

Laboratory Report

** Amended Report **

Laboratory #:	82070	Call Name:	T'Challa
Order #:	36269	Registered Name:	Ch Sandstone Jungleground
Ordered By:	Susan Leonard	Breed:	Labrador Retriever
(Co-)Owner:	Susan Leonard	Sex:	Male
Ordered:	Feb. 20, 2018	DOB:	Nov. 2016
Received:	March 7, 2018	Registration #:	SR961153/02
Reported:	March 21, 2018	Microchip #:	981020015876001
Amended:	Jan. 20, 2020		

Results:

Disease	Gene	Genotype	Interpretation
Exercise-Induced Collapse	<i>DNM1</i>	WT/M	Carrier
Hereditary Nasal Parakeratosis	<i>SUV39H2</i>	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration	<i>PRCD</i>	WT/M	Carrier

WT, wild type (normal); M, mutant; Y, Y chromosome (male)

Interpretation:

Molecular genetic analysis was performed for three specific mutations reported to be associated with disease in dogs. We identified two normal copies of the DNA sequences in the *SUV39H2* gene tested. Thus, this dog is not at an increased risk for Hereditary Nasal Parakeratosis. However, we identified one normal copy and one mutant copy of the DNA sequences for *DNM1*. Thus, this dog is a carrier of Exercise-Induced Collapse. In addition, we identified one normal copy and one mutant copy of the DNA sequences for *PRCD*. Thus, this dog is a carrier of Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration.

Recommendations:

Exercise-Induced Collapse is inherited in an autosomal recessive fashion. Based on this, and the fact that this dog showed a mutation in one copy of the *DNM1* gene, this dog is a carrier of this disease. Although dogs that carry only one copy of this mutation will not be clinically affected, if bred with another carrier, the pairing could produce affected offspring. To avoid producing affected offspring, this dog should be bred with dogs that are normal (WT/WT) for this gene. Dogs related to this dog have an increased risk to be affected by or carry the mutated gene. Additional testing for this mutation is indicated for related dogs.

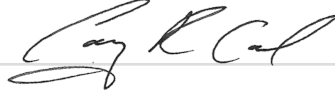
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration is inherited in an autosomal recessive fashion. Based on this, and the fact that this dog showed a mutation in one copy of the *PRCD* gene, this dog is a carrier of this disease. Although dogs that carry only one copy of this mutation will not be clinically affected, if bred with another carrier, the pairing could produce affected offspring. To avoid producing affected offspring, this dog should be bred with dogs that are normal (WT/WT) for this gene. Dogs related to this dog have an increased risk to be affected by or carry the mutated gene. Additional testing for this mutation is indicated for related dogs.

Paw Print Genetics® has genetic counseling available to you at no additional charge to answer any questions about these test results, their implications and potential outcomes in breeding this dog.

**Note: At the client's request, this laboratory report and accompanying Canine Genetic Health Certificate® were amended on Jan. 20, 2020 to update the registered name for this dog.*



Helen F Smith, PhD
Assistant Laboratory Director



Casey R Carl, DVM
Associate Medical Director

Normal results do not exclude inherited mutations not tested in these or other genes that may cause medical problems or may be passed on to offspring. These tests were developed and their performance determined by Paw Print Genetics®. This laboratory has established and verified the tests' accuracy and precision. Because all tests performed are DNA-based, rare genomic variations may interfere with the performance of some tests producing false results. If you think these results are in error, please contact the laboratory immediately for further evaluation. In the event of a valid dispute of results claim, Paw Print Genetics will do its best to resolve such a claim to the customer's satisfaction. If no resolution is possible after investigation by Paw Print Genetics with the cooperation of the customer, the extent of the customer's sole remedy is a refund of the fee paid. In no event shall Paw Print Genetics be liable for indirect, consequential or incidental damages of any kind. Any claim must be asserted within 60 days of the report of the test results.

Coat Color and Trait Certificate

Call Name:	T'Challa	Laboratory #:	82070
Registered Name:	Ch Sandstone Jungleland	Registration #:	SR961153/02
Breed:	Labrador Retriever	Microchip #:	981020015876001
Sex:	Male	Certificate Date:	Jan. 20, 2020
DOB:	Nov. 2016		

This canine's DNA showed the following genotype(s):

Coat Color/Trait Test	Gene	Genotype	Interpretation
B Locus (Brown)	<i>TYRP1</i>	B/B	Black coat, nose and foot pads
D Locus (Dilute)	<i>MLPH</i>	D/D	Non dilute
L Locus (Long Hair/Fluffy)	<i>FGF5</i>	Sh/Sh	Shorthaired

Interpretation:

This dog carries two copies of **B** at all three of the b^c , b^d and b^s loci making the overall B locus genotype of this dog **B/B**. The overall B locus genotype for a dog is determined by the combination of the genotypes at the b^c , b^d , and b^s loci. The b^c , b^d , and b^s variants confer brown coat, nose, and foot pads when at least one of these DNA changes is present on both genes of the dog at the B locus. If the dog has one or no copies of **b** then the dog will have a black coat, nose, and foot pads. However, this dog's coat color is also dependent on the E, K, and A genes. This dog will pass on **B** to 100% of its offspring.

This dog carries two copies of **D** which does not result in the "dilution" or lightening of the black and yellow/red pigments that produce the dog's coat color. The base coat color of this dog will be primarily determined by the E, K, A, and B genes. This dog will pass on **D** to 100% of its offspring.

This dog carries two copies of **Sh** which results in short hair. However, the overall coat type of this dog is dependent on the combination of this dog's genotypes at the L, Cu, and IC loci. This dog will pass **Sh** on to 100% of its offspring.

Paw Print Genetics® has genetic counseling available to you at no additional charge to answer any questions about these test results, their implications and potential outcomes in breeding this dog.

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