

# Methods in Plant Sciences

*Special Issue*



Edited by  
Martin Janda

*Left* Microscopy, gene editing, -omics, in vitro cultivation, bioinformatics, pathogen assay, etc. Imagine whatever method you want, and it will be undoubtedly useful in plant research (courtesy of Martin Janda; created with BioRender.com)

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# Methods in Plant Sciences

Significant advances in available instruments and methodology have preceded many great biological discoveries. For example, the observation of a cell would not have been possible without the invention of the microscope. Today we are witnessing constant progress in the detection limits of analytical instruments; the resolution of microscopes; the cost (speed) of sequencing is steadily decreasing (increasing); the possibilities of gene editing have been pushed in recent years to places we could not have imagined fifteen years ago; and increasingly powerful computers and more sophisticated software allow us to do detailed experiments 'without a laboratory'. This special issue—which will be published in association with the conference 'Methods in Plant Sciences 2023'—will

focus on current advances in plant experimental biology methods. The special issue aims to help readers keep up with progress in available methodological approaches.

## Invited Reviews

*Daniel van Damme* The state of the art of PPI tools in plant research

*Martin Potocký* Lipid-protein interphases in plant membranes

*Domminik Grimm* Permutation-based GWAS

*Roman Pleskot* Protein-membrane interfaces studied by molecular dynamics

*Martin Mascher & Hana Šimková* Hi-C techniques: from genome assemblies to transcription regulation

*Jan Petrášek & Ayoub Stelate* Advanced imaging tech-

niques for studies of PIN-FORMED auxin transporters

*Marieke Dubois* The use of single-cell transcriptomics in plant-environment interaction analysis

*Ondřej Novák* Spatio-temporal (cell specific) phytohormonal concentration analysis

*Małgorzata Kwaśniak-Owczarek* Approaches of translation study in plant mitochondria: past, present and future perspectives

*Tetiana Kalachova* Monitoring of plant-pathogens interactions

*Jan Skalák* The role of plant hormones in epigenetic regulations

*Roman Hobza* Methodical approaches to study plant sex chromosomes •

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## Invitation to submit

We welcome contributions to this special issue. If you would like to submit a paper, either research or review, please [email](#) a title and brief outline for the consideration of the guest editors. All papers are subject to the usual standards of peer review and must fit the scope of the journal. The deadline for submissions is 30 November, 2023.

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