



# Midwest Society of Periodontology Newsletter

Spring 2010

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**Midwest Society of  
Periodontology  
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and  
Executive Committee**

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## President Message:

Greetings fellow Midwest Society of Periodontology members!

The snow is gone, hopefully for good, and it doesn't seem as if it's only been a month since we met in Chicago. I can see the first blades of grass peeking up through my lawn and it reminds me of the year ahead as I start my term as President of the Midwest Society of Periodontology. I truly want to thank all the members for giving me the opportunity to serve.

I have had the privilege of serving on the MSP executive committee for several years and I can tell you that we have some of the best leaders in periodontics working hard to make our society the best it can possibly be. I have learned a lot working with all of them, but I especially want to point out the work of our Executive Director and Past AAP President, Ken Krebs. Most members probably have no idea of all that Ken does, and it would be impossible to tell you in this short message, but he really is the one individual who "makes it happen." He keeps all of the officers and committee members on task, deals with the hotels, maintains contacts with all of the vendors who generously support us, etc., etc., and makes it look effortless. He always remains calm and positive, even when things might not be going as planned. The next time you see him, please take a moment to thank him for all he does.

This year's meeting was a great success and was well attended even though we were competing with the American Dental Education Association (ADEA) meeting. I want to thank Darnell Kaigler, 2010 program chair, for arranging a great lineup of speakers, and Dimitris Tatakis, for running the Graduate Student Research Forum. Also, as a past chair of the Luncheon for Learning Committee, I know it's not easy to get six or more L & L speakers, so I want to thank Monish Bhola and Diego Velasquez for arranging speakers for that event, and the luncheon for learning speakers for agreeing to participate.

This year the Executive Committee approved another \$10,000 donation to the AAP Foundation. This is the third year MSP has been able to support the foundation in this way. The AAPF has been very appreciative of the support MSP has provided.

Looking ahead, next year's annual meeting will be held on February 26-27, 2011. Dimitris Tatakis is the program chair and has lined up two great speakers. On Saturday, Dr. Paul Rosen will compare maintaining ailing teeth versus placing implants, and will provide practical advice for the use of the latest regenerative therapies. On Sunday, Dr. Hom-Lay Wang will cover prevention and management of dental implant complications. In addition, we have a couple of exciting proposals for a Friday pre-meeting program. It should be a great meeting next year, so mark your calendars.



*Dr. Bob Eber, President*

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## Award to Past President



*Dr. Robert Eber, Dexter, MI, President Midwest Society of Periodontology presents Dr. Stephen Meraw, Warren, MI, Immediate Past President with a plaque of appreciation.*

## AAP Elections

Don't forget to vote in the upcoming AAP election. You should receive your ballot on or about June 1 and have until July 1 to cast your vote.

Dr. Nancy Newhouse is the candidate for Vice President.

Dr. Joseph V. Califano and Dr. Jim Hinrichs are two of the four candidates for two positions as Directors of the American Board of Periodontology.

Two AAP Trustees have completed their term and are up for reelection. There are four candidates and the two candidates with the most votes will be the Trustees representing District 4. The four candidates are:

Dr. Catherine Bishop  
Dr. Gregory Fauth \*  
Dr. Stephen Meraw  
Dr. William Sorensen \*

\* indicates incumbent

## 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 organization.

Ace Surgical Supply  
Astra Tech, Inc.  
Biomet 3i  
BioHorizons Implant Systems, Inc.  
Colgate Oral Pharmaceuticals  
Concise Vision  
Conebeam Imaging, LLC  
Community Tissue Services (CTS)  
Exactech, Inc / One Point Medical  
G. Hartzell & Son  
Glustitch, Inc.  
Keystone Dental, Inc  
Medtronic  
Millennium Dental Technologies  
Nobel Biocare  
OraPharma  
Osstell  
Osteohealth Co  
Panda Perio Dental Software, Inc.  
Predictable Surgical Technologies (PST)  
RIEMSER  
Salvin Dental Specialties, Inc.  
Straumann USA  
Sunstar Americas, Inc  
Sunstar Americas, Inc, Guidor Division  
Sybron Implant Solutions  
Snoasis  
Thommen Medical USA, L.L.C  
Treloar & Heisel, Inc.  
Yodle, Inc.  
Zimmer Dental

