterial population of the blood of cats is poorly understood. This study, a collaboration of Caribbean and German researchers, will investigate this in both healthy and sick cats, leading to greater understanding of many diseases and potential groundbreaking treatments.

EC22-038: "Dexmedetomidine-vatinoxan-ketamine for anesthesia in cats." Principal Investigator(s): Bruno Pypendop, Linda Barter; University of California-Davis. \$35,000

Anesthesia in cats commonly involves combinations of drugs to provide both sedation and pain relief, but the most common combination negatively affects heart function. This study adds an additional drug to counteract this effect. If successful, it will result in a new combination safer with fewer side effects.