Supporting Original Studies

*New diagnostic approaches*

**WCVD8/SOS-1059**

**Identification of dermatophagoides pteronyssinus allergens in dogs with atopic dermatitis sensu stricto positive in intradermic and serological (fcer1-alpha) testings.**

J. Possebom* 1, M. Lima2, V. Cunha3, M. Farias4

1School of Agraries Sciences and Veterinary Medicine, Pontifical Catholic University of Paraná, Curitiba, Paraná, 2School of Agraries Sciences and Veterinary Medicine, Pontifical Catholic University of Paraná, 3FDA Allergenic, Rio de Janeiro, RJ, 4Medical Practice in Companion Animals, Pontifical Catholic University of Paraná, Curitiba, Paraná, Brazil

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Please insert your abstract: Major house dust mite allergens of high molecular weight are usually involved in the clinical signs of canine atopic dermatitis (AD). Western blotting methodology shows immunoglobulin-E (IgE) responses directed against proteins in the range of 13 to 220 kDa in dogs with AD. This study aimed to identify the molecular weight of the proteins to which canine IgE reacted against, in dogs with AD sensu stricto and sensitized to *Dermatophagoides pteronyssinus*. Twenty client-owned dogs diagnosed with AD by confirming that each dog fulfilled six of eight clinical features of canine AD, as described by Favrot et al, and ruling out other pruritic dermatoses were enrolled in the study, after exclusively feeding a novel protein diet for four to eight weeks. Intradermal and FceR1-α serological testing were performed in all 20 atopic dogs, in order to identify sensitization to *D. pteronissynus*. A 15% poliacrilamide SDS-PAGE gel and a monoclonal anti-IgE western blotting methodology were used to identify the molecular weight of the reacting allergens. All data were analyzed descriptively. Among the 20 dogs tested, 13 (65%) showed positive results for *D. pteronissynus* in intradermal, serological and western blotting testing. The median of serum IgE in 13 dog was 335. All those 13 dogs reacted against proteins in the range of 21,5 to 31 kDa, what may indicate reaction to Der p 1 (25 kDa), Der p 3 (31 kDa), Der p 6 (25 kDa) and Der p 9 (29 kDa). Seven of the 13 dogs (53,8%) reacted against proteins in the range of 14,5 to 21,5 kDa, what may indicate response against Der p 2 (15 kDa); while 4/13 dogs (30,8%) showed reactions in the range of 31,1 to 44,9 kDa, possibly to Der p 10 (36 kDa); and 1/13 (7,7%) dogs showed reactions to proteins of less than 14,4 kDa, such as Der p 5 (14 kDa). Low molecular weight DP allergens, can cause sensitization and eczema precipitation in dogs with atopic dermatites usually implicated in humans with allergic rhinitis and asthma.

Please insert the short abstract: Major house dust mite allergens of high molecular weight are usually involved in the clinical signs of canine atopic dermatitis (AD). Western blotting methodology shows immunoglobulin-E (IgE) responses directed against proteins in the range of 13-220kDa. This study aimed to identify molecular weight of the proteins to which IgE from atopic dogs reacted against. Twenty client-owned atopic dogs were enrolled in the study after confirming that they fulfilled six of eight clinical features of canine AD, as described by Favrot et al, ruling out other pruritic dermatoses, and exclusively feeding a novel protein diet for eight weeks. Intradermal and FceR1-α serological tests were performed in all 20 atopic dogs to identify sensitization to *D. pteronissynus* (DP). SDS-PAGE with a 15% gel and a monoclonal anti-dog IgE western blotting were used to identify molecular weight of reacting allergens. Among the 20 dogs tested, 13 (65%) showed positive results for DP in intradermal, serological and western blotting tests. All 13 dogs reacted against proteins in the range of 21,5-31kDa,
what may indicate reaction to Der p1 (25kDa), Der p3 (31kDa), Der p6 (25kDa) and Der p9 (29kDa). Seven of the 13 dogs (53.8%) reacted against proteins in the range of 14.5-21.5kDa, what may indicate response against Der p2 (15kDa); while 4/13 dogs (30.8%) showed reactions between 31.1-44.9kDa, possibly to Der p10 (36kDa); and 1/13 (7.7%) dogs showed reactions to proteins of less than 14.4kDa, such as Der p5 (14kDa). Low molecular weight DP allergens, can cause sensitization and eczema precipitation in dogs with atopic dermatites usually implicated in humans with allergic rhinitis and asthma.

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I declare that the conflict of interests of each author are declared: Yes

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