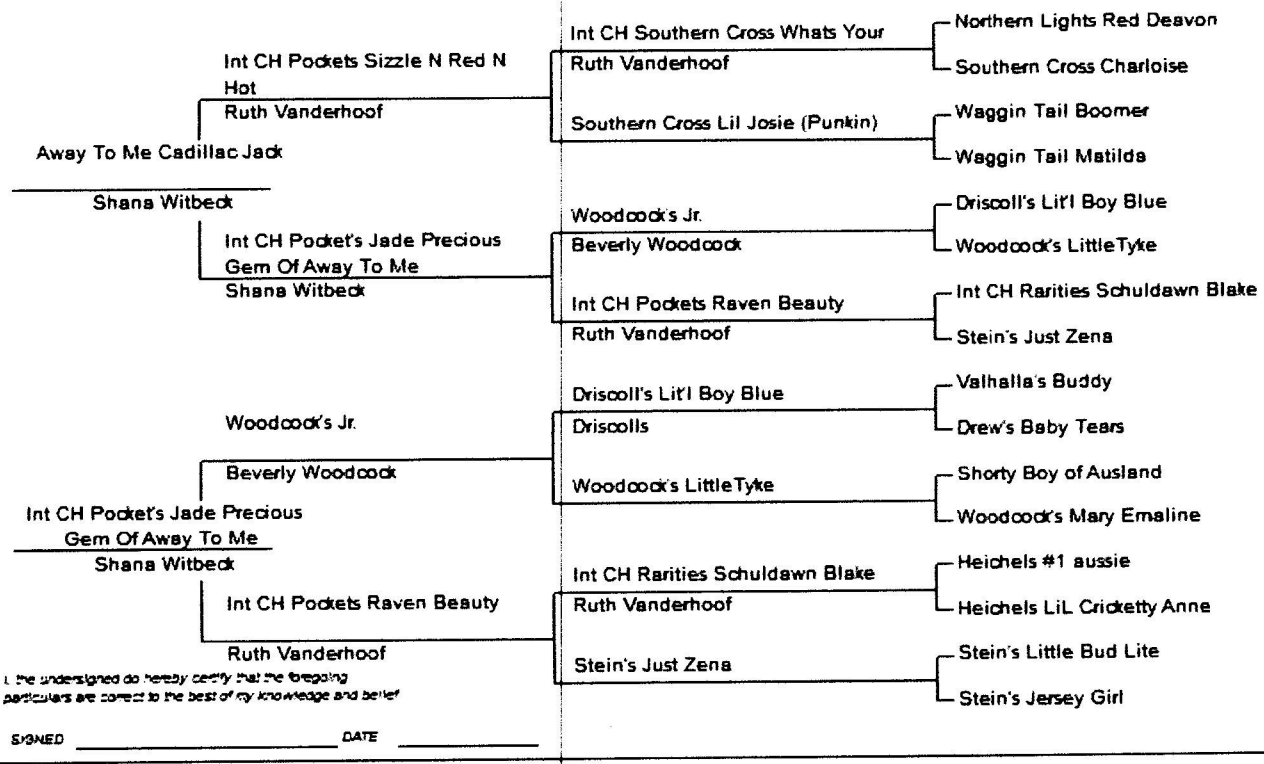
Certificate of Pedigree

Name: Away To Me Nike Blue **Sex:** M **Whelped:** 3/15/2010 **Reg No.:** D10SW4307

Colour & Markings Blue Merle/White/Copper RF **Breed:** Miniature Australian Shepherd

Owner: Shana Witbeck **Breeder:** Shana Witbeck



I, the undersigned do hereby certify that the foregoing particulars are correct to the best of my knowledge and belief

SIGNED _____ DATE _____

From: **Shana Witbeck** shanawitbeck@gmail.com
Subject: Emailing: Image (56).jpg
Date: February 16, 2016 at 4:22 PM
To: Lori Phelps lorimphelps@gmail.com

HC 14444.7

Result certificate #015934:

Detection of g.85286582delC mutation causing hereditary cataract in Australian Shepherds by fragment analysis

Sample
Sample: 12-00225
Name: Away To Me Nike Blue
Breed: Miniature Australian Shepherd
Reg. number: DN31803801
Microchip: -
Date of birth: March 15, 2010
Sex: male
Date received: 16.01.2012
Sample type: buccal swab

Customer
Shana Witbeck
3836 N Dry Fork Cyn Rd
84078 Vernal
United States

Result: Mutation was not detected (N/N)

Explanation

Presence or absence of mutation g.85286582delC in HSF4 gene causing hereditary cataract (HC) in Australian Shepherds was tested. Presence of deletion is connected with development of binocular cataract in different age of the dog. Generally, the mutation is inherited in autosomal dominant trait with incomplete penetration. It means that carriers do not need to be affected with HC; there is also possibility involving other genetic or environmental factors.

