

University of Minnesota Pulmonary Fibrosis Study Funded!

By Ned Patterson, D.V.M., Ph.D.

A study by Professors Ned Patterson D.V.M., Ph.D. and Peter Bitterman M.D. from the University of Minnesota College of Veterinary Medicine and School of Medicine respectively, has been funded for \$175,000 to study Pulmonary Fibrosis (PF) in West Highland White Terriers. In the past 15 years, a form of Pulmonary Fibrosis (lung scarring) has been recognized in dogs, almost exclusively in Westies. The diagnosis in dogs is usually made based on clinical signs, arterial blood gas analysis, and chest radiographs. The diagnosis is greatly improved by using High Resolution Computed Tomography (HR-CT). Currently there is no known specific treatment, and therapy is at best to relieve the symptoms but does not affect the progression of the disease.

The purpose of this study is to obtain blood DNA samples, and blood gas samples from dogs affected with PF, as well as DNA samples from dogs aged 8 years and older that are not affected. We will use the DNA samples to sequence the whole genome (all the DNA sequence) of some of the dogs, and later possibly to get DNA marker data for all the dogs enrolled. We will compare the DNA of affected dogs versus unaffected dogs to see if we can detect gene mutations that predispose dogs to develop PF. If gene mutations are found, and verified, they could be used as a test to diagnose PF and also as a test to help breeding decisions to decrease the number of Westies with PF. We will also be

studying if the abnormal lung cells in Westies with PF are similar to people with PF. Improved knowledge of the genes and mechanisms involved will hopefully lead to specific treatments being developed.

Your dog may be able to help if he/she

- **Cases:** Has a diagnosis of Pulmonary Fibrosis (any breed, any age); or Westie with unexplained cough for 3 months or more.
- **Controls:** Is a purebred West Highland white terrier who is at least 8 years old and has no history of persistent cough or other persistent respiratory signs.

Procedures

For dogs that can be brought to the U of MN Small Animal Hospital, two blood samples will be collected for analysis and if indicated, chest X-rays will be also taken to see if there are signs of scarring (fibrosis) in the lungs. The blood sample collection and possible chest X-rays will be performed at no cost to you. To see if your dog meets eligibility requirements, and to arrange an appointment at the University of Minnesota Small Animal Hospital, please contact Dr. Ned Patterson at patte037@umn.edu or call 612-625-5799 or 612-626-8387.

Dogs residing outside of the Minneapolis-St. Paul Metro area:

Dogs unable to travel to the University of Minnesota may participate in our study by going to our website <http://www.cvm.umn.edu/vbs/faculty/Mickelson/lab/PulmonaryFibrosis/index.htm> and sending a completed Pulmonary Fibrosis Submission Form along with a small blood sample for DNA isolation. No financial compensation is currently available for dogs submitted from outside of the University of Minnesota Small Animal Hospital.

(Note: The Board of the Westie Foundation of America has approved funding for shipping of samples of dogs living outside Minnesota. Contact Kay McGuire, DVM (kmccash@aol.com) or Ned Patterson, DVM, PhD (patte037@umn.edu) for information.)

