A Tribute to Marty Taubman: The Earl of Sandwich, IgA, T-regs, and the Celtics
R.J. Genco
This is a tribute to the academic career of Dr. Martin A. Taubman, editor of Discovery! from 2005-2013.

The Ethical Imperative of Addressing Oral Health Disparities: A Unifying Framework
J.Y. Lee and K. Divaris
This article emphasizes the role of social determinants of oral health, providing a framework outlining the pathways operating across the continuum of these determinants and highlighting potential areas for intervention in oral health disparities research.

Neutrophil Homeostasis and Periodontal Health in Children and Adults
E. Hajishengallis and G. Hajishengallis
The breakdown of any of the known mechanisms regulating neutrophil homeostasis affects severe forms of periodontitis, indicating that neutrophils are key to periodontal health.

Maternal Oral Bacterial Levels Predict Early Childhood Caries Development
B.W. Chaffee, S.A. Gansky, J.A. Weinstein, J.D.B. Featherstone, and F.J. Ramos-Gomez
There is a positive prospective association between higher maternal salivary challenge of mutans streptococci and lactobacilli and incidence of early childhood caries in children.

Novel PAX9 Mutations Cause Non-syndromic Tooth Agenesis
This report describes two novel PAX9 mutations in patients with non-syndromic tooth agenesis and the deletion of three nucleotides corresponding to a single amino acid in the paired domain.

Scaffoldless Tissue-engineered Dental Pulp Cell Constructs for Endodontic Therapy
F.N. Syed-Picard, H.L. Ray, Jr., P.N. Kamta, and C. Sfeir
Three-dimensional scaffold-free tissues were engineered from human dental pulp stem cells and shown to regenerate a dentin-pulp complex in an endodontic treatment model in vivo.

Estimating Mineral Changes in Enamel Formation by Ashing/BSE and MicroCT
J.E. Schmitz, J.D. Teppe, Y. Hu, C.E. Smith, R.J. Fajardo, and Y.-H.P. Chun
Appropriately calibrated microCT (µCT) technology was used to obtain estimates of mineral content (weight and/or density) and volumes of mouse incisor enamel comparable in accuracy with directly weighed and sectioned enamel.

Carbodiimide Inactivation of MMPs and Effect on Dentin Bonding
The authors discuss the effect of the application of carbodiimide cross-linking agent during dentin bonding procedures on MMP activity.

Abundance of MMPs and Cysteine Cathepsins in Caries-affected Dentin
The presence and distribution of cathepsin K in human dentin suggests that cysteine cathepsins and MMPs can be involved with caries progression.

Size and Shape Variability in Human Molars during Odontogenesis
W. Morita, W. Yano, T. Nagaoka, M. Abe, and M. Nakatsukasa
The authors explore size and shape variability through odontogenesis using human maxillary permanent first molars and second deciduous molars.
TMJ Degeneration in SAMP8 Mice is Accompanied by Deranged Ihh Signaling

Y. Ishizuka, Y. Shibukawa, M. Nagayama, R. Decker, T. Kinumatsu, A. Saito, M. Pacifici, and E. Koyama

Early-onset articular cartilage degeneration in SAMP8 TMJ involves alterations in Ihh signaling, and occlusal dysfunction accelerates progression toward degenerative morbidity.

Dental Pulp Dendritic Cells Migrate to Regional Lymph Nodes


Dental pulp cells expressing dendritic cell lineage markers and high levels of co-stimulatory molecules migrate to regional lymph nodes after cusp injury.

Simvastatin Inhibits LPS-induced Alveolar Bone Loss during Metabolic Syndrome


The authors report for the first time that simvastatin inhibited LPS-induced alveolar bone loss and periodontal inflammation in an animal model of metabolic syndrome.

Expression of Resolvin D1 Biosynthetic Pathways in Salivary Epithelium

N.J. Leigh, J.W. Nelson, R.E. Mellas, A. Aguirre, and O.J. Baker

Resolvin D1 biosynthesis machinery is expressed in salivary glands.

Hypersensitive mAChRs are Involved in the Epiphora of Transplanted Glands

C. Ding, X. Cong, Y. Zhang, N.Y. Yang, S.L. Li, L.L. Wu, and G.Y. Yu

Hypersensitive mAChRs might be responsible for epiphora of transplanted submandibular glands by moving AQP5 out of lipid rafts.

Ultrastructural Characterization of the Implant Interface Response to Loading

X. Zhang, J. Duyck, K. Vandamme, I. Naert, and G. Carmeliet

The authors investigated the peri-implant tissue response to loading conditions at the tissue, cellular, and molecular levels.

LETTERS TO THE EDITOR

Letter to the Editor, “Retained Asymptomatic Third Molars and Risk of Second Molar Pathology”

J.W. Friedman

Response to Letter to the Editor, “Retained Asymptomatic Third Molars and Risk for Second Molar Pathology”

M.E. Nunn, M.D. Fish, R.I. Garcia, E.K. Kaye, R. Figueroa, A. Gohel, M. Ito, H.I. Lee, D.E. Williams, and T. Miyamoto

CLASSIFIEDS

ABOUT THE COVER

Resolvin D1 biosynthetic machinery localization in salivary glands with Sjögren’s Syndrome. Frozen sections from human minor salivary glands were subjected to immunofluorescent staining with goat anti-rabbit anti-iPLA2, (green) followed by propidium iodide nucleic acid stain (blue).

For more details, see pages 300-305.