Record Nr. UNINA9910574098903321 Microbes and evolution [[electronic resource]]: the world that Darwin **Titolo** never saw / / edited by Roberto Kolter and Stanley Maloy Pubbl/distr/stampa Washington, D.C., : ASM Press, c2012 **ISBN** 1-68367-073-6 1-55581-847-1 Descrizione fisica 1 online resource (314 p.) Altri autori (Persone) KolterRoberto <1953-> MaloyStanley R Disciplina 571.8/92 Soggetti Microorganisms - Evolution Bacteria - Evolution Evolution (Biology) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. ""Cover""; ""Half Title""; ""Title Page""; ""Copyright""; ""Contents""; Nota di contenuto ""Contributors""; ""Preface""; ""Introduction: Darwin and Microbiology""; ""Chapter 1. Evolution in Action: A 50, 000-Generation Salute to Charles Darwin"; ""Chapter 2. Minimal Genomes and Reducible Complexity""; ""Minimal Cells: from Aristotle to Plato""; ""Naturally Evolved Reduced Genomes""; ""The Flagellum of a Bacterial Endosymbiont: A Case against Intelligent Design""; ""Chapter 3. Lady Lumpsa€?s Mouthguard""; ""Chapter 4. Trying To Make Sense of the Microbial Census""; ""Chapter 5. The View from Below"" ""Chapter 6. Running Wild with Antibiotics""""Chapter 7. Antibiotic Resistance""; ""What Are Antibiotics and How Do They Work?""; ""Some Bacteria Are Naturally Resistant to Particular Antibiotics""; ""How Susceptible Bacteria Become Resistant to Antibiotics""; ""Target-Focused Resistance Mechanisms""; ""Drug-Focused Resistance Mechanisms"": ""What Has Antibiotic Use Taught Us about Natural Variation, Selection, and Evolution of Bacteria?""; ""Where Do We Stand Today?""; ""Chapter 8. Bacteria Battling for Survival""; ""Chapter 9. Phage: An Important Evolutionary Force Darwin Never Knew""

""Chapter 10. The Struggle for Existence: Mutualism"""Chapter 11. The

Secret Social Lives of Microorganisms""; ""Chapter 12. Microbes and Microevolution"": ""Chapter 13. Unnecessary Baggage"": ""Chapter 14. Bacterial Adaptation: Built-In Responses and Random Variations"": ""Graduality and Overlap of Bacterial Built-In Responses""; ""Heterogeneity in Bacterial Populations""; ""Bacterial Genome Plasticity""; ""Variation of Mutation Rates""; ""Clues of Bacterial Evolutionary Success""; ""Chapter 15. The Impact of Differential Regulation on Bacterial Speciation"" ""Chapter 16. An Accidental Evolutionary Biologist: GASP, Long-Term Survival, and Evolution"""Chapter 17. How Bacteria Revealed Darwin's Mistake (and Got Me To Read On the Origin of Species""; ""The Importance of Small-Effect Mutations""; ""Before You Can Estimate the Mutation Rate, You Must Eliminate Natural Selection""; ""Why are Mutants Frequent in the Cairns Experiment?""; ""Take-Home Points""; ""Chapter 18. The Role of Conjugation in the Evolution of Bacteria"": ""Chapter 19. Do Bacteria Have Sex?""; ""Chapter 20. Better than Sex"" ""Chapter 21. Darwin in My Lab: Mutation, Recombination, and Speciation"""Chapter 22. Sexual Difficulties""; ""Chapter 23. Unveiling Prochlorococcus: The Life and Times of the Oceana€?s Smallest Photosynthetic Cell""; ""Chapter 24. Deciphering the Language of Diplomacy: Give and Take in the Study of the Squid-Vibrio Symbiosis""; ""The Geological Context of the Evolution of Animal-Microbial Partnerships""; ""A a€œSymbiosisa€? Begins: Margareta€?s Story""; ""Evolution of a Microbiologist: Neda€?s Story""; ""What Wea€?ve Learned, Where We Are Now, and Where We're Going"" ""Chapter 25. The Tangled Banks of Ants and Microbes""