

INPLASY PROTOCOL

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None declared.

An updated systematic review of *Vaccinium myrtillus* leaves: phytochemistry and pharmacology

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Review question / Objective: This review aims to present the latest knowledge on the phytochemical profile as well as the therapeutic effects of *Vaccinium myrtillus* leaves.

Background: The leaves are used in traditional medicine of different countries for the management of diabetes. Until date there are no relevant information, only assumptions regarding the compounds that are responsible for this effect. Bilberry leaves are used in many countries in traditional medicine for treating a wide variety of diseases. Well documented in the literature, the influence of pedo-climatic conditions is an important factor that is responsible for the noticeable differences among the chemical composition of herbal drugs, and also the accumulation of different metals, having significant effects on the quality of plant products.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 December 2022 and was last updated on 08 December 2022 (registration number INPLASY2022120029).

INTRODUCTION

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METHODS

Strategy of data synthesis: For this systematic review the main databases were searched using combinations of the following keywords: „Vaccinium myrtillus“, „bilberry“, „leaves“. The search performed on Web of Science Core Collection, PubMed and Scopus.

Eligibility criteria: After reading the abstract, or in some cases the full text, publications dealing with soil science, ecology, plant pathology and cell culture were excluded, as well as articles about other Vaccinium species and Vaccinium myrtillus fruits.

Source of evidence screening and selection: The search performed on Web of Science Core Collection, PubMed and Scopus (June 2022) led to a total 197 publications (review, research article, short communications and proceedings paper). All identified articles were pooled to reference manager software (Mendeley) in order to remove duplicates and select relevant papers. Following this selection, 64 publications remained. No disagreements between reviewers occurred.

Data management: All articles were read by the authors and the data was included in an excel table. Extracted data included study design, study details (such as

purpose, methodology), and any specific details.

Language restriction: Only articles in english were selected.

Country(ies) involved: Romania.

Keywords: bilberry; leaves; Vaccinium myrtillus; phytochemistry.

Contributions of each author:

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