



## **Academy of Prosthodontics Annual Scientific Session Ritz-Carlton, Sarasota Florida April 25 – April 29, 2017**

### **Program Speaker - Dr. Ichiro Nishimura**

#### **Title**

*Genetic and Molecular Mechanism of Socket Preservation*

#### **Abstract**

In 1957, Atwood and Tallgren independently reported the loss of large alveolar bone structure in edentulous patients. Tooth extraction wound healing normally completed in 3~6 months but the reduction of residual ridge may continue in some patients, leading clinical challenges for both patients and dentists. The current socket preservation approach focuses on the bony socket; however, the primary therapeutic target should be the numerous osteoclasts appearing on the external surface of alveolar bone.

The recent exploration of barrier tissue and its immunity has provided better understanding of the oral mucosa, which closely associates with the alveolar process of jawbones. In the wound healing period, osteo-clastogenesis requires the presence of T lymphocytes in the oral mucosa. However, the continued osteo-clastogenesis after resolution of oral barrier immune reaction appeared to vary individually, suggesting the involvement of genetic polymorphisms.

This report is an update on our investigation on the molecular and genetic mechanism of residual ridge resorption. We propose a new concept of socket preservation approach for further discussion.

#### **Learning Objectives**

1. Oral mucosal barrier immunity is a new paradigm for socket preservation
2. Individual variations of residual ridge resorption potentially may be linked to underlining genetic variations
3. Therapeutic strategies for socket preservation

#### **Biography**

ICHIRO NISHIMURA, DDS, DMSc, DMD, FAP

received clinical training from Tokyo Dental College (DDS, 1981) and Harvard School of Dental Medicine (DMD, 1993). His advanced research training at Harvard resulted in the Doctor of Medical Sciences (DMSc) degree in 1986. While conducting biotechnology research at HSDM, he served as Director of the Harvard-MIT Biomaterials Research Training Program (1993-95) and Director of the Predoctoral Research Program (1995-97). He joined UCLA in 1997 and established the Weintraub Center for Reconstructive Biotechnology as Founding Director, supported by the NIH/NCRR and philanthropic contributions from film and entertainment industry. Nishimura served as a reviewing consultant for NIH, NSF, and British Biotechnology and Biological Sciences Research Council among others. He received scientific/academic awards including Distinguished Faculty Award (Harvard, 1993), Distinguished Service Award (AADR, 1999), Appreciation of Services (US Department of Health & Human Services, 2000 & 2005) and Distinguished Scientist Award (IADR, 2004). He is currently Professor of Dentistry and Bioengineering and Co-Director of NeuroEngineering at UCLA.