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Unlocking the Therapeutic Potential of the Genus *Senecio* (Asteraceae): Essential Oil Composition and Pharmacological Insights

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Abstract *Senecio* is the largest and most complex genus in the family of the Asteraceae with more than 1,500 species distributed widely

throughout the world. A comprehensive search of the electronic databases (1986-2023) using the keywords of 'Senecio' and 'essential oil' revealed that an essential oils composition breakdown is available for 57 species, with alpha-pinene, alpha-farnesene, germacrene D, p-cymene, myrcene, alpha-terpinene, and caryophyllene oxide being the most identified components. The pharmacological activities have been summarized of different species including antimicrobial, antioxidant, repellent, antifungal, acaricidal, anti-inflammatory, cytotoxicity, phytotoxic, anticholinesterase, allelopathic, nematocidal, antimalarial, antileishmanial, alpha-glucosidase, anticorrosive, analgesic, and toxicity. This review is expected to lay the foundation for further studies of this genus and provides guidance for selecting accessions of species with the best chemical profiles.

Keywords

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