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Nota di contenuto	Cover; Related Titles; Title page; Copyright page; Contents; Preface; References; List of Abbreviations; 1: Antimicrobial Peptides: Their History, Evolution, and Functional Promiscuity; Summary; 1.1 Introduction: The History of Antimicrobial Peptides; 1.2 AMPs: Evolutionarily Ancient Molecules; 1.3 AMPs: Multifunctional Molecules; 1.3.1 Defensins as Effectors of Immunity; 1.3.2 Defensins and Wound Healing; 1.3.3 Defensins and Canine Coat Color; 1.4 Discussion; References; 2: Cationic Antimicrobial Peptides; Summary; 2.1 Introduction; 2.2 CAMPs and Their Antimicrobial Action 2.3 CAMPs That Adopt an -Helical Structure2.4 CAMPs That Adopt a -Sheet Structure; 2.5 CAMPs That Adopt Extended Structures Rich in Specific Residues; 2.6 Discussion; References; 3: Anionic Antimicrobial Peptides; Summary; 3.1 Introduction; 3.2 AAMPs in the Respiratory Tract; 3.3 AAMPs in the Brain; 3.4 AAMPs in the Epidermis; 3.5 AAMPs

in the Epididymis; 3.6 AAMPs in Blood Components; 3.7 AAMPs in the Gastrointestinal Tract and Food Proteins; 3.8 AAMPs and Their Structure-Function Relationships; 3.9 Discussion; References

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Sommario/riassunto

In this didactically-written text, the small team of expert authors presents the field in a comprehensive and accessible manner that is well suited for students and junior researchers. The result is a highly readable and systematically structured introduction to antimicrobial peptides, their structure, biological function and mode of action. The authors point the way towards a rational design of this potentially highly effective new class of clinical antibiotics on the brink of industrial application by discussing their design principles, target membranes and structure-activity relationship