عنوان مقاله:

ACCUMULATION AND PRODUCTION OF SECONDARY METABOLITES IN SALVIA SPECIES

محل انتشار:

اولین همایش منطقه ای گیاهان دارویی شمال کشور (سال: 1392)

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خلاصه مقاله:

The Salvia is an important genus of Lamiaceae family with more than 099 annual or perennial species which are used for therapeutical, nutritional or decorative purposes. Many plant species from genus Salvia have long been recognized as medicinal herbs in the traditional science. An unusually rich source of significant and useful secondary metabolites, belonging to various chemical groups, such as essential oils, terpenoid compounds and phenolic derivatives, tannins and flavonoids have been isolated from the genus. It has been used widely to treat coronary heart disease, menstrual disorders, miscarriage, hypertension, and viral hepatitis. The valuable assortment of secondary metabolites in plants from genus Salvia has created a considerable interest in the research community for their production in cell or tissue culture. But, the application of biotechnological methods for the propagation of this species to recover high rich metabolites appears rather limited. So, undifferentiated and transformed cultures are able to synthesize the active compounds but their content is low. The elicitation treatment significantly enhances the metabolites content at a level close or much higher than in the intact plants. The induction effect depends on many factors: the kind and dose of the elicitor, the type of explant in the culture and its susceptibility, time and ways of administration, the growth state of tissues etc. The recognition of the genes pathways and the transcription factors will be helpful method and improve production of the secondary metabolites in vitro cultures and eventually appliance in the industry. The hairy roots (transformed roots) were transformed by the infection of plantlets with soil bacterium Agrobacterium rhizogenes containing Ri plasmid, and they have been established as a potential means for the production of bioactive compounds. The interest in hairy roots is mainly due to high growth rate, genetic stability and growth in hormone-free media. This research describes best methods for accumulation and production of secondary metabolites in salvia species.

کلمات کلیدی:

Medicinal herbs, Biotechnology, Elicitation, Hairy roots