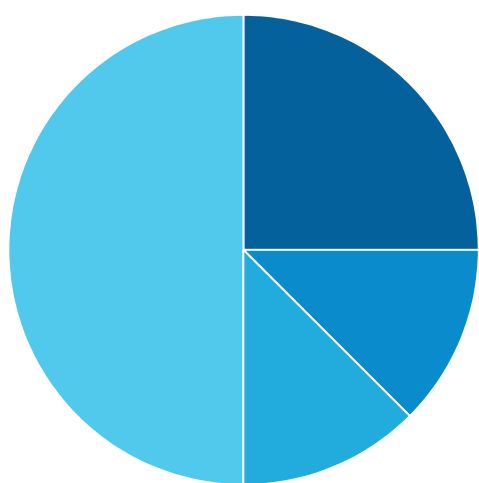


DISCOVER ALL  
**ABOUT ARLO**

The results are in! Let's take a look at what the DNA told  
us about Arlo's ancestry...

## ARLO'S BREED BY PERCENTAGE



- 25% Beagle
- 12.5% Chow Chow
- 12.5% White Swiss Shepherd
- 50% Breed Group(s)
  - Asian
  - Sporting
  - Hound
  - Terrier
  - Middle Eastern and African

Exciting news, the results are in! Here's what makes Arlo so unique. Using the data generated from Arlo's DNA, our sophisticated computer algorithm performed over 17 million calculations! What you see here is Arlo's ancestry by percentage.

# BEAGLE

THEY WERE ONCE USED FOR HUNTING HARE, QUAIL AND PHEASANT.

- Happy or gentle nature, and usually friendly dogs; although some have high energy levels.
- Beagles seem to enjoy dog sports such as tracking, hunting, agility, rally and competitive obedience.
- Respond well to reward-based training involving treats or favorite toys.
- Chasing wildlife or barking may impair bonding.

► **Height**

**13 - 16 in**

► **Weight (show)**

**20 - 30 lb**

► **Weight (pet)**

**17 - 37 lb**



## DID YOU KNOW?

These iconic dogs are a long-established breed and are descended from the Foxhound, the Harrier and the Kerry Beagle. They were once used for hunting hare, quail and pheasant, although nowadays they also make excellent family dogs. They love to follow a scent, and with over 200 million scent receptors in their nose, have understandably been used for police work. The origin of their name is still debated. Some believe it's from the Celtic word 'beag', which means 'small', while others say it's from the French word 'begle', which means 'useless' or 'of little value'. But for anyone who's had one of these happy characters in their lives, the latter seems very unlikely indeed.

# CHOW CHOW

THESE NOBLE DOGS ARE ORIGINALLY FROM NORTHERN CHINA.

- Reputation as a loyal family dog.
- Reserved and wary with strangers.
- Independent spirit, but responds to reward-based obedience training.
- The Chow Chow was originally bred for various purposes including the guarding of people and/or property. Individual members of this breed will benefit from firm and dedicated training to temper this guarding tendency, and thus help to maintain safety as a household companion.

► **Height**

**18 - 22 in**

► **Weight (show)**

**40 - 65 lb**

► **Weight (pet)**

**42 - 69 lb**



## DID YOU KNOW?

Aloof and loyal, these noble dogs are originally from northern China (though some have argued they migrated there from Mongolia and elsewhere). In their native land, they are called Songshi Quan, which means 'puffy-lion dog'. It is thought the breed first appeared 2,000 years ago. They were mainly used for hunting and guarding sacred temples from evil entities. The East India Company brought them to England in 1781 and Queen Victoria received one as a gift in 1865. During the 1880s, more and more Chow Chows were imported in large numbers. Today, these puffy lions are the pride of many an owner's home.

# WHITE SWISS SHEPHERD

## HAPPY AND LOYAL.

- Personalities can vary from calm and watchful/observant to energetic.
- Enjoy participating in dog sports such as agility, tracking, flyball, and competitive obedience.
- Eager to learn and respond well to reward-based training.
- The German Shepherd Dog was originally bred for various purposes including the guarding of people and/or property. Individual members of this breed will benefit from firm and dedicated training to temper this guarding tendency, and thus help to maintain safety as a household companion.

### ► Height

**22 - 26 in**

### ► Weight (show)

**48 - 89 lb**

### ► Weight (pet)

**48 - 97 lb**



## DID YOU KNOW?

These happy and loyal Swiss fellows are a cross between the long-haired, short-haired and wire-haired shepherd dogs of the German regions of Württemberg, Thuringia and Bavaria. The German Shepherd was first recognized by the AKC in 1908. The white-coated variant was removed from the main breed standard in 1968, but was conserved by breeders in Switzerland, who developed the breed we know today. Sometimes known as the White Swiss Shepherd or the Berger Blanc Suisse, they were first bred for herding, but their strength and intelligence meant they soon became popular in a variety of roles. Guard dogs, guide dogs, search and rescue dogs, police dogs and military dogs. You name it, these distinct white dogs have done it – and still do.

