



For the Health and Well-being of All Cats

Research Update

\$515,499 in Feline Health Study Grants Awarded in 2017/2018

Each year, Winn Feline Foundation receives proposals from veterinary researchers around the world who are interested in improving feline health. By May 2018, Winn's cumulative total in feline health research funding was more than \$6.4 million at more than 30 partner institutions worldwide.

Winn Feline Foundation funded the following feline health studies in October 2017:

Winn Feline Foundation announced the award of five feline medical research grants funded in partnership with the George Sydney and Phyllis Redman Miller Trust.



MT17-002: Investigating appropriate dosing for gabapentin sedation in cats with and without chronic kidney disease

Jessica Quimby, DVM, PhD, DACVIM; The Ohio State University; Karen Van Haaften, DVM; University of California-Davis; \$32,349

A mild sedative, gabapentin, is often used to aid in transporting cats to their veterinarians. This study looks at the appropriate dose of this sedative in cats with kidney disease who may have trouble eliminating this medication, as humans with kidney disease do. This information will help avoid overdosing these patients.

MT17-006: Using biomarkers of aerodigestive disorders involving reflux for diagnosis of reflux in cats

Megan Grobman, DVM, PhD, DACVIM, Carol Reinero, DVM, PhD, DACVIM; University of Missouri; \$21,164

Reflux is a common cause of respiratory symptoms in humans. This study evaluates the incidence of reflux in cats. This will lead to a better understanding and treatment of respiratory disease in cats. Results may also increase the understanding of medications that block reflux in many other feline diseases.

MT17-007: Mesenchymal stem cell therapy for cats with inflammatory bowel disease

Craig Webb, DVM, PhD, DACVIM, Tracy Webb, DVM, PhD; Colorado State University; \$34,863

Inflammatory bowel disease (IBD) is a common cause of diarrhea and vomiting in cats. Preliminary data suggests stem cell therapy from fat tissue is an effective and safe treatment for this disease. This study will further evaluate the safety and efficacy of this alternative to corticosteroid treatment for IBD.

MT17-008: Early intervention of mesenchymal stem cell therapy for cats with chronic gingivostomatitis

Boaz Arzi, DVM, PhD, DADC, Dori Borjesson, DVM, PhD, DACVP, Frank Verstraete, Professor; University of California-Davis. \$28,008

Previous studies have shown the efficacy of stem cells from a cat's own fat tissue in chronic non-responsive stomatitis, a severe inflammation of the mouth. This study looks at the efficacy of this therapy as a primary treatment for this painful and otherwise poorly responsive common disease of cats, prior to full mouth tooth extractions.

MT17-017: Using novel, non-invasive measures of chronic stress in cats to determine levels of stress hormone in hair and nails of cats (New Feline Investigator Award, In Memory of Fred Jacobberger)

Elena Contreras, DVM, MS, Michael Lappin, DVM, PhD, DACVIM; Colorado State University; \$11,484

Chronic stress plays a role in many diseases, but has been difficult to measure. This study proposes a novel way to measure stress by evaluating the amount of the stress hormone, cortisol, in hair and nails, which accumulates over a much longer period of time than blood levels.

The following four feline health studies were also funded in October 2017 in a Special Review:

MTW17-009: Mapping heart fibrosis in cats with hypertrophic cardiomyopathy (HCM) using cardiac MRI

Ryan Fries, DVM, DACVIM, Jonathan Stack, DVM; University of Illinois; \$33,850 (Anonymous Sponsor)

Fibrous tissue in the heart (measured by MRI) is correlated with worse outcomes in humans with heart disease. MRI is commonly available in veterinary medicine, this study looks at the correlation of fibrosis in cats with heart disease. This non-invasive procedure will aid in determining treatment as well as prognosis for cats with heart disease such as HCM.

