Woman's Best Friend?

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Trial

Mattsson L, Lundgren T, Everberg H, et al.: Prostatic kallikrein: a new major dog allergen. *J Allergy Clin Immunol* 2009, 123:362–368.

Rating

- Of importance.

Introduction

Several important dog allergens have been identified: the lipocalins Can f1 and Can f2, serum albumin, and Can f3. However, the full spectrum of the IgE activity in dog allergen extracts has not yet been defined.

Aims

The authors investigated the important allergenic components contained in dog urine.

Methods

Using size exclusion chromatography, proteins were separated, and their IgE-binding activity examined. The N-terminal amino acids of one of these allergenic fractions were

sequenced. A recombinant allergen was produced, and its IgE binding activity to sera from 37 dog allergic individuals was assayed by a fluorescent enzyme-linked immunoassay.

Results

An allergenic protein in dog was identified as prostatic kallikrein. A similar protein was identified in dog dander extracts. Seventy percent of the sera had IgE binding to this allergen. A total of 37% of sera tested failed to demonstrate IgE binding to Can f1, 2, or 3. In addition, the dog prostatic showed IgE cross-reactivity with human prostatic kallikrein.

Discussion

The authors have identified a significant new dog allergen that differs from the currently known major dog allergens. Sensitization to this allergen, prostatic kallikrein, in women may predispose them to human seminal fluid due to cross-reactivity.

Comments

Dog prostatic kallikrein seems to be an important dog allergen, and its inclusion in dog allergen reagents will aid in the diagnosis and treatment of dog allergic patients. Furthermore, the cross-reactivity with human prostatic kallikrein is of importance in understanding the potential mechanisms in women suffering from sensitivity to human seminal plasma (ie, dog dander allergy may be a risk factor for this condition).

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