



## Establishment and in vitro regeneration of some horticultural crops through micropropagation

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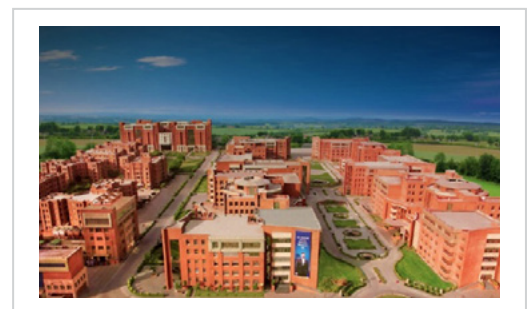
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### Abstract

Horticultural crops are well known for their multifunctional properties. Various propagation techniques have been applied for propagating the horticultural crops but due to overexploitation and high demand of these multifunctional crops there has been always need for advancement towards these available techniques. Micropropagation is a promising technology for mass multiplication, for producing true to type and disease free plants. The present research highlights on development of in vitro regeneration of some of the horticultural crops having potential for commercialization. Punica granatum and Citrus macroptera has multiple functions and known for its nutraceutical and medicinal value. All the different parts of the Punica granatum plant from leaves, fruits, bark to roots have important medicinal usage. They are rich in phytochemicals such as alkaloids, flavonoids, terpenoids, anthocyanins, organic acid and catechin to name a few. Citrus macroptera has significant cytotoxic, antimicrobial, antihypertensive, antipyretic, and appetite stimulant potentials. Non availability of elite clones for plantation is the main constrain in cultivation of these species. Experiments were carried out to find out the best suitable media, effect of subculture, effect of phytohormones were studied. All these parameters will pay a positive impact on in-vitro conservation and mass multiplication through micropropagation in accomplishing disease-free and true to type planting material. In vitro studies on specific variety of Punica granatum and Citrus macroptera has been carried out and complete regeneration protocol has been developed which is ready and can be taken up further mass multiplication.

### Biography

Susmita Shukla is PhD and M.Sc in Biotechnology and more than 17 years of teaching and research experience. She has received prestigious award as DBT travel grant for presenting research work in International conference at Singapore, IASc-INSa-NASI Summer Research Fellowship Award, Career Advancement Award, Best Young Scientist Award, Scientist of the Year Award, Outstanding Scientist Award etc. She has also filed patent of commercial use and also organized National & International seminars and Indo- African Training Program for African Professionals. She has also handled some prestigious projects funded by Department of Biotechnology, Govt. of India. She has published research papers in reputed National and International journals and also presented her research work in various National and International conferences.



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