

PRESS RELEASE: Shar-Pei Trust funds Cornell testing for gene responsible for inflammatory disease

ITHACA—A new test for a serious disease affecting the Chinese Shar-Pei dog breed will soon be available at the Cornell University College of Veterinary Medicine Animal Health Diagnostic Center (AHDC). The new capability is made possible by a gift from the Chinese Shar-Pei Charitable Trust, which has donated \$50,000 toward the purchase of advanced testing equipment.

The Shar-Pei is a medium-sized, short-haired dog with a distinctive, slightly oversized head and excess skin that falls in folds around its face and back. There are about 20,000 Shar-Pei in the United States—and most of them carry the gene that puts them at risk for Shar-Pei Autoinflammatory Disease (SPAID). Dogs with a copy of the mutated gene from each parent are at extremely high risk for the disease.

SPAID is the first spontaneously occurring autoinflammatory disease to be described in animals. Severe cases are characterized by recurrent symptoms of inflammation: fever; swollen, painful joints; a condition that causes bubbles containing a clear, jellylike substance on the skin; ear problems and kidney failure. Dogs with SPAID may experience one or more of these problems. There is no vaccine or cure for SPAID, but with veterinary assistance owners can provide their dogs with some relief from the symptoms.

The new test, using droplet digital PCR (ddPCR), measures the number of copies of the faulty gene in individual Shar-Pei. It was developed by scientists in Sweden and the United States, including Dr. Linda Tintle, a Cornell veterinary college alumna. The group has spent years unraveling SPAID, first discovering the relevant gene in 2011. They announced their success with ddPCR last spring in BMC Genomics. So far, only Cornell's AHDC and SLU, the Swedish University of Agricultural Sciences, will offer testing for SPAID.

Dr. Tintle, who first began researching SPAID with Cornell immunologists in the 1980s, said positive test results serve two important purposes: "As a health tool, alerting owners to watch their dogs carefully for signs of SPAID, and as a breeding tool, with the aim of reducing the presence of SPAID in the worldwide Shar-Pei population" by not breeding dogs at high risk for SPAID.

The test also may prove useful in studying inflammatory diseases in humans.

“Cornell’s agreement to join in collaborative research into the syndrome will help us learn more about how to help relieve suffering in these dogs and others with inflammatory diseases,” said Dr. Tintle.

“On behalf of our Trustees and donors, I am pleased to announce this gift,” said Lee Arnold, Chairman of the Chinese Shar-Pei Charitable Trust. “We are indebted to Dr. Linda Tintle and her team for their groundbreaking research. This will be most beneficial for our breeders and owners for their future breeding programs.”

“We are very pleased to make this new assay available to the Shar-Pei breeders in the US, in collaboration with Dr. Tintle and her colleagues at the Swedish University of Agricultural Sciences,” says Dr. Amy Glaser, Director of Molecular Diagnostics at the AHDC. “We look forward to being able to provide this assay as a service to the community and to ongoing collaborative efforts with our colleagues in Sweden. We are grateful for this gift that makes this collaboration possible.”

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