## THANK YOU!

**Reserve These Dates!**

**Midwest Society of  
Periodontology  
54th Annual Meeting  
February 26 – February 27, 2011**



*Dr. Howard Rosa at Friday Limited attendance program underwritten by Sunstar Americas, Inc. Guidor Division.*

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In the news, William Giannobile, MSP Past President, after years of service as Associate Editor of the Journal of Periodontology, was recently named as the Editor in Chief of the Journal of Dental Research, the highest impact factor journal in dentistry. In addition, check out “Member Close-ups” on Perio.org, where MSP member Vanchit John, was recently featured in an interview. Congratulations, guys!

Also, don't forget to vote in the upcoming AAP election that runs from June 1 through July 1, 2010, and support our district candidates. The following MSP members are on the slate: Nancy Newhouse for Vice President; Joseph Califano and Jim Hinrichs for two open ABP Director positions; and Cathy Bishop, Greg Fauth, Steve Meraw and Bill Sorensen for two open District IV Trustee positions.

Before I close, I want to acknowledge the wonderful job that outgoing President, Steve Meraw, did last year. As Immediate Past-President he now will move on to the Nominations Committee and will remain active on the Executive Committee.

Finally, it is through the devotion of our members that we stay strong as a society. If you know of colleagues that are not members, please encourage them to join. The MSP annual meeting is a great value in continuing education and it's a great time to meet up with old friends, make new ones and to keep current on issues facing our profession. It has always been my favorite meeting. Again, thank you all for the privilege of serving as President this year. I hope to see many of you in Hawaii this year and certainly will see all of you in Chicago next February! Have a great spring!

Warmest Regards,

Bob Eber

# RESEARCH FORUM ABSTRACTS

## ANGIOGENIC BIOMARKER EXPRESSION DURING PERIODONTAL SOFT TISSUE REPAIR USING BILAYERED CELL THERAPY

Dr. Thiago Morelli, DDS  
University of Michigan, Ann Arbor, MI

**Background:** Oral tissue engineered biologics have become an emerging treatment approach in periodontal regenerative medicine. The use of intra-oral soft tissue engineered cell-based products has demonstrated satisfactory results with less morbidity of surgical procedures. However, little is known about the mechanism of action during wound healing in cellularized tissue based approaches.

**Objective:** The aim of this prospective, multi-center, randomized, controlled clinical trial was to investigate the role and significance of angiogenic biomarkers in wound healing of soft tissue regeneration procedures comparing bilayered cell therapy (BCT) to autogenous free gingival grafts (FGG).

**Methods:** The study population included 44 subjects with bilateral recession-type defects who possessed an insufficient zone of attached gingiva ( $\leq 1\text{mm}$ ). Following informed consent, each subject was randomly assigned with either one test (BCT) or control (FGG) site. Wound fluid samples were collected at day 0 and weeks-1, -2, -3, and -4 postoperatively. The samples were analyzed using protein microarrays for the following angiogenic biomarkers: angiogenin (ANG), angiostatin (ANT), PDGF-BB, VEGF, FGF-2, IL-8, TIMP-1, TIMP-2, GM-CSF, and IP-10.

**Results:** Forty-four subjects completed the study. Results demonstrated an increased expression of angiogenic biomarkers for the BCT group compared to the FGG group at all timepoints. A significant increase in expression of TIMP-2 and ANT was noticed for the BCT group over the FGG group at week 1 ( $p < 0.05$ ). In addition, levels of ANG, VEGF, IL-8, and TIMP-1 were highly expressed for the BCT group over the FGG group at 2 weeks ( $p < 0.05$ ).

**Conclusion:** This human investigation provides early evidence of the angiogenic biomarker profile of BCT and FGG in soft tissue regeneration of oral mucosal defects. The results of this study demonstrate that BCT modulates the wound healing process after mucogingival surgery by the stimulation of angiogenic-related biomarkers, which may have a positive impact on the regeneration of intra-oral soft tissues.

