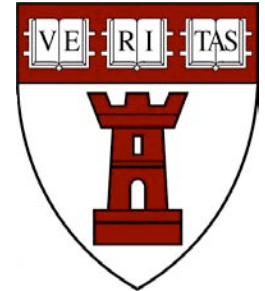


HSDM OFFICE OF RESEARCH

BULLETIN

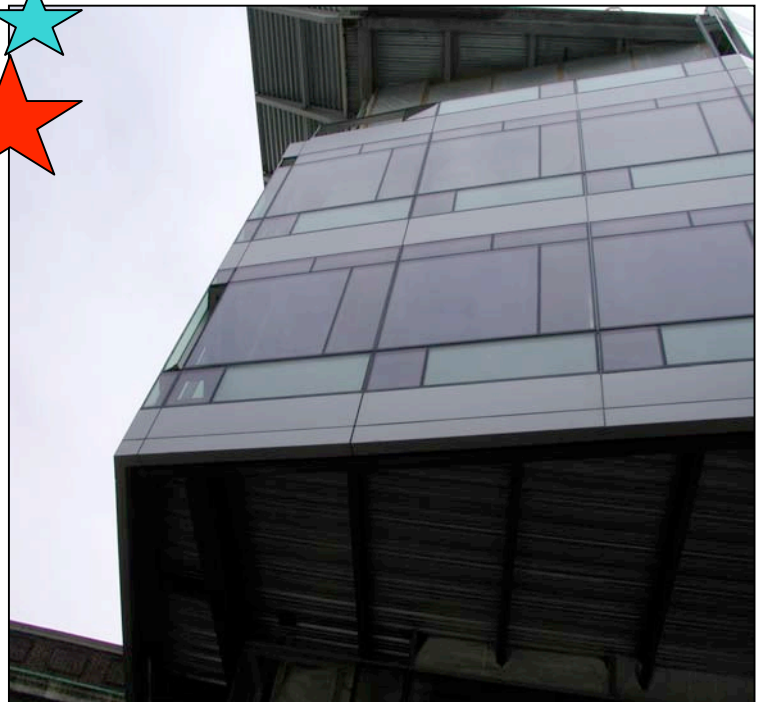


July 1, 2004

GRANTS & AWARDS:

Congratulations to **Shigemi Nagai, DDS, PhD**, Instructor in Restorative Dentistry and Biomaterials Sciences for her recently funded project from the ITI Foundation. This project, **Optical Analysis to Determine the Preferred Neck Color for ITI Implants to Facilitate Optimal Soft Tissue Esthetics**. The purpose of this study is to define the optimal color for the ITI implant neck portion based on a sequence of three experiments.

Congratulations to **Patty Purcell, PhD**, Instructor in Oral and Development Biology and member of the Rosen Lab at The Forsyth Institute for receiving an award from the **50th Anniversary Fellowship Program for Scholars in Medicine** for her project, **Genetic Determinants of TMJ Formation**. This project will fulfill two main objectives; first, it will allow an understanding of the biology of the TMJ within the context of the developmental processes that govern other synovial joints and secondly, it will identify genes with an essential regulatory function in TMJ development. Taken together, the results obtained from this work will greatly extend the understanding of the biology of the TMJ and have the potential to provide important tools to manipulate the formation, regeneration and maintenance of TMJ structures, a fundamental step towards the design of novel therapeutic approaches for temporomandibular joint disorders.



Top (Laboratory bench under construction in the new building), Bottom (Exterior image) Photographs taken by Ben Mojica

DEAN'S AWARDS FOR CLINICAL RESEARCH 2004-05 RECIPIENTS:

Dean R. Bruce Donoff is pleased to announce the second year of funding for the Dean's Awards for Clinical Research. These awards are to promote scholarship among the HSDM full-time junior faculty on the Clinician Teacher track. The goal of the program is to help junior faculty initiate scholarly investigation and to publish a manuscript as a result of their work.

Congratulations to the following faculty members for receiving 2004-2005 Dean's Award for Clinical Research.

Hiroe Ohyama, DDS, MMSc, PhD
Instructor in Restorative Dentistry and Biomaterials Sciences

In-patient comparison of glycosaminoglycans levels in peri-implant sulcus fluid of immediately loaded and non-loaded patients

Jarshen Lin, DMD, BDS
Instructor in Restorative Dentistry and Biomaterials Sciences

Three-dimensional analysis of the working dimension of the root canal system

Congratulations to Drs. Ohyama and Lin!!!

RECENT PUBLICATIONS:

Please note, if we have not captured your recent publications, please email Dawn DeCosta. You can be assured they will be listed in the next Bulletin. Thanks!

