Annual variation in the production of Boeravinone B in different plant parts of *Boerhaavia diffusa* L. - A medicinally important herb

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Boerhavia diffusa (Nyctaginaceae) commonly known as Punarnava is a widely distributed herb that has been naturalized in many areas of the world. It is used for the treatment of various ailments by Indians, particularly tribal people as mentioned in Ayurveda, Charaka Samhita and Sushrita Samhita. Punarnava has many ethnobotanical uses (used as a green leafy vegetable, root juice is used to cure asthma, urinary disorders, leucorrhea, rheumatism, encephalitis, etc.) due to the presence of its valuable phytochemical constituents. Moreover, due to the presence of polyphenols and flavonoids, clinicians and scientists have examined it extensively to gain more insight into the biological and medicinal properties, amongst which Boeravinone B a potent flavonoid is responsible for its pharmacological activities. A study was performed for the identification and quantification of Boeravinone B throughout the year on a monthly basis using different parts of this useful species grown under field conditions by using HPTLC analysis. Variation in the content of Boeravinone B were observed throughout the year and maximum yield of metabolite was obtained in the month of July, which is also the ideal time for the growth and proliferation of this plant species. The study indicates a correlation of the availability of the metabolite with the various developmental stages of the plant. Among the different individual plant parts analyzed, the highest concentration was recorded in the roots followed by leaves and the least concentration was recorded in the defoliated stem parts of the plants species. These results signify the therapeutic potential of herb and the collection times for maximum availability of phytochemicals. The details shall be discussed and presented.

Speaker Biography

Sharada Mallubhotla from Punjab University, Chandigarh, India, is presently Academic Coordinator for School of Biotechnology at Shri Mata Vaishno Devi University, India. She has authored 26 publications, two books well cited over 175 times, and is serving as editorial board member of reputed Journals. Her research interests include production and manipulations of bioactive phytochemical metabolites from cell and organ cultures, micropropagation, medicinal plant conservation Biotechnology, Genetic engineering of medicinal plant species and Orchid Biotechnology. Currently she is working on application of bioreactor systems for production of plant bioactives, value additions through biotic and abiotic elicitation in plant cultures.

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