This study was supported by NIH/NCRR UL1RR024986 and Organogenesis, Inc.

# RESEARCH FORUM ABSTRACTS

## BLOOD FLOW AND DIMENSIONAL CHANGES OF CONNECTIVE TISSUE GRAFTS

Dr. Shaun Rotenberg  
The Ohio State University, Columbus, OH

**Objectives:** Among grafting techniques used to treat gingival recession, the subepithelial connective tissue graft (CTG) remains the most predictable. While CTG use has become almost commonplace, little is known about early CTG healing. The aim of this prospective clinical study was to determine CTG revascularization and dimensional changes during initial healing.

**Methods:** Adult (18-55) healthy non-smokers scheduled to receive CTG were recruited. Impressions were taken and stents were fabricated for repeatable probe positioning during blood flow and tissue dimension measurements. Blood flow was determined with laser Doppler flowmetry (LDF). LDF values were recorded at the surgical site and a contralateral control site. LDF measurements were obtained immediately preoperatively (baseline), immediately following graft placement, and at 3, 7, 14, and 21 days postoperatively. Tissue dimension (buccolingual tissue thickness) was determined using a probe inserted into custom stent until contact with tissue surface was made. Tissue dimension was recorded at six sites per CTG site (apically and coronally; at mesial, midbuccal, and distal of site). Tissue dimension was recorded preoperatively, immediately following CTG placement, and at 3, 7, 14, and 21 days postoperatively. Differences from baseline values and over time were statistically analyzed.

**Results:** 12 subjects completed the study. LDF measurements showed 86.2% reduction in tissue perfusion immediately post-surgery compared to preoperative (baseline) values. At postoperative day 3, tissue perfusion was reduced by 73.2%, while at postoperative days 7, 14, and 21 perfusion was increased, compared to baseline, by 22.9%, 146.6%, and 26.8% respectively. Control sites showed no reduction in perfusion during the study. Immediate postoperative graft thickness averaged 1.5 mm. Tissue thickness increased 98.4% at day 3, 54.7% at day 7, 2.9% at day 14, and decreased 13.6% by day 21.

**Summary and Conclusions:** Results showed significant reduction in tissue perfusion following CTG procedure, with a rebound increase at 2 weeks postoperatively. The CTG doubled in thickness at day 3 and required 2 weeks of healing to return to baseline dimensions. The observed CTG dimensional changes could be of clinical significance; this information could help the treatment planning of recession defect cases where the CTG technique is to be used.

# RESEARCH FORUM ABSTRACTS

## INFLUENCE OF ANATOMICAL VARIABLES ON SINUS AUGMENTATION OUTCOMES

G. Avila-Ortiz<sup>1</sup>, H-L. Wang<sup>1</sup>, I. Rudeck<sup>1</sup>, P. Galindo-Moreno<sup>2</sup>, C.E. Misch<sup>1</sup>, R.A. Bagramian<sup>1</sup> and R. Neiva<sup>1</sup>  
<sup>1</sup>University of Michigan, Ann Arbor, MI,  
<sup>2</sup>University of Granada, Granada, Spain.

**Objective:** Inadequate alveolar bone height as a consequence of tooth loss is a common limitation for proper implant placement in the posterior maxilla. Augmentation of the maxillary sinus has been regarded as one of the most reliable implant site development options to overcome this challenge. A variety of sinus augmentation techniques and materials have been used showing high implant survival rates. Nonetheless, several factors have to be considered to ensure a predictable outcome. The maturation, consolidation and stability of the grafted area relies on the proper formation of a functional graft-vital bone complex. Graft consolidation requires adequate angiogenesis and migration of osteogenic cells from native bone. These events may be determined by the dimensions of the maxillary sinus cavity. The purpose of this study was to assess the influence of the distance from the lateral to the medial wall of the maxillary sinus on the outcomes of a sinus augmentation procedure using an allograft.

