

## Coat Color and Trait Certificate

<b>Call Name:</b>	Bobby	<b>Laboratory #:</b>	180784
<b>Registered Name:</b>	Fairytale lanes Bobby	<b>Registration #:</b>	WALA00040202
<b>Breed:</b>	Australian Labradoodle	<b>Certificate Date:</b>	Feb. 4, 2021
<b>Sex:</b>	Male		
<b>DOB:</b>	Sept. 2019		

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

Coat Color/Trait Test	Gene	Genotype	Interpretation
A Locus (Agouti)	ASIP	a <sup>t</sup> /a <sup>t</sup>	Tricolor, black and tan
B Locus (Brown)	TYRP1	B/b or b/b	Carries brown and may have brown or black coat, nose and foot pads
Cu Locus (Curly Hair)	KRT71	Cu/Cu <sup>C</sup>	Wavy/Curly coat (carrier)
D Locus (Dilute)	MLPH	D/D	Non dilute
E Locus (Yellow/Red)	MC1R	E/e	Black (carries yellow/red)
IC Locus (Improper Coat/Furnishings)	RSPO2	F/IC	Furnishings (improper coat carrier)
K Locus (Dominant Black)	CBD103	k <sup>Y</sup> /k <sup>Y</sup>	Agouti expression allowed
L Locus (Long Hair/Fluffy) - Lh <sup>1</sup> (Common Variant - Corgi, Labrador, Chesapeake Bay Retriever, Others)	FGF5	Lh/Lh	Longhaired (carries two copies of long hair)
M Locus (Merle)	PMEL	m/m	Non merle
S Locus (White Spotting, Parti, or Piebald)	MITF	S/s <sup>P</sup>	Limited white spotting, flash, parti, or piebald (carrier)
SD Locus (Shedding)	MC5R	sd/SD	Moderate shedding

### Interpretation:

This dog carries two copies of a<sup>t</sup> which results in tan points and can also present as a black and tan or tricolor coat color. However, this dog's coat color is also dependent on the E, K, and B genes. The tan point coat color is only expressed if the dog is also E/E or E/e at the E locus and k<sup>Y</sup>/k<sup>Y</sup> at the K locus. This dog will pass on a<sup>t</sup> to 100% of its offspring.

The overall B locus genotype for a dog is determined by the combination of genotypes present at the b<sup>c</sup>, b<sup>d</sup>, and b<sup>s</sup> loci. The b<sup>c</sup>, b<sup>d</sup>, and b<sup>s</sup> variants confer brown when at least one of these DNA changes is present on both genes of the dog at the B locus. This dog carries two copies of B at the b<sup>s</sup> locus. In addition, this dog carries one copy of B and one copy of b at both the b<sup>c</sup> and b<sup>d</sup> loci. The presence of both these variants on a single copy of the gene cannot be excluded. Thus, due to the particular combination of variants detected, the overall B locus genotype of this dog is B/b or b/b and cannot be determined without additional testing of parental samples. Therefore, this dog carries brown and may have brown or black coat, nose and foot pads.

If the b<sup>c</sup> and b<sup>d</sup> variants each occur on separate copies of the B locus, the dog will be brown (b/b). However, if these variants occur on the same copy of the gene, the dog will be black (B/b). Therefore, the final B locus genotype for this dog can be inferred by evaluating the color of this dog's nose. If this dog's nose is brown, the

