President Message:

A warm greeting from Chicago to all MSP members.

Before his passing, my father frequently told me that the proudest moment of his professional life was becoming "An American Dentist". For my father, as for legions of dentists throughout the world, the sacrifice of leaving the homeland (in our case communist Cuba), learning a new language and the rigors of obtaining a license was the price that must be paid. Joining the elite was worth the tremendous sacrifice. From every aspect, American dentistry is the world standard.

As periodontists, we play a crucial role in this great profession. With our unique training, talents and firm grasp of the biological sciences, we are the architects and protectors of the foundation of all clinical dentistry. However, our traditional position in that leadership role has been challenged from every direction. Hardly a day goes by without some solicitation for some unproven "periodontal cure". Many companies promote their products without regard to clinical efficacy while others give the impression that complex, delicate surgical procedures can be performed by anyone with minimal training. In many schools, the students are short changed by having periodontal courses taught by non-periodontists. Is it any wonder that many periodontists are having a hard time connecting with their referral base? Is it any wonder that many general practitioners who are providing quality, interdisciplinary care for their patients are made to feel that they are out of touch because they don’t jump on the latest bandwagon?

We can’t put our heads in the sand and wish for the good old days. We have the responsibility to preserve and promote the team approach to optimal patient care. We need to combat empirically based treatment with sound science and education. It would be nice if that were all that was needed; it isn’t. If we are to succeed, we need to be aggressive in defining our vital role in the scope of dental therapy and in guiding the future. We need to be persistent both individually and in our organizations in reaching our target audiences and supporting like-minded practitioners.

Part of the mission of the MSP is "To advance the Art and Science of periodontology". To that end two significant things happened at the February board meeting. Firstly, the board elected to make a contribution of $1000.00 to the AAP Foundation in support of their efforts on behalf of Periodontics. This amount represents approximately 1% of our annual budget which is in line with the AAP’s annual contribution.

Secondly, we established the Student Outreach Committee. Our goal will be to work with graduate students as well as undergrads. For the graduate students, we hope to provide some guidance for future employment so that they can make sound decisions for the short and long terms. For the undergrads, we would like to develop a mechanism to expose them to the valuable role of the periodontist in comprehensive care. Although we are still at the infancy stage, we have had substantive discussions and hope to have something concrete in place by our next meeting at the AAP in the fall.

Every year we convene in February for a weekend of learning, fellowship and discussion. A great society such as the MSP deserves a world class program. This is exactly what our 2013 program chair Tim Walsh has developed. For 2013, we have three days of top notch education.

The theme for the Friday, February 22, 2013 meeting will be: "Minimally Invasive Approaches to the Posterior Maxilla". Leading the presenters will be our very own Marty Kolinski. Marty is one of the most experienced implant surgeons in the country and will be focusing on the use of osteotomes for immediate implant placement in molar areas. The second speaker will be Ziz Mazor who will be coming in from Israel just for this meeting. His topics will be the balloon subantral augmentation and the use of biologics in regenerative therapy.

On Saturday, February 23, we will feature two of the icons of modern periodontics. The morning speaker will be Dennis Tarnow. In the afternoon, Burt Langer’s topic will be “A 25 year retrospective: Connective Tissue Grafting around Teeth and Implants”.

Sunday we will conclude our program with the provocative topic “The Future of Periodontics”, featuring Ken Runkle. A frequent speaker at the annual AAP meeting, Ken is the principal and owner of the Paragon group based out of Columbus, Ohio. He has worked with numerous periodontal practices for over 25 years and has unique insights into our specialty. It is never too early to start planning. Don’t miss this opportunity!

Finally, our executive board is a diverse, talented, (and FUN!) group which will continue to work on behalf of the members of the society. Our job has been made easier by the direction of past–president George Jumes and the always steady hand of executive director Ken Krebs, who keeps everyone in line.

I look forward to a very productive year and thank you for the opportunity to serve.

Warmest regards,

Peter O. Cabrera, DDS
Chicago, IL
AAP Elections

The candidates running for the Nominating Committee for the American Board of Periodontology are:

Jon Jenkins (incumbent) and Paul Ricchetti.

All voting will be electronic this year. If you are an Active or Life Active member of the AAP, you will receive a postcard reminding you to check your e-mail on June 1 for notification that voting has begun. The e-mail will provide a link to the voting site and log-in information.

GENERAL MEETING SUPPORT
We want to express our thanks to the exhibitors who support the Midwest Society of Periodontology by participating in our annual meeting. We appreciate their support of our Society.

