

1. Record Nr.	UNINA9910827614203321
Titolo	Phloem : molecular cell biology, systemic communication, biotic interactions // edited by Gary A. Thompson, Aart J.E. van Bel
Pubbl/distr/stampa	Ames, Iowa, : Wiley-Blackwell, 2013
ISBN	1-283-55060-1 9786613863058 1-118-38282-X 1-118-38280-3 1-118-38284-6
Edizione	[1st ed.]
Descrizione fisica	1 online resource (394 p.)
Altri autori (Persone)	ThompsonGary A <1955-> (Gary Allen) BelAart Jan Eeuwe van <1943->
Disciplina	575.4/52
Soggetti	Phloem Sieve elements Plant molecular biology Plant cell interaction Plant-pathogen relationships Growth (Plants) Plants - Development
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A. Introduction -- Phloem, the integrative avenue / Aart J.E. van Bel and Gary A. Thompson -- Cell biology of sieve element-companion cell complexes / Rosemary G. White -- Fundamentals of phloem transport physiology / John W. Patrick -- B. Functional aspects of structural SE components -- Roles of plasma membrane transporters in phloem functions / Mechthild Tegeder, Yong-Ling Ruan, and John W. Patrick -- Regulation of sucrose carrier activities / Christina Kuhn -- Cellular basis of electrical potential waves along the phloem and impact of coincident Ca ²⁺ fluxes / Jens B. Hafke and Aart J.E. van Bel -- Sieve element occlusion / Michael Knoblauch and Daniel Mullendore -- C. Long-distance signaling -- Sieve elements : Puzzling activities

deciphered through proteomics studies / Sylvie Dinant and William J. Lucas -- Endogenous RNA constituents of the phloem and their possible roles in long-distance signaling / Julia Kehr and Anja Buhtz -- The effect of long-distance signaling on development / David J. Hannapel -- Plant defense and long-distance signaling in the phloem / Frank Gaupels and A. Corina Vlot -- D. Biotic interactions with the phloem -- Role of phloem metabolites in plant defense / Jillian M. Hagel, Akpevwe Onoyovwi, Edward C. Yeung, and Peter J. Facchini -- Viroids and phloem-limited viruses : Unique molecular probes of phloem biology / Lucy R. Stewart, Biao Ding, and Bryce W. Falk -- Spiroplasmas and phytoplasmas : the phytopathogenic mollicutes of the phloem / Allyson M. MacLean and Saskia A. Hogenhout -- Breaching the sieve element : the role of saliva as the molecular interface between aphids and the phloem / Torsten Will, James C. Carolan, and Thomas L. Wilkinson -- Behavioral and molecular-genetic basis of resistance against phloem feeding insects / Linda Walling and Gary A. Thompson.

Sommario/riassunto

Phloem: Molecular Cell Biology, Systemic Communication, Biotic Interactions is a timely collection of research on the cellular and molecular biology of this plant vascular tissue. Recent advances in phloem research have revealed the centrality of this plant tissue to whole plant development and physiology. Building on advances made through developments of new analytical technologies, this book will provide readers with a current and comprehensive reference on the role of phloem in plant growth and development. Collecting the work of a global team of leading researchers, Phloem wi
