

## Report on Ocular Melanosis Project

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### *Samples received:*

**DNA Samples:** Thus far, we have 311 DNA samples from Cairn Terriers, of which 101 are from dogs affected with Ocular Melanosis. This fall we have received 90 samples alone from eye clinics that were organized to specifically examine dogs for OM. This week we are expecting eye exam reports from 81 more dogs from the Sumac/Twin Cities Cairn Terrier Club, who examined a record number of dog this year at their annual "Toto" clinic. Thanks to all of you who attended these clinics and support our research!

**Enucleated Eyes:** Since January 2005 we have received 8 additional enucleated eyes.

### *Gene mapping project*

Last spring we sent 94 samples to the Veterinary Genomics Laboratory at UC Davis from Cairn terriers within our extended pedigree of Cairns with ocular melanosis for genotyping. The initial phase of running a microsatellite array analysis is complete along with the allele scoring for each of the chromosomal markers. We are currently in the process of analyzing the data collected from those samples to try and detect linkage of a portion of a chromosome with disease status. One of our concerns is that there may not be enough statistical weight with this small sample size, so we hope to send another 69 samples soon to add more animals to our database. These new samples should be through the microsatellite and allele scoring process before the end of the year.

*Histological analysis – no updated news for this section since the 2005 Spring newsletter*

### *Culture of abnormal cells from ocular melanosis*

To advance our laboratory in culturing iris cell lines, we have begun the detailed process of setting up a cell culture room with another researcher in the veterinary school. This has proven to be a large and expensive task (for which we have support from the Department and College and through other grants), although we feel it is going to be extremely helpful for this project. The first step of culturing normal iris melanocytes is underway at another facility on campus, and we hope soon to be able to move this over entirely to our own room. Affected eyes (with OM) are needed for our work to isolate the cells causing disease by culture. It is important that these eyes are handled in a special way, so if you are in a position to donate to this cause, we will need to contact your veterinarian.

### *What we need:*

1. We always need blood samples to use for DNA extraction from affected and related Cairns, accompanied by pedigrees and details of eye examinations.
2. We need enucleated eyes. It is important that we are contacted before they are removed so that we can ensure that the eye is handled in an appropriate manner for the part of the project we intend to use the eye for.