A. Titan Instruments
Ace Surgical Supply
Astra Tech, Inc.
BIOHORIZONS
Biomet 3i
Colgate Oral Pharmaceuticals
ConeScan
Community Tissue Services (CTS)
Exactech, Inc
G. Hartzell & Son
Glustitch, Inc.
Implant Direct Sybron International
Johnson and Johnson
Keystone Dental, Inc
Medtronic
Millennium Dental Technologies
Nobel Biocare
OraPharma
Ostell
Osteohealth Co
Predictable Surgical Technologies (PST)
Riemser
Salvin Dental Specialties, Inc.
Southern Anesthesia + Surgical
Straumann USA
Snoasis Medical
Sunstar Americas, Inc
Sunstar Americas, Inc, Guidor Division
Thommen Medical USA, L.L.C
Treloar & Heisel, Inc.
Zimmer Dental

THANK YOU!

RESERVE THESE DATES!!
Midwest Society of Periodontology
56th Annual Meeting
February 22 – February 24, 2013
Dr. George Jumes (R) presents Alice DeForest with a plaque of appreciation for her 25 years of service to the American Academy of Periodontology as Executive Director and Periodontics.

Dr. Sebastian Ciancio presents “LOTIONS, POTIONS, PASTES AND MORE!”

Dr. Kirk Pasquinelli at the Friday limited attendance program underwritten by Sunstar Americas, Inc. Guidor Division.

Dr. Pam McClain, AAP President addresses the MSP.

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CHARACTERIZATION OF PERIODONTAL STRUCTURES IN ENAMELIN NULL MICE

H-L Chan DDS, WV Giannobile, DDS, MS, DMSc, RM Eber, DDS, MS, JP Simmer, DDS, PhD, and JC Hu, BDS, PhD University of Michigan, Ann Arbor, MI

Objectives: Enamelin is known to be essential for amelogenesis; a question remains as to whether it plays a role in periodontal development and homeostasis. During a previous study of Enamelin null mice, we observed alveolar bone height reductions that appeared to be dietary-related. Studies on the periodontia of these genetically engineered mice would provide important information on Enamelin’s role beyond specific tooth-related effects. The primary aim was to compare the dimension of interradicular bone of Enamelin null (KO) with wild-type (WT) mice, maintained on hard (HC) or soft chow (SC). Secondary, this study was to examine whether there were other periodontal changes in KO mice.

Methods: Four groups were studied: KO/HC (n=26), KO/SC (n=27), WT/HC (n=23) and WT/SC (n=24) at 23 days, 8wks and 6m of age. Micro-computed tomography was performed and the following measurements were made between mandibular 1st (M1) and 2nd molars (M2): relative alveolar bone height (RBH), crestal bone width (CBW), bone volume (BV), bone mineral content (BMC) and bone mineral density (BMD). The position of M1 and M2 in relation to the inferior border of the mandibular was also determined at 6m. All variables were compared by one-way ANOVA and Dunnett’s test for pair-wise comparisons. The association between variables was determined with Pearson’s correlation test. H&E and TRAP staining were used for histological analyses.

Results: Radiographically, the enamel layer was absent in KO mice. Interproximal open contacts were observed exclusively in KO mice and the prevalence decreased over time, suggesting a tooth shifting had occurred. Additionally, in the two KO groups, RBH was significantly lower at 8wks and 6m (p<0.02); CBW, BV and BMC were significantly less (p<0.05) at 6m. No differences in BMD were found among the 4 groups. A positive correlation was noted between RBH and CBW (r=0.53-0.81 at all time points). The molars migrated to a more coronal position in KO mice and mice on a hard diet. Histologically, minimal periodontal inflammation was observed in all groups. In KO animals, the junctional epithelium was less organized; a TRAP negative cervical root defect was frequently observed at all time points.

Conclusion: The interdental bone density was not directly affected in the absence of Enamelin but its volume, which is likely a consequence of alternations in tooth position affected by crown contours. The cervical root defect, which was not associated with odontoclast activities, was characteristic in Enamelin null mice. The Enamelin null mouse model appears valuable for studying the interrelationship between crown morphology and the periodontium.
The hallmark feature of periodontal disease is the loss of tooth supporting structures, specifically the alveolar bone. Regulation of alveolar bone formation and resorption is controlled by osteoblasts cells. However, the role of these cells in periodontal disease is poorly understood.

**Purpose:** To analyze the gene and cytokine expression of human alveolar bone derived osteoblasts when stimulated with lipopolysaccharide (LPS) from the periodontal pathogen Porphyromonas gingivalis.

**Methods and Materials:** Osteoblasts were cultured from alveolar bone chips harvested during dental alveolar surgery from 9 consenting patients. Osteoblasts were cultured in human serum and stimulated with 10μg/ml of ultra-pure P. gingivalis LPS (InvivoGen, USA). Osteoblast mRNA and culture supernatant were collected for subsequent analysis. Confirmation of osteoblast lineage was determined by expression of osteocalcin, an osteoblast specific marker, by reverse transcription - polymerase chain reaction analysis (RT-PCR). Collected mRNA was analyzed by Affymetrix Human Gene 1.0 ST arrays (University Health Network Microarray Centre, Toronto, Canada) to assess osteoblast gene expression under stimulation conditions. Osteoblast cytokine expression under stimulation conditions will be assessed by analyzing culture supernatant using commercially available enzyme-linked immunosorbent assays (ELISA).

