



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

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

**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.**

**DAF: \$2,500.00**

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