AKC Canine Health Foundation

Saluki Health Research, Inc
Grant Sponsorships since 8/1/2009
27 August 2010

Grant Information	Sponsorship Information

Saluki Health Research, Inc.

00908 - Serotonin Type 2A Receptor Antagonist Therapy for Preventing the Progression of Myxomatous Mitral Valve Disease

University of Pennsylvania - School of Veterinary Medicine: Dr. Mark A. Oyama

Grant Amount - $81,918.00   Project Dates : 1/1/2008 - 8/31/2011

Abstract: Background: Canine myoxmatous mitral valve disease is very common in older dogs and is similar to the human disorder. Serotonin (5HT) related mechanisms has been found in the certain forms of human heart valve disease, and a beginning study by the investigators has shown heightened 5HT signaling in diseased canine mitral valve interstitial cells (MVIC).

Objective: The researchers are investigating the hypothesis that 5HT signaling contributes to the progression of canine myxomatous mitral valve disease. The reseachers seek to 1) further characterize the 5HT signaling pathway in normal and diseased human and canine mitral valve specimens, 2) determine the effects of 5HT-2A receptor antagonism in diseased canine MVIC, 3) perform a dose escalation (Phase I) study of a candidate 5HTR-2A receptor antagonist, ketanserin, in client-owned dogs with myxomatous mitral valve disease, and 4) perform a controlled comparison (Phase II) study in dogs using ketanserin. Ultrasound studies and measurement of neurohormonal markers will assess effects of therapy on progression of mitral valve disease. This study represents a novel translational study that targets a potential underlying pathogenesis of canine mitral valve disease.

Cash: $2,500.00
Commitment Date:3/29/2010
Payment Date: 4/5/2010

01131 - Genetic Background and the Angiogenic Phenotype in Cancer

University of Minnesota: Dr. Jaime F Modiano

Grant Amount - $254,871.00   Project Dates : 1/1/2010 - 12/31/2012

Abstract: Background: Certain dog breeds are prone to develop certain types of cancer; yet, there has been little progress to define genes or other factors that account for this risk. The researchers' recent work on hemangiosarcoma is the first to clearly demonstrate that a dog's genetic background, defined by "breed," can influence the type of genes that show up as tumors. This means that certain breeds are diagnosed with specific cancers more frequently than others because of the behavior of tumors after they show up, and not simply because they show up more frequently. Specifically, this may apply to the observed tendency for hemangiosarcoma seen in Golden Retrievers, German Shepherd Dogs, and Portuguese Water Dogs. In addition, one-size-fits-all therapies may be not enough to effectively treat this disease.

Objective: This project will continue the researchers' observations on gene appearance profiles in hemangiosarcoma from Golden Retrievers to German Shepherd Dogs and Portuguese Water Dogs, and it also will define how new targeted therapies may effectively control the disease in these and other dog breeds.

Cash: $2,500.00
Commitment Date:9/30/2009
Payment Date: 10/6/2009

01139 -   Immune Targeting of Canine Hemangiosarcoma Using a Canine Derived Single Chain Antibody Approach

University of Pennsylvania - School of Veterinary Medicine: Dr. Nicola J Mason

Grant Amount - $123,125.40   Project Dates : 1/1/2009 - 12/31/2010

Cash: $2,500.00
Commitment Date:9/30/2009
Payment Date: 10/6/2009

Abstract: Background: Canine hemangiosarcoma is a common and highly aggressive tumor of blood vessels that is often fatal. At diagnosis most dogs have evidence of metastatic disease and despite chemotherapy, survival times rarely exceed 6 months. New approaches to the treatment of this disease are needed. The use of monoclonal antibodies and antibody fragments to directly target different tumors has shown promise in clinical trials in man.

Objective: This project aims to use a new canine synthetic antibody system to target the tumor and deliver cytotoxic agents directly to both primary and metastatic lesions. Using advanced molecular techniques, the researchers intend to review antibody responses that dogs with hemangiosarcoma may make against their own tumors and use these as a template to generate canine antibody fragments that specifically recognize tumor particles. Tumor-specific antibody fragments will be linked to an exotoxin and evaluated for their ability to kill canine hemangiosarcoma cells in vitro. This allows for the direct delivery of cytotoxic agents to the tumor, which decreases side effects and increases therapeutic value. This work aims to develop the first canine-derived, tumor-specific targeting approach for the treatment of HSA and to provide proof-of-principal for this approach that can then be used to therapeutically target many other tumor types in this species in vivo.

01355-A - Expression of Vascular Endothelial markers in Canine Hemangiosarcoma and their use in Diagnostic Cytology Using Immunocytochemistry

University of Illinois: Dr. Kimberly Weber

Grant Amount - $5,285.52   Project Dates : 9/1/2009 - 8/31/2010

Cash: $500.00
Commitment Date:9/30/2009
Payment Date: 10/6/2009

Abstract: Background: Canine hemangiosarcoma is an aggressive malignant tumor of the blood vessels which occurs most commonly in the spleen, heart and skin. Patients diagnosed with hemangiosarcoma in a location other than the skin have a very poor prognosis and these patients generally die from their disease in a short amount of time despite aggressive treatments including surgery and chemotherapy. Currently this type of cancer is most accurately diagnosed by biopsying the tumor which involves removing a small piece of tissue or the entire tumor and examining it microscopically. Tissue is most often obtained during surgery which requires the patient to be anesthetized. Biopsy of these tumors, however, carries many risks including rupture of the tumor and uncontrollable bleeding which may lead to death. Fine needle aspiration of the tumor is a safer, more inexpensive and less invasive procedure whereby cancer cells are removed by use of a small needle placed through the skin and into the tumor. These cells are then smeared onto a glass slide and examined under a microscope. Fine needle aspiration can be performed on an awake or lightly sedated patient and carries less risk of bleeding or tumor rupture. However, the diagnosis of hemangiosarcoma is difficult using this method because the cells obtained can appear very similar to other types of cancerous cells.

Objective: The goal of this study is to identify a special cellular marker that can be applied to the sample obtained by fine needle aspiration which will differentiate hemangiosarcoma from other similar cancers. The use of such a marker will allow canine hemangiosarcoma to be diagnosed more reliably through the use offine needle aspiration and avoid costly and invasive surgery to obtain a diagnosis of this devastating disease.

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