Bhol KC, Alroy J, Schechter PJ.
Anti-inflammatory effect of topical nanocrystalline silver cream on allergic contact dermatitis in a guinea pig model. *Clinical Experimental Dermatology* 2004;29(3):282-7.

DePaola DP. Nurturing a culture of innovation. *Journal of Dental Research* 2004;83(6):446-7.

Joshiyura KJ, Wand HC, Merchant AT, Rimm EB. Periodontal disease and biomarkers related to cardiovascular disease. *Journal of Dental Research* 2004;83(2):151-155.

Nawshad A, LaGamba D, Olsen BR, Hay ED. Laser capture microdissection (LCM) for analysis of gene expression in specific tissues during embryonic epithelial-mesenchymal transformation. *Developmental Dynamics* 2004;230(3):529-34.

Nelson LP, Savelli-Castillo I. New antiepileptic agents. *Pediatric Dentistry* 2004;26(1):58-62.

Ohba K, Matsuo M, Noguchi M, Nishikido M, Koga S, Kanetake H, Nazneen A, Liu D, Razzaque MS, Taguchi T. Clinicopathological study of vesicoureteral reflux (VUR)-associated pyelonephritis in renal transplantation. *Clinical Transplantation* 2004;18:34-38.

Wang W, Wang YG, Reginato AM, Glotzer DJ, Fukai N, Plotkina S, Karsenty G, Olsen BR. Groucho homologue Grg5 interacts with the transcription factor Runx2-Cbfa1 and modulates its activity during postnatal growth in mice. *Developmental Biology* 2004;270(2):364-81.

THE ANNALS OF THE ACADEMY AT THE HARVARD SCHOOL OF DENTAL MEDICINE:

We are happy to report the near completion of *The Annals*, the first, student-driven publication at Harvard School of Dental Medicine. This publication is a result of the hard work and dedication by the Research Academy students, in particular Salim Afshar, Ketan Amin, Kelly Morgan, Zachary Peacock and Brad Williams.

Research Academy students designed an abstract competition open to dental schools throughout the US. Then selected abstracts from a pool of over 30, and worked with these students to develop manuscripts. We believe this is the only journal dedicated exclusively to student research. The third-year students in the Research Academy will take over the Annals for next year's publication. Aside from the HSDM Research Academy, this project is supported by Dean Bruce Donoff. "I thought that it was a very exciting, innovative, and energetic idea and I told the students that I would support it." "It is consistent with the ideas of the School and I am extremely pleased to see who rigorous, thoughtful and successful their efforts have been. I think it's the beginning of something that will become enduring."



RESEARCH LAB FOCUS: THE LANSKE LAB

The next few issues of the Bulletin will highlight the various research laboratories moving into the new building. Beate Lanske, PhD, Associate Professor of Oral and Developmental Biology will be moving her lab from The Forsyth Institute. The Lanske Lab members are:

Beate Lanske, PhD *Associate Professor, Oral & Developmental Biology*

Da Chang *Student Harvard FAS Program*

Yukiko Maeda, PhD *Research Fellow, Oral & Developmental Biology*

Mohammed Razzaque, MD, PhD *Instructor, Oral & Developmental Biology*

Betty Sitara, PhD *Research Associate, Oral & Developmental Biology*

Dr. Lanske's current research objectives include studies to better understand the control and regulation of cartilage differentiation and bone formation. She is continuing her work on Indian hedgehog and PTHrP to evaluate the downstream pathways that are used to regulate chondrocyte and osteoblast differentiation. Since the early lethality of many knockout mice makes it difficult to study the postnatal function of a gene, she is working on the establishment of a tissue- and time-specific *IHH* knockout animal model using the *cre-loxP* system.

In future studies, Dr. Lanske is interested in the physiological function of the *FGF23* gene. Mutations in this gene have recently been identified to cause autosomal dominant hypophosphatemic rickets (ADHR). Preliminary work on this project has been performed and the next step is the generation of a knockout strain. Mouse lines that are over expressing *Phex* (phosphate regulating gene with homologies to endopeptidases on the X-chromosome) under the human beta-actin promoter have already been established. *Phex* is thought to be the endopeptidase that inactivates *FGF23*. Comparisons of the phenotype of mice lacking *FGF23* and animals over expressing *Phex* will provide information about phosphate regulation in the body.

To learn more about research activities at HSDM, have questions, comments, and/or suggestions for this Bulletin, please contact dawn_decosta@hsdm.harvard.edu, or 617.432.1121, or visit the HSDM website at:

<http://www.hsdm.harvard.edu/asp-tml/research.html>