



**01052-A - Whole Genome Association Mapping of Squamous Cell
Carcinoma (SCC) of the Digit in the Standard Poodle**

National Human Genome Research Institute: Dr. Elaine Ostrander

Grant Amount - \$12,000.00 Project Dates : 1/1/2008 - 12/31/2008

Abstract: Squamous cell carcinoma (SCC) of the digit is a highly breed specific skin cancer with increased risk found in large black dogs, including the Standard Poodle, Giant Schnauzer and Gordon Setter. This cancer is more aggressive than most SCCs with 80 percent of cases involving bone lysis and 5-13 percent recurring in multiple toes. When invasive, the cancer metastasizes to the lung or lymph nodes and ultimately leads to mortality. The disease occurs in older dogs and therefore it is not currently possible to control through selective breeding. We propose a whole genome association study to identify the locus and eventually the gene(s) responsible for increased susceptibility to SCC of the digit. Using the Affymetrix whole genome SNP chip, we will genotype at least 40 affected and 40 unaffected black Standard Poodles. Chromosomal regions showing significant association with the disease will undergo follow-up analyses with fine mapping, haplotype analysis and targeted sequencing. Candidate genes will be interrogated for disease-associated mutations.

Cash: \$6,000.00

Commitment

Date:12/27/2007

Payment Date: 12/27/2007