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Phytochemical Standardization of Ashtavarga: An Endangered Ayurvedic Himalayan Herb

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ABSTRACT

Background: Ashtavarga is a group of eight endangered medicinal herbs namely Jeevak (*Malaxis acuminata*), Rishbhak (*M.muscifera*), Meda (*Polygonatum verticillatum*), Mahameda (*P.cirrhifolium*), Kakoli (*Roscoea purpurea*), Kshirkakoli (*Lilium polyphyllum*), Vridhi (*Habenaria edgeworthii*) and Ridhi (*H.intermedia*) used in the preparation of highly popular ayurvedic formulation Chyawanprash, which is well recognized for strengthening vital force of the body, cell regeneration capacity and immune system. All these plants grow naturally in small patches in particular ecological environments in the North-Western Himalayan region at an elevation of 1200-4000 m above the msl. However, because of the lack of proper documentation and written details, identification of the plants became difficult and illusory. Through literature search we noticed that there were no reports on the active chemical constituents of the most of Ashtavarga plants which are mainly responsible for medicinal properties.

Aims: Taking into consideration of the medicinal properties of these plants, phytochemical standardization is the need of hour to scientifically validate the claims.

Methods: Hence in this study we isolated marker compounds from four Ashtavarga plants namely *R. purpurea*, *P. verticillatum*, *C.acuminatum* and *L. polyphyllum* by using appropriate chromatographic techniques (column chromatography and HPLC) followed by structure elucidation using different NMR (1D and 2D), MS and other spectroscopic techniques. After isolation, plant extracts were standardized with the help of marker compounds using HPTLC and HPLC techniques.

Results: We have successfully isolated four marker compounds from each of the above mentioned plants and standardized the extract by using isolated markers.

Conclusion: As these herbs are rare and endangered, the Ayurvedic formulation companies mostly substituted these with commonly known medicinal plants. Hence phytochemical standardization is necessary for herbal formulations because these are composed of many constituents that are capable of variation.

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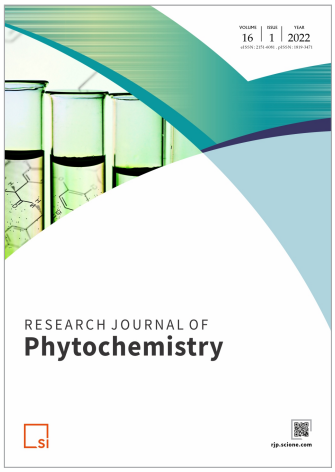

Aims & Scope

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