The oral cavity supports a rich and diverse microbial population. Oral health is dependent on the maintenance of stable microbial communities; disease occurs when this balance is disturbed and more pathogenic species outgrow the commensals. Health and disease in the mouth are active processes in which the ecology of communities, not of single organisms, is paramount. 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.

Oral Microbial Ecology book. Read reviews from world’s largest community for readers. The oral cavity supports a rich and diverse microbial population. Oral health is dependent on the maintenance of stable microbial communities; disease occurs when this balance is disturbed and more pathogenic species outgrow the commensals. Health and disease in the mouth are active processes in which the ecology of communities, not of single organisms, is paramount. In this chapter we first discuss the methodology used for oral biofilm structure research and subsequently discuss the current status of the research as well as our concept of supra- and subgingival biofilm organization. 5. The Role of Extracellular Polysaccharides Matrix in Virulent Oral Biofilms. Marlise l. Klein, Megan L. Falsetta, Xiao J, William H. Bowen and Hyun Koo.