MTW17-014: Development of cat genetic resources for standardized genetic testing

Leslie Lyons, PhD; University of Missouri; \$11,740 (Sponsored by Wisdom Health™)

While genetic testing for cats is now commonplace, most labs lack the standards and expertise to properly interpret their results. The goals of this study are to provide DNA controls for all traits and diseases to the testing laboratories and to provide a standardized set of reports that has the needed information to provide consistent and accurate results.

MTW17-020: Developing a safe and effective combined antiviral therapy (CACT) for cats with FIP (Bria Fund Study)

Brian Murphy, DVM, PhD, Niels Pedersen, DVM, PhD; University of California-Davis; \$20,500 (Anonymous Sponsor)

Feline infectious peritonitis (FIP) is a common and deadly disease of cats with previously no effective treatment. This study uses compounds developed for antiviral therapy in humans to treat this disease, with promising early results. Combination antiviral therapy, used successfully in humans, will be evaluated for enhanced treatment of this otherwise fatal disease.

MTW17-022: Generating an attenuated feline infectious peritonitis (FIP) vaccine by creating a protective immune response (Bria Fund Study)

Gary Whittaker, PhD; Cornell University; Susan Baker, PhD; Loyola University; \$35,000

Feline infectious peritonitis (FIP) is a common and deadly disease of cats. Previous attempts at developing a vaccine were ineffective and increased the likelihood of the disease. New information shows that mutation of a specific gene in the virus can protect against this infection without causing disease. This study attempts to develop a new live-attenuated vaccine for FIP.

Winn Feline Foundation funded the following feline health studies in March 2018:



Winn Feline Foundation awarded thirteen feline medical research grants funded through the generous support of private and corporate donations from around the world. Winn awarded \$73,807 for three feline shelter medicine studies established through a grant from PetSmart Charities®, the leading funder of animal welfare in North America. Winn also awarded \$212,764 for ten grants reaching a final total award amount of \$286,571 for a diverse group of health studies.

FELINE SHELTER MEDICINE STUDIES

W18-002: Protecting foster kittens from infectious diarrhea with a new potential probiotic

Jody Gookin, DVM, PhD, DACVIM; North Carolina State University; \$25,000

Infectious diarrhea is a common cause of death in shelter kittens. This study will evaluate whether a probiotic containing specific protective bacteria will decrease the incidence of diarrhea and associated death in these kittens.



W18-006: Understanding immunity to protect cats from distemper (panleukopenia)

Prof. Vanessa Barrs, Prof. Julia Beatty; University of Sydney, Australia; \$24,500

Feline distemper or parvovirus (panleukopenia) is an often-fatal disease with recent outbreaks. This study will evaluate the natural and vaccination resistance to this disease in shelter and owned cats to enable the design of more effective prevention strategies.

W18-007: Evaluating feline coronavirus as a cause of upper respiratory disease in shelter cats

Gary Whittaker, PhD, Elizabeth Berliner, DVM; Cornell University; \$24,307

This study will assess the importance of feline coronavirus as a cause of upper respiratory disease in shelter cats, and the role it plays in the development of the fatal disease, feline infectious peritonitis (FIP).

WINN FELINE FOUNDATION FUNDED STUDIES**W18-010: Understanding genetic differences in immunity to feline infectious peritonitis (FIP)**

(Bria Fund Study and New Feline Investigator Award)

Emi Barker, BVSc, PhD, DACVIM, ECVIM, Christopher Helps, BVSc, PhD; Langford Vets, University of Bristol, UK; \$6400

Feline infectious peritonitis (FIP) is caused by a coronavirus, only some infected cats get the disease. This study will examine how genetic differences in a cat's immune system play a role in this disease, and how common these differences are in the general cat population.

W18-013: Predicting susceptibility to FeLV infection in cats

(New Feline Investigator Award – Genomics; Sponsored by Wisdom Health™)

Elliott Chiu, DVM and PhD candidate; Colorado State University; \$15,000

Cat genes contain remnants of ancient viral infection, including feline leukemia virus (FeLV). This study will look at whether ancient infection protects against new infection, and whether a test can be developed to predict which cats are susceptible to this disease.

