Antimicrobial resistance in bacteria is increasing at an alarming rate and presents an enormous global health challenge. Multi-drug resistance in particular is a major problem and severely compromises our ability to deal with infectious disease. The cost of the problem in terms of money, mortality and disability is also rising.

This book presents nine comprehensive and cutting-edge reviews on the current state of antimicrobial resistance. Special emphasis is placed on state-of-the-art research and the authors focus on novel approaches and new perspectives. Topics covered include new antibiotics, biofilm resistance, drug efflux, plasmid-mediated resistance, extended-spectrum beta-lactamases, monitoring of resistance, predicting the evolution of new resistance, antibiotic cycling, and a review of the system for the discovery and development of novel antibiotics. The chapters are unified in theme, however each stands alone in conveying the author’s individual perspectives on the issue of antimicrobial resistance.

Written by experts in the field of antimicrobial resistance this book is a major new resource for microbiologists, molecular biologists, researchers, epidemiologists, infectious disease specialists, medical practitioners, public health experts, and anyone interested in a review of the current research on antimicrobial resistance.

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