

Pete Smith  
1014 Castro Street,  
Chico, California 95928

## Congratulations!

You're about to uncover the story of your dog's ancestry.

In this report, you will find detailed results from **Buddy's Wisdom Panel™ Professional** mixed-breed DNA analysis.

In the following pages, you will learn about:

- BREED DETECTION
- BREED APPEARANCE & BEHAVIOR
- APPEARANCE, BEHAVIOR & HISTORY
- SHARING YOUR DOG'S STORY

It is important to carefully review your entire report and discuss the results with your veterinarian to gain the most valuable insight into **Buddy**.

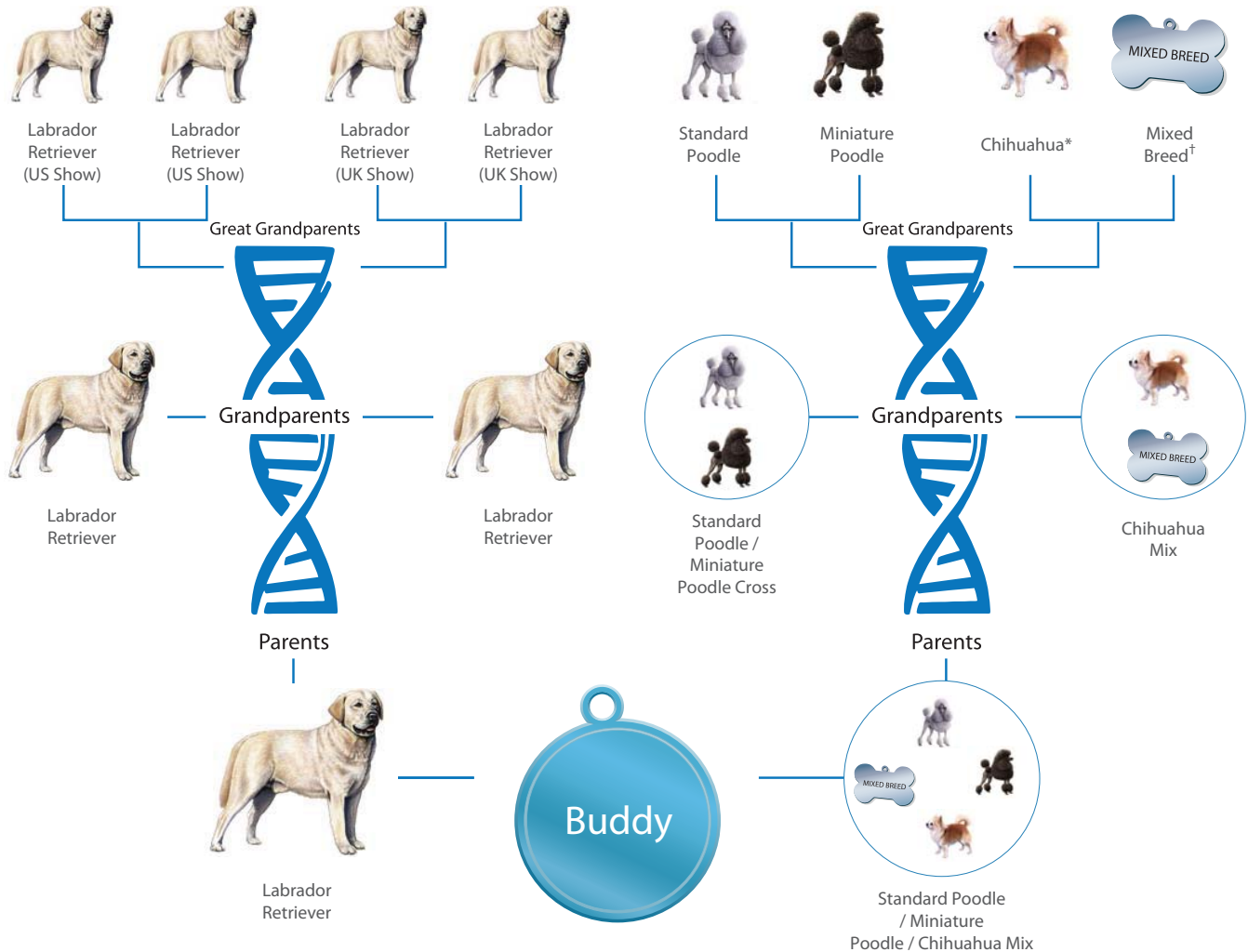
Owner Name: **Pete Smith**  
Test Report Code: **1234567890**  
Date Printed: **March 23, 2011**

