



THE WINN FELINE FOUNDATION

For the Health and Well-Being of All Cats

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2005 HEALTH STUDY GRANT AWARDS

Eight studies funded for a total of \$110,751

The Winn Feline Foundation was pleased to receive proposal from veterinary researchers around the world who were interested in improving feline health. Out of over 40 proposals, our team of outstanding veterinary consultants helped the Foundation selected the best eight studies for funding. We look forward to seeing the results of these studies and being able to share them with both the veterinary community as well as breeders.

NEW STUDIES

A Blood Test for Heart Disease in Cats

A Clinically Viable B-Type Natriuretic Peptide Assay For Feline Hypertrophic Cardiomyopathy. Philip F. Solter, DVM, PhD, DACVIM, DACVP, D. David Sisson, DVM, DACVIM (Cardiology), Mark A. Oyama, DVM, DACVIM (Cardiology). College of Veterinary Medicine, University of Illinois; \$12,800.

This project will refine a blood test for a form of heart disease, hypertrophic cardiomyopathy, which was developed by these researchers in a Winn-funded project from 2000. A hormone produced by the heart called BNP is proving to be a useful marker for heart disease in both humans and cats. This simple blood test could be a valuable addition to the tests that are currently available (such as X-rays or echocardiography).

Improving Our Knowledge of the Feline Genome

Targeted Gene Mapping in Gaps of the Feline/Human Comparative Map. William J. Murphy, PhD., Texas A & M University, \$15,000.

Several hundred diseases and other traits of interest (such as colors and patterns) have been described in the domestic cat. While some diseases have been linked to specific genes or their mutations, many more such diseases or traits remain to be identified for the cat. These researchers intend to develop the necessary tools for feline geneticists to identify and characterize genes causing disease in cats by refining the comparative map linking the cat genome to the human genome. This improved map of the feline genome will enable researchers to identify the genetic basis of some feline diseases and improve the health of all cats.

A Better Understanding of a Common Cancer Drug

Effects of L-asparaginase on Plasma Amino Acid Profiles and Tumor Burden in Cats with Lymphoma. Amy LeBlanc, DVM, DACVIM(Oncology), Claudia A. Kirk, DVM, PhD, DACVIM, DACVN, and Sherry Cox, PhD, University of Tennessee. \$10,445.

Lymphoma is a common, devastating cancer that affects thousands of cats every year. Currently, combination chemotherapy is the standard of care. Treatment, however, is both expensive and potentially toxic. L-asparaginase is used in combination with other drugs to treat feline lymphoma. L-asparaginase has excellent potential because it may improve the response to treatment without additional toxicity. This drug is expensive; therefore its efficacy needs to be known to justify its use. This work will provide objective data regarding the value of this drug in cats with lymphoma and will help optimize care for these cancer patients.

An Investigation into the Causes of Feline Hyperthyroidism

Nutritional and Environmental Influences on the Development of Feline Hyperthyroidism. Cynthia R. Ward, VMD, PhD, DACVIM, University of Pennsylvania. \$13,800.

Hyperthyroidism is the most common hormonal disease affecting middle-aged to older cats. Molecular abnormalities in the thyroid gland are the likely culprits that play a part in this malady. The cause of the changes in gland function is unknown. Some recent studies have implicated diet as playing a role in the development of the disease. Cats evolved as meat-eating animals and canned cat food contains ingredients, other than meat. High concentrations of some of these same ingredients cause thyroid disease in people. Since feline hyperthyroidism usually occurs in older animals, it is possible that exposure to these substances over many years results in changes in the thyroid gland. This study will attempt to identify potentially harmful substances that can be targeted for future investigation.

A New Approach to Treatment of a Common Feline Cancer

Normal tissue tolerance to radiation therapy following induction chemotherapy in cats with intra-abdominal high-grade lymphoma. Laurel E. Williams, DVM, ACVIM (Oncology), North Carolina State University. \$15,000.

Lymphoma is a malignant cancer of the immune system that can develop in any organ or body system. In cats, lymphoma most often develops in organs within the abdomen. Because lymphoma is a systemic disease, treatment has historically involved chemotherapy drugs that can have significant and serious adverse effects. Unfortunately, cats treated with chemotherapy have a relatively poor response to treatment. Combining chemotherapy with other forms of therapy may improve the outcome in cats with lymphoma. Preliminary data suggests that the combination of chemotherapy and radiation therapy is well tolerated in cats with lymphoma at other body sites. It may be possible to administer radiation therapy targeted to the abdomen in cats with lymphoma as well. This approach would enable the administration of higher and potentially more effective amounts of radiation therapy while preventing exposure to tissues outside the abdomen.

Evaluation of a New Clotting Test in Cats

New Diagnostic Tests of Thrombosis in Cats with Cardiac Disease: D-dimer and Thrombin-Antithrombin Complex. Tracy Stokol, BVSc, PhD, DACVP, Marjory Brooks, DVM, Hollis Erb, DVM, PhD. Cornell University. \$13,710.

Large and small blood clots often form in the vessels of cats with heart disease. When these clots block major blood vessels, they cause extreme pain and distress to the cat because tissues die from lack of blood and oxygen. Many cats do not survive an initial clotting episode. Although we know cats with certain types of cardiac diseases are at risk of abnormal blood clots formation, we have no laboratory tests to detect these clots before they cause severe tissue injury or to determine which cats are at risk of these clots. If such cats were identified, they could be treated with anti-clotting (anti-coagulant) drugs to prevent clot formation. In this study, researchers will examine whether two laboratory tests of clot formation commonly used in people, thrombin-antithrombin complexes and D-dimer, can be applied to cats. These assays are used for diagnosing and monitoring human patients with thrombosis, but have not been tested in cats. If these tests prove to be useful in cats, they could be used by veterinarians for the early detection of clots, to identify cats that might benefit from anti-coagulant drugs, and to develop safe and effective treatment protocols to prevent abnormal clot formation.

Evaluation of the Best Method for Obtaining Intestinal Biopsies

Comparison of Endoscopic and Full-Thickness Intestinal Biopsies to Diagnose Feline Inflammatory Bowel Disease and Alimentary Lymphoma. Sarah E. Evans, DVM, Jennifer J. Bonczynski, DVM, DACVS, John Broussard, DVM, DACVIM, Eveline Han, VMD, DACVIM, Keith Baer, DVM, DACVP, Animal Medical Center. \$15,000.

Chronic diarrhea is a common problem in cats. Inflammatory bowel disease and lymphoma are frequently identified causes. Intestinal biopsies are required to differentiate these conditions. Biopsies can be obtained through an endoscope passed into the intestinal tract but only superficial biopsies can be obtained by this method and relevant tissues required for diagnosis may be missed. This study will compare the value of the less invasive technique of endoscopic biopsy to exploratory surgery and biopsy for the diagnosis of common intestinal diseases.

RICKY FUND STUDIES (a fund for the study of hypertrophic cardiomyopathy in cats established by Steve Dale in memory of his cat, Ricky)

A New Drug to Treat Heart Disease in Cats

Effect of pirfenidone on myocardial fibrosis and diastolic function in feline familial hypertrophic cardiomyopathy. Mark Kittleson, DVM, PhD, DACVIM (Cardiology), Kristin MacDonald, DVM, DACVIM (Cardiology), University of California, Davis. \$14,996.

Cats with severe hypertrophic cardiomyopathy (HCM) may develop congestive heart failure or may develop a clot within the heart that is carried into the arteries of the body. These complications are life threatening and devastating. The extent of scar tissue within the muscle of the heart is strongly predictive for development of congestive heart failure (CHF) or sudden death in people with HCM. Pirfenidone, an anti-fibrotic drug for humans, may be able to decrease scarring of the hearts of cats with HCM, and therefore improve heart function. Early usage of this drug may be successful in preventing or slowing progression of disease and subsequent development of heart failure.

For more information, contact:

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