**Results:** Cells grown in culture were confirmed to be of osteoblastic lineage based on morphology, and expression of the osteoblast specific gene osteocalcin. LPS stimulation of osteoblasts leads to significant expression of pro-inflammatory genes, including interleukin-6 and interleukin-8. Both of these genes showed greater than 2-fold expression compared to control expression.

**Conclusions:** P. gingivalis LPS stimulation induces significant pro-inflammatory gene expression in cultured human osteoblasts. A novel finding of interleukin-8 gene expression in human osteoblasts stimulated with LPS was demonstrated. Gene expression data will be confirmed with cytokine and prostaglandin ELISA.
RESOLVIN-DL BLOCKS THE EFFECTS OF P. GINGIVALIS ON HUMAN GINGIVAL FIBROBLASTS

Khaled M, Windsor J, Kowolik M, Blanchard S, Song F and Zunt S.
Indiana University, Indianapolis, IN

Periodontitis is an immune inflammatory disease that is initiated by an oral microbial biofilm and the destruction is caused in part by host responses. Porphyromonas gingivalis (P. gingivalis) is one of the most important periodontal pathogens in the oral microbial biofilm and affects cells in the periodontal tissues such as gingival fibroblasts. Resolvins are novel molecules that protect the host against acute inflammation in part by blocking the trans-endothelial migration of neutrophils and initiates resolution. Oxygenated metabolites derived from docosahexaenoic acid are resolvins of the D series. Not much is known about the effects of resolvins on other cells in the periodontal tissues. Human gingival fibroblasts (HGFs) are present in these tissues and play critical roles in tissue remodeling and repair, as well as play roles in tissue degradation.

Objectives: This study was done to determine the effects that Resolvin-D1 has on HGF cell survival when treated with and without P. gingivalis.

Methods: Lactate dehydrogenase assays were utilized to determine the cytotoxic effects of Resolvin-D1 on HGFs with and without P. gingivalis supernatant.

Results: Resolvin-D1 had no cytotoxic effects on the HGFs at concentrations between 1-1000 nM (all p values ≤ 0.05). Resolvin-D1 (1000 nm) significantly inhibit the toxic effects of 10% P. gingivalis supernatant (p= 0.000) on HGFs.

Conclusions: Resolvin-D1 altered the toxicity of P. gingivalis supernatant on HGFs. The ability of Resolvin-D1 to enhance HGF cell survival might play a role in cell/tissue damage in conditions such as periodontal disease. The next step is to determine if Resolvin-D1 alters the effects that P. gingivalis supernatant has on inflammatory cytokines and growth factors from HGFs.
**RESEARCH FORUM ABSTRACTS**

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At the February meeting of the MSP in Chicago the finalists of the Graduate Student Research Forum were all presented plaques and $500 checks at the awards ceremony and reception. The Research Forum and awards ceremony are supported by a generous grant from Sunstar Americas, Inc. Dr. Tim Walsh, Chairperson of the Research Forum stands next to Juliana Kim from Sunstar Americas. To the left of Tim is Dr. Tom Wierzbicki, Dr. Mohamed Khaled and Dr. Hsun-Liang Chan followed by Mark Carlascio and Yoshie Whan from Sunstar Americas.

**The Midwest Society Wishes to Acknowledge**

**Sunstar Americas, Inc.** is the underwriter of the Graduate Student Research Forum and the Awards Ceremony.

**Sunstar Americas, Inc. Guidor Division** sponsored the Friday limited attendance program, “PERIODONTAL AND IMPLANT SURGERY IN THE ESTHETIC ZONE” featuring Dr. Kirk Pasquinelli.

**Johnson and Johnson** underwrote the presentation by Dr. Sebastian Ciancio.

**THANK YOU!**

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**Midwest Society of Periodontology Graduate Student Research Forum**

**First Place**

Dr. Tom Wierzbicki - University of Manitoba  
“Cytokine and Prostaglandin Expression in Primary Human Osteoblasts under Inflammatory Conditions”

**Honorable Mention**

Dr. Mohamed Khaled - Indiana University  
“Resolvin-D1 Blocks the Effects of P.gingivalis on Human Gingival Fibroblasts”

Dr. Hsun-Liang Chan - University of Michigan  
“Characterization of Periodontal Structures in Enamelin Null Mice”
# New Members

All members and officers express a hearty welcome to each new member and look forward to your participation in the Society.

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