Professor Thomas Lehner: Archetypal Translational Scientist  
S.J. Challacombe  
The author pays tribute to Thomas Lehner’s myriad contributions to our understanding of the pathogenesis of a variety of mucosal diseases.

Dental X-rays and Risk of Meningioma: Anatomy of a Case-Control Study  
D. Dirksen, C. Kunze, L. Berghoff, P. Schmutzler, and L. Fichinger  
The authors conclude that there is little to no evidence of an increased risk of meningioma for individuals exposed to low-dose dental x-ray diagnostics.

Periodontal Disease and Rheumatoid Arthritis: A Systematic Review  
S. Kaur, S. White, and P.M. Bartold  
This systematic review considers the best available evidence for an association between the clinical features of periodontal disease and biochemical markers for rheumatoid arthritis.

Advanced BMP Gene Therapies for Temporal and Spatial Control of Bone Regeneration  
C.G. Wilson, F.M. Martín-Saavedra, N. Vilaboa, and R.T. Franceschi  
This review advances the hypothesis that reconstitution of spatial and temporal patterns of bone morphogenetic protein signaling with cutting-edge gene therapies will transform the clinical management of craniofacial bone defects attributed to trauma, disease, or surgical resection.

Common SNPs of AmelogeninX (AMELX) and Dental Caries Susceptibility  
This study showed differences for individuals for genotype distribution in caries-free children vs children with caries.

Intrauterine Hormone Effects on Tooth Dimensions  
D.C. Ribeiro, A.H. Brook, T.E. Hughes, W.I. Sampson, and G.C. Townsend  
The authors’ findings strongly support the Twin Testosterone Transfer hypothesis and they propose that the growth-promoting effects of the Y chromosome and intrauterine male hormone levels influence tooth dimensions differentially.

Genome-wide association Studies of Pit-and-Fissure- and Smooth-surface Caries in Permanent Dentition  
Genes differentially affect cariogenesis across the surfaces of the permanent dentition.

Host Susceptibility to Periodontitis: Mapping Murine Genomic Regions  
This report shows that periodontitis in mice is a polygenic trait with highly significant mapped Quantitative Trait Loci.

Type I Interferon Receptor Deficiency Prevents Murine Sjögren’s Syndrome  
B.M. Szczepanik, P.D. Rybakiewska, P. Fig, K.M. Fajer, A.B. Auesch, J. Hänninen, and U.S. Desikan  
In genetically susceptible individuals, the type I IFN pathway can propagate certain features of Sjögren’s Syndrome.

Decreased Osteogenesis in Stromal Cells from Radiolucent Zone of Human TMJ Ankylosis  
Radiolucent zones possess the properties of bone marrow stem cells but with lower proliferation and osteogenic differentiation capacity similar to that of stromal cells in hypertrophic non-union tissues.
Interaction of IL-1β and P2X₃ Receptor in Pathologic Masseter Muscle Pain

N. Noma, M. Shinoda, K. Honda, M. Kiyomoto, K. Drzawa, Y. Nakaya, O. Komiyama, Y. Imamura, and K. Iwata

P2X₃R expression associated with enhanced IL-1β expression and ATP release in the masseter muscle (MM) has a possible important role in MM mechanical hyperalgesia after excessive muscular contraction.

Biomaterials & Bioengineering

Organo-Selenium-containing Dental Sealant Inhibits Bacterial Biofilm

P. Tran, A. Hamood, T. Mosley, T. Gray, C. Jarvis, D. Webster, B. Amaechi, T. Enos, and T. Reid

The inhibitory effect of an organo-selenium dental sealant against S. mutans and S. salivarius biofilms is very effective and durable.

Surface Degradation of Dental Ceramics as a Function of Environmental pH

J.F. Esquivel-Upshaw, F.Y. Dieng, A.E. Clark, D. Neal, and K.J. Anusavice

Ceramic veneers and glazes may be susceptible to considerable degradation in low- and high-pH buffer solutions.

Letters to the Editor

Letter to the Editor, “Tooth Bleaching Increases Dentinal Protease Activity”

Y.-F. Ren

Response to Letter to the Editor, “Tooth Bleaching Increases Dentinal Protease Activity”

F.D. Nascimento and I.L.S. Tersario

Classifieds