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In Vivo Studies of *Lepidium meyenii* or Maca in Animal Models of Diabetes Mellitus and Other Metabolic Syndrome-Related Diseases-A Scoping Review

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Abstract

Lepidium meyenii or Maca is a Peruvian plant that belongs to the Brassicaceae family. Maca has various attributed health benefits due to the diversity of its bioactive compounds. Studies reveal that Maca is effective for many purposes including in the treatment of diabetes mellitus (DM) and other metabolic syndrome-related diseases. This review aims to uncover previously identified underlying anti-diabetic effects of Maca as well as its potential in the treatment of other conditions linked to metabolic syndrome in animal models in vivo. A scoping review of the literature was conducted using a protocol by Arksey and O'Malley. The protocol centred on the identification of research questions, identification and selection of relevant studies, data charting and collating, summarizing, and reporting the findings. Searches were conducted using Semantic Scholar, Scopus, PubMed Central, and Science Direct. Six studies were included in the review. The studies varied in terms of purpose, methodology, and detail of findings. They include the administration of Maca in different types of animal models and its effect on several biochemical parameters. There is fundamental scientific evidence from this review that supports the anti-diabetic properties of Maca in animal models of DM and other metabolic syndrome-related diseases. However, the scarcity of reports indicates the need for more rigorous studies in the future. © (2023), (International Islamic University Malaysia). All Rights Reserved.

Author Keywords

animal; diabetes; *Lepidium meyenii*; metabolic syndrome (MetS)

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