# What's Your Dog's Tale?



### What breeds make up Buddy?

The Wisdom Panel™ Professional computer algorithm performed over seven million calculations using 11 different models (from a single breed to complex combinations of breeds) to predict the most likely combination of pure and mixed breed dogs in the last 3 ancestral generations that best fit the DNA marker pattern observed in Buddy. The ancestry chart depicting the best statistical result of this analysis is shown in the picture below.



Labrador Retriever crossed with Standard Poodle / Miniature Poodle / Chihuahua Mix

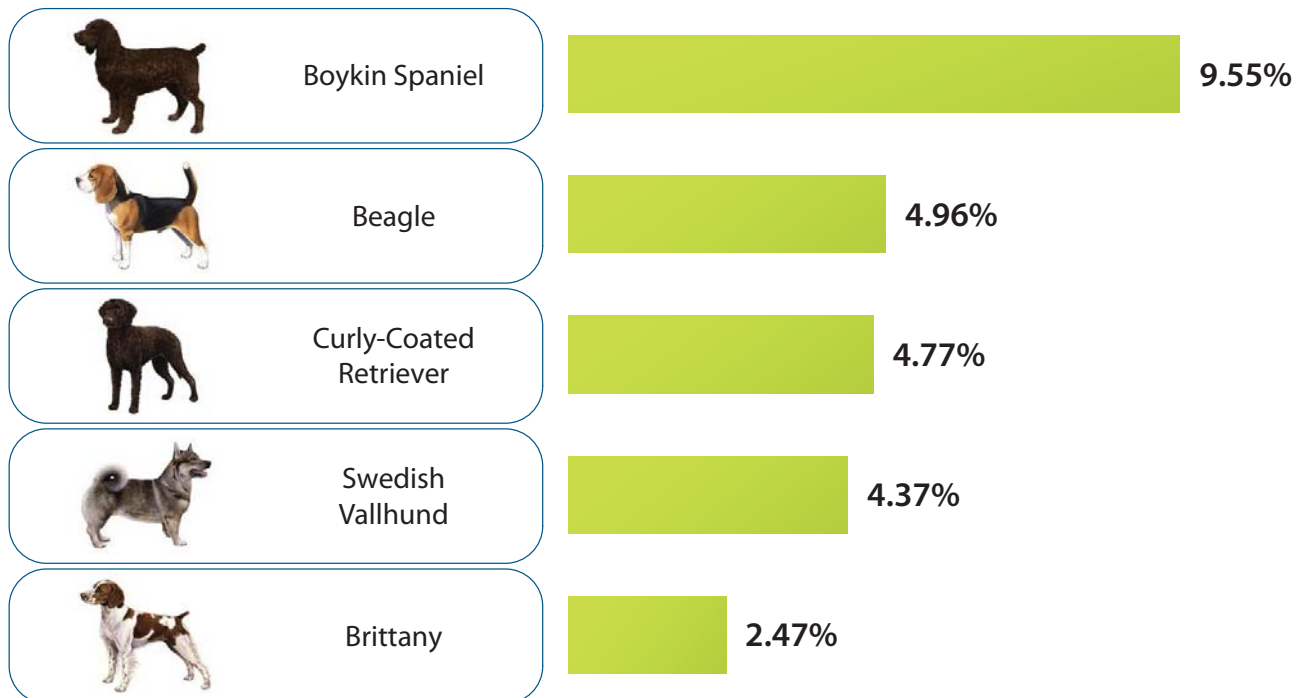
 † Curious about the Mixed breed ancestry? Take a look at the next page!

\*Breed detected, however at a lower confidence. Such results are not included in accuracy calculations.



## What does the Mixed Breed Ancestor mean for my dog?

We have identified for you the 5 next best breed matches which appeared in the analysis of your dog's DNA. One or more of these breeds could have contributed to the genetic makeup of the ancestors indicated by the mixed breed icon. The breeds are listed by the relative strength of each result in our analysis with the most likely at the top of the list. There could also be a breed or breeds present in the mixed breed component that we cannot detect with our current database of purebred dogs.



