



2226 - Characterizing the Inheritance of Addison's Disease and Linked DNA Markers

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Grant Amount - \$47,600.00 Project Dates : 2/7/2002 - 3/31/2004

Abstract: Addison's disease is a late onset disorder caused by the deterioration of the adrenal gland. Addison's occurs in the domestic dog at approximately 0.1 percent, with some breeds showing a greater prevalence. Notably, the Bearded Collie, the West Highland White Terrier, the Standard Poodle, the Portuguese Water Dog, and the Leonberger are considered to have unacceptable rates of Addison's disease. Breeders have noted a familial tendency of Addison's disease suggesting a genetic basis to the disorder. Our laboratory has determined that Addison's is highly heritable in Bearded Collies. Further, although Addison's is not fully governed by a single locus in the Bearded Collie, it does appear to be regulated by a single gene of large effect. The specific objectives of this study are to develop a genetic marker associated with an Addison's locus in the Bearded Collie; such a genetic marker will provide a useful tool to aid breeders in making health-based breeding decisions. The second objective is to determine if Addison's disease in the Standard Poodle, West Highland White Terrier, Portuguese Water Dog and Leonberger also has a genetic basis and if so, whether there is a common genetic defect across all these breeds.

Cash: \$5,875.00

Commitment Date: 7/26/2001

Payment Date: 7/12/2002