

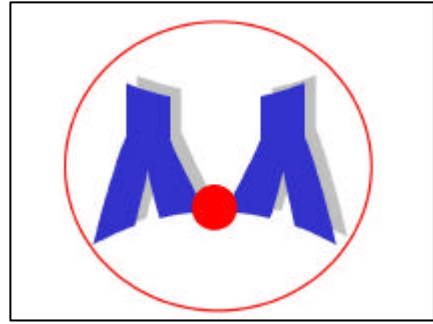
MEDIWISS Analytic GmbH

Uerdinger Strasse 3

D-47441 Moers

02841/8890470

[pwahl@mediwiss-analytic.de](mailto:pwahl@mediwiss-analytic.de)



# AllergyScreen<sup>TM</sup>

## Circular letter 1

### Knowledge and know how in allergy diagnosis

Many species of arthropods are the sources of potent allergens that sensitize and induce IgE-mediated allergic reactions in humans. Most of these arthropod allergens are proteins, and the allergic response mechanism to these allergens is the same as it is for allergens from other sources such as plant pollen, moulds and foods. Aside from ingestion of crustaceans (shrimps, crabs), among arthropods, humans have the greatest contact with insects and mites, and as a result allergies to these two groups of arthropods have been the most frequently reported. Because of the large number of people affected by allergic reactions to cockroaches and dust mites, many allergens of these organisms have been extensively studied, purified, and immunobiochemically characterized.

**Shrimps, crabs and lobsters may cross-react** with other crustaceans and mollusks and nonedible arthropods such as insects (**cockroach**) and arachnids (**house dust mites**).

The IgE recognition by shrimp, crab or house dust mites allergic individuals is based on similar amino acid sequences homologous to epitopes in mite, cockroach and crab **tropomyosins**. They are the basis of the in vitro cross-reactivity among invertebrate species.

Example in the AllergyScreen system, Panel 2 and Panel 3 (same serum):

**Strong house dust mite reactivity and the cross reaction against crab!**

