Special Issue

Research on Plant Cell Wall Biology

Message from the Guest Editors

Plant cells walls are highly variable between species and organs and during plant development. Primary cell walls are mainly composed of polysaccharides, but they also contain a large diversity of peptides and cell wall proteins (CWPs). These latter are critical players in cell wall dynamic processes. They are capable of sensing the cell wall structure changes and accordingly convert them to signals triggering appropriate physiological responses. Secondary cell walls may contain aromatic polymers which contribute to cell wall rigidification and cell death for particular tissues. The sensing of cell wall integrity, in order to balance and restore cell wall homeostasis, is still puzzling. Another fascinating subject concerns the cell wall dynamics and constraints during lateral organ formation. Indeed, cell walls which are necessary to maintain cell structure and integrity in response to cell turgescence need to be locally loosened to allow lateral organ emergence. To summarize, the plant cell wall is a solid, plastic, intelligent exoskeleton capable of sensing and responding to all types of stimuli. Keywords cell wall proteins dynamics integrity plasticity signaling

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Deadline for manuscript submissions

closed (31 January 2022)

Cells

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Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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