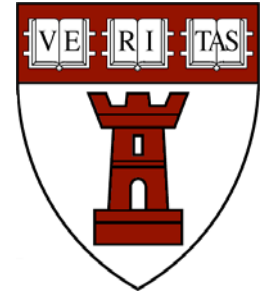


HSDM OFFICE OF RESEARCH BULLETIN



June 1, 2004

RESEARCH GRANTS & AWARDS:

DR. CORTINO (TINO) SUKOTJO

Gene Profiling Analysis of SLA Implant, an In Vivo study in Rats

Congratulations to Tino, an HSDM advanced graduate prosthodontics student and candidate for an MMSc degree (June 2005). Tino received funding from the ITI Foundation for his project on gene profiling of SLA implants. Because of its high success rate, implant therapy has become a routine part of prosthodontic care. Implant treatment in general is very successful, however, the length of treatment is still unsatisfactory. Shortening of the healing phase has become a main focus in implant research over the last few years. In vivo and vitro studies have shown that implant surface topography not only alter cells proliferation and differentiation but also influences the biomechanical properties of osseointegration. The SLA (sandblasted with large grit and acid etched) implant coated surface is a textured surface that was uniquely designed to lead to a rapid and strong implant fixation. The previous finding showed the superiority of the SLA implant surface compared to others. However, the detailed molecular analysis describing this unique phenomenon has not yet been determined. For this study, Tino and his colleagues hypothesize that the Sandblasted and Acid-etched (SLA) implant surface modulates a specific differential gene expression in the implant-tissue interface promoting early bone formation. Therefore, they propose to investigate the effect of SLA surface on the expression patterns of bone wound healing related genes during osseointegration process using a molecular biology assay.

CORE LABORATORY DIRECTOR HAS BEEN APPOINTED

JIM MCBRIDE has accepted the position of **Core Laboratory Director** in the Office of Research for the new Research and Education Building. Jim has over 10 years experience in managing a molecular biology and protein science laboratory at the Harvard School of Dental Medicine as well as 3 years managing a core equipment facility that is used by 37 laboratories at the UCLA Dental Research Institute. Jim worked at HSDM from 1988 to 2001 in the Department of Oral Pathology and has spent his last several years at UCLA. Please join us in welcoming Jim back to HSDM on August 10, 2004.

RECENT PUBLICATIONS:

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

Abukawa H, Shin M, Williams WB, Vacanti JP, Kaban LB, Troulis MJ. Reconstruction of mandibular defects with autologous tissue-engineered bone. *J Oral Maxillofac Surg* 2004;62(5):601-6.

Bhutto IA, Kim SY, McLeod DS, Merges C, Fukai N, Olsen BR, Luttly GA. Localization of Collagen XVIII and the Endostatin Portion of Collagen XVIII in Aged Human Control Eyes and Eyes with Age-Related Macular Degeneration. *Invest Ophthalmol Vis Sci* 2004;45(5):1544-52.

Borras MC, Becerra L, Ploghaus A, Gostic JM, DaSilva A, Gonzales RG, Borsook D. fMRI Measurement of CNS Responses to Naloxone Infusion and Subsequent Mild Noxious Thermal Stimuli in Healthy Volunteers. *J Neurophysiology* 2004;91(6):2723-33.

Cutler C, Kim HT, Hochberg E, Ho V, Alyea E, Lee SJ, Fisher DC, Miklos D, Levin J, Sonis S, Soiffer RJ, Antin JH. Sirolimus and tacrolimus without methotrexate as graft-versus-host disease prophylaxis after matched related donor peripheral blood stem cell transplantation. *Biol Blood Marrow Transplant* 2004;10(5):328-36.

Giddon DB. Should dentists become 'oral physicians'? *JADA* 2004;135:438-446.

Giddon DB. Commentary on "Perceptions of dental attractiveness and orthodontic treatment among Tanzanian children." *Am J Orthod Dentofac Orthop* 2004;125(4):433-434.

Halpern LR, Kaban LB, Dodson TB. Perioperative neurosensory changes associated with treatment of mandibular fractures. *J Oral Maxillofacial Surgery* 2004;62(5):576-81.

Kuo WP, Whipple ME, Epstein JB, Jenssen TK, Santos GS, Ohno-Machado L, Sonis ST. Deciphering gene expression profiles generated from DNA microarrays and their applications in oral medicine. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2004;97(5):584-91.

Lader AS, Ramoni MF, Zetter BR, Kohane IS, Kwiatkowski DJ. Identification of a Transcriptional Profile Associated with In Vitro Invasion in Non-Small Cell Lung Cancer Cell Lines. *Cancer Biol Therapy* 2004;Jul 9.

Marneros AG, Norris JE, Watanabe S, Reichenberger E, Olsen BR. Genome scans provide evidence for keloid susceptibility Loci on chromosomes 2q23 and 7p11. *J Invest Dermatol* 2004 May;122(5):1126-32.

Pfander D, Kobayashi T, Knight MC, Zelzer E, Chan DA, Olsen BR, Giaccia AJ, Johnson RS, Haase VH, Schipani E. Deletion of Vhlh in chondrocytes reduces cell proliferation and increases matrix deposition during growth plate development. *Development* 2004;131(10):2497-508.

Rubenstein EB, Peterson DE, Schubert M, Keefe D, McGuire D, Epstein J, Elting LS, Fox PC, Cooksley C, Sonis ST; Mucositis Study Section of the Multinational Association for Supportive Care in Cancer; International Society for Oral Oncology. Clinical practice guidelines for the prevention and treatment of cancer therapy-induced oral and gastrointestinal mucositis. *Cancer* 2004;100(9 Suppl): 2026-46.

Sonis ST, Elting LS, Keefe D, Peterson DE, Schubert M, Hauer-Jensen M, Bekele BN, Raber-Durlacher J, Donnelly JP, Rubenstein EB; Mucositis Study Section of the Multinational Association for Supportive Care in Cancer; International Society for Oral Oncology. Perspectives on cancer therapy-induced mucosal injury: pathogenesis, measurement, epidemiology, and consequences for patients. *Cancer* 2004;100(9 Suppl):1995-2025.

Zelzer E, Mamluk R, Ferrara N, Johnson RS, Schipani E, Olsen BR. VEGFA is necessary for chondrocyte survival during bone development. *Development* 2004;131(9):2161-71.

RESEARCH ACADEMY PUBLICATION

STAY TUNED....

The students of the Research Academy are putting the final touches on the first student-driven publication at HSDM entitled, *The Annals of the Academy at Harvard School of Dental Medicine*. We will highlight this exciting publication in the next Bulletin.

Congratulations to the graduating Class of 2004!



To learn more about research activities at HSDM, have questions, comments, and/or suggestions for this Bulletin, please contact us, or visit the HSDM website at:

<http://www.hsdm.harvard.edu/asptml/research.html>

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