### How Wisdom Panel Professional works

The process started when you sent a sample to our laboratory, where the DNA was extracted from the cells and examined for the 321 markers that are used in the test. The results for these markers were sent to a computer, that evaluated them using a program designed to consider all of the pedigree trees that are possible in the last three generations. The trees considered include a simple pedigree with a single breed (a likely pure-bred dog), two different breeds at the parental level (a first-generation cross), all the way up to a complex tree with eight different great-grandparent breeds allowed.

Our computer used information for over 225 breeds, varieties, and types from our breed database to fill these potential pedigrees. For each of the millions of combinations of ancestry trees built and considered, the computer gave each a score representing how well that selected combination of breeds matched to your dog's data. The pedigree with the overall best score is the one which is shown on the ancestry chart. Only breeds that reached our set confidence threshold for reporting are reported in the ancestry chart.

### THE INFLUENCE OF BREEDS ON APPEARANCE AND BEHAVIOR

This report reveals the breeds detected in your dog's DNA. It also includes checklists of physical and behavioral traits associated with these breeds. Breeds can combine their influences in countless, fascinating ways. It's a unique combination that makes your dog one-of-a-kind.

Your dog may behave like - or strongly resemble - just one of the breeds in its makeup, but - much more commonly - your dog's looks and personality will blend aspects of these breeds. Consider the example below...

**Wisdom Panel Professional found these breeds in our example dog Riff:**



Chihuahua



Toy Fox Terrier



Japanese Chin

In this example, while many of Riff's physical and behavioral traits suggest a blending of breed influences, there are certain aspects of her appearance and personality that suggest the influence of specific breeds.

**PHYSICAL TRAITS**

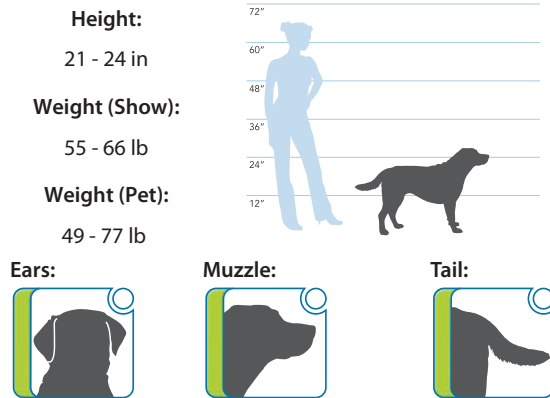
**CHIHUAHUA**  
An upright forward curving tail with a plume of hair is typical of the Chihuahua breed.

**TOY FOX TERRIER**  
A strong broad muzzle, parallel to the skull beneath clear, bright dark-rimmed eyes is a common trait of Toy Fox Terriers.

**BEHAVIORAL TRAITS**

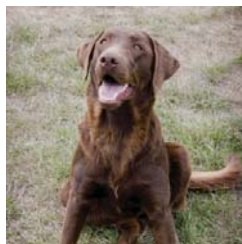
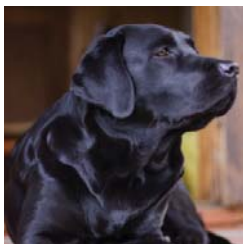
**JAPANESE CHIN** Japanese Chins are known for being quiet, docile and relaxed with their human companions.

## Labrador Retriever



The Labrador Retriever can trace its roots to the coast of Newfoundland, Canada. The breed dates back to at least the seventeenth century when they were known as the "Lesser Newfoundland." The breed is believed to have descended from the extinct "St. John's Water Dog" which was a cross between native water dogs and the Newfoundland. Labrador Retrievers were initially trained to retrieve fishing nets from the cold waters of the North Atlantic. Fisherman brought them to England in the nineteenth century where they were lauded for their swimming, retrieving and hunting skills. The Earl of Malmesbury is believed to have coined the name Labrador in order to differentiate them from their Newfoundland ancestors. During the 1800's, a heavy dog tax in Canada and quarantine laws in Britain drastically cut the number of Labradors in the U.K., but a good breeding program replenished the stock. Labrador Retrievers were recognized by the American Kennel Club in 1917.

