DISCOVERY!

Personal Reflections on a Sensitive Subject
K. Markowitz and D.H. Pashley
The authors reflect on their involvement in the field of tooth sensitivity and how they navigated between laboratory and clinical research.

CRITICAL REVIEWS IN ORAL BIOLOGY & MEDICINE

Is SPARC an Evolutionarily Conserved Collagen Chaperone?
N. Martinek, J. Shahab, I. Sodek, and M. Ringuette
SPARC may play a role in regulating post-endoplasmic reticulum events that promote collagen fibrillogenesis.

Chemokines in Oral Inflammatory Diseases: Apical Periodontitis and Periodontal Disease
T.A. Silva, G.P Garlet, S.Y. Fukada, J.S. Silva, and EO. Cunha
The authors summarize the findings regarding the role of chemokines in periapical and periodontal tissue inflammation, and the integration, into experimental models, of the information about the role of chemokines in human diseases.

RAPID COMMUNICATION

DMP1-targeted Cre Expression in Odontoblasts and Osteocytes
Y. Lu, Y. Xie, S. Zhang, V. Dusevich, L.E Bonewald, and J.Q. Feng
The authors describe an animal model for the preferential study of gene functions in both odontoblasts and osteocytes.

BIOLOGICAL

Validation of Amelogenesis Imperfecta Inferred from Amelogenin Evolution
S. Delgado, M. Ishiyama, and J.-Y. Sire
The authors show how evolutionary analysis, conducted within a phylogenetic framework, could help both in validating mutations in humans and in revealing amino acids which could play important roles in enamel structure and organization.

Transgenic Mice that Express Normal and Mutated Amelogenins
C.W. Gibson, Z.A. Yuan, Y. Li, B. Daly, C. Suggs, M.A. Aragon, E. Alawi, A.B. Kulkami, and J.T. Wright
The authors describe a phenotype that argues for dominant-negative activity for the P70T amelogenin, and for the robust nature of the process of amelogenesis.
Micromolar Fluoride Alters Ameloblast Lineage Cells in vitro
Q. Yan, Y. Zhang, W. Li, and PK. DenBesten
The authors describe multiple effects of micromolar fluoride on ameloblast-lineage cells.

Isolation of Human Oral Keratinocyte Progenitor/Stem Cells
K. Izumi, T. Tobita, and S.E. Feinberg
This is the first study to show Peroxisome Proliferative-activated Receptor-gamma expression in normal oral mucosa, cultured oral keratinocytes, and a human ex vivo-produced oral mucosa equivalent.

MMPs IL-1 and TNF are Regulated by IL-17 in Periodontitis
A. Beklen, M. Ainola, M. Hukkanen, C. Gürban, T. Sorsa, and YT. Konttinen
Gingival fibroblasts may play an important role in tissue destruction in periodontitis via cytokine-inducible matrix metalloproteinase-1 and -3 production, in which interleukin-17 plays a role as a key regulatory cytokine.

Fibrillin-2 Degradation by Matrix Metalloproteinase-2 in Periodontium
E. Tsuruga, K. Irie, and T. Yajima
The authors demonstrate, for the first time, that some active MMP-2 may degrade fibrillin-2 in periodontal ligament fibroblast cell layers, and MMP-2 may play a role in the remodeling of elastic system fibers in the periodontal ligament.

Nifedipine and Cyclosporin Affect Fibroblast Calcium and Gingiva
Changes in gingival collagen metabolism are not mediated by calcium intracellular oscillations.

Role of NF-κB in TNF-α-induced COX-2 Expression in Synovial Fibroblasts from Human TMJ
J. Ke, X. Long, Y. Liu, YF. Zhang, J. Li, W. Fang, and Q.G. Meng
Activation of NF-κB is responsible for TNF-α-induced COX-2 expression in synovial fibroblasts from the temporomandibular joint.

Cortical Vascular Canals in Human Mandible and Other Bones
V.J. Kingsmill, C.M. Gray, D.R. Moles, and A. Boyde
The authors found no relationship between cortical porosity and the degree of bone mineralization.

CLINICAL
Tobacco Use and Incidence of Tooth Loss among US Male Health Professionals
T. Dietrich, N.N. Maserejian, K.J. Joshipura, E.A. Krall, and R.I. Garcia
Current pipe/cigar smokers have a 20% increased risk of tooth loss compared with those who never or formerly smoked pipes/cigars.

BIOMATERIALS & BIOENGINEERING
Effects of Calcium Phosphate Nanoparticles on Ca-PO 4 Composite
H.H.K. Xu, M.D. Weir, L. Sun, S. Takagi, and L.C. Chow
The authors describe new, novel nano-composites that could provide the needed combination of stress-bearing and caries-inhibiting capabilities.