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Nota di contenuto	ANTIBIOTICS AND ANTIBIOTIC RESISTANCE; CONTENTS; Preface; 1 ANTIBIOTICS: THE GREATEST TRIUMPH OF SCIENTIFIC MEDICINE; Selectivity; Development of Resistance; Sulfonamide: The First Antibacterial Agent Acting Selectively; Chemotherapeutics and Antibiotics; Penicillin: The First Antibiotic; The First Therapeutic Trial; Rediscovery of Penicillin by a Basic Scientific Approach; Betalactams; Streptomycin: The Second Antibiotic in the History of Antibacterial Agents; The First Remedy for Tuberculosis; Conclusion; 2 DISTRIBUTION OF ANTIBIOTICS; Quantitative Evaluation of Antibiotics Consumption Defined Daily DosesInternational Distribution of Antibiotics: A Scandinavian Example; Control of Antibiotics Overuse; 3 SULFONAMIDES AND TRIMETHOPRIM; General Aspects Regarding the Development of Resistance; Sulfonamides; Sulfonamides as Remedies; Resistance to Sulfonamide; Resistance to Sulfonamides in <i>Neisseria</i> <i>meningitidis</i> ; Characterization of the Sulfonamide-Resistant Dihydropteroate Synthase in <i>N. meningitidis</i> ; Characterization of the Other Sulfonamide-Resistant Dihydropteroate Synthase in <i>N.</i>

meningitis; Resistance to Sulfonamides in *Streptococcus pyogenes* Resistance to Sulfonamides in *Campylobacter jejuni*Resistance to Sulfonamides in *Streptococcus pneumoniae*; Resistance to Sulfonamides in *Pneumocystis jiroveci* (carinii); Resistance to Sulfonamides in *Staphylococcus aureus* and *S. haemolyticus*; Resistance to Sulfonamides in *Mycobacterium leprae*; Plasmid-Borne Resistance to Sulfonamides; Trimethoprim; Innate Resistance to Trimethoprim; Chromosomal Resistance to Trimethoprim; Plasmid-Borne Resistance to Trimethoprim; Possible Pathogenicity Change in *C. jejuni* by Acquiring Trimethoprim Resistance Genes Experimental Test of the Reversibility of Trimethoprim ResistanceConclusion; 4 PENICILLINS AND OTHER BETALACTAMS; The Betalactam Ring: The Characteristic of all Betalactams; The Antibacterial Mechanism of Betalactams; Penicillins; Penicillins with an Enlarged Spectrum; Penicillins Stable to Penicillinases; Counteracting Resistance by the Inhibition of Betalactamases; Other Antibacterial Betalactams; Cephalosporins; Monobactams; Thienamycins; Betalactamases; Horizontal Spread of Betalactamases; Penicillin-Binding Proteins; Resistance to Betalactams by Changes in the PBPs A Very Old Prophecy Came True5 GLYCOPEPTIDES; Mechanism of Antibacterial Action; Resistance; Avoparcin and Clinical Resistance to Glycopeptides; Vancomycin as an Antibiotic of Last Resort; 6 AMINOGLYCOSIDES; The Antibacterial Mechanism of Streptomycin; Bactericidal Effect; Clinical Side Effects; Bacterial Resistance to Aminoglycosides; Horizontal Spread of Aminoglycoside Resistance; Conclusion; 7 OTHER ANTIBIOTICS INTERFERING WITH BACTERIAL PROTEIN SYNTHESIS; Chloramphenicol; Clinical Side Effects; Bacterial Resistance to Chloramphenicol; Tetracyclines; Mechanism of Action Clinical Side Effects

#### Sommario/riassunto

This book, which is the translated version of a Swedish book, combines a general introduction of a variety of antibiotics with a more in-depth discussion of resistance. The focus on resistance in learning about antibiotics will help future scientists recognize the problem antibiotics resistance poses for medicinal and drug-related fields, and perhaps trigger more research and discoveries to fight antibiotic resistant strains. Current overviews of the topic are included, along with specific discussions on the individual mechanisms (betalactams, glycopeptides, aminoglycosides, etc) used in var