

PROGRESS REPORT



Understanding Heart Disease in Newfoundland Dogs

Vilma Yuzbasiyan-Gurkan, PhD, Michigan State University, D23CA-507

Projected End Date: 4/30/26

SUMMARY: Researchers will study the genetic basis of subvalvular aortic stenosis in Newfoundland dogs, a high-risk breed for developing this devastating heart condition.

THE PROBLEM: Subvalvular aortic stenosis (SAS), a constriction of the aorta, the major vessel in the heart, is a significant concern in several dog breeds, causing shortened lifespan and, in some cases, sudden death. Large and giant breeds, including Newfoundland dogs, rottweilers and bullmastiffs, have a higher risk of developing SAS. The breed-specific prevalence, the early age of onset, the clustering of affected dogs in sibships, and results from some breeding studies have pointed to a genetic basis for SAS in these high-risk breeds. However, the causative genetic variation(s) and identification of the broader genetic basis for SAS in Newfoundland dogs and other breeds has remained elusive.

THE PROJECT: The team recently obtained blood samples from a key sire and the team continues to obtain samples from well-characterized Newfoundland families with SAS. The team had some obstacles which have been resolved but have asked for an extension of their project.

POTENTIAL IMPACT: Findings will help advance our understanding of the genetic basis of SAS in the breed and provide valuable clues to help other breeds affected by this life-limiting heart condition.

Thanks to the Newfoundland Club of America Charitable Trust for sponsoring this study!