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## Elicitation: An effective strategy for the biotechnological production of bioactive compounds

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Pharmaceutically significant secondary metabolites include alkaloids, lignans, glycosides, flavonoids, volatile oils, etc. Currently, most of these secondary metabolites are isolated from wild or cultivated plants because their chemical synthesis is either extremely difficult or economically infeasible. Plant in vitro cultures represent an renewable source of valuable medicinal compounds and cost-effective alternative to classical approaches to plant secondary metabolite production. Numerous strategies have been developed to improve the productivity of plant culture such as medium optimization, precursor addition, elicitation, genetic transformation, metabolic engineering. Elicitation is a good strategy to induce physiological changes and stimulate defense or stress-induced. Traditionally, elicitors have been classified in two types, abiotic or biotic, according to their chemical nature and exogenous or endogenous origin. Here, we summarize the enhancing effects of elicitors on the production of bioactive compounds such as alkaloids, lignans, volatile oils, focusing particularly on the use of biotic elicitors, salicylic acid and nitric oxide. Understanding how plant tissues and their specific secondary metabolic pathways respond to specific treatments with elicitors would be the basis for designing protocols to enhance the production of secondary metabolites, in order to produce quality and healthy fresh foods.

### Biography

Sedigheh Esmaeilzadeh Bahabadi has completed his PhD at the age of 29 years from Tarbiat Modares University, Iran and was researcher at SUNBOR Institute, Japan and Göttingen University, Germany. She is Assistant Professor, Department of Biology, University of Zabol, Iran. She is published more than 10 papers in reputed journals and has been serving as a reviewer of international journals.

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