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WINN FELINE FOUNDATION AWARDS GRANTS FOR FELINE HEALTH STUDIES IN PARTNERSHIP WITH THE MILLER TRUST

Wyckoff, NJ, December 17, 2012: The Winn Feline Foundation is pleased to announce the award of five feline medical research grants funded in partnership with the George Sydney and Phyllis Redman Miller Trust in 2012. Winn President Vicki Thayer, DVM, DABVP (feline) commented, “We are excited about the proposals that have received funding. This year we awarded $99,745 in grants for studies on stem cell therapy for gingivostomatitis and asthma, cancer in Oriental and Siamese breeds, infectious GI parasitic disease and pain management.”

Grants were awarded for the following research studies:

Autologous Adipose-Derived Mesenchymal Stem-Cell Therapy for Cats with Chronic, Non-Responsive Gingivostomatitis $19,340.00 (MT12-002) Principal Investigator: Boaz Arzi, Veterinary Medicine: Surgical & Radiological Services, University of California, Davis

Feline chronic gingivostomatitis (FCGS) is a poorly defined disease characterized by severe inflammation of the gums and the back aspects of the oral cavity. FCGS is painful and debilitating. Treatment usually involves medical and surgical approaches including full-mouth tooth extractions and the use of both antibiotics and anti-inflammatory drugs (corticosteroids). However, these treatments are not ideal. They are not 100% effective and there are significant potential complications that affect the quality of life for the cat. One form of stem cell therapy uses stem cells that are extracted from the cat’s own fat tissue, called fat-derived mesenchymal stem cells (adMSC). MSC therapy is used in human and horse medicine to treat chronic inflammatory diseases. This cell therapy may alter the inflammatory response that is abnormally regulated with stomatitis in cats. If the proposed stem cell treatment proves to be beneficial, it will revolutionize the treatment options for cats with FCGS.

Longitudinal evaluation of effects of mesenchymal stem cells in feline chronic allergic asthma: Phase II $10,000.00 (MT12-003) Principal Investigator: Carol Reiner, DVM, DACVIM, PhD, Associate Professor and Director, Comparative Internal Medicine Laboratory, University of Missouri
This study is a continuation of research previously funded by Winn Feline Foundation. Asthma is a common breathing disorder in cats, decreasing quality of life and sometimes causing death. Currently asthma is managed using steroids, which have many unpleasant side effects or may not be able to be given to cats with concurrent diseases like diabetes. Importantly, they only suppress inflammation and do nothing to reverse the underlying abnormal immune response that triggers the asthmatic syndrome. Thus there is a need for new safe and effective treatments for feline asthma. Pilot data from Phase I research indicates that stem cells can be administered safely and alter some aspects of the immune response initially after administration. Other exciting data from Phase I of the study suggests the most dramatic response to stem cell therapy occurs months after administration. This study will look at long term effects of stem cells on the key features of asthma, which include airway inflammation, airway constriction and structural changes.

**Novel analgesic for cats with inflammatory pain $27,123.00 (MT12-008)** *Principal Investigator: Alonso Guedes, Veterinary Medicine: Surgical & Radiological Services, School of Veterinary Medicine, University of California, Davis*

The limited number, efficacy and risk of undesirable effects of presently available painkillers for use in cats with chronic painful conditions call for the development of mechanistically novel therapeutic agents. This study will seek to prove that t-TUCB, an inhibitor of an enzyme (soluble epoxide hydrolase - sEH) involved in inflammation, will produce significant, dose-dependent pain relief in a reversible model of pain due to inflammation in cats. On the basis of studies in rats and the preliminary data, it is expected that t-TUCB will produce dose-dependent reduction in measures of inflammation and pain relief without clinically significant negative effects.

**Gene Identification for Mediastinal Lymphoma in Oriental and Siamese Type Cats $ 19,482.00 (MT12-009)** *Principal Investigator: Leslie Lyons, PhD, School of Veterinary Medicine, University of California, Davis*

Lymphosarcoma (LSA, lymphoma) is the most common cancer of cats worldwide. All breeds are susceptible, as are large felids such as the lion, tiger and cheetah. This cancer is also one of the most common cancers in dogs and people. Young cats of the Siamese and Oriental breeds are susceptible to a novel form of LSA; in these breeds, the cancer occurs early (generally when cats are young adults in the prime of their life), and the cancer is situated at the front of the chest (in the cranial mediastinum). LSA in this cohort of cats seems
different to other forms of LSA in (i) being unassociated with retroviruses (FIV and FeLV), and (ii) having greater sensitivity to chemotherapy agents (which means many affected cats can be successfully treated using sequential multi-agent chemotherapy). Previous studies funded by the Cat Health Network have helped localize a critical suspect gene to cat chromosome D1. A gene in this region is significantly suspected of being involved with the Oriental cat LSA. Critically, by determining the gene(s) responsible for this type of cancer in Siamese/Oriental cats, a PCR test to identify carriers can be developed, and thereby prevent the next generation of Siamese and Oriental shorthairs developing LSA. Cats used in this study might also prove useful in future studies of genetic conditions commonly seen in Siamese and Oriental cats, such as hepatic amyloidosis. This gene could then be analyzed in other cats with other forms of lymphosarcoma to determine if genetic markers can identify risk.

Utilization of an in vitro luciferase assay to determine efficacy of novel 5-nitroimidazole derivatives and proton pump inhibitors against ronidazole-resistant and susceptible feline Tritrichomonas foetus isolates

$23,800.00 (MT12-011) Principal Investigator: Stanley L. Marks, BVSc, PhD, Dip ACVIM, Dip ACVN, School of Veterinary Medicine, University of California, Davis

Trichomonas foetus is an important and common parasitic infection that primarily affects purebred cats living in catteries and shelters worldwide. The objectives of this study are to develop a more rapid, sensitive screening method for assessing the efficacy of novel drugs that have been shown to kill a variety of protozoa in other studies, but have not been tested against T. foetus from cats to date. The parasite can cause severe inflammation of the colon and subsequent diarrhea, resulting in discomfort for the infected cat and frustration for the owner. Eradication of the infection is equally challenging for veterinarians and breeders alike, as 57% of cats diagnosed with T. foetus-associated diarrhea persist in shedding the organism for up to 5 years following treatment. A variety of drugs have been utilized to eradicate T. foetus infection with limited success. More recent therapeutic approaches have involved the use of ronidazole, an antibiotic with similar properties to metronidazole; however, clinical resistance to metronidazole, low efficacy of tinidazole (a drug that is related to metronidazole), and documentation of resistance to ronidazole in some cats are consistent with a high level of cross resistance of feline T. foetus to conventional antibiotics.

The Winn Feline Foundation is a non-profit organization established in 1968 that supports studies to improve cat health. Since 1968, the Winn Feline Foundation has funded over $3 million in health research for cats at more than 30 partner institutions world-wide. For further information, go to www.winnfelinehealth.org