

Skeletal Dysplasia Study

UC Davis – October 2004

We received funding from the AKC CHF to test candidate genes for skeletal dysplasia in Tollers, Newfoundlands and Chesapeake Bay retrievers. At the same time we are investigating the cause of chondrodysplasia in Basset hounds, Dachshunds and Corgis.

We have tested 5 candidate genes and have not identified any disease causing mutations. We have one more candidate to test. We are also using the canine sequence to design markers flanking the candidate genes so that we can take a genetic approach to identify the gene involved. This requires samples from families of dogs segregating the trait. In the case of skeletal dysplasia this is very difficult since the phenotype has variable expressivity and has not been completely defined. We are in the process of establishing collaboration with someone who has produced Corgi crosses that we might be able to use to map the trait using these markers. If the candidates are all excluded then we will perform a genome scan. Something we have successfully done in other breeds with different diseases.

Some of the samples collected at last year's national are being used as controls for the Addison's project as well.

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