

MEETING ABSTRACT

Open Access

Influence of gender and sexual reproductive state in concentration of CAN f 1 in the fur of dogs (*Canis lupus familiaris*)

Maicon Paulo^{1*}, Marconi Rodrigues De Farias¹, Fábio Nogueira¹, Michelle Barbosa², L Karla Arruda², Nelson Rosario Filho³

From 3rd WAO International Scientific Conference (WISC) 2014
Rio de Janeiro, Brazil. 6-9 December 2014

Background

The allergens from cats and dogs have been implicated as extrinsic factors involved in sensitization, precipitation and exacerbation of allergic rhinitis and asthma in susceptible children and adults, at rates ranging from 10 to 25%. The major allergen from the epithelium of dogs is the Can f 1, responsible for the majority of sensitivity reactions to these. The Can f 1 is a lipocalin, which confers adhesive properties, derived from the sebaceous glands and found in fur, scales and saliva of dogs. The aim of this study is to assess the influence of gender and sexual reproductive state on concentrations of Can f 1 in the fur of dogs.

Methods

Were evaluated 80 healthy household dogs, 40 males (20 whole and 20 neutered) and 40 females (20 whole and 20 neutered), older than one year, regardless of size, weight or breed, free of ectoparasites and sanitized regularly. All samples were separated and sieved resulting in a fine dust used to determine the levels of Can f 1 by enzyme-linked immunosorbent assay (ELISA), using anti can f 1 (Indoor Biothechnologies-Chartottesville USA.) All data were analyzed by ANOVA and Bonferroni method, and the estimated difference between averages for the groups was evaluated by Student's t test, with significance level of 5% ($p \leq 0.05$).

Results

All evaluated dogs had Can f 1 in its fur, and its average concentration was $1.2612 \pm 0.67 \mu\text{g.g}^{-1}$. The concentration

of Can f 1 in the fur of dogs was higher in females compared to males ($p \leq 0.05$), and there was no difference between neutered and whole ($p \leq 0.05$) animals.

Conclusions

Female dogs have higher amounts of Can f 1 in fur compared to males, and sterilization no influence on their concentrations.

Authors' details

¹School of Agricultural Sciences and Veterinary Medicine, Pontifícia Universidade Católica Do Paraná, Brazil. ²School of Medicine, University of São Paulo, Ribeirão Preto, Brazil. ³Federal University of Parana, Brazil.

Published: 8 April 2015

doi:10.1186/1939-4551-8-S1-A177

Cite this article as: Paulo et al.: Influence of gender and sexual reproductive state in concentration of CAN f 1 in the fur of dogs (*Canis lupus familiaris*). *World Allergy Organization Journal* 2015 **8**(Suppl 1):A177.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



¹School of Agricultural Sciences and Veterinary Medicine, Pontifícia Universidade Católica Do Paraná, Brazil
Full list of author information is available at the end of the article