

A systematic review about anti leishmaniasis effects of *Allium* species from 2000 to 2017

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Abstract

Introduction: Leishmania is a major public health problem worldwide. The aim of the present study was to investigate medicinal plants with anti-Leishmania activity which used in the world.

Methods and Results: Data were systematically gathered from five English databases including Ebsco, Science Direct, PubMed, Google Scholar and Scopus, and four Persian databases including Magiran, Irandoc, Iran medex, and the Scientific Information Database (SID) from 2000 to April 2017. Obtained information included plant family, extraction method, extract concentration, animal models and parasite species. A total of 27 papers, including 44 experiments (26 in-vitro and 18 in-vivo), were eligible between 2000 and 2017 for systemic review and meta-analysis. Various species of *Allium* spp. were studied in Leishmania species. The study showed that there is not much diversity among studies. Result showed the highest proportion of *Allium* species used in the world as anti-leishmaniasis was *Allium sativum*.

Conclusions: The present systemic review provides valuable information about natural products with anti-Leishmania activity, which would be examined in future experimental, clinical trials, and herbal combination therapy.

Key words: Leishmania, Medicinal plants, *Allium* species, Herbal extract, Systematic review, Meta-analysis