

Why is this important?

Inbreeding, bottlenecks, popular sires, and selective breeding in the past are a few factors that can restrict a breed's gene pool and may eventually lead to increased inherited diseases, weaker immune systems, cancers, reproductive problems, and smaller litter size. As gene pools lose genetic diversity, breed specific diseases tend to increase.

This genetic diversity research has provided information on the diversity status of your breed as a whole and provided recommendations how the breed might maintain diversity it has retained after stud book closure.

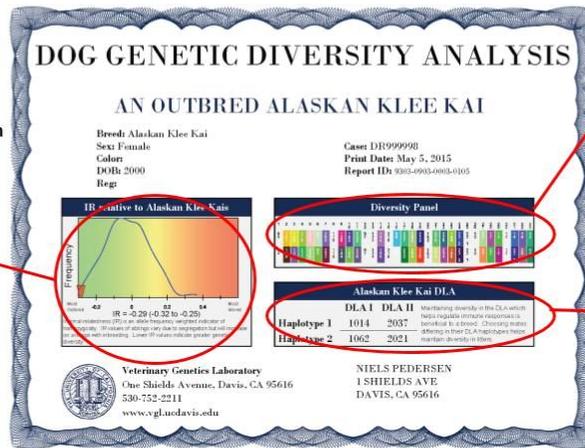
It tells us how closely related our dogs actually are, regardless of pedigree, and shows the overall level of diversity present within the breed. Individual dogs receive data demonstrating their diversity compared with the rest of the breed's population as well as an inbreeding assessment. The information is greatly different than the Coefficient of Inbreeding (COI), which is a statistical probability of risk of inheriting the same genetics from an ancestor. The COI for a litter will be the same for each puppy, whereas the genetic information provided by an individual's DNA may tell a different story. This testing will help to identify dogs with less typical genetics that can be used to improve your gene pool.



This test was developed by world renowned veterinarian researcher, Dr. Niels Pedersen, to equip breeders to maintain their breed's diversity.

This is the inbreeding measurement at UC Davis. The higher the IR, the more inbred. The lower, the more outbred. Breed for litter averages below 0 to produce outbred puppies.

The UC Davis Certificate. What do you get?



These are the markers used to map breed-wide diversity. These can be used in breeding programs, like Betterbred, to create breeding tools.

This area names the regions of the DLA, or immune system, of a dog. Numbers in the 1000s are the Class I haplotypes, 2000s the Class II. UC Davis tests the most areas of DLA of any test currently.

What will it tell me about my dog?

The main parts of the study will provide breeders with a certificate which is another tool to help make better breeding decisions for the future preservation of the breed, each individual dog will be provided with the following information:

- 1) The DLA (immune system) haplotype of each dog, Class I and Class II
- 2) Will identify how inbred or outbred each dog is to the rest of the population
- 3) How genetically unique a dog is for its population, and how closely it is related to others in its breed.

This last analysis is done on the BetterBred website.

- 4) BetterBred will provide materials for how to use the results in breeding programs and provide a free trial of full membership to the research members.