

NCSU, COLLEGE OF VETERINARY MEDICINE
VETERINARY GENETICS LABORATORY
<http://www.cvm.ncsu.edu/vhc/csds/vcgl/index.html>
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Owner:	JUKKA PURO FINLAND, DR. Veterinarian: PURO KENNELS FINLAND, FI Phone 358400542472 Fax	Accession Number: CG14-00031 Received: 01/03/2014 Reported: 01/09/2014 Species: CANINE Breed: GORDON SETTER Sex: F Age: 8Y4M Animal ID: IMITIGENS ET DATTER Case Ref#: Specimen: SWB
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Results:**GS CA** Negative Homozygous (Clear)**COMMENTS** Negative homozygous (0 copies of the mutated genes). These dogs are genetically clear of Cerebellar Degeneration.

GENETIC INFO CEREBELLAR DEGENERATION IS A HEREDITARY DISEASE THAT IS RECOGNIZED IN SEVERAL DIFFERENT BREEDS OF DOG. WE HAVE IDENTIFIED A MUTATION THAT IS HIGHLY ASSOCIATED WITH THE DISEASE IN OLD ENGLISH SHEEPDOGS AND GORDON SETTERS. THE DISEASE IS AUTOSOMAL RECESSIVE AND SO DOGS HAVE TO INHERIT TWO COPIES OF THE MUTATED GENE TO SHOW SIGNS OF THE DISEASE. IF THEY HAVE TWO COPIES THE LIKELIHOOD OF THEM DEVELOPING SIGNS IS EXTREMELY HIGH, BUT PLEASE KEEP IN MIND THAT WE ARE CONTINUALLY LEARNING ABOUT THIS DISEASE, AND OUR UNDERSTANDING OF THE RISK ASSOCIATED WITH THE MUTATION MAY CHANGE AS WE GET MORE DATA.

CURRENTLY OUR INTERPRETATION OF THE TEST IS:

NEGATIVE RESULTS: THIS DOG DOES NOT HAVE THE MUTATION

HETEROZYGOUS RESULTS: THIS DOG HAS ONE COPY OF THE MUTATED GENE. IT WILL NOT DEVELOP SIGNS OF THE DISEASE BUT IS A CARRIER OF THE MUTANT GENE AND CAN PASS IT ON TO OFFSPRING. IF BRED WITH ANOTHER CARRIER THERE IS A 25% RISK OF PRODUCING AFFECTED DOGS, AND A 50% RISK OF PRODUCING CARRIERS OF THE DISEASE.

POSITIVE RESULTS:

DOGS THAT ARE POSITIVE FOR THE TEST HAVE TWO COPIES OF THE MUTATED GENE AND ARE AT EXTREMELY HIGH RISK OF DEVELOPING SIGNS OF THE DISEASE. IF BRED, THEY WILL PASS ON THE MUTATION TO ALL OF THEIR OFFSPRING. IF BRED TO A CARRIER THERE IS A 50% RISK OF PRODUCING AFFECTED DOGS AND 50% RISK OF PRODUCING CARRIERS. IF BRED TO ANOTHER AFFECTED DOG, ALL OF THE OFFSPRING WILL BE AFFECTED.

IMPORTANTLY, BREEDING DECISIONS SHOULD BE MADE CAREFULLY. REMOVAL OF A SIGNIFICANT NUMBER OF DOGS FROM THE BREEDING POPULATION COULD BE VERY BAD FOR THE OLD ENGLISH SHEEPDOG BREED. REMEMBER THAT DOGS THAT CARRY THIS MUTATION ALSO CARRY OTHER IMPORTANT GOOD GENES THAT WE DO NOT WANT TO LOSE FROM THE BREED.

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