GUEST EDITORIAL
Mark C. Herzberg, DDS, PhD, Linda G. Griffith, PhD, Matthew J. Doyle, PhD
The authors argue for the critical need for a cadre of young people pursuing academic careers in dentistry.

DISCOVERY
Atsuo Amano
The author pays tribute to his mentor, Shigeyuki Hamada.

CRITICAL REVIEWS IN ORAL BIOLOGY & MEDICINE
Modulation of Dental Inflammation by the Sympathetic Nervous System
S.R. Haug and K.J. Heyeraas
This article presents evidence in support of interactions between the sympathetic nervous system and dental inflammation.

Implant Surface Roughness and Bone Healing: a Systematic Review
M.M. Shalabi, A. Gortemaker, M.A. Van't Hof, I.A.Jansen, and N.H.I. Creugers
The authors present evidence for a positive relationship between bone-to-implant contact and surface roughness.

BIOLOGICAL
Extracellular Phosphate Alters Cementoblast Gene Expression
R.B. Ruttlferford, B.L. Foster, T. Bammiller, R.P Beyer, S. Sato, and M.J. Somerman
The authors demonstrate the utility of global gene expression profiling to discover and further explore signaling and other pathways likely involved in the regulation of cementogenesis.

Diabetes Enhances Periodontal Bone Loss through Enhanced Resorption and Diminished Bone Formation
R. Liu, H.S. Bai, T. Desta, N. Krothapalli, M. Alyassi, Q. Luan, and D.T. Graves
Diabetes causes a more persistent inflammatory response and greater loss of attachment, and enhances periodontal bone loss through enhanced resorption and decreased osseous repair.

Mechanism of Cyclosporine-induced Overgrowth in Gingiva
Both p38 MAPK and PI3K are essential for gingival fibroblast proliferation, and TGF, and iL-6, with their associated signal transduction, may be novel bona fide molecular targets for the prevention of gingival overgrowth in cyclosporine A-treated patients.

Simvastatin Decreases IL-6 and IL-8 Production in Epithelial Cells
K. Sahoda, M. Yamamoto, Y. Negishi, LK. Liao, K. Node, and Y. Izumi
The authors provide the first evidence that simvastatin reduces IL-la-induced production of inflammatory cytokines such as IL-6 and IL-8 by human oral epithelial cells.
This is the first report on the expression of Toll-like receptors, NOD1, and NOD2 in human oral epithelial cells.

Apoptosis in the enamel knot is necessary for the proper formation of molar teeth, including appropriate shape and size.

Bradykinin has dual effects on the activation of eNOS in odontoblasts.

MSXI regulatory elements may be mutated.

The OHIP change scores were significantly greater for participants receiving implants than for those who refused them.

Lateral displacement of the mandible can possibly initiate an adaptive process in the entire jaw system, resulting in extensive atrophy of the jaw muscles.

This is one of the first studies to report on the effectiveness of chlorhexidine varnish in preventing caries in primary teeth in preschool children.

This is the first report addressing the intrinsic biomechanical properties of bone associated with titanium implants.

Selected gene transcripts are induced by titanium implants under regulatory control strongly associated with the nature of osseointegration.

This is the first study in which the dynamic compressive properties of the condylar cartilage have been examined for a wide frequency range (0.01-10 Hz).