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Evaluation of phytochemical and pharmacological activity of beetroot extracts (Beta vulgaris)

P. R. Onkar¹, P. V. Powar¹, P. H. Sharma¹ and J. G. Avari² ¹Padmashree Dr. D.Y. Patil College of Pharmacy, India ²Rashtrasant Tukadoji Maharaj Nagpur University, India

Beet root (*Beta vulgaris*) ranks among the 10 most powerful vegetables with respect to its antioxidant capacity. Beet root is a potential source of valuable water-soluble nitrogenous pigments, called betalains, which comprise two main groups, the red betacyanins and the yellow betaxanthins. Betalains have been extensively used in the modern food industry. Betalains, because of their relative scarceness in nature, have not been much explored as bioactive compounds, but some studies have indicated their potential as antioxidant pigments. The aim of this study was to characterize the phytochemical profile and determine the antibacterial activity of beetroot extracts (*Beta vulgaris*) extract. The standardization of plant material was carried out which involved study of botanical description identification and physicochemical parameter of plant material along with test for heavy/ toxic material and microbial contamination. A preliminary phytochemical analysis of the beet root was conducted for the detection of alkaloids, cardiac glycosides, flavonoids, tannins, anthraquinones, saponins, volatile oils, cyanogenic glycosides, coumarins, sterols and triterpenes. The phyto-chemical screening of beetroot extracts shows presence of flavonoids, saponins, sterols and triterpenes. The obtained extract was used for determination of antibacterial activity against selected Gram-positive, Gram negative bacteria. The *in vitro* antibacterial activity of ethanol extract of beet root was evaluated by cup plate method using selected Gram-positive and Gram negative bacteria. In antibacterial tests, *Staphylococcus aureus and Bacillus cereus* showed higher susceptibility than *Staphylococcus aureus and Pseudomonas aeruginosa*. The antibacterial gel was prepared containing above extract and evaluated for evaluation parameter of gel.

Biography

P. R. Onkar has completed her B.Pharm. from Pune University and now she is doing M.Pharm. in Quality Assurance Techniques at Dr. D. Y. Patil College of Pharmacy Akurdi, Pune. She has published 1 paper in reputed journal and presented 3 posters in different conferences.