W18-021: Evaluating a new drug therapy for lung cancer in cats

(Lung Cancer Fund)

Alycen Lundberg, DVM, Timothy Fan, DVM, PhD, DACVIM; University of Illinois; \$24,998

Lung cancers in cats respond poorly to current therapies. This study will evaluate a promising new drug for efficacy and side effects in cats with primary lung tumors.

W18-031: Identifying a new biomarker for hypertrophic cardiomyopathy (HCM) in cats

(Ricky Fund Study; Sponsored by Holly Aglialoro in memory of Augustus)

Jonathan Stack, DVM, Ryan Fries, DVM, DACVIM; \$21,900

Heart disease in cats can be readily diagnosed and treated, but some of these cats have a short lifespan. This study will evaluate a test used in humans to predict which cats are at highest risk of early death from this disease.

GENERAL FUND STUDIES**W18-014: Using new approaches to modulate feline leukemia virus infection**

Cheryl Swenson, DVM, PhD, Vilma Yuzbasiyan-Gurkan, PhD; Michigan State University; \$24,974

Feline leukemia causes persistent infection in cats, even when not fatal. This study will look at whether a drug known to decrease a similar infection in mice can also decrease persistent infection in cats.

W18-019: Examining the effectiveness of a low-cost treatment for oral cancer in cats

Michael Nolan, DVM, PhD; North Carolina State University; \$23,060

This study will examine the effectiveness of a simple treatment for oral cancer in cats with few side effects that could make treatment readily available, safe, and affordable.

W18-028: Investigating a new pain pathway associated with osteoarthritis in cats

Santosh Mishra, PhD, Duncan Lascelles, BVSc, PhD, DACVS; North Carolina State University; \$23,560

Osteoarthritis (degenerative joint disease) is common in older cats, but few effective and safe treatments are available. This study will investigate a new pathway of pain associated with arthritis, which may lead to new therapies for this debilitating disease.

W18-039: Determining feeding behavior in cats to manage weight and obesity

Andronie Verbrugghe, DVM, PhD, ECVCN, Anna-Kate Shoveller, PhD; Ontario Veterinary College, Canada; \$24,002

Many cats are overweight and controlling their calories sometimes doesn't help. This study will look at whether feeding cats smaller meals more frequently makes a difference.

W18-040: Evaluating genetic differences of amyloidosis in Siamese/Oriental and Abyssinian/Somali cats

Maria Longeri, DVM, PhD; University of Milan, Italy; Leslie Lyons, PhD; University of Missouri; \$23,870

While both Siamese and Abyssinian cats have a genetic mutation that causes accumulation of an abnormal protein in different organs (called amyloidosis), the mutation is different in each breed. This study will characterize the disease in Abyssinians to gain a better understanding of this disease.

W18-046: Measuring total cat count in communities

Tyler Flockhart, PhD; University of Maryland, Center for Environmental Sciences; \$25,000

While people debate the best way to manage outdoor cats, there is currently no good way to know how many there are. This study will use scientific methods to accurately measure their numbers so management strategies can be developed to benefit them.

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637 Wyckoff Ave., Suite 336, Wyckoff, NJ 07481.

W18-010: Understanding genetic differences in immunity to FIP**W18-019: Examining the effectiveness of a low-cost treatment for oral cancer****W18-028: Investigating a new pain pathway associated with arthritis**

Winn Feline Foundation is a non-profit public charity established in 1968 that supports studies to improve cat health and welfare. Since 1968, the Winn Feline Foundation has funded over \$6.4 million in health research for cats at more than 30 partner institutions world-wide. For further information, go to www.winnfelinefoundation.org.

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Winn Feline Foundation is a non-profit organization [501(c)(3)] established in 1968 that supports studies to improve cat health.

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