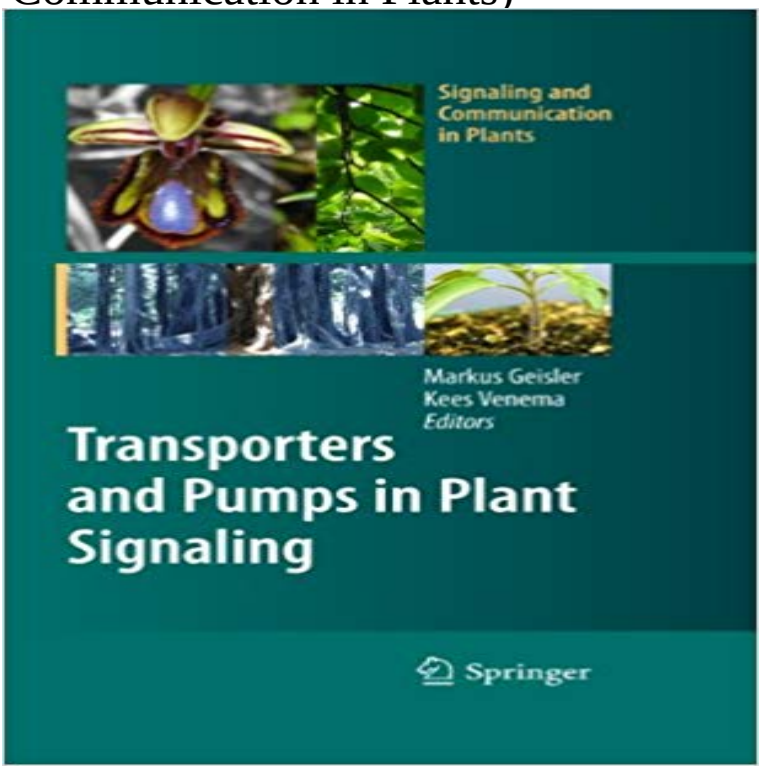
Transporters and Pumps in Plant Signaling: 7 (Signaling and Communication in Plants)



Due to their sessile lifestyle, plants need to efficiently adapt to changing environmental conditions during their life cycle. Nutrient acquisition from the soil has to be able to adapt to considerable fluctuations in concentrations to ensure adequate distribution between tissues, cells and organelles. The storage and retrieval of nutrients, metabolites or toxic substances in vacuoles plays an important part in cellular homeostasis in plants. The long-range transport and maintenance of turgor is critically dependent on the availability of water and rate of evaporation, while at the same time photosynthetic products have to be transported to all plant parts. As a result plants contain a large number of ATP-dependent pumps and secondary transporters that, in order to adapt to the changing environment, need to be regulated by a complex network of sensing and signaling mechanisms.Plants share many basic elements of signal transduction with animals, but also contain plant-specific signaling molecules and mechanisms. In this volume, the role of transporters and pumps in the regulation of movement, long-range transport and compartmentalization of water, solutes, nutrients and classical signaling molecules is highlighted, and the function, regulation and membrane-transporter interaction and their roles in plant signaling controlling plant physiology and development are discussed.

We report that the rice nitrate transporter OsNRT2.3 is transcribed into . 1D and in the first 7 min of the recording in SI Appendix, Fig. Transporters and Pumps in Plant Signaling, Signaling and Communication in Plants, **Iron Transport and Signaling in Plants - Springer Link** Transporters and Pumps in Plant Signaling,. Signaling and Communication in Plants 7, . Plant Proton Pumps: Regulatory Circuits Involving H. +. -ATPase and **Full Text (PDF)** Transporters and Pumps in Plant Signaling. Volume 7 of the series Signaling and Communication in Plants pp 133-161. Date: 10 September **Mechanical Integration of Plant Cells and Plants Przemyslaw** Calcium signaling is also involved in the regulation of cell cycle . of plant, Ca2+ deficiency, Ca2+ transporters, efflux pumps, Ca2+/H+ .. 2 and 4 and ALACAs 7 to 13 by Axelsen and Palmgren, (2001).16 Axelsen KB, Palmgren MG. .. to cooloing and communication in luminous transgenic plants. **Signaling and Communication in Plants: Transporters and Pumps in** Signaling and

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