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Oral Microbial Ecology

Current Research and New Perspectives

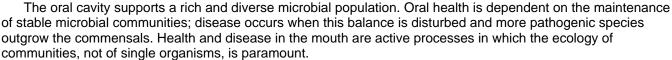
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Published: February 2013 (book); October 2013 (ebook). Pages: xii + 232

Book: ISBN 978-1-908230-17-1 £159, \$319. Ebook: ISBN 978-1-908230-82-9 £159, \$319

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Expert authors from around the world provide an update on recent developments in the burgeoning field of oral microbial ecology. The focus of the book is on the most topical areas in oral microbiology and the volume is a major new work in the field. The chapters are arranged into five sections: microbial populations in oral biofilms, the structure of oral biofilms, communication and sensing within biofilms, health to disease - the microbial community perspective, and new approaches for oral biofilm control. Specialist authors contribute chapters on various topics including population biology, detection and culture of novel oral bacteria, bacterial catabolism of salivary substrates, structural organization of oral biofilms, the extracellular polysaccharides matrix, extracellular proteins and DNA in the matrix, a holistic view of inter-species bacterial interactions, environmental sensory perception, microbial community interactions of *Streptococcus mutans*, biofilms in periodontal health and disease, oral biofilms as a reservoir for pathogens, oral biofilms as a device for therapeutic agents, and probiotics in oral healthcare.

The book is an essential text for scientists interested in oral microbiology, bacterial communities and biofilms and is recommended reading for anyone working in the areas of oral health, and the pathogenesis of dental caries and periodontal disease. A recommended book for all microbiology laboratories.

Chapter 1. Microbial Populations in Oral Biofilms. Michael F. Cole, Katherine A. Wirth and George H. Bowden

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Chapter 3. Bacterial Catabolism of Salivary Substrates. David Beighton, Sadaf Rasheed Mughal and Thuy Do

Chapter 4. Structural Organization of Oral Biofilms in Supra- and Subgingival Environments. Vincent Zijnge, Annette Moter, Frank Abbas and Hermie Harmsen

Chapter 5. The Role of Extracellular Polysaccharides Matrix in Virulent Oral Biofilms. *Marlise I. Klein, Megan L. Falsetta, Xiao J, William H. Bowen and Hyun Koo*

Chapter 6. Extracellular Proteins and DNA in the Matrix of Oral Biofilms. Nicholas S. Jakubovics

Chapter 7. A Holistic View of Inter-species Bacterial Interactions within Human Dental Plaque. *Alexander H. Rickard, Adam J. Underwood and William Nance*

Chapter 8. Environmental Sensory Perception by Oral Streptococci. Justin Merritt and Jens Kreth

Chapter 9. Microbial Community Interactions of the Cariogenic Organism *Streptococcus mutans. Saswat Sourav Mohapatra and Indranil Biswas*

Chapter 10. Biofilms in Periodontal Health and Disease. Purnima S Kumar, Matthew R Mason and Janel Yu

Chapter 11. Periodontal Biofilm and Immunity: Immune Subversion by Select Pathogens as a Community Service. *George Hajishengallis*

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Hoogmoed, Frank Abbas and Henny C. van der Mei

Chapter 14. Probiotics: a Possible Tool in Oral Health Care?. Christof Godts, Gitte Loozen, Marc Quirynen and Wim Teughels

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