



Vieira Lab Newsletter

October 22, 2012
Volume 7, Issue 3

Lab Meeting

Friday, October 26th

Room 371 at 11am

Upcoming Events

5th AADR Fall Focused Symposium: Translational Genetics— Advancing Fronts for Craniofacial Health

When: November 16-17, 2012

Where: University of Pittsburgh
Pennsylvania, USA

Recent Publications

Interaction between IRF6 and TGFA Genes Contribute to the Risk of Nonsyndromic Cleft Lip/Palate.

Letra A, Fakhouri W, Fonseca RF, Menezes R, Kempa I, Prasad JL, McHenry TG, Lidral AC, Moreno L, Murray JC, Daack-Hirsch S, Marazita ML, Castilla EE, Lace B, Orioli IM, Granjeiro JM, Schutte BC, Vieira AR. PLoS One. 2012;7(9):e45441. doi: 10.1371/journal.pone.0045441. Epub 2012 Sep 20.

Enamel formation genes influence enamel microhardness before and after cariogenic challenge.

Shimizu T, Ho B, Deeley K, Briseño-Ruiz J, Faraco IM Jr, Schupack BI, Brancher JA, Pecharki GD, Kuehler EC, Tannure PN, Lips A, Vieira TC, Patir A, Yildirim M, Poletta FA, Mereb JC, Resick JM, Brandon CA, Orioli IM, Castilla EE, Marazita ML, Seymen F, Costa MC, Granjeiro JM, Trevisatto PC, Vieira AR. PLoS One. 2012;7(9):e45022. doi: 10.1371/journal.pone.0045022. Epub 2012 Sep 24.

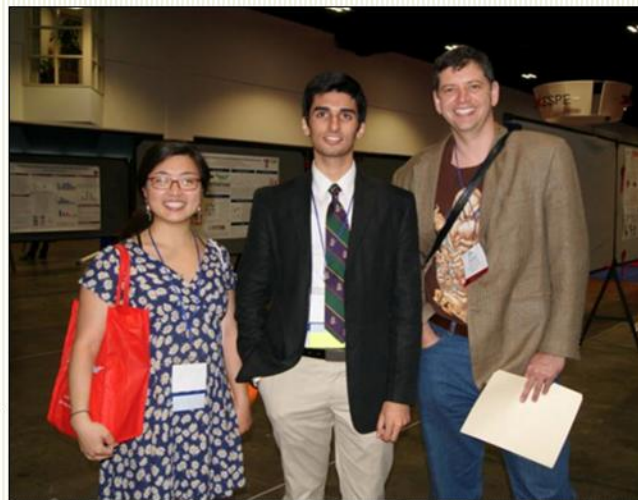
Lab News

Next month, the American Association of Dental Research will hold its Fall Focused Symposium at the University of Pittsburgh. The topic for this symposium is Translational Genetics - Advancing Fronts for Craniofacial Health.

Of the 24 posters accepted, eight are on research performed at or in collaboration with the Vieira Lab. Fourteen of the posters are from the University of Pittsburgh.

If you are interested in attending the Fall Focused Symposium, more information can be found on the AADR website under the "Meetings" tab. Registration is currently open.

(Poster titles are listed on page 2 and 3.)



Serena Hsin and Shahryar Khaliq (pictured with Dr. Vieira) are two students from the School of Dental Medicine who will be presenting posters at the AADR Fall Focused symposium.

DRDR Update

Recruitment Summary

Subjects Recruited	3605
Subjects Declined	557
Compliance Rate	86%

Recruitment Location

Module 1	865	Emergency Care	68	UDHS	8
Module 2	1179	Oral Surgery	43	Orthodontics	150
Module 3	453	Pediatric Dentistry	243	Other	73
Module 4	211	Implant Center	15	AEGD	22
Dental Hygiene	213	Prosthodontics	29	Perio	8
Endo	25				



Lab News (continued)

Detection of Apoptosis in Periodontal Ligament During Orthodontic Tooth Movement

R. Duggal (Department of Orthodontics, All India Institute of Medical Sciences, New Delhi, India) and N. Singh (Department of Biochemistry, All India Institute of Medical Sciences, New Delhi, India)

Genetic Mapping of High Caries Experience on Chromosome 13

E.C. Kuchler, K. Deeley, B. Ho, and A. Vieira (all from Oral Biology, University of Pittsburgh)

Looking at the Role of Novel Genes in Tooth Agenesis

H. Hsin (University of Pittsburgh), K. Deeley (Oral Biology, University of Pittsburgh), R. Meira (Pediatric Dentistry and Orthodontics, Universidade Federal Do Rio De Janeiro, Rio de Janeiro, Brazil), A. Patir (Istanbul Medipol University, Istanbul, Turkey), F. Seymen (Department of Pedodontics, Istanbul University, Istanbul, Turkey), A. Modesto (Pediatric Dentistry, University of Pittsburgh), R. D'Souza (Biomedical Sciences, Baylor College of Dentistry, Dallas, TX), and A. Vieira (Oral Biology, University of Pittsburgh).

Phosphohoryn Expression Elicits Differential Growth Responses in Fibroblasts and Osteoblasts

M. Pham (The Center for Craniofacial Regeneration, University of Pittsburgh, Pittsburgh, PA), G. Sencak (University of Pittsburgh), N. Sundaram (Carnegie Mellon University, Pittsburgh, PA), C. Sfeir (Oral Biology, University of Pittsburgh), and T. Jayaraman (Oral Biology, University of Pittsburgh).

Genes Involved in Tumorigenesis Are Associated with Oral Clefts

M.F. Reis (Oral Biology, University of Pittsburgh), E.C. Kuchler (Oral Biology, University of Pittsburgh), P. Tannure (Universidade Federal Do Rio De Janeiro, Rio de Janeiro, Brazil), K. Deeley (Oral Biology, University of Pittsburgh), A. Lips (Universidade Federal Fluminense, Niteroi, Brazil), T.C. Vieira (Oral Biology, University of Pittsburgh), T. Saboia (Pediatric Dentistry and Orthodontics Universidade Federal Do Rio De Janeiro, Rio de Janeiro, Brazil), B. Ho (Oral Biology, University of Pittsburgh), A.C. Rