

BORZOI HEART STUDY

GENETICS OF INHERITED HEART DISEASE IN BORZOI

Texas A&M College of Veterinary Medicine

Please consider supporting this important research by submitting DNA samples from borzoi who have been diagnosed with DCM, Arrhythmia, or other heart disease for genomic sequencing. Samples are also required from borzoi in the 11 - 12 yr old age group who have had cardiac evaluations and remained healthy (these serve as control dogs"). If you have borzoi that have heart testing certified by a British Veterinary Society Accredited Cardiologist you can also send in DNA along with the certificate of that heart testing.

I have swab kits available now. I can mail them out to you with a SAE for return to me BY February 15th 2025. There is no cost to you as owner. Please note as stated below you will not receive any individual genetic test result back as this is a voluntary scheme for research and data analysis.

Email me at celticborzoi@btinternet.com or telephone 07950 912291 (please leave a message if I do not pick up the call). *Lorraine Harvey*

Background and purpose

Recent research in Borzoi dogs has revealed that dogs of this breed experience sudden, unexplained death. About 85% of sudden, unexplained deaths in humans are linked to an underlying heart disease. Our existing research in Borzoi dogs has shown that they are predisposed to developing arrhythmias (abnormal heart rhythms) and dilated cardiomyopathy (a heart muscle disease causing dilated heart chambers and weak pumping function).

Due to our documentation of the frequency of these conditions in Borzoi dogs, we seek to identify responsible genetic variations similar to what is seen in humans with electrical cardiac diseases that trigger arrhythmias and dilated cardiomyopathy.

The objective of our study is to identify genetic mutations associated with heart disease in Borzoi dogs and document their existence in other sighthound breeds.

What happens in this study

We are collecting saliva samples from both healthy Borzoi and Borzoi dogs affected with arrhythmias and/or dilated cardiomyopathy. We will also collect saliva samples from any other sighthound breeds.

We will extract DNA from these samples and perform genomic sequencing on a select number while retaining the remainder for further screening. By analyzing the sequencing

data, we can compare the genes of healthy and affected Borzoi dogs and identify variants linked to their heart conditions. We will also compare the findings in Borzoi dogs to results from other sighthound breeds.

Pet owner responsibilities

A swab kit will be sent to you for at home use along with a link to an instructional video on how to properly obtain a swab of the mouth. The kit will contain equipment to collect the saliva swab, a history form for your pet, a client consent form and a shipping label to return samples to us.

Participation requirements

To participate, you must have a Borzoi dog or a sighthound breed that is either healthy or affected by arrhythmias and/or dilated cardiomyopathy. Pets may be any age or sex.

Electronic or paper veterinary medical records will need to be provided.

Benefits and risks of participating

There is little to no risk for taking a brief swab of the mouth for saliva collection if procedures outlined in the video are followed. No individual genetic test results will be provided to study participants.

Compensation

There is no cost to the owner for participating in this study. No compensation will be provided.