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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Molecular Biology of Aquaporins -- The Evolutionary Aspects of Aquaporin Family -- Transport Characteristics of Aquaporins -- Aquaporins and Gland Secretion -- Aquaporins in Nervous System -- Aquaporins in Cardiovascular System -- Aquaporins in Respiratory System -- Aquaporins in Digestive System -- Aquaporins in Urinary System -- The physiological role and regulation of aquaporins in teleost germ cells -- Aquaporins in the Skin -- Aquaporins in Eye -- Aquaporins in Fetal Development -- Diabetes Insipidus -- Aquaporins in Obesity -- Aquaporin-targeted Therapeutics: State-of-the-field -- Water Transport Mediated by Other Membrane Proteins -- Methods to measure water permeability.
Sommario/riassunto	This book provides a state-of-the-art report on our current understanding of aquaporins and the future direction of the field. Aquaporins (AQPs) are a group of water-channel proteins that are specifically permeable to water and other small molecules, such as glycerol and urea. To date thirteen water-channel proteins (AQP0 –

AQP12) have been cloned and the mechanisms and physiological functions of water transport across biological membranes have long been the subject of interest. Recent advances in the molecular biology and physiology of water transport have yielded new insights into how and why water moves across cell membranes, and studies on aquaporin knockout mouse models suggest that aquaporins are involved in the development of some diseases and they may be useful targets of research into selective-inhibitor drugs. By focusing on the advances made over the last 20 years in the biophysics, genetics, protein structure, molecular biology, physiology, pathophysiology and pharmacology of aquaporins in mammalian cell membranes, this book provides novel insights into further mechanisms and the physiological significance of water and some small molecule transport in mammals in order to stimulate further research in new directions.

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