



The use of encapsulation dehydration for the first time in *Bunium persicum* to converse this important endangered medicinal plant

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India is known as “The Home of Spices”. Seed spices are an important group of agricultural commodities and play a significant role in our national economy. *Bunium persicum* (Boiss.) Fedtsch, a member of family Apiaceae, is one of the medicinally important spices but it is critically endangered. Plant tissue culture plays a very significant role in production and conservation of an endangered medicinal plant. Hence encapsulation dehydration was carried out for the first time in *Bunium persicum* to converse this important endangered medicinal plant. For encapsulation shoot buds and somatic embryos were excised from *in vitro* stock cultures, and these explants were encapsulated into beads. The beads were dehydrated by air drying in laminar flow chamber to reduce the water content, followed by direct immersion in liquid nitrogen in cryovials for one month. Frozen beads were quickly thawed in water bath at 40°C for 3 minutes and cultured on MS medium fortified with 0.25 mg/l TDZ and 200 mg/l activated charcoal for shoot retrieval. A maximum of 45.8 % shoot retrieval was recorded. The technique of encapsulation dehydration would help in making the germplasm available on sustainable basis and save it from the verge of extinction.



Neha Sharma has completed her PhD at the age of 27 years from Dr Y S Parmar University of Horticulture & Forestry, Nauni, Solan (HP) India and even alongwith her PhD she started working as a Senior Research Fellow. She has published around 15 papers in reputed journals and has been serving as an editorial board member to many esteemed journals. She has submitted two virus coat protein gene sequences to NCBI. She has a great command on Plant Tissue culture, Plant Molecular Biology, Genomics, Proteomics, Serology and Bioinformatics. Her Research contributes a lot to society for future breeding programs.

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