Special Issue

Production of Plant Secondary Metabolites Using Plant Tissue Culture and Bioreactor Culture Techniques

Message from the Guest Editors

Plants are rich sources of secondary metabolites such as flavonoids, phenolics, polyphenols, terpenoids, and alkaloids, which have pharmaceutical and therapeutic value. Secondary metabolites can be produced continuously, sustainably, economically, and successfully in plant tissue cultures such as callus, cell, shoot, embryo, adventitious root, and transgenic root cultures. In a variety of bioreactors, including stirred tanks, bubble columns, airlifts, temporary immersion chambers, and other modified bioreactors, cells, shoots, embryos, and adventitious and transgenic root cultures have been developed. The gaseous atmosphere, oxygen supply, pH, minerals, carbohydrates, growth regulators, rheology of the liquid medium, cell density, and other elements that have been thoroughly studied in various plant species are among the various factors affecting biomass and metabolite accumulation in bioreactors. Elicitation, immobilization, nutrient, and precursor feeding strategies have been developed. The production of useful plant secondary metabolites using plant tissue cultures is the main topic of this Special Issue of *Plants*.

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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