The Labrador Retriever comes in solid black, chocolate, and yellow. The yellow varies from a pale cream to a rich red fox color. Some Labradors also have white chest blazes. The Dudley variant is where the nose is pink, though this is quite rare. Non-AKC registries sometimes recognize a Silver Variant though this may be classed as chocolate by the AKC.



### Do you recognize any of these Labrador Retriever traits in Buddy?

- Usually happy-go-lucky, calm, or easygoing dogs, though some may be energetic.
- Usually friendly and are generally good family dogs.
- Labrador Retrievers enjoy dog sports such as agility, hunting, tracking, rally and competitive obedience; retrieving and swimming.
- Quite food motivated, which may make it easier to teach the Labrador Retriever to drop retrieved items not intended for play.

## Miniature Poodle


**Height:**

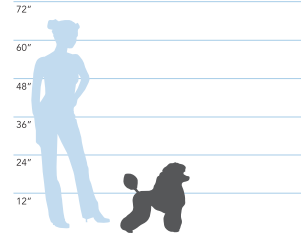
10 - 15 in

**Weight (Show):**

13 - 26 lb

**Weight (Pet):**

15 - 28 lb

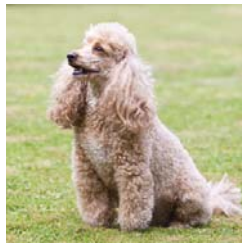

**Ears:**

**Muzzle:**

**Tail:**


The Poodle is a breed with a long history and unknown origins. Poodles have been featured in royal artwork since the 1500's and although many think of it as a French breed, it is unlikely. Experts believe the Poodle may have originated in Central Europe or Russia, although it is also possible that the breed originated in Spain or Portugal. Another theory claims the Poodle was brought to France by German soldiers during the 1400's. It is not disputed however, that the modern traits of the breed were developed in France. Poodles are believed to be related to the Portuguese Water Dog and the Irish Water Spaniel. Though many regard Poodles as ornamental lap dogs, they are actually gun dogs with an excellent reputation for bird hunting and water retrieval. The name Poodle has its roots in an old German word meaning "to splash about," which is a reference to their fondness for water. Smaller Poodle breeds were developed in the 1700's, much later than the large Standard Poodle. The Poodle was recognized by the American Kennel Club in 1887 and has become one of the most popular breeds in America.

The Miniature Poodle comes in a wide range of colors including solid blacks, grays, silvers, browns, apricots, creams and shading variations. Although the AKC standard does not permit particolored dogs, this is an accepted variant by the UKC. Poodles have been historically clipped to aid performance so may look quite different unclipped.



### Do you recognize any of these Miniature Poodle traits in Buddy?

- Intelligent, athletic, and playful dogs.
- Eager to learn and respond well to reward-based training using treats or favorite toys.
- Miniature Poodles seem to enjoy dog sports such as agility, retrieving, musical canine freestyle, rally and competitive obedience.
- Some tend to bark and can be reserved around strangers and may require careful socialization to prevent or reduce defensive aggressive tendencies.

## Standard Poodle


**Height:**

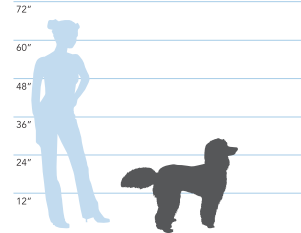
Over 15 in

**Weight (Show):**

44 - 65 lb

**Weight (Pet):**

42 - 69 lb


**Ears:**

**Muzzle:**

**Tail:**


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### Do you recognize any of these Standard Poodle traits in Buddy?

- Intelligent, calm, and usually friendly dogs.
- Some can have a high amount of energy.
- Have a sensitive nature and respond well to motivational tools such as treats or favorite toys in a reward-based approach to training.
- Generally good family dogs.