# BREED GROUPS ARLO IS MOST LIKELY RELATED TO

We tested Arlo's ancestry for specific pure breeds, going back three generations (or to the great-grandparents). Beyond this, today's technology can only identify down to the genetic "group" level (sporting, toy, guard, etc.). We know the breeds found in these groups and that Arlo may share genetic similarities with many of them. We've arranged these in order, with the most likely starting at the top. The breeds displayed are examples of breeds in each specific group. The full list for each can be found on the breeds we analyzed, click on the link below.

## ASIAN GROUP

The Asian Group is comprised mainly of breeds from the Asian and Arctic regions of the world. Often bred for guarding or working they have been invaluable assets to man throughout the ages.

## SPORTING GROUP

The sporting group breeds are incredibly diverse in personality and appearance, but can be characterized as very sturdy. They were developed to work closely with people and in general have a very responsive nature and high intelligence.

## HOUD GROUP

The most common ancestral trait of this group is being used for hunting. Some use acute powers of scent to follow a trail while others demonstrate the gift of stamina as they run down a quarry. Beyond these two common traits, however, generalizations about hounds are hard to come by as the group is comprised of a very diverse lot of breeds.

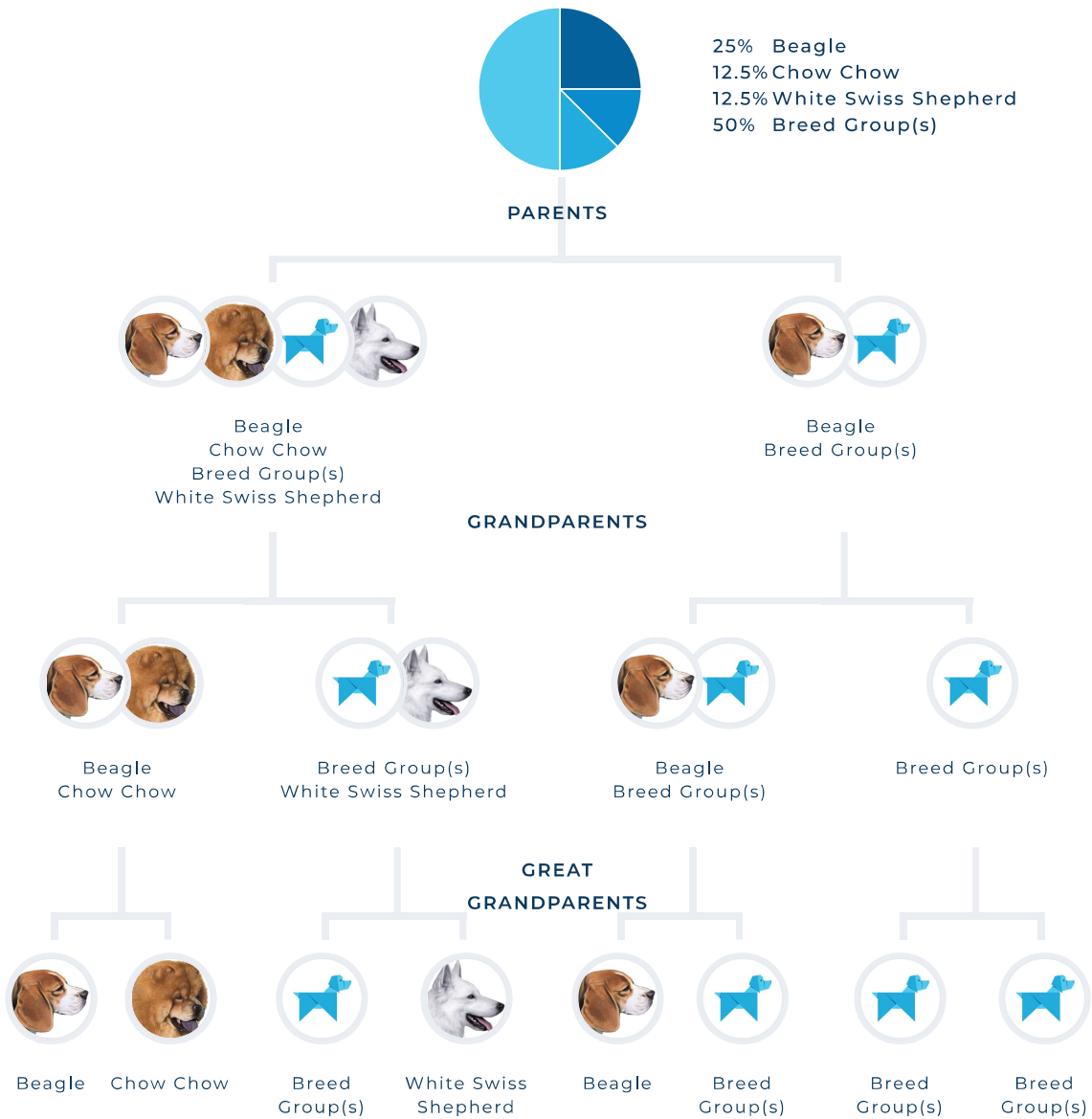
## TERRIER GROUP

The Terrier Group ancestors were bred to hunt and kill vermin. They are often characterized as feisty and energetic dogs whose sizes range from fairly small to much larger.

