



Baker Institute for Animal Health

DEDICATED TO THE STUDY OF VETERINARY INFECTIOUS DISEASES, IMMUNOLOGY,
GENETICS, AND REPRODUCTION

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Westie Foundation Funds Allergic Disease Research

Baker Institute immunologist [Dr. Elia Tait Wojno](#) wants to unlock the mystery of the canine immune system. She seeks to find better ways to treat a common affliction, and possibly the most burdensome one, in the West Highland White Terrier breed – atopic dermatitis (AD). New funding from the [Westie Foundation of America](#) (WFA) will provide the support she needs to launch a new study.

According to the AKC Canine Health Foundation, 10% of dogs are affected by AD which is the second most common allergy in dogs behind flea bite allergy.

A unique human/canine researcher

“We are pleased to provide this grant to Dr. Tait Wojno to support her work in allergic disease in Westies, and atopic dermatitis, in particular,” said Kay McGuire, DVM, and Vice President, Health for WFA. “The work she is doing in AD in canine medicine side-by-side with human medicine is unique and we believe is part of the future for improving the health of our Westies.”

It is the perspective that Tait Wojno brings to the table, along with her ongoing collaborations in human medicine that provide the basis for potentially dramatic improvement in canine allergy. “This project offers the opportunity to make a difference in dogs’ and humans’ lives. For the work in canine allergy, I feel like the real opportunity is that the work we do in the lab will have a real clinical impact in the short term – for discovery and also to apply the knowledge in a practical and helpful way,” she said.

“We know relatively little about what the immune system in the dog does when it becomes allergic. There are exciting questions to answer that could guide us towards directions to develop better treatments for dogs with allergies,” said Tait Wojno. “It is quite a burden – dogs with allergic disease. When the quality of life of dogs is negatively impacted, the owners’ lives are negatively impacted.”

An assistant professor at Cornell University’s College of Veterinary Medicine, Tait Wojno didn’t begin her research working in canine disease. She completed a fellowship at the University of Pennsylvania, Philadelphia where she also received her doctoral training, studying immune responses during infection and allergy.

She spent years looking at human allergic conditions in the field of immunology, training that helped her better understand atopic dermatitis and allergy.

[Professor William H. Miller, Jr., VMD, DACVD](#), Medical Director of Cornell University’s Companion Animal Hospital believes Tait Wojno’s work and her expertise are the right fit to help figure out AD in Westies. “With her experience in innate immunity, she’s in a very good position to help define the array of allergic mechanisms in allergic dogs. Her long term findings may lead to the development of new treatments.”

The specific goal for Tait Wojno’s research project is to identify an immune cell profile of an allergic Westie and determine how it differs from that of a healthy Westie. She is confident that her team will be able to identify an immune cell profile in the blood of allergic dogs. This profile may also exist in dogs that don’t yet show signs of allergies but will develop them. This work will provide researchers with a

better understanding of the immune responses that underlie allergy in dogs, which will increase our ability to identify biomarkers of disease, develop new therapies, and come up with ways to measure response to therapy. "Having a way to measure if therapy is successful early on can make a difference," she said.

Ultimately, Tait Wojno hopes this work will help improve lives of all who suffer from atopic dermatitis. "AD - we talk about it a lot in human and veterinary medicine," she said. Though with the disease, dogs and humans are not dying from the condition, the negative impact on quality of life is clear. "Human literature shows lost work hours, negative financial impact, time lost at home. This creates a very significant burden. Data in dogs shows that the same is true for canine allergy. As much as we can measure their mental health, their happiness - the burden of disease in dogs is really significant and has a negative impact on the dog and the owner, as well."
