



POSTER PRESENTATION

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Peanut panallergen Ara h 8 IgE and IgG4 epitopes

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From 5th International Symposium on Molecular Allergology (ISMA 2013)
Vienna, Austria. 6-7 December 2013

Background

Ara h 8 is hypothesized to be the panallergen responsible for oral allergy syndrome between birch pollen (Bet v 1) and peanut. We recently determined the crystal structure of Ara h 8. In this work, we probed microarrays of peptides with peanut allergic and peanut sensitized patient sera for IgE and IgG4 reactivity.

Methods

15-mer peptides that were offset by 5 amino acids were printed to glass. Patient sera was incubated with the slides. IgE and IgG4 binding was detected with combinations of secondary and fluorescently-labeled tertiary antibodies. The linear epitopes identified were mapped on the 3-D structure and compared with those of birch pollen protein Bet v 1.

Results

The majority of the Ara h 8 IgE epitopes mapped in this work align with those identified with Bet v 1. Considerably more IgG4 epitopes than IgE epitopes were found. Peanut allergic sera were more reactive with regard to IgE and IgG4 than peanut sensitized sera.

Conclusion

Our results support both the hypothesis that Ara h 8 could be contributing to oral allergy syndrome between birch pollen and peanut.

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Published: 17 March 2014

doi:10.1186/2045-7022-4-S2-P30

Cite this article as: Hurlburt et al.: Peanut panallergen Ara h 8 IgE and IgG4 epitopes. *Clinical and Translational Allergy* 2014 **4**(Suppl 2):P30.

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