Individuals with one deleted allele (result N/P, negative/positive) have approximately 17-time higher risk of binocular cataract than the individuals without any deleted allele (result N/N). Heterozygous individuals (N/P) are in higher risk of HC disease and they transfer the mutation to their offspring.

This test does not exclude existence of any other unknown mutation of HSF4 gene nor different gene responsible for hereditary cataract.

Method: SOP25

Report date: 24.01.2012
Responsible person: Mgr. Markéta Dajbychová, Deputy Laboratory Manager

Genomia s.r.o, Teslova 3, 30100 Plzeň, Czech Republic, IČZ: 44929000
www.genomia.cz, laborator@genomia.cz, tel: +420 378 051 410

From: **Shana Witbeck** shanawitbeck@gmail.com
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Date: February 16, 2016 at 4:25 PM
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Paw Print Genetics
A division of Genetic Veterinary Sciences, Inc.

850 E. Spokane Falls Blvd., Suite 200
Spokane, Washington 99202
www.pawprintgenetics.com
(509) 483-5950

Laboratory Report

Laboratory #:	5857	**Call Name:**	Nike
Order #:	1877	**Registered Name:**	Away To Me Nike Blue
Ordered By:	Shana Witbeck	**Breed:**	Miniature American Shepherd
Ordered:	Nov. 19, 2014	**Sex:**	Male
Received:	March 23, 2015	**DOB:**	March 2010
Reported:	March 28, 2015	**Registration #:**	DN31803801
		Microchip #:	avid074323001

Results:

Disease	Gene	Genotype	Interpretation
Collie eye anomaly	*NHEJ1*	WT/WT	Normal

WT, wild type (normal); M, mutant

Interpretation:

Molecular genetic analysis was performed for a specific mutation of the *NHEJ1* gene reported to be associated with collie eye anomaly in dogs. We identified two normal copies of the DNA sequences in the gene tested.

Recommendations:

No mutations were identified. Thus, this dog is not at an increased risk for the disease caused by or associated with the mutation tested. Normal results do not exclude inherited mutations not tested in this gene or other genes that may cause medical problems or may be passed on to 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.

Blake C Ballif, PhD
Laboratory & Scientific Director

Casey R Carl, DVM
Associate Medical Director

From: **Shana Witbeck** shanawitbeck@gmail.com
Subject: Emailing: Image (58).jpg
Date: February 16, 2016 at 4:26 PM
To: Lori Phelps lorimphelps@gmail.com

PR-A

PRCDTEST.COM

Result report certificate
Detection of mutation in dog PRCD gene

Customer
Shana Witbeck
3836 N Dry Fork Cyn Rd
84078 Vernal
United States

Sample
Sample: 11898
Name: Away To Me Nike Blue
Breed: Miniature Australian Shepherd
Reg. number: DN31803801
Microchip: -
Date of birth: March 15, 2010
Sex: male
Date received: 16.01.2012
Sample type: buccal swab

Result: N/N

Result codes:
N/N clear (normal homozygote)
N/P carrier (heterozygote)
P/P affected (mutated homozygote)

Explanation

Mutation 1298G>A in PRCD gene in CFA9 (canine chromosome 9) has been examined. This mutation induces progressive retinal atrophy – prcd (progressive rod cone degeneration). Disease causes the degeneration of retinal cells in the eye. Firstly, rod cells are affected and the animal develops night blindness. Later, cone cells degenerate. That results in complete blindness of animal. The age of onset of disease varies, but, generally, it cannot be recognized before the adulthood of the animal.

Prcd-PRA is inherited as an autosomal recessive trait. That means the disease affects dogs with P/P genotype only. The dogs with P/N genotype are considered carriers of the disease (heterozygotes). In offspring of two heterozygous animals following genotype distribution can be expected: 25 % N/N (healthy non-carriers), 25 % P/P (affected), and 50 % N/P (healthy carriers).

The PRA-prcd mutation was found in following dog breeds: Am. Eskimo Dog, Austr. Cattle Dogs, Austr. Shepherd (normal, mini), Austr. Stumpy Tail Cattle Dog, Retriever (Chesapeake Bay, Golden, Labrador, Nova Scotia Duck Tolling), Chinese Crested Dog, Cockapoos, Cocker Spaniel (Am., Engl.), Basenji, Poodles (Dwarf, Miniature, Toy), Entlebucher Mountain Dog, Lapphund (Swedish, Finnish), Goldendoodle, Karelian Bear Dog, Kuvasz, Magyar Vizsla, Labradoodle, Lapponian Herder, Norwegian Elkhound, Papillon, Water Dog (Portuguese, Spanish), Terrier (Silky, Yorkshire). With lower probability, other breeds can be also affected by PRA-prcd.

