UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

College of Veterinary Medicine
Veterinary Teaching Hospital
240 Small Animal Clinic, MC-004
1008 W. Hazelwood Drive
Urbana, IL 61802-4714

Study Title: Evaluation of molecular endotype of pit bull dogs with atopic dermatitis compared to healthy dogs of the same breed.

Purpose of Study/Background/Objectives:

Canine atopic dermatitis (AD) or skin allergies is the most common cutaneous disease in dogs. It is known that some dog breeds present distinct clinical signs of allergies and variable treatment responses. It is also possible that breeds with specific clinical signs show consistent inflammatory and pruritic mediators. However, this information has not yet been clarified.

Currently there are no studies correlating the clinical presentation, severity of the disease, and inflammatory biomarkers in serum and skin of dogs with AD. The main objective of this research is to determine systemic and *in situ* inflammatory response through different biomarkers using ELISA and qRT-PCR techniques in Pit bull dogs that are commonly diagnosed with AD.

The secondary goals of this proposal are: (I) to establish whether pit bulls present a pattern in clinical presentation and disease severity based on clinical scores; (II) to establish whether Pit bulls present a pattern in altered AD biomarkers and determine a database of such markers in this breed; (III) to compare the severity of disease with the biomarkers findings; (IV) to compare the results with healthy Pit bulls; and (V) to compare ELISA test results using skin samples and serum samples.

Inclusion Criteria for the group of allergic dogs:

- Pit bull type dogs with diagnosis of atopic dermatitis (skin allergies) based on history and clinical sigs (see images below)
- Dogs with allergic pruritus (scratching, licking and chewing paws, scooting) and no lesions

Inclusion Criteria for the group of healthy dogs:

- Pit bull type dogs with no skin or systemic diseases

Exclusion Criteria:

- Dogs from breeds other than Pitbull terrier-type
- Dogs with diagnostic or history of skin or systemic inflammatory disease
- Dogs currently on allergen specific immunotherapy (allergy shots)

Withdrawn medications:

- Injectable glucocorticoids for 8 weeks
- Oral glucocorticoids and cyclosporine for 4 weeks
- Oclacitinib and topical glucocorticoids for 2 weeks
- Lokivetmab for 12 weeks.

Protocol: The completion of the study will require 2 visits to the Dermatology service.

Allergic Pit bulls:

1. Screening visit:

- Physical and dermatological exam to confirm allergies and to check for secondary bacterial or yeasty infections (allergic dogs); or to rule out skin or systemic diseases (healthy control dogs).
- Blood draw for CBC + chemistry for health status checkup.

If allergy is confirmed but secondary infections are present, infection treatment will be provided in preparation for sampling in 2-3 weeks.

If allergy is confirmed and no secondary infections are present, sampling can be done the following day (second visit).

2. Second visit:

Sedation for biopsy; blood draw (8ml) and skin biopsy (2 samples ventral/lateral chest and ventral abdominal/inguinal area); 2 single stitches on each biopsy site; treatment recommendations for allergies.

Compensation:

- Free skin and ears examination, and secondary infection treatment (if infection is present).
- Free CBC + chemistry for health status checkup.
- Free flea and tick preventative (3-month worth).
- Free allergy treatment recommendations.

Contact Information: If you are interested in enrolling a dog in the study, please email Dr. Calesso at jcalesso@illinois.edu. Referring veterinarian and client inquiries are welcome.


Thick skin


Inflammation and hair loss


Ichiness and dry skin


Darkening of the skin


Pododermatitis and paw licking