In hymenoptera allergic patients with positive tests to several venom species, the ImmunoCAP®-inhibition assay can be used to identify patients who only need immunotherapy with one venom species.

According to the authors, multiple venom extracts are often prescribed in immunotherapy of hymenoptera allergic patients showing positive tests to more than one species. This may result in increased costs, increased risk of adverse events and in sensitization to new allergens. The aim was to investigate if the positive reaction to both yellow-jacket (Vespula) and European paper wasp (Polistes) in a population of patients with clinical hymenoptera allergy was due to cross-reaction or not. In the study they used the ImmunoCAP®-inhibition assay technique, where the patient sera are pre-incubated with homologous or heterologous venoms before testing for venom-specific IgE antibodies.

There was no significant difference in the level of IgE antibodies to Vespula venom and Polistes venom before the pre-incubation step. Preincubation with homologous venom showed more than 90% decrease in venom-specific IgE for both species. In the heterologous ImmunoCAP-inhibition assay it was shown that Polistes venom effectively (> 75%) bound Vespula-specific IgE in 56% (25/45) of the patients and Vespula venom bound effectively Polistes-specific IgE in 13% (6/45) of the patients.

69% of the population should only receive venom from one species when treated with immunotherapy and that both species has to be tested with ImmunoCAP-inhibition to disclose this.

In conclusion the authors state that 69% of the population should only receive venom from one species when treated with immunotherapy and that both species has to be tested with ImmunoCAP-inhibition to disclose this.

### SYNOPSIS

- Consecutive adult patients (n=45, mean age = 40) with skin test verified clinical (grade III–IV Mueller) hymenoptera allergy were studied.
- IgE antibodies to honeybee (Apis), yellow-jacket (Vespula), European paper wasp (Polistes) and European hornet (Vespa) were assayed by ImmunoCAP® (Phadia AB, Uppsala, Sweden).
- ImmunoCAP-inhibition was performed by pre-incubating sera with increasing dilution of venom for 12 h at 4 °C and then assayed for allergen-specific IgE antibodies.
- All sera were positive to yellow-jacket (12.03±5.7 kUA/L) and European paper wasp (10.7±2.0 kUA/L), but the concentrations were not significant different.
- The Polistes venom effectively (> 75%) bound Vespa-specific IgE in 56% (25/45) of the patients and Vespa venom bound effectively Polistes-specific IgE in 13% (6/45) of the patients.
- 69% of the population should only receive venom from one species when treated with immunotherapy and both species has to be tested with ImmunoCAP-inhibition to disclose this.


### SYNONYM

- Allergy high-risk children were recruited from an ongoing prospective cohort.
- Allergen-specific IgE was assayed by ImmunoCAP® at birth and at 12, and 24 months of age. Detection limit was extended to 0.1 kUA/L by including a zero control.
- Mononuclear cells were isolated from cord blood and peripheral blood and then cryopreserved.
- Cytokine levels (time-resolved fluorescence) and cytokine-specific mRNA (PCR-technique) were assayed in the cell culture after 48 hours exposure to allergen.
- A transient low production of IgE antibodies, in a few children above 0.35 kUA/L (especially for peanut), was noted and peaked at 6 or 12 months and then returned to baseline in the population with no sensitization at 2 years of age.
- The scientific basis for existing recommendation for allergen avoidance by high-risk women during pregnancy was questioned.


### SYNONYM

- Families, adults (n=119) and children (n=137), who intended to buy a dog, a cat or intended to start riding a horse were recruited by newspaper advertisement.
- They were examined by symptom scores and IgE allergen sensitization at baseline and once a year for 5 years.
- The symptom score was based on 5 symptoms scored 0-4 and thus a max score at 20.
- Allergen-specific IgE was assayed by ImmunoCAP® to a mixture of common allergen (Phadiatop®) and to the individual animal allergens.
- The symptom score of the atopic population was 5 to 6.
- There was no change in symptom score in atopic patients over the follow up period even if they were sensitized to their own animal.
- In the atopic population, 26.7% of the children but no adults or non-atopic individuals develop sensitization to their new animal.