

# 10<sup>th</sup> Dentists and Prosthodontics Annual Meeting

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## Periodontal considerations for implant dentistry (Gingivitis, Periodontitis, Peri-Implantitis): The connection and treatment

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Periodontal diseases are chronic, infectious and inflammatory diseases resulting from exposure of the periodontium to dental plaque, a complex bacterial biofilm that accumulates on the teeth. With periodontal disease the epithelial tissue, connective tissue and bone is damage and the teeth and dental implants may be lost. To understand long-term survival of dental implants, the clinician must have a clear understanding of the epithelial tissue, connective tissue and bone relationships to the dental implant surfaces. Evidence suggests that periodontitis and peri-implantitis is the same disease and may contribute to the development or progression of local tissue break down and other systemic diseases or conditions. In light of the high prevalence of the periodontal disease, these associations may be important for the maintenance of dental implants and general health. Patients and health care providers must be informed that periodontal intervention may prevent the onset of hard and soft tissue breakdown or progression of various systemic diseases. Are the tissue relationships of dental implants the same as seen with teeth and will the dental plaque attack the dental implant tissues the same as seen with teeth? Will the tissue surrounding dental implants have the same response to dental plaque as teeth? These questions and others will be answered during the presentation. The purpose of this presentation to provide evidence based information to evaluate the relationships of the hard and soft tissues of connection to dental implants and to determine if these tissues are subject to periodontal breakdown. To understand the mechanism by which periodontal infections may contribute to the destruction of periodontal tissues or the loss of dental implants and treatment.

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## Topical application of statins for controlling periodontal immune responses: A revolution in periodontal disease prevention and treatment?

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Periodontal disease (PD) is an inflammatory-infectious and destructive disease of the tissues surrounding teeth. Despite scientific and clinical advances worldwide, at least 90% of the adult population continues to suffer loss of periodontal tissues and eventually dentition, thereby deteriorating quality of life and generating enormous spending on oral as well as general health of the population. While the Biofilm is considered the main etiological factor of PD, it is now known that the immune system plays a key role in pathogenesis; responsible for the majority of the tissue destruction. Indeed, bacterial antigens do trigger an immuno-pathological reaction, which determines the susceptibility of the patient to the final outcome of the process. Furthermore, while the reversible lesion; gingivitis; under certain immunological conditions (yet unknown), can progress to a more complex, irreversible and destructive condition; periodontitis, this does not seem to depend solely on the type and amount of bacteria present, yet on a dysfunctional immune response, that in turn determines the pre-disposition of the patient to tissue destruction. Hence, tackling such pathologies solely via a bacteriological approach is deemed insufficient for a well-established clinical diagnosis, prognosis and efficacious preventive and therapeutic strategies. In this lecture, we will present scientific evidence supporting the application and potential of statins in clinical Periodontology. Predominantly indicated for dyslipidemia, statins possess extra-lipid properties and immuno-modulatory effects that favor their use for cardiovascular diseases (CVD). Given, that CVD and PD share common paths in their physiopathology, our research group developed a statin-medicated toothpaste formulation and conducted a double-blinded controlled clinical trial, where the clinical efficacy (as an adjunct to conventional, periodontal treatment) was proved. Hence, the purpose of this presentation is to join forces with International University Research Centers and the pharmaceutical industry to develop a new generation of oral care products medicated with statins in order to impact the periodontal health indices of our patients and populations. It is an open invitation to fellow clinicians and researchers to be at the forefront of preventive and therapeutic periodontics; a revolution, perhaps one of the most significant in decades.

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