



1 Serviço de Imunoalergologia, Centro Hospitalar Universitário de Lisboa Norte, Lisboa, Portugal; 2 Serviço de Imunoalergologia, Centro Hospitalar Universitário do Algarve, Faro, Portugal; 3 Serviço de Imunoalergologia, Centro Hospitalar Universitário de Coimbra, Coimbra, Portugal; 4 Faculty of Medicine of the University of Coimbra, Coimbra, Portugal; 5 UBIAir – C linical & Experimental Lung Centre, Universidade da Beira Interior, Covilha, Portugal; 6 Unidade de Imunoalergologia, Centro Hospitalar Universitário da Cova da Beira, Covilhã, Portugal; 7 Unidade de Imunoalergologia, Unidade Local de Saúde de Castelo Branco, Castelo Branco, Portugal; 8 Consulta de Imunoalergologia, Hospital Terra Quente, Mirandela, Portugal; 9 Instituto Clínico de Alergologia de Lisboa, Lisboa, Portugal; 10 Macro Array Diagnostic, Vienna, Austria; 11 Diater Laboratorio de Diagnostico y Aplicaciones Terapeuticas SA, Madrid, Spain

## Background

Pollens from the Cupressaceae family are common allergens in the Mediterranean area; however, its real prevalence and its clinical relevance in patients with respiratory allergy is not precisely established.

## Aim

To characterise the clinical and molecular profile in a subgroup of allergic rhinitis patients with positive skin tests (SPT) to Cupress and Cup a 1.

## Methods

**Included:** seasonal allergic rhinitis (AR) patients

- ≥ 11 years-old
- from 7 allergy centres in Portugal
- without previous AIT
- With positive SPT to both Cupress and Cup a 1 (Diater®)

**Determinations:** Total IgE and specific IgE (sIgE) – sIgE to Cup s, Cup a1, Cry j1, Pru p3, Pru p7

- ALEX2 (MacroArrayDX, Wien, Austria)
- values ≥0.3kUA/L considered positive



All with SPT positive to Cupress and Cup a 1

48 patients with allergic rhinitis

**ALEX2**  
18.8% (n=9) were sensitised to cypress without sensitisation to other pollens.

52% female

88% adults

Mean age: 36.2±17.3 years

69% persistent moderate-severe rhinitis

60% conjunctivitis

58% asthma

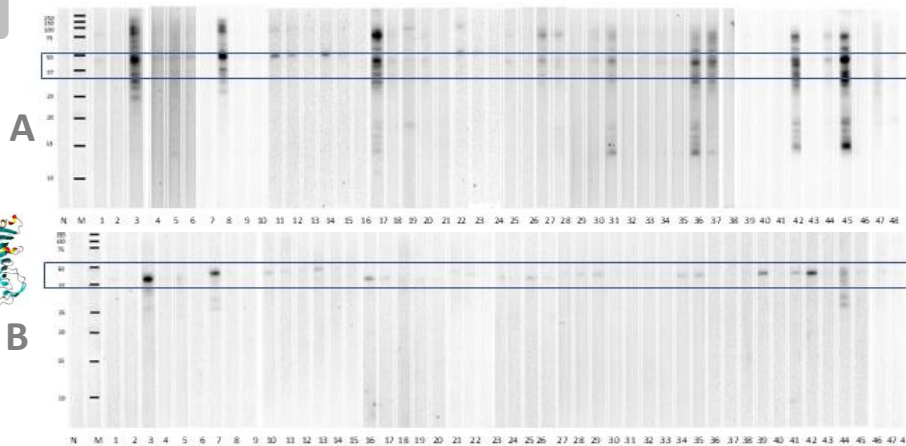


Fig.1 a- Cupressaceae extract immunoblotting;; Fig.1 b- Cup a1 extract immunoblotting

## Results

Table 1- sIgE determined – frequency of sensitization and mean values

	Total IgE	Cup s	Cup a1	Cry j1	Pru p3	Pru p7
n(%)	48 (100)	6 (12.5)	41 (85.4)	26 (54.2)	3 (6.3)	0 (0)
sIgE Med [IQR] – kUA/L	109 [303.2]	0.6 [0.2]	8 [17.5]	1.4 [4.6]	4.4 [8.8]	0 [0]

✓ We did not find a significant variation in sIgE to Cup a1 levels according to rhinitis severity (p=0.5), the presence of asthma (p=0.6) or of conjunctivitis (p=0.3).

Table 2 – Cypress sensitisation profile of the studied population

		sIgE to Cup a 1 (n)	
		< 0.3 kUA/L	>0.30 kUA/L
sIgE to Cup s (n)	< 0.3 kUA/L	7	35
	> 0.30 kUA/L	0	6
		sIgE to Cry j1 (n)	
		< 0.3 kUA/L	>0.30 kUA/L
sIgE to Cup s (n)	< 0.3 kUA/L	18	24
	>0.30 kUA/L	4	2
		sIgE to Cup a1 (n)	
		< 0.3 kUA/L	>0.30 kUA/L
sIgE to Cup s + sIgE to Cry j1 (n)	< 0.3 kUA/L	3	15
	>0.30 kUA/L	0	2

## Conclusions

In Portugal, sensitisation to Cypress is more common in the context of sensitisation to other pollens and is associated with a high frequency of rhino conjunctivitis. Cup a1 was the allergen identified in most Cypress allergic patients. These data highlight the importance of Cup a1 in the diagnosis and, consequently, in the selection of this same molecular allergen in the composition of the ITA in cypress allergy.