

## Should we all eat insects ?

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### Introduction

Entomophagy is an alternative food that has become more common in our countries during recent years.

The aim of the study was to identify the potential cross-reactivity between the allergens of shrimps, House Dust Mites (HDM) and crickets.

### Material & Method

We selected 3 patients (aged 7–18–27 y.o.) on the basis of their positive sIgE results against Der p 10 (from 16.9 to >100 KUA/L) and against Pen a 1 (from 14.3 to >100 KUA/L), two tropomyosins. Each patient had a diagnosis of both HDM allergy and food allergy to shrimps. We performed a total *Grylloides sigillatus* protein extraction in order to separate the proteins on the basis of their isoelectric point and their molecular weight. Afterwards, we performed 1D and 2D Western blot (WB) to determine the molecular allergen sensitization profile of each patient serum to the extract.

### Results & Discussion

The 1D WB confirmed the sIgE reactivity to a protein around 37 kDa that could be the *Grylloides'* tropomyosin. The 2D WB confirmed for the 3 patients' sera a tropomyosin sensitization (around 37 kDa, pH 5-7). Furthermore, it showed for 1 out of 3 patients a sensitization to a protein around 17 kDa, pH 9 that could be troponin, another described allergenic protein.

### Conclusion

Our preliminary results showed IgE cross-reactivities with the *Grylloides'* tropomyosin in 3 shrimp and HDM allergic patients with positive sIgE to Pen a 1 and Der p 10. One patient presented a sensitization to the *Grylloides'* troponin, but the identification of this protein should be confirmed by LC-MS/MS.