

## CORRESPONDENCE

# Basophil responses to peanut allergens

DOI:10.1111/all.12502

C Mayorga et al. report an interesting study on the basophil response to peanut allergens in a Spanish population of 30 peanut allergic patients (1). Sensitization to Ara h 9 is not frequent in French and Nordic populations (2, 3). On the contrary, Ara h 2 is predictive of peanut allergy (2, 4, 5). Sensitization to Ara h 9 has been observed in 42% of Spanish peanut allergic patients. In these patients, only 4.8% reacted to Ara h 1 or Ara h 2 or Ara h 3 (6). In a previous study, Ara h 9 was considered to be linked to bronchospasm in a cohort of patients from United Kingdom (7). What was the rate of asthma as a major symptom in the patients of this study, with sensitization to Ara h 9?

On account of a cross-reactivity between Ara h 9 and Pru p 3, the latter being a frequent sensitizing allergen in Spain, the authors study the basophil response to Ara h 9, Pru p 3, Ara h 1, Ara h 2, and Ara h 6 in patients with or without a peach allergy (group 1 and group 2). A control group is group 3 with peach allergy but tolerant to peanut, and another control group is group 4 without any allergy.

Some results are not thoroughly discussed. How do they explain that immunoCAP to Ara h 2 is always negative in pea-

nut allergic patients (group 1) and with poor efficiency in group 2 (33%), despite the fact that BAT is positive to Ara h 2 in 60% of cases of group 1? Do they assert that peanut allergy entirely relies on Ara h 9 in group 1 (CAP is positive in 100% of cases)? But 60% of peanut tolerant patients—group 3—are positive to Ara h 9 at the same extent by CAP and by BAT... The reader would appreciate your opinion about the real interest of Ara h 9 for the diagnosis of peanut allergy. It is likely that complementary results about the level of specific IgEs to Ara h 2 and Ara h 9, as well as detailed results for each patient would contribute to clarify the relevant allergens to be involved in the Spanish peanut allergic patients.

## Conflict of interest

The author declare that they have no conflict of interest.

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## REPLY

We thank Dr. Moneret-Vautrin for her comments on our paper “Basophil responses to peanut allergens in Mediterranean peanut allergic patients”. We agree that Ara h 2 has been shown to be the most relevant and predictive allergen for peanut allergy in many countries (1, 2). However, in the Mediterranean area, where peanut and peach sensitization and allergy often coexist in the same patient, Ara h 9 has also been shown to be involved, and Pru p 3 has been shown to be the primary sensitizer (3–6). Thus, we aimed to analyze the importance of various peanut allergens, including Ara h

2 and Ara h 9 among others, using the basophil activation test, in a population with a high prevalence of peach allergy.

In this work we found different patterns of sensitization, with significant differences in basophil activation for Ara h 1, Ara h 2 and Ara h 9 in patients allergic to peanut with good tolerance to peach, compared to those non-allergic controls. The only real discriminating allergen for peanut allergy was Ara h 2, with a high sensitivity and specificity (7). Moreover, sensitivity to Ara h 9 was also high in patients with allergy to peach indicating a cross-reactivity to Pru p 3, as has been

found by others (5, 6). These results indicate that in Mediterranean population, although there is a high prevalence of sensitization and allergy to LTP, Ara h 2 is important for the diagnosis of peanut allergy. In addition, sensitization to Ara h 9, was not found to be related to bronchospasm, in fact the highest percentage of positive cases to this allergen was found for patients with OAS, although this was not significant.

Regarding sensitization to Ara h 2 in peanut allergic patients (groups 1 and 2) as detected using immunoCAP, this was found to be extremely low. These results were similar with those obtained by ELISA. These data agree with the findings of Vereda et al. (4), who showed that only 42% of Spanish patients were positive to this allergen in contrast to the higher sensitivity found in patients from other countries. On the other hand, BAT, which detects a functional response, demonstrated a higher sensitivity to Ara h 2 compared to serum IgE determination, as has been found by oth-

ers (6). Therefore we believe that these differences are likely to be due to the use of different methodologies that measure different outcomes (6).

These data suggest that despite the high sensitivity to the peanut LTP Ara h 9, the better allergen for discriminating peanut-allergic subjects is Ara h 2, and that the basophil activation test leads to both a higher sensitivity and specificity than immunoCAP for evaluating peanut allergy.

### Conflict of interest

The author declare that they have no conflict of interest.

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