Report date: 19.01.2012
Responsible person: Mgr. Markéta Dajbychová, Analyst

PRCD CERTIFICATE TEST

From: **Shana Witbeck** shanawitbeck@gmail.com
Subject: Emailing: Image (59).jpg
Date: February 16, 2016 at 4:28 PM
To: Lori Phelps lorimphelps@gmail.com

Animal Genetics INCORPORATED
1336 Timberlane Road
Tallahassee, FL 32312-1766

Generated On: **7/16/2014**

Canine Genetic Testing Report

Submitted By	AG120402
Ashley Badgett P.O. Box 921 Pocahontas, AR 72455	

Subject Dog

Date Received: 7/10/2014

Dog Name: **Away To Me Nike Blue**
Breed: Miniature American Shepherd
Phenotype: Blue Merle

Registration: DN31803801
Sex: Male
Birth: 03/15/2010

Sire

Sire Name:
Breed:
Registration:
Phenotype:

Dam

Dam Name:
Breed:
Registration:
Phenotype:

Coat Color/Type Testing

	A Locus-Ay		
	A Locus-At		
	A Locus-a		
	B Locus		
	D Locus		
	E Locus- EM		
X	E Locus- e	E/e	Dog carries the allele responsible for the yellow coat color, and could pass on either allele to any offspring..
	K Locus-KB		
	Spotting		
	Hair Length		
	Hair Curl		
	Furnishings		
	Bobtail		

Genetic Disorders

	Cone Deg.		
	CMR1		
X	DM	n/n	Clear: Dog is negative for the Degenerative Myelopathy mutation.
	HC		
	MDR1		

Genetic Marker Results Run Date:

- / AHT121	- / AHT137	- / AHTH171	- / AHTK260	- / AHTK211	- / AHTk253	- / C22.279
- / CAN AM8L	- / FH2354	- / FH2648	- / VPA21	- / INU005	- / INU030	- / INU055
- / REN54P11	- / REN105O04	- / REN164D11	- / REN169O18	- / REN247M03		

Cone Deg. = Cone Degeneration
CMR1 = Canine Multifocal Retinopathy Type 1
DM = Degenerative Myelopathy
HC = Hereditary Cataracts
MDR1 = Multi-Drug Resistance

Additional Comments

From: **Shana Witbeck** shanawitbeck@gmail.com
Subject: Emailing: Image (60).jpg
Date: February 19, 2016 at 8:53 PM
To: Lori Phelps lorimphelps@gmail.com

Animal Genetics INCORPORATED
1336 Timberlane Road
Tallahassee, FL 32312-1766

Generated On: **7/23/2010**

Canine Genetic Testing Report

Submitted By	AG106455

Date Received: 7/6/2010

Subject Dog

Dog Name: **CJ**
Breed: Miniature Australian Shepherd
Phenotype: Red Tri
Registration:
Sex: Male
Birth:

Sire

Sire Name: Pockets Sizzle N Hot
Breed: Miniature Australian Shepherd
Registration:
Phenotype: Red Tri

Dam

Dam Name: Prockets Precious Jade
Breed: Miniature Australian Shepherd
Registration:
Phenotype: Blue Merle

Coat Color/Type Testing

A Locus	
B Locus	
D Locus	
E Locus	
K Locus	
Length	

Genetic Disorders

	Cystinuria			
	CNM			
	EIC			
X	HC	n/n	Clear- Dog tested negative for the HSF-4 Hereditary Cataracts mutations.	
X	MDR1	n/n	Clear-Only normal unaltered allele detected. Dog should not exhibit any sensitivity to ivermectin or other drugs associated with this disorder.	
	NCL			
	PFKD			
	cord1-PRA			
X	prcd-PRA	n/P	Carrier-Linkage analysis indicates dog is a carrier of the prcd-PRA mutation and may pass on a copy of the mutation to any offspring	
	-			
	-			

Additional Comments

CNM = Centronuclear Myopathy
EIC = Exercise-Induced Collapse
MDR1 = Multi-Drug Resistance
NCL = Neuronal Ceroid Lipofuscinosis
PFKD = Phosphofructokinase Deficiency
prcd-PRA = Progressive Rod-Cone Degeneration