



Plasma-Membrane Transport in Plant 2022

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Message from the Guest Editor

Biologic membranes are indispensable components of living eukaryotic cells, which separate cytoplasm from the external medium and organelles from the cytoplasm, thus, underlying the unique environment in each of these subcellular compartments. They not only prevent the free movement of molecules, but also underlie a multitude of other essential functions, including nutrient acquisition, signal perception and processing, electrical phenomena, water balance, and ionic homeostasis. Both mineral uptake and signaling are mediated by so-called transport proteins that “occupy” at least 5% of the plant genome. Numerous electrophysiological and molecular studies have been undertaken to understand how the membrane transport network and its individual components operate. This volume summarizes and reviews some of this work and provides a timely update in the field revealing the role, functional expression patterns, and regulatory modes of some plasma- and organelle-membrane-based cation and anion transporters that enable plant core functions, such as growth, development, and adaptive responses.





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Message from the Editor-in-Chief

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