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Title: The wound healing potential of agrimony

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Statement of the problem: Agrimonia eupatoria L. (Rosaceae) is an herb widely used in traditional medicine for its beneficial effects. Agrimony belongs to one of the most famous middle- European medicinal plants. The aerial part of agrimony is a rich source of tannins, organic acids and flavonoids. This herbal remedy is recommended for the symptomatic relief of mild inflammation of the mouth and throat, symptomatic treatment of mild diarrhea and for relief of minor skin inflammation and small, superficial wounds. Antimicrobial, anti-glucosidase, anti-glycation and anti-hyperglycemic activities were previously described for agrimony. Moreover, experiments on isolated aortas showed improved vasodilatation in diabetic rats. *In vivo* study revealed wound healing-promoting effects, which led us to extend the evaluation to fibroblasts and keratinocytes and open and sutured wounds in rats. The purpose of this study was to prepare different extracts of agrimony and, after HPLC characterization and identification of phenolic compounds, prepare different topical preparations (gels) for wound treatment.

Methodology and Theoretical Orientation: water and 50% methanol extracts of agrimony were prepared and lyophilized, followed by HPLC characterization and phenolic compounds identification. Determination of phenolic compounds and flavonoids was carried out and topical pharmaceutical preparations for wound treatment were prepared.

Findings: different phenolics were identified by HPLC. The Content of total polyphenols, tannins and flavonoids was determined according to European Pharmacopoeia. Gels with agrimony extracts for topical application were prepared. Animal experiments with gel applications are planned.

Conclusion: The reported and obtained data showed that extract could help improve the healing of acute skin wounds.

Biography

Mucaji graduated in Pharmacy at Comenius University in Bratislava, Slovakia, where he also received a PhD degree in Pharmacognosy. Since 2013 is an ordinary professor at the Department of Pharmacognosy and Botany, Faculty of Pharmacy, CU. He has published over 90 research articles with more than 1100 citations. His field of interest is Pharmacognosy, the separation and identification of natural compounds, extracts standardization and evaluation of natural compounds' biological activity.