DISCOVERY!

Daniel H. Fine

The author pays tribute to the "Grandfather" of modern oral microbiology.

STATEMENT OF OWNERSHIP

CLASSIFIEDS

CRITICAL REVIEWS IN ORAL BIOLOGY & MEDICINE

Craniofacial Tissue Engineering by Stem Cells

J.J. Mao, W.V. Giannobile, J.A. Helms, S.J. Hollister, PH. Krebsbach, M.T. Longaker, and S. Shi

This review is designed not only to serve as a timely and comprehensive synthesis of our current knowledge of craniofacial tissue engineering, but also to identify immediate challenges in this dynamic field.

Efficacy and Safety of Biodegradable Osteofixation Devices in Oral and Maxillofacial Surgery: a Systematic Review

G.J. Buijs, B. Stegenga, and R.R.M. Bas

The authors systematically review the available literature to determine the clinical efficacy and safety of biodegradable devices compared with titanium devices in oral and maxillofacial surgery.

CLINICAL

Lesions of Endodontic Origin and Risk of Coronary Heart Disease


Chronic endodontic inflammation is related to the development of coronary heart disease, especially among younger men.

Head Immobilization can Impair Jaw Function


The authors' findings suggest the recruitment of neck muscles in jaw activities, supporting the hypothesis that head fixation can impair jaw function.

Mechanical Work during Stress-field Translation in the Human TMJ

1006
To the authors' knowledge, this is the first analysis of data describing mechanical work in a synovial joint system.

The Effect of Copper on Demineralization of Dental Enamel

AZ. Abdullah, S.M. Strafford, S.J. Brookes, and M.S. Duggal

Copper alone had no significant protective effect on demineralization of dental enamel.

BIOMATERIALS & BIOENGINEERING

Effects of Resin Hydrophilicity on Dentin Bond Strength


Wet-bonding with ethanol achieved higher bond strengths with hydrophobic resins than were possible with water-saturated matrices.

Role of Alcohol in the Fracture Resistance of Teeth


Chemical dehydration induced by alcohol has a significant beneficial effect on the elastic modulus, strength, and fracture toughness of dentin, and the change in properties is fully reversible upon rehydration.

Minimizing Dentinal Fluid Flow Associated with Gap Formation

D.N. Ratih, J.E.A. Palamara, and H.H. Messer

The authors investigated the hypothesis that either glass-ionomer cement liners or low-shrinkage composite could reduce fluid flow related to gap formation.

Increased Young’s Modulus and Hardness of Col1 a2oim Dentin

G.E. Lopez Franco, A. Huang, N. Pleshko Camacho, D.S. Stone, and R.D. Blank

Clinical fragility of oim mice is not due to deficiencies of hardness or Young's modulus, but may be due to defects in post-yield behavior or resistance to fatigue damage.

Apparent Interfacial Fracture Toughness of Resin/Ceramic Systems

A. Della Bona, K.J. Anusavice, and J.J. Mecholsky, Jr.

The authors confirmed the hypothesis that interfacial fracture toughness of the adhesion zone of resin/ceramic systems is affected by the ceramic microstructure and ceramic surface treatments.

BIOLOGICAL

Effects of Systemic Fluoride and in vitro Fluoride Treatment on Enamel Crystals


The authors suggest a mechanism for the increased surface roughness of crystals in fluorotic enamel.

Tissue pH and Temperature Regulate Pulpal Nociceptors

H.E. Goodis, A. Poon, and K.M. Hargreaves

Environmental stimuli regulate the activity of capsaicin-sensitive neurons innervating dental
pulp, and these factors may be significant clinically in the development and amelioration of dental pain.

Characterization of Fibroblasts with *Son of Sevenless* \(^{+}\) Mutation

E.J. Lee, S.I. Jang, D. Pallos, J. Kather, and TC. Hart

The authors report that increased fibroblast numbers and collagen matrix changes are associated with mutation of the *SOS1* gene *in vitro* and *in vivo*. 