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Application of plant tissue culture technology in conservation and propagation of plant species used in Dashmula

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Forests constitute an important part of the social life of tribal groups who are entirely or partly dependent on forests for their livelihood. Forest trees have direct and indirect impact on economies, food security and health. India is endowed with rich and diverse forest resources. Dashmula is one of the best known health care products of Ayurveda, which is a combination of ten medicinal plants. In Dashmula, principally roots are employed in compounding of Ayurvedic formulations. Dashmula invariably means ten roots comprising of 5 trees and 5 smaller plants. Each of the plants is endowed with medicinal properties and act synergistically in combination. Dashmula is collectively used in pacify vitiated tridosha, pain, arthritis, fever, cough, bronchitis, general weakness, neuropathy, nervine weakness, urinary tract diseases, boosts immune power, colic pain, intermittent fever, respiratory disease and as an expectorant. These medicinal plants are highly demanded for preparation of Ayurvedic medicines. *Stereospermum suaveolens* is one of the tree species used in preparation of Dashmula. *S. suaveolens* is also one of the ingredients used in formulation of *Chyawanprasha*. Due to the indiscriminate collection, over exploitation and uprooting of such plants for their roots, these valuable plants have become vulnerable in various places and becoming endangered in India. To overcome this, tissue culture offers potential solution for *in-situ* and *ex-situ* conservation as well as large scale propagation. *In vitro* propagation of *S. suaveolens* as well as status of tissue culture intervention in other species of Dashmula will be presented and discussed.

Biography

Susmita Shukla has completed her Ph.D. in Biotechnology from Pt Ravishankar Shukla University, Raipur. She is an Assistant Professor, in Amity Institute of Biotechnology, Amity University, Noida (U.P). She has teaching experience of more than ten years, published papers in reputed national and international journals. She is actively involved in micropropagation/clonal propagation of elite medicinal and economical important plants for mass multiplication, raising hybrid variety of economical important crops through tissue culture techniques.

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