**Methods and Materials:** A total of 25 patients in need of sinus augmentation were recruited for the study. After initial exam, customized radiographic guides were fabricated and a cone-beam computerized tomography scan was obtained. The bucco-palatal distance (BPD) was calculated on the scans at 8, 10 and 12 mm from the alveolar crest at the locations marked by the radiographic guide. Sinus grafting was performed by a lateral window approach using a particulated allograft. Patients were followed-up for six months. Then, at the time of implant placement bone core biopsies were harvested using the same radiographic guide as a reference. Sections of the bone cores at 8, 10 and 12 mm from the alveolar crest were histomorphometrically analyzed. The proportion of vital bone (%VB) was correlated with the BPD using a statistical model.

**Results:** Twenty-one patients underwent sinus augmentation for a total of 24 sinuses. One sinus developed an infection after grafting. This is translated into a success rate of 96% for the sinus grafting procedure. Histomorphometric analysis revealed that mean % of vital bone was  $23.01 \pm 19.11$ , mean % of remaining allograft was  $22.25 \pm 20.30$ , and average % of non-mineralized connective tissue was  $54.73 \pm 13.51$ . Analysis of the correlation between %VB and BPD via linear regression, using the actual values of BPD, showed a strong negative association ( $R^2 = 0.125$ ;  $p=0.004$ ). This finding suggests that as BPD decreases, %VB increases.

**Conclusions:** These findings suggest that a short distance between the lateral and medial wall of the sinus cavity promotes quicker bone remodeling and maturation. This information may be considered in the clinical decision of when to intervene for implant placement and/or loading after sinus augmentation procedures.

At the February meeting of the MSP in Chicago the finalists 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. Dimitris Tatakis (R) was Chairperson of the Research Forum. From left Mark Carlascio and Yoshie Whan from Sunstar Americas followed by Dr. Thiago Morelli, Dr. Gustavo Avila-Ortiz and Dr. Ioanna Tsolaki accepting the award for Dr. Shaun Rotenberg.



## 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 featuring Dr. Howard Rosa presenting the use of Guidor for guided bone regeneration and immediate and staged implant placement.

**Astra Tech, Inc. and BioHorizons Implant Systems, Inc.** for underwriting the presentation by Dr. Craig Misch

***THANK YOU!***

### Midwest Society of Periodontology Graduate Student Research Forum

#### First Place

**Dr. Gustavo Avila-Ortiz - University of Michigan**  
"Influence of Anatomical Variables on Sinus Augmentation Outcomes"

#### Honorable Mention

**Dr. Thiago Morelli, DDS - University of Michigan**  
"Angiogenic Biomarker Expression During Periodontal Soft Tissue Repair Using Bilayered Cell Therapy"

**Dr. Shaun Rotenberg - The Ohio State University**  
"Blood Flow and Dimensional Changes of Connective Tissue Grafts"



# New Members



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

Dr. Wayne	Aldredge	Holmdel	NJ
Dr. Marwan	Assaf	St. Louis	MO
Dr. Taylor	Bahn	Cape Girardeau	MO
Dr. Anil	Bouri	Aurora	IL
Dr. Laura	Brown	Olathe	KS
Dr. Alan	Dalessandro	Hoffman Estates	IL
Dr. Karim	El Kholy	Livonia	MI
Dr. Daniel	Gomes	Indianapolis	IN
Dr. Daniel	Hogan	Moline	IL
Dr. Donald	Janoff	Champaign	IL
Dr. Nikisha	Jodhan	Evanston	IL
Dr. Nadia	Kawar	Westmont	IL
Dr. David	Krill	Cincinnati	OH
Dr. Jacob	Lueder	Grand Rapids	MI
Dr. Yetta	McCullom	Chicago	IL
Dr. Parrick	Murphy	Wayzata	MN
Dr. Russell	Thaler	Maumee	OH
Dr. Doug	Walters	Kansas City	MO
Dr. Jeffrey	Wessel	Chesapeake	VA
Dr. Laura	Zetu	Bloomfield Hills	MI

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