

## Plants with anti-inflammatory properties: a review regarding Portuguese ethnobotany

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**Background:** Ethnobotany represent a key element to identify plants with medicinal properties, gathering ancestral traditions with scientific inquiry. In Portugal, ethnobotany has contributed to the identification of plant species used to address various health concerns. In this context, the emergence of anti-inflammatory properties stands out. The search and collection of plants with these characteristics not only serves to preserve cultural knowledge and traditions but also opens doors to the development of natural therapies [1,2].

**Objective:** Identify, based on ethnobotanical studies conducted in Portugal, plant species traditionally used for anti-inflammatory purposes. **Methods:** A narrative literature review was conducted using the ScienceDirect, PubMed, Web of Science, and RCAAP databases. The search employed the keywords "ethnobotanical studies" and "Portugal" in both Portuguese and English. Studies were selected based on the following eligibility criteria: i) conformity with the definition of genuine ethnobotanical studies, based on field interviews; ii) being digitally accessible; and iii) include a list of species with scientific names and community uses. **Results:** Nineteen eligible studies were selected, identifying plants used for anti-inflammatory purposes, totaling 101 species. The most frequently mentioned species were *Malva sylvestris* L., *Geranium purpureum* Vill., and *Parietaria judaica* L. Regarding locations, the São Mamede Natural Park was the location where the highest number of species with anti-inflammatory potential was identified. The term most commonly used by the population to describe anti-inflammatory properties was "inflammations". Notably, leaves were typically used as the plant part of choice for their anti-inflammatory properties. **Conclusions:** This study compiles a list of plant species traditionally used within the community for their anti-inflammatory properties. This list serves as a foundation for the development of *in vitro* and *in vivo* studies to validate the anti-inflammatory properties of these species. If the properties were confirmed, this study establishes a basis for the development of new therapeutic agents.

**Keywords:** Ethnobotany; inflammations; medicinal plants;

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### References

1. Camejo-Rodrigues J, Ascensão L, Bonet MA, Valles J. An ethnobotanical study of medicinal and aromatic plants in the Natural Park of "Serra de São Mamede" (Portugal). *J Ethnopharmacol* 2003, 89, 199–209.
2. Novais MH, Santos I, Mendes S, Pinto-Gomes C. 2004. Studies on pharmaceutical ethnobotany in Arrábida Natural Park (Portugal). *J Ethnopharmacol* 2004, 93, 183–95.