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Titolo	ABC Transporters - 40 Years on / / edited by Anthony M. George
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ISBN	3-319-23476-5
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (384 p.)
Disciplina	570
Soggetti	Cell membranes Biophysics Biochemistry Drug resistance Membrane Biology Biological and Medical Physics, Biophysics Biochemistry, general Drug Resistance
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.
Nota di contenuto	ABC Importers -- Inborn errors and potential correction of the cellular expression and localization of medically important ABC transporters -- Human ABC transporter ABCC11: Molecular mechanistic, pharmacological, and anthropological aspects -- Biology of mitochondrial ABCs and their contribution to pathology -- ABC transporters and multidrug resistance in fungi and yeast -- Structural and mechanistic insights into modulation of P-glycoprotein (ABCB1) function by tyrosine kinase inhibitors -- Techniques for the purification of ABC transporters -- HDAC inhibitors and MDR ABC transporters -- The role of polymorphisms in P-glycoprotein (ABCB1) on function -- Interaction of ABC transporters with drugs -- ABC insights from CFTR.
Sommario/riassunto	This book provides new structural, biochemical, and clinical information on ABC transporters. The authors explore and describe the state of the art of research, knowledge, and prospects for the future for this important family of proteins. The first ABC transporter was discovered in 1973 and was named P-glycoprotein. It elicits resistance

to cytotoxic drugs, chiefly in human tumours, within which chemotherapy failure is observed in about 50% of cases. Together with its complex pharmacology, and even a suspected role in Alzheimer's disease, this ABC transporter still eludes a clinical solution to its multidrug resistance property. ABC transporters are integral membrane active proteins and they belong to one of the largest protein families across all species. Their myriad roles encompass the import or export of a diverse range of allocrites, including ion, nutrients, peptides, polysaccharides, lipids, and xenobiotics. They are of major medical importance with many members elaborating multidrug resistance in bacteria, fungi, yeast, parasites, and humans. Other ABC transporters are involved in a number of inherited diseases, including cystic fibrosis, macular degeneration, gout, and several other metabolic disorders.