## Chihuahua


**Height:**

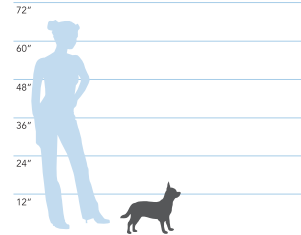
6 - 9 in

**Weight (Show):**

2 - 7.5 lb

**Weight (Pet):**

2 - 9 lb


**Ears:**

**Muzzle:**

**Tail:**


The Chihuahua is one of the most ancient of dog breeds, with its origins dating back to the Mayan civilization. The breed is believed to have descended from the ancient Techichi, a dog that played an important role in both the Toltec and Aztec cultures. Some believe that the Chihuahua is a result of the crossing of the Techichi and the Chinese Crested, which came to South America from Alaska. Due to the destruction of the ancient civilizations, the breed faced extinction. However, remnants of the breed survived in Mexico and the Chihuahua was introduced to the United States in 1898. The Chihuahua was recognized as an official breed in 1904 by the American Kennel Club and by 1915, thirty Chihuahuas were registered in the States with that number jumping to over 25,000 by the early seventies.

The Chihuahua has a vast amount of variation partly due to the fact that any color or combination is permitted in the breed standard. The coat comes in either long or short hair, with traits including dark masks, merle, and white markings. The colors range from blacks to various silver and fawn shades.



### Do you recognize any of these Chihuahua traits in Buddy?

- Alert, active, and often playful dogs.
- Responds well to reward-based training using treats or favorite toys.
- Small size makes it easy for them to live in smaller places such as apartments.
- May be suspicious of strangers or bark at other dogs when intimidated by their size.

## Thank you for choosing Wisdom Panel™ Professional to uncover the story of your dog's ancestry!

Congratulations on taking the steps to learn about your dog's ancestry and to understand what breeds are in your mixed breed dog using Wisdom Panel™! Knowing your dog's breeds is more than a novelty - it is a medical necessity. Each breed in your pooch's genetic paw print has unique health concerns you should know about so that you can provide a lifetime of excellent care.

Visit [www.Genesis4Pets.com](http://www.Genesis4Pets.com) to find out more about your dog's health-care needs: you'll feel better knowing that you're doing everything you can to keep your pal happy and healthy. In addition to loads of free, easy-to-understand information based on the latest medical research, you will receive a 50% discount on all downloadable health-care booklets that explain the common health concerns for individual breeds. Simply enter promotional code **WISDOM** when you check out to receive your discount (expires 30 days after you receive your Wisdom Panel report).

### Predicted Adult Weight Profile for Buddy:

Based upon the breeds detected in Buddy's ancestry and the genetic markers analyzed by Wisdom Panel Professional, we have calculated the likely weight that Buddy should reach when an adult. The Wisdom Panel Professional target weight profile is presented as a range based on the unique mix and proportion of breeds detected.

- If Male and Intact, the adult weight is predicted to be between 43 - 49 lbs.
- If Male and Neutered, the adult weight is predicted to be between 45 - 52 lbs.
- If Female and Intact, the adult weight is predicted to be between 41 - 45 lbs.
- If Female and Spayed, the adult weight is predicted to be between 42 - 47 lbs.

Many factors can influence an adult dog's weight, including sex and neuter status. Both of these factors have been used to calculate the predicted weight profile. Another major influence on canine weight is body condition score, which is a factor of your dog's lifetime nutrition and exercise regimen. If your dog's body condition is different from the ideal body condition score, we anticipate that your dog might be under (if underweight) or over (if overweight) the weight predicted by Wisdom Panel Professional.

To learn more about assessing body condition score please use the Royal Canin™ Body Condition Score Chart.

More information on this can be found at: <http://www.wisdompanelpro.com/sizeprediction/>

### Tell Your Dog's Tale

Join our online community of mixed-breed dog owners and share your dog's Wisdom Panel Professional story with the world. At [WisdomPanelPro.com](http://WisdomPanelPro.com) you can:

- Register your dog and upload photos into our Wisdom Panel photo gallery
- Get help to show off your dog's breed profile on your blog, Dogster page, Facebook and Myspace profiles
- Access your report online with our Test Status Checker.

This will also allow you to access Mixed-Breed Genesis health reports provided by VetThink™ which are designed to assist you to take the best possible care of your dog throughout its life.



Visit [www.wisdompanel.com/photos](http://www.wisdompanel.com/photos) and use these details to create your dog's profile:

Owner: **Pete Smith**  
Report Code: **1234567890**

Each dog is unique and their physical and behavioral traits will be the result of multiple factors, including genetics, training, handling and environment. Wisdom Panel™ Professional's proprietary genetic analysis is intended to provide owners insight to potential predispositions to physical and behavioral traits in breeds which have been identified in your dog and is not intended to predict disease or behavior in any particular dog.

