Record Nr. UNINA9910784731203321 Sensing with ion channels [[electronic resource] /] / Boris Martinac, **Titolo** editor Pubbl/distr/stampa Berlin, : Springer, 2008 **ISBN** 1-281-11832-X 9786611118327 3-540-72739-6 Edizione [1st ed. 2008.] Descrizione fisica 1 online resource (325 p.) Collana Springer series in biophysics, , 0932-2353;; 11 Altri autori (Persone) **MartinacBoris** Disciplina 571.64 Soggetti Ion channels Mechanoreceptors Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Microbial Senses and Ion Channels -- Mechanosensitive Channels and Sensing Osmotic Stimuli in Bacteria -- Roles of Ion Channels in the Environmental Responses of Plants -- Ion Channels, Cell Volume, Cell Proliferation and Apoptotic Cell Death -- TRPV Ion Channels and Sensory Transduction of Osmotic and Mechanical Stimuli in Mammals -- Mechanisms of Thermosensation in TRP Channels -- TRPC Family of Ion Channels and Mechanotransduction -- Mechano- and Chemo-Sensory Polycystins -- Biophysics of CNG Ion Channels -- Sensory Transduction in Caenorhabditis elegans -- Epithelial Sodium and Acid-Sensing Ion Channels -- P2X3 Receptors and Sensory Transduction --Voltage-Gated Calcium Channels in Nociception. Sommario/riassunto All living cells are able to detect and translate environmental stimuli into biologically meaningful signals. Sensations of touch, hearing, sight, taste, smell or pain are essential to the survival of all living organisms. The importance of sensory input for the existence of life thus justifies the effort made to understand its molecular origins. Sensing with Ion Channels focuses on ion channels as key molecules enabling biological systems to sense and process the physical and chemical stimuli that act upon cells in their living environment. Its aim

is to serve as a reference to ion channel specialists and as a source of

new information to non specialists who want to learn about the structural and functional diversity of ion channels and their role in sensory physiology.