

## EDITORIAL

### UNCOMMON ALLERGENS

*Any protein or polysaccharide with antigenic properties or any other substance bound to a carrier protein to form a haptene can provoke the formation of reagenic antibodies, thus provoking an allergic reaction. In fact, for a reagenic reaction to take place, the antigen or haptene only has to avoid the mechanisms of suppression of Th2 cell activation (1). Nevertheless, certain conditions are essential to, or encourage, this anomalous response to these proteins, which most people tolerate perfectly. Firstly, an atopic predisposition, which is genetically transmitted, is one clearly demonstrated factor that present in most allergic patients (2, 3). Another factor involves intense, habitual contact with allergens, such as that which can occur in working environments (occupational asthma and dermatitis) (4, 5) as well as in some homes (6). Moreover, certain characteristics make antigens more likely to provoke sensitization: the size and compactness of the folding of the protein molecule, its stability and solubility determine its ability to penetrate through the mucosas and activate the cellular system that will eventually give rise to the production of specific IgE. Because they have enzymatic activity, some allergens, such as respiratory allergens (fungi, mites, pollens) (1, 7) have even greater penetrative capacity.*

*In most cases, predisposing factors and environmental allergens have these characteristics. Consequently, sensitization is usually caused by certain allergens, making etiologic diagnosis relatively easy. Allergens that are practically universal are dust mites, grass pollens and certain fungi, among the respiratory allergens, while the most frequent causes of food allergy are cow's milk proteins, egg, fish and dried fruit. In some countries or regions, certain allergens predominate such as olive and parietaria in the Mediterranean region, ragweed in the USA, birch in northern Europe, and buckwheat, as a food, in some Asian countries. However, it is not unusual to see patients with symptoms suggestive of allergy in whom the results of routine allergological tests are negative. When this happens, laborious detective work must begin, thus putting allergists' investigative ability, as well as their patience and that of the patients, to the test. All allergology journals frequently publish case reports showing a causal relationship between a particular substance and the patient's symptomatology, which could make the role played by the possible allergen seem almost anecdotal. The publication of these detailed cases should not be undervalued, since they provide suggestions for investigation in other, possibly similar, cases that are difficult to diagnose. However, attention should be paid to the quality of the diagnostic tests carried out, as these are*

*sometimes excessively simple and although they may be sufficient, doubt can remain concerning the real responsibility of the allergen (8). Other cases may involve a cross-reaction, which must be confirmed by investigation of the patient's serum antibodies to the possible antigen. To do this, SDS-PAGE immunoblotting (9) should be used. This technique is also required to demonstrate the various antigens contained in the allergen (10, 11). Finally, when the results of diagnostic tests are negative, it is sometimes difficult to prove that a particular product has behaved as an allergen, causing symptoms that overlap with those of the allergic reaction. This highlights the need to exercise caution when establishing the etiology of an allergy although, in practice, elimination of the product causing the symptoms is the most appropriate solution (12).*

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