## MIDDLE EASTERN AND AFRICAN GROUP

While this ancient group shares many of the characteristics of the Hound Group, their origins, as the name would suggest, are concentrated in Africa and the Middle East unlike the hound group that has no true geographic center.

# ARLO'S FAMILY TREE



# ARLO'S HEALTH RESULTS

We have tested Arlo's DNA for the following important genetic health conditions.  
The results can be seen below.

## MULTIDRUG SENSITIVITY (MDR1)



**CLEAR**

Arlo has no copies of the MDR1 mutation and should not be affected by the disorder due to this genetic cause.

## EXERCISE-INDUCED COLLAPSE (EIC)



**CLEAR**

Arlo has no copies of the EIC mutation and should not be affected by the disorder due to this genetic cause.



# ARLO'S TRAITS

<b>Base Pigment Color</b>	Arlo carries the gene for the 'expression' of black pigment. This means that even though their overall coat color may not be black, they are still able to make black pigment. They will also likely have black around their eyes, a black nose, and may even have black pads on their feet.
<b>Furnishings</b>	Arlo does not carry any copies of the gene for 'furnishings' (which would give them a fuzzy beard and eyebrows). This means they probably have smooth, short facial hair. Did you know you can often get 'furnished' and 'unfurnished' dogs within the same breed?
<b>Coat Color Subtypes</b>	Arlo carries one copy of the gene for white spotting so might have a fair bit of white in their coat. (Did you know white is not a color but a lack of pigment which acts to cover up a dog's natural base color?)
<b>Coat Length and Type</b>	Arlo's coat is probably on the long side and wavy. Did you know this is because they show one copy of the gene for curl? If they'd shown two, their coat would exhibit tight curls, like a poodle.
<b>Tail Length</b>	Arlo likely was born with a long tail - although the exact length can vary from dog to dog. Long tails are sometimes known as 'coffee table clearers'. (If you've ever seen a long-tailed dog get excited near one, you'll know exactly why.)
<b>Ear Carriage</b>	A lot of factors can decide the shape of a dog's ear. But as far as we can tell, Arlo probably has perk or upright ears. Did you know this type of ear is recessive (which means you need a copy from each parent to show it)? Common breeds with upright ears include German Shepherd, Chihuahua and Husky.
<b>Leg Length</b>	Arlo has one copy of the gene for short limbs (known as 'chondrodysplasia') so their legs are probably moderately short in length. When people think of this trait, they think mainly of the Dachshund, Corgi, or Basset Hound. There are actually over 20 breeds that have it, including the Chihuahua.
<b>Coat Color Main Possibilities</b>	Arlo probably has a coat color known as 'sable' - light overall, but with some dark-tipped patches of fur. They probably also have marking around the face that looks like a 'mask'. (It is very common for sable dogs to also carry the gene for a dark facial mask, but scientists still don't know what the link is.)

## IDEAL WEIGHT

Based on our findings, we've calculated that Arlo's ideal, adult weight should be:

**27** lbs - **47** lbs

Maintaining a healthy weight is a key factor in Arlo having a long and healthy life.

# WISDOM<sup>TM</sup> PANEL



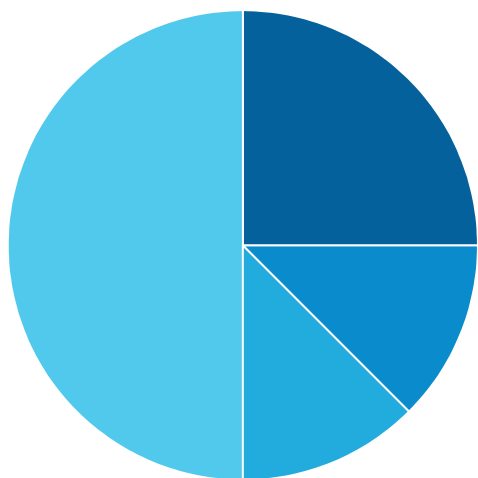
## STATEMENT OF AUTHENTICATION

Owner's Name: **Rod Allrich**

Dog's Name: **Arlo**

Date: **December 8, 2018**

This certifies the authenticity of Arlo's canine genetic background as determined, following the careful analysis of more than 1800 genetic markers, by the WISDOM PANEL<sup>TM</sup> Canine DNA Test. The purebred breed signature matches included in the analysis are those that were detected in the last three generations of Arlo's ancestry using the Wisdom Health proprietary breed detection algorithm.



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