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Nota di contenuto	ABC TRANSPORTERS AND MULTIDRUG RESISTANCE; CONTENTS; PREFACE; CONTRIBUTORS; INTRODUCTION: WHAT IS MULTIDRUG RESISTANCE?; PART I ABC PROTEINS: AN OVERVIEW AND DESCRIPTION OF THE STRUCTURE, GENOME, NORMAL TISSUE EXPRESSION, PHYSIOLOGICAL ASPECT, AND MECHANISM OF ACTION; 1 The P- glycoprotein 170: Just a multidrug resistance protein or a protean molecule?; 2 Multidrug resistance-associated protein (MRP/ABCC proteins); 3 ABCG2: A new challenge in cancer drug resistance PART II ABC PROTEINS AND ONCOLOGY: EXPRESSION, DETECTION, AND IMPLICATION OF ABC PROTEINS IN HEMATOLOGICAL MALIGNANCIES AND SOLID TUMORS4 Expression, detection, and implication of ABC proteins in acute myeloblastic leukemia; 5 ABC proteins and oncology: Expression, detection, and implication of ABC proteins in solid tumors; PART III ABC PROTEINS AND PATHOGENIC MICROORGANISMS; 6 ABC transporters and resistance to antibiotics; 7 ABC proteins involved in protozoan parasite resistance

PART IV MULTIDRUG RESISTANCE (MDR) MODULATION THROUGH INHIBITION OF ABC TRANSPORTERS: DESIGN OF INHIBITORS AND MECHANISM OF ACTION<sup>8</sup> Reversal agents for P-glycoprotein-mediated multidrug resistance; 9 Reversal agents of multidrug resistance mediated by multidrug resistance-associated proteins (MRPs); 10 Reversal agents for breast cancer resistance protein (BCRP)-mediated multidrug resistance; 11 Strategies to overcome drug resistance in acute and chronic leukemias; 12 Multidrug resistance reversal in solid tumors

PART V BIOLOGICAL AND CLINICAL ASPECTS OF MULTIDRUG RESISTANCE: THE ROLE OF THE TRANSPORTERS AT THE MAIN PROTECTION BARRIERS (ABCB1, ABCC1, ABCC2, ABCG2) ON THE BIOAVAILABILITY OF MANY TYPES OF DRUGS AND MEDICATIONS<sup>13</sup> ABC superfamily transporters at the human blood-brain barrier; 14 The role of ABC transporters at the intestinal barrier; 15 Genetic polymorphisms in ABC transporters; PERSPECTIVES; INDEX

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### Sommario/riassunto

A comprehensive review of the most current scientific research on ABC transporters and multidrug resistance ATP-binding cassette transporter genes (ABC transporters) are known to play a crucial role in the development of multidrug resistance (MDR). MDR is the ability of pathologic cells, such as tumors, to withstand chemicals designed to target and destroy such cells. In MDR, patients who are on medication eventually develop resistance to not only the drug they are taking, but to several different types of drugs. ABC Transporters and Multidrug Resistance offers an essential r

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