



Cornell University
College of Veterinary Medicine

Philippa J. Johnson
Section of Diagnostic Imaging
Department of Clinical Sciences
Ithaca, New York 14853-6401
Phone: 607-253-3816
Fax: 607-253-3289
E-mail: pjj43@cornell.edu

Debra Hokkanen, President and Ellie Carson, Treasurer
The American German Shepherd Dog Charitable Foundation
c/o Morris Animal Foundation
720 So Colorado Blvd, Suite 174A
Denver, CO 80246

Dear Ms. Hokkanen and Ms. Carson

I am writing to thank you for the support that you and your charitable foundation have provided for my research.

The project that was funded focused on identifying a better way to diagnose and image lesions in the spinal cord of dogs with degenerative myelopathy. Degenerative myelopathy causes progressive axonal loss of the spinal cord and results in worsening neurological deficits in the hind limbs. The spinal cord lesions are not visible on standard MR imaging and although we can provide a presumptive diagnosis after genetic testing a definitive diagnosis cannot be confirmed until necropsy. This means that we are unable to provide owners with definitive answers or prognostic information. Additionally, we are unable to monitor the progression of lesions over time which limits our knowledge of how and why these lesions develop. We aimed to test an advanced MR imaging method called diffusion tensor imaging to see if lesions could be identified in dogs with the condition. This method has been successful at detecting lesions in humans a condition similar to degenerative myelopathy called amyotrophic lateral sclerosis (ALS or Lou Gehrig's Disease).



We started the project in August 2017 and have found owners to be extremely committed to helping with our research. So far, we have scanned 14 dogs with degenerative myelopathy and five similarly aged normal dogs for comparison. This summer we aim to complete the imaging of both groups so that we can start the image analysis. We have been overwhelmed by the commitment shown by owners to have their dogs involved in this project, with some driving many hours for enrollment. I have included pictures of two of the German Shepherds included in our project, namely Anya (left) who was the gentlest sweet girl and Victoria (below) who was rescued with paralysis from a puppy farm.

The preliminary results from this project are promising and we look forward to the final analysis of the project. We aim to present the results at the annual meeting for the American college of veterinary radiology next year.

The project was posted in our clinical trials web page (<https://www2.vet.cornell.edu/hospitals/clinical-trials/using-advanced-imaging-diagnose-canine-degenerative-myelopathy>) our Lab webpage (<https://www.johnsonlabcornell.com/degenerative-myelopathy>) and was written about on a popular blog (<https://lessonsfromaparalyzeddog.com/dogs-needed-for-advanced-imaging-procedure-to-diagnose-degenerative-myelopathy/>)

Your financial support has been extremely valuable in the development of this project. It has allowed us to try to improve our clinical ability to diagnose this devastating disease and has the potential to be a technique that will help us monitor this disease and improve our knowledge of the pathogenesis.

Thank you again.

Kind regards



Philippa J. Johnson BVSc, CertVDI, DipECVDI, MSc, MRCVS
Assistant Professor of Veterinary Radiology
Cornell College of Veterinary Medicine

