Special Issue

Phytochemical Diversity and Interactions with Herbivores

Message from the Guest Editors

For over a century, biologists have asked why plants produce such large diversities of chemical compounds and hypothesized about their role in plant–insect interactions. Outstanding advances have been made in elucidating phytochemical diversity as a complex phenotype that can predict defensibility within plants. Despite these advances, more progress is needed to achieve a nuanced view of phytochemical diversity and its interactions with herbivores, community dynamics, and ecosystem processes. Some specific gaps in this literature include: understanding the different components of phytochemical diversity; the macro- and micro-evolutionary scale of phytochemical diversity; linking molecular structure to function; the identification of gene function; utilizing or manipulating phytochemical diversity to protect crop plants from herbivores or manage invasive species; and quantifying the metabolomic changes along environmental clines. For this Special Issue, articles may focus all aspects of phytochemical diversity, but manuscripts describing theoretical or experimental studies are particularly welcome.

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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.

Editor-in-Chief

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