

Genetic Testing for Acquired Peripheral Neuropathy in Dogs

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WARF: P160048US02

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in a method for predicting acquired peripheral neuropathy in dogs, which can serve as an animal model for human therapeutic development.

OVERVIEW

Peripheral neuropathies are a diverse group of diseases marked by degeneration of the peripheral nervous system. These diseases affect both humans and animals. In humans, the most common form is Charcot-Marie-Tooth disease (CMT), which affects about 1 in 2,500 people. Current treatments for CMT manage symptoms rather than modify the disease course. One barrier to developing new and better treatments is the lack of a large animal model.

A related disease called acquired peripheral neuropathy (APN) syndrome is common in certain dog breeds. This condition is also referred to as laryngeal paralysis. Labrador retrievers (the most common dog breed in the United States) represent about 70 percent of APN cases, although other breeds can be affected including golden retrievers, poodles and Irish setters. To date, no genetic test for the disease is commercially available.

A diagnostic test to predict the likelihood that a patient – human or canine – will exhibit peripheral neuropathy in their lifetime would be of significant value.

THE INVENTION

UW-Madison researchers have identified a single nucleotide polymorphism (SNP) that is predictive of APN syndrome in dogs, based on a genome-wide association study. Using a population of Labrador retrievers (56 cases and 26 controls), the researchers have shown that a SNP on CFA1 tags the causal variant for APN in the Labrador retriever breed.



THE WARF ADVANTAGE

Since its founding in 1925 as the patenting and licensing organization for the University of Wisconsin-Madison, WARF has been working with business and industry to transform university research into products that benefit society. WARF intellectual property managers and licensing staff members are leaders in the field of university-based technology transfer. They are familiar with the intricacies of patenting, have worked with researchers in relevant disciplines, understand industries and markets, and have negotiated innovative licensing strategies to meet the individual needs of business clients.



APPLICATIONS

- Genetic test for predicting dogs that will develop APN, for use in selective breeding programs and guiding treatment
- Identifying a large animal model for development of disease-modifying therapies in humans

KEY BENEFITS

- Potential to become the first genetic test for APN – an economically significant veterinary disease
- Potential utility for human health (e.g., genetic model for human ALS research studies)

STAGE OF DEVELOPMENT

The development of this technology was supported by WARF Accelerator. WARF Accelerator selects WARF's most commercially promising technologies and provides expert assistance and funding to enable achievement of commercially significant milestones. WARF believes that these technologies are especially attractive opportunities for licensing.

ADDITIONAL INFORMATION

Related Portfolios

WARF Accelerator Program Technologies

Tech Fields

Veterinary - Companion animals

Drug Discovery - Disease models

Agriculture - Animal health

CONTACT INFORMATION

For current licensing status, please contact Emily Bauer at emily@warf.org or 608-960-9842.

