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and Related Gram-Positive Bacteria; 18. Resistance of Bacterial Spores; 19. Protection against Foreign DNA 20. More than Just a Quorum: Integration of Stress and Other Environmental Cues in Acyl-Homoserine Lactone Signaling 21. Biofilms; 22. Persister Bacteria; IV. PATHOGENIC RESPONSES; 23. Bacterial Responses to the Host Cell; 24. Phase Variation; V. BACTERIA THRIVING IN STRESSFUL ENVIRONMENTS; 25. Metamicrobiology: Analyzing Microbial Behavior at the Community Level; 26. Life at the Extremes of Temperature; 27. Comparative Genomics of Stress Response Systems in Deinococcus Bacteria; VI. APPLICATIONS OF STRESS RESPONSE STUDIES 28. Redox Mechanisms and Reactive Oxygen Species in Antibiotic Action and Resistance 29. Applications of Stress Response Studies: Biofuel Production; 30. Microbial Bioremediation of Chemical Pollutants: How Bacteria Cope with Multi-Stress Environmental Scenarios; Index

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## Sommario/riassunto

The second edition of Bacterial Stress Responses incorporates and reviews the vast number of new findings that have greatly advanced the understanding of bacterial stress responses in the decade since the publication of the first edition. Readers will discover how this improved understanding not only enhances our knowledge of all cellular regulation at the molecular level, but also provides new ammunition in the fight against pathogens and helps optimize the use of bacteria in biotechnology.

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