Emphasizing Relevance
T.A. DeRouen
This is the text of the inaugural address delivered by President-elect Timothy A. DeRouen at the Closing Ceremonies of the 43rd Annual Meeting of the American Association for Dental Research, March 22, 2014, Charlotte, NC, USA.

The Role of Oral Pathobionts in Dysbiosis during Periodontitis Development
Y. Jiao, M. Hasegawa, and N. Inohara
The authors discuss the role of oral pathobionts in dysbiosis during the development of periodontitis.

Proteomic Analysis of RBP4/Vitamin A in Children with Cleft Lip and/or Palate
Reduced levels of retinol binding protein 4 (RBP4) and vitamin A were related to post-birth non-syndromic cleft lip and/or palate babies.

Dental Anomalies Associated with Cranio-Metaphyseal Dysplasia
I.-P. Chen, A. Tadinada, E.H. Dutra, A. Utreja, F. Uribe, and E.J. Reichenberger
The authors discuss orthodontic and radiologic evaluations of patients with cranio-metaphyseal dysplasia (CMD), as well as comparative tooth movement in a CMD murine model.

A miRNA-binding-site SNP of MSX1 is associated with NSOC Susceptibility
L. Ma, M. Xu, D. Li, Y. Han, Z. Wang, H. Yuan, J. Ma, W. Zhang, H. Jiang, Y. Pan, and L. Wang
The authors’ findings advance the etiology of NSOC and suggest that SNPs in miRNA-binding sites might play an important role in the development of NSOs.

Radiopaque Tagging Masks Caries Lesions following Incomplete Excavation in vitro
The authors developed a method for radiographic tagging caries lesions remaining after incomplete one-step caries removal, thereby masking lesions that might otherwise be radiographically detected and unnecessarily re-treated.

Failure of Tooth Formation Mediated by miR-135a Overexpression via BMP Signaling
E.J. Kim, M.J. Lee, L. Li, K.S. Yoon, K.S. Kim, and H.S. Jung
BMP signaling regulates tooth formation through the BMP receptors, including Bmpr-Ia and Bmpr-Ib, via miR-135a.

Id1 Expression Level Determines the Differentiation of Human Dental Pulp Stem Cells
I. Maciejewska, M. Sakowicz-Burkińowicz, and T. Pawełczyk
The authors highlight Id1 as an important modulator of molecular events during dental pulp stem cell commitment and differentiation, which should be considered in dental tissue engineering.

Gpr177-mediated Wnt Signaling is Required for Fungiform Placode Initiation
X. Zhu, Y. Liu, P. Zhao, Z. Dai, X. Yang, Y. Li, M. Qiu, and Z. Zhang
The authors demonstrate the role of Gpr177 in tongue placode initiation by an epithelium-specific gene deletion.

Crosstalk between miR-34a and Notch Signaling Promotes Differentiation in Apical Papilla Stem Cells (SCAPs)
In this study, the authors investigated the crosstalk between microRNA miR-34a and Notch signaling during cytodifferentiation in human Apical Papilla Stem Cells (SCAPs).

Obesity-associated Gingival Vascular Inflammation and Insulin Resistance
K. Mizutani, K. Park, A. Mima, S. Katagiri, and G.L. King
The authors provide the first documentation of insulin resistance, and the mechanism that causes it, in the gingivae of Zucker rats in obese and insulin-resistant states.
Diffusion Reflection: A Novel Method for Detection of Oral Cancer

D. Fixler, R. Ankri, I. Kaplan, I. Novikov, and A. Hirshberg
The authors introduce a novel method to identify carcinomatous changes in tissue sections using direct diffusion reflection measurements of gold nanoparticles.