

IDENTIFICATION OF THE ALLERGENS RESPONSIBLE FOR DOG ALLERGIES TO BEEF AND LAMB´S MEAT

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Objectives of this study:

Eating meat is a frequent cause for dogs to develop food allergies. In this study, our objective was to identify the main allergens responsible for allergies in dogs to beef and lamb's meat.

Methodology and materials:

We selected ten dogs that were allergic to beef and lamb's meat, with high levels of serum specific IgE when exposed to these extracts (PET-ELISA TM, Alergovet S.L.) which were confirmed through an elimination diet and subsequent provocation.

The serums were analyzed using ELISA with pure protein and SDS-PAGE/ immunoblotting, and we determined the N-terminal sequence of the major allergens identified.

Results:

The major allergens, those against which almost all tested serums triggered a reaction, were homologous proteins in beef and lamb, with molecular weights of approximately 160 and 60 kDa. The first one was identified as Immunoglobulin G, and the second one as phosphoglucosomutase.

Conclusions:

As with humans, bovine and ovine IgG are important allergens in dogs. However, phosphoglucosomutase had not been previously identified as an allergen. The results obtained explain the existence of cross-reaction by homology between allergens of both species.