



**00762 - The Mapping and Characterization of Canine Epilepsy Loci**

University of Missouri, Columbia: Dr. Gary S. Johnson

Grant Amount - \$129,600.00 Project Dates : 10/1/2008 - 9/30/2010

**Abstract: Background:** Epilepsy is a neurological condition characterized by seizures which result from abnormal brain activity. There is no cure and the medications used to reduce the frequency of seizures are often ineffective and/or have unsatisfactory side effects. While there is strong evidence that canine epilepsy is inherited in many breeds, the patterns of inheritance are often complex.

**Objective:** The researchers' goal is to identify mutations responsible for epilepsy so that they can devise DNA tests that detect the mutations. These tests can be used by dog breeders to help them avoid matings that produce puppies destined to develop epilepsy. The researchers have collected DNA samples from over 1100 epileptic dogs and nearly 6000 of their relatives. The researchers will study epilepsy in dog breeds from their collection. Then, they will use DNA samples from these four breeds and appropriate mapping strategies to determine the locations of the epilepsy mutations on the dog chromosomes. Then they will examine the genes at these chromosomal locations to identify epilepsy-causing mutations. DNA tests that detect these mutations will be validated and then offered to the dog-owning public.

**DAF: \$2,500.00**

**Commitment Date: 10/9/2009**

**Payment Date: 10/21/2009**