

1. Record Nr.	UNINA9910784547103321
Autore	Ashcroft Frances M
Titolo	Ion channels and disease [[electronic resource]] : channelopathies // Frances M. Ashcroft
Pubbl/distr/stampa	San Diego, : Academic Press, 1999
ISBN	1-281-02870-3 9786611028701 0-08-053521-6
Descrizione fisica	1 online resource (505 p.)
Collana	Quantitative Finance
Disciplina	571.64 616.07 616.07 21
Soggetti	Ion channels Genetic disorders - Molecular aspects Membrane proteins
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Front Cover; Ion Channels and Disease; Copyright Page; CONTENTS; PREFACE; CHAPTER 1. INTRODUCTION; CHAPTER 2. FROM GENE TO PROTEIN; Basic Genetics; CHAPTER 3. HOW ION CHANNELS WORK; Properties of Single-Channel Currents; From Single Channels to Macroscopic Currents; From Whole-Cell Currents to Membrane Potential Changes; CHAPTER 4. STUDYING ION CHANNELS; Investigating Ion Channel Function; Obtaining the Primary Sequence; Investigating Ion Channel Structure; Genetic Analysis of Ion Channels and Disease; CHAPTER 5. VOLTAGE-GATED Na ⁺ CHANNELS; Diseases of Muscle Na ⁺ Channels Diseases of Neuronal Na ⁺ ChannelsCHAPTER 6. VOLTAGE-GATED K ⁺ CHANNELS; KV Channels; KV Channels and Disease; KCNQ Channels; KCNQ Channels and Disease; Eag-Like KV Channels; Eag-like KV Channels and Disease; CHAPTER 7. Ca ²⁺ -ACTIVATED K ⁺ CHANNELS; Maxi KCa (BK) Channels; Small KCa Channels; Myotonic Muscular Dystrophy; Intermediate KCa Channels; CHAPTER 8. INWARDLY RECTIFYING K ⁺ CHANNELS; Diseases Associated with Kir Channels;

CHAPTER 9. VOLTAGE-GATED Ca²⁺ CHANNELS; Diseases of Skeletal Muscle Ca²⁺ Channels; Diseases of Neuronal Calcium Channels;
CHAPTER 10. VOLTAGE-GATED Cl⁻ CHANNELS
Cl⁻ Channel Diseases
CHAPTER 11. CYCLIC NUCLEOTIDE-GATED CHANNELS; Cyclic Nucleotide-Gated Channels; CNG Channel Mutations Associated with Disease; Hyperpolarization-Activated Cyclic-Nucleotide-Gated Channels; CHAPTER 12. CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR; Cystic Fibrosis;
CHAPTER 13. EPITHELIAL Na⁺ CHANNEL; Diseases Associated with ENaC Channels; CHAPTER 14. LIGAND-GATED Ca²⁺ CHANNELS; Ryanodine Receptors; Diseases Associated with Ryanodine; IP₃ Receptors; Diseases Associated with IP₃ Receptors; CHAPTER 15. ACETYLCHOLINE RECEPTORS; Diseases of Skeletal Muscle AChRs Diseases of Neuronal AChR
CHAPTER 16. GLUTAMATE RECEPTORS; Non-NMDA Receptors; NMDA Receptors; Glutamate Channels and Disease; CHAPTER 17. GLYCINE RECEPTORS; Glycine Receptors and Disease; CHAPTER 18. GABAA RECEPTORS; Diseases Associated with GABAA Channels; CHAPTER 19. WATER CHANNELS; CHAPTER 20. GAP JUNCTION CHANNELS; Diseases of Gap Junction Channels; CHAPTER 21. AUTOANTIBODIES TO ION CHANNELS; Basic Immunology; Autoantibodies Affecting Neuromuscular Transmission; Autoantibodies to Ion Channels Not Involved in Neuromuscular Transmission; CHAPTER 22. ION CHANNELS IN VIRUSES; Influenza Virus Other Types of Viruses
CHAPTER 23. ION CHANNELS AS LETHAL AGENTS; Ion Channels of the Vertebrate Immune System; Ion Channels of Bacteria, Fungi and Protozoans; Venoms; CHAPTER 24. A RAGBAG OF CHANNELS; ATP-Gated Ion Channels; Vanilloid Receptors; Channels Involved in Programmed Cell Death; β -Amyloid Peptide; A LAST WORD; BIBLIOGRAPHY; INDEX

Sommario/riassunto

Ion channels are membrane proteins that act as gated pathways for the movement of ions across cell membranes. They play essential roles in the physiology of all cells. In recent years, an ever-increasing number of human and animal diseases have been found to result from defects in ion channel function. Most of these diseases arise from mutations in the genes encoding ion channel proteins, and they are now referred to as the channelopathies. Ion Channels and Disease provides an informative and up-to-date account of our present understanding of ion channels and the molecular basis of i
