# Is Cynodon dactylon an important cause of pollinosis in Madrid?

Subiza J, Barjau MC, Craciunesco GC, Narganes MJ, Gonzalez P., De Noia A.

**Clínica Subiza, Madrid, Spain**

CLÍNICA SUBIZA

## BACKGROUND

Objective: **Grass pollen is the main cause of pollinosis in Madrid**. Both grass **subfamilies, Pooideae** (Trisetum paniceum, Dactylis glomerata, etc.) and **Chloridoideae** (Cynodon dactylon), **are abundant plants** in the surrounding areas of the city. However**, exist a problem for the prescription of accurate immunotherapy,** due to the low, **but present partial cross-reactivity between Phl p 1 and Cyn d 1**

## METHODS

Pollen counts were done with a **Burkard spore trap** (Burkard Manufacturing, Rickmansworth, Herst., U.K.) from 1979 to 2024 **(45 years)**

Additionally, we performed **Alex Allergy Explorer** (Macro Array Diagnostics GmbH, Austria) **in 1,584 patients** with pollinosis born and residing in Madrid and **studied consecutively** during 2022-23

## RESULTS

The highest airborne presence was for Platanus sp. (22%) followed by Quercus spp. (18%), Cupressaceae (13%), **Poaceae (10%),** Olea sp. (6%), Pinus spp. (5%), and Populus spp. (3%) (Figure and Table I)

The most significant allergenic pollen was for grasses, with a prevalence of positive **(Phl p 1 and/or Phl p 5) of 68%,** followed by Cupressus arizonica (Cup a 1) of 61%, Olea europea (Ole e 1) of 58%, Platanus acerifolia (Pla a 1 and/or Pla a 2) of 28%

Although the prevalence of Cyn d 1 was 45%, in contrast, it was only **2.3%** in those **genuinely sensitized to Cynodon** but not to Pooideae (**Cyn d 1 > Phl p 1 and Phl p 5 neg**.) following the instructions suggested by Popescu FD. (Molecular biomarkers for grass pollen immunotherapy. World J Methodol. 2014 Mar 26;4(1):26-45. doi: 10.5662/wjm.v4.i1.26.)

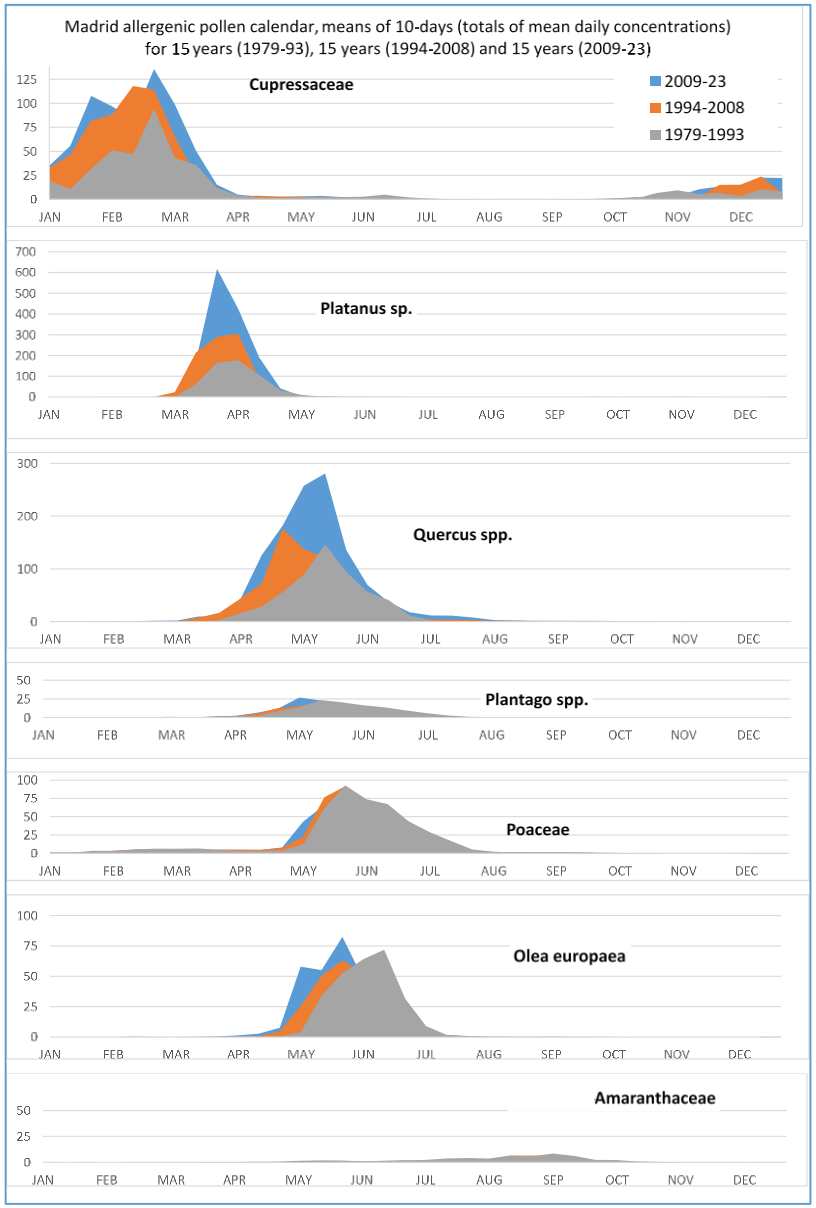


Table I. Presence of airborne pollen and ALEX test positivity

| **Airborne presence** | | **ALEX test positivity** | |
|---|---|---|---|
| | % | | % |
| *Platanus* acerifolia | 22 | **Pla a 1 and/or Pla a 2** | **28** |
| *Quercus* spp | 18 | | |
| Cupressaceae | 13 | **Cup a 1** | **61** |
| Poaceae | 10 | **Phl p 1 and/or Phl p 5** | **68** |
| | | Cyn d 1 | 45 |
| | | **Cyn d 1 > Phl p 1 and Phl p 5 neg** | 2.3 |
| *Olea europaea* | 6 | **Ole e 1** | **58** |
| *Plantago* spp | 3 | Pla l 1 | 8 |
| Amaranthaceae | 0.9 | Sal k 1 | 10 |
| | | Chen a 1 | 2 |
| | | **Profilins** | **42** |
| | | Polcalcines | 16 |
| | | LTPs | 18 |
| | | Storage proteins | 15 |
| | | PR-10 | 14 |
| | | | |

Airborne presence (percent of total yearly pollen count, mean of 1979-2023)

and ALEX test positivity (percent positive results in 1584 patients with polinosis studied consecutively during 2022-23

**Conclusion:**

1) **Cynodon dactylon is not a frequent cause of grass genuine sensitization in Madrid**
2) On the contrary, the subfamily **Pooideae represents by far the most frequent cause of genuine sensitization to grasses**

EAACI 2025 GLASGOW