











## Dog Information

**Magic Soul I'll Never Give UP (Amélia)**  
 NAME **Female**  
 SEX  
**Border Collie**  
 GENETIC BREED **April 12th, 2018**  
 DATE OF BIRTH  
**Magic Soul I'll Never Give up:**  
 RG/SPX/18/01711 **n/a**  
 MICROCHIP  
 REGISTRATION

**FERNANDO MACEDO DE ANDRADE**  
 OWNER NAME  
**Canine Genetic Health Screen**  
 TEST  
**April 13th, 2021**  
 TEST DATE

## BREED HEALTH TESTS

DISEASE	GENE	GENOTYPE	RESULT	
Collie Eye Anomaly, Choroidal Hypoplasia, CEA	NHEJ1 (Intron 4)	NN	Clear	
Degenerative Myelopathy, DM	SOD1	GG	Clear	
Imerslund-Grasbeck Syndrome, Selective Cobalamin Malabsorption	CUBN (Exon 53)	NN	Clear	
MDR1 Drug Sensitivity	ABCB1	NN	Clear	
Myotonia Congenita	CLCN1 (Exon 23)	NN	Clear	
Neuronal Ceroid Lipofuscinosis 1, NCL 5	CLN5 (Exon 4)	CC	Clear	
Primary Lens Luxation	ADAMTS17	GG	Clear	
Trapped Neutrophil Syndrome	VPS13B Exon 19	NN	Clear	
Goniodysgenesis and Glaucoma	OLFML3	AA	2 Variants	
Raine Syndrome, Canine Dental Hypomineralization Syndrome	FAM20C	GG	Clear	

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## INBREEDING AND DIVERSITY

Genetic Diversity	RESULT
Coefficient Of Inbreeding	26%
MHC Class II - DLA DRB1	No Diversity
MHC Class II - DLA DQA1 and DQB1	No Diversity

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## TRAIT TESTS (1/2)

Coat Color		RESULT
E Locus (MC1R)	Can have a melanistic mask	E <sup>m</sup> E
K Locus (CBD103)	More likely to have a mostly solid black or brown coat	K <sup>B</sup> K <sup>B</sup>
Intensity Loci LINKAGE	No impact on coat pattern	Intermediate Red Pigmentation
A Locus (ASIP)	Not expressed	a <sup>t</sup> a <sup>t</sup>
D Locus (MLPH)	Dark areas of hair and skin are not lightened	DD
Cocoa (HPS3)	No co alleles, not expressed	NN
B Locus (TYRP1)	Black or gray hair and skin	BB
Saddle Tan (RALY)	Not expressed	ll
S Locus (MITF)	Likely to have little to no white in coat	SS
M Locus (PMEL)	No merle alleles	mm
R Locus (USH2A) LINKAGE	Likely no impact on coat pattern	rr
H Locus (Harlequin)	No harlequin alleles	hh
Other Coat Traits		RESULT
Furnishings (RSPO2) LINKAGE	Likely unfurnished (no mustache, beard, and/or eyebrows)	ll
Coat Length (FGF5)	Likely long coat	TT
Shedding (MC5R)	Likely heavy/seasonal shedding	CC
Hairlessness (FOXI3) LINKAGE	Very unlikely to be hairless	NN

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## TRAIT TESTS (2/2)

Body Size		RESULT
Body Size (IGF1)	Larger	NN
Body Size (IGFR1)	Larger	GG
Body Size (STC2)	Larger	TT
Body Size (GHR - E191K)	Smaller	AA
Body Size (GHR - P177L)	Larger	CC

Performance		RESULT
Altitude Adaptation (EPAS1)	Normal altitude tolerance	GG
Appetite (POMC) LINKAGE	Normal food motivation	NN