

Special Issue

Specialized Metabolites in Root cultures

Message from the Guest Editors

Triterpenoids and steroids, including phytosterols, represent a characteristic group of natural compounds of high structural diversity. The functions of these compounds in plants are ascribed both to primary (general) and secondary (specialized) metabolism, e.g., the participation of sterols in the structure and fluidity regulation of cellular membranes, and triterpenoids – in diverse strategies of plant chemical defense. Both triterpenoids and phytosterols exert numerous biological activities and display various pharmacological effects. The multifunctionality of triterpenoids makes them promising multitargeting agents in the treatment of certain cancers and inflammatory diseases, as well as microbial infections. In turn, phytosterols can reduce the intestinal absorption of cholesterol and help maintain cardiovascular health. For this reason, these compounds have become valuable with regard to the production of various food additives. Thus, there is an increasing interest in the pharmaceutical, nutraceutical, and cosmeceutical applications of triterpenoids and phytosterols.

Guest Editors

Prof. Dr. Anna Szakiel

Department of Plant Biochemistry, Institute of Biochemistry, Faculty of Biology, University of Warsaw, 1 Miecznikowa Str., 02-096 Warszawa, Poland

Dr. Marek Długosz

Department of Plant Biochemistry, Institute of Biochemistry, Faculty of Biology, University of Warsaw, 1 Miecznikowa Str., 02-096 Warszawa, Poland

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
plants@mdpi.com

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Editor-in-Chief

Prof. Dr. Dilantha Fernando
Department of Plant Science, University of Manitoba, Winnipeg, MB
R3T 2N2, Canada

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