

Plants as antiparasitic agents: a review regarding Portuguese ethnobotany

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Background: Ethnobotany focuses on the communal use of plants, within this field, ethnobotanical studies play a crucial role identifying plants with potential therapeutic effects, preserving traditional knowledge and ancestral practices [1,2,3]. These studies allow the development of alternative therapies, which are crucial to support modern medicine [4]. Thus, the identification of plants with antiparasitic properties is vital for the development of new therapeutic options [5]. Plants such as *Allium sativum* and *Mentha spicata* have a history of use and serve as examples recognized for their antiparasitic properties [6]. **Objective:** The objective of this study is to identify ethnobotanical studies conducted in Portugal, with the aim of creating a list of plants that have been documented to have antiparasitic properties. **Methods:** A literature review was undertaken using PubMed, ScienceDirect, RCAAP and Web of Science, with the search equation (“Ethnobotanical studies” AND “Portugal”). Eligible studies were required to meet the criteria of being authentic ethnobotanical studies conducted in Portugal, that were digitally accessible and contain the list of plants along with their scientific names and documented purposes. The extracted information was summarized in tables. **Results:** A total of 56 species with documented antiparasitic uses were identified within the community. These species were utilized for addressing both ectoparasites and endoparasites, serving purposes in human and veterinary applications. The most cited plants included *Mentha spicata* and *Mentha piperita*. Remarkably, the Autonomous Region of Madeira had the highest number of identified antiparasitic plant species, totaling 22 species. **Conclusions:** This study successfully compiled a list of plants with antiparasitic properties within the community. The findings provide foundation for future research, including *in vitro* and *in vivo* studies, to validate and explore the efficacy of these plants as antiparasitic agents, and contribute to the development of alternative therapeutic options for managing parasitosis.

Keywords: Ethnobotanical research; ethnopharmacology; parasites; medicinal plants;

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References

- [1] Camejo-Rodrigues J, Ascensao L, Bonet MA, Valles J. An ethnobotanical study of medicinal and aromatic plants in the Natural Park of "Serra de Sao Mamede" (Portugal). *Journal of Ethnopharmacology*. 2003;89(2-3):199-209.
- [2] Vinagre C, Vinagre S, Carrilho E. The use of medicinal plants by the population from the Protected Landscape of "Serra de Montejunto", Portugal. *Journal of Ethnobiology Ethnomedicine*. 2019;15(1):30.
- [3] Esteves MI, Silva OD, Pasa MC. Traditional medicine and mediterranean vegetation in portuguese community, Europe. *FLOVET*. 2018;1(10).
- [4] Silva PT, Silva MA, Silva L, Seca AM. Ethnobotanical Knowledge in Sete Cidades, Azores Archipelago: First Ethnomedicinal Report. *Plants*. 2019;8(8).
- [5] Cock IE, Selesho MI, Van Vuuren SF. A review of the traditional use of southern African medicinal plants for the treatment of selected parasite infections affecting humans. *Journal of Ethnopharmacology*. 2018;220:250-64.
- [6] Camejo-Rodrigues J. *Recolha dos 'Saber-Fazer' Tradicionais das Plantas Aromáticas e Medicinais*. 2006.