Neither Mars Veterinary nor Mars, Incorporated are conducting any type of health or disease screening through Wisdom Panel Professional. Links to the testing services and descriptions are being provided for informational purposes only. Mars Veterinary and Mars, Incorporated are not associated with and do not endorse or sponsor the commercial tests being conducted by Washington State University, University of Minnesota or Optigen.

Wisdom Panel Professional is used to help determine the breed makeup of a dog. Validation testing has resulted in an average accuracy\* of 90% in first-generation crossbred dogs of known parentage. The breeds in this validation study represent 45% of AKC registrations.

In the unlikely event that it is not possible to determine breed history or that an error in the analysis occurs, liability by Mars Veterinary or related companies and individuals is disclaimed and damages in any event are limited to the payment actually received by Mars Veterinary for the individual specified analysis at issue.

The Wisdom Professional product is designed and intended to be used solely to identify the genetic makeup of a mixed breed dog and no other purpose is authorized or permitted. Consult your veterinarian for information regarding your particular dog's physical and behavioral condition.

Many cities and communities have breed specific ordinances and laws which may require special handling or prohibit the ownership of some dogs with a particular breed in their genetic background. Check with your local authorities to determine if your dog's genetic profile requires you to comply with any laws, regulations or ordinances in your area.

\*Accuracy was determined by average Positive Predictive Value across breeds studied. Breeds detected at lowest level of certainty were not included in accuracy calculation.

# Retrieved Ancestry Certification

Wisdom Panel *Professional* certifies that:

*Buddy*

is a genetic mixture of the following canine breeds:

Labrador Retriever, Miniature Poodle, Standard Poodle and Chihuahua.

March 23, 2011

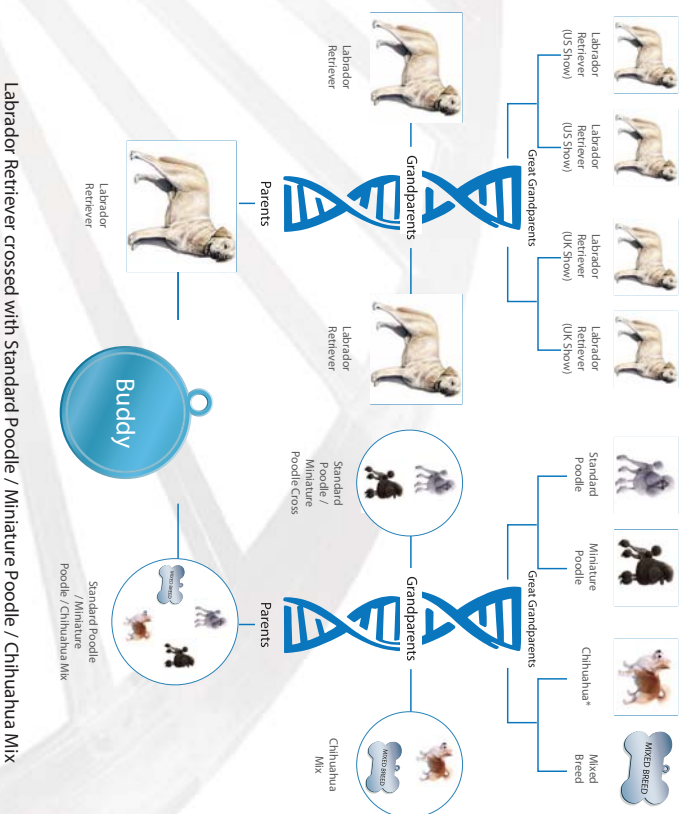
## Statement of Authenticity

This certifies the authenticity of Buddy's canine genetic background as determined following careful analysis of more than 300 genetic markers using Wisdom Panel *Professional*. The purebred dog breed signature matches included in this analysis are those that were detected in the last three generations of Buddy's ancestry using the proprietary breed detection algorithm at Mars Veterinary.



Dr. Neale Fretwell

Research & Development Director



Wisdom Panel<sup>™</sup>  
**Professional**  
 Canine Genetic Analysis

**MARS**  
 veterinary<sup>™</sup>