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# CAP inhibition in hymenoptera venom allergy V.1

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Savi Eleonora[1], Peveri Silvia[1], Montagni Marcello[1]

[1]UOsD Allergologia, Ospedale G.da Saliceto - Piacenza Italy

Silvia Peveri



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## Attachments

DOC

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220KB

1 **Annual validation**: 17/01/2017

2 **BACKGRUOND** A common issue in diagnosis of Hymenoptera venom allergy (HVA) is the occurrence of multiple positive results to the different venoms, mainly due to cross-reactivity between phospholipase A1 for vespids, and hyaluronidase, that may concern all venoms; another important cross-reactivity source is common cross-reactive carbohydrate determinants (CCD)

3 **AIM** Provide the laboratory technician with the instructions for the in vitro test

4 **FIGURES INVOLVED** laboratory technician and allergologist

5 **ACTIVITY DESCRIPTION**
- Eligible patients: CAP-inhibition is mandatory in the correct choice of the venom to be used for VIT in patients with apparent poly-sensitization
- Blood sample: Blood sample is collected in a dry tube with a Separator Gel. No fasting is required before exam.

6 **EXECUTION**
Two 100 mcl aliquots of patient's serum were incubated separately overnight at 4 °C with 200 mcl of two venoms at increasing dilutions (0; 25 mcg; 50 mcg; 100 mcg  200 mcg/ml). Subsequently sIgE against each of the venoms were determined in the samples prepared as above using ImmunoCap tecnique. The CAP-inhibition test was carried out with a specific programme in UniCap 250 (Thermofisher) with a calibration curve between 0.1 to 100 ku/l sIgE concentrations that allows a good evaluation of low values.The extent of homologous (blockage of venom-sIgE by the same venom) and heterologous (blockage of the venom-sIgE by the other venom) inhibition was computed with the following formula:% inhibition = 100 – [IgE inhibited sample (kU/l) × 100/ IgE anti-venom (kU/l) at zero concentration of venom].A percentage of homologous inhibition >70 % was required to perform heterologous inhibition. The same percentage was considered suggestive of cross-reactivity among venoms. The venom preparations tested were the same used for skin tests

7 **COMPLICATIONS** Having a small quantity of blood sample can cause problems in running the test that can not be conducted until the end.

8 **RECOMMENDATIONS** Take a test tube full enough of blood.It's recomanded  to use a IgE specific serum concentration below 25-28 ku/l to have a good rate between sIgE

concentration and venom concentration. Higher values are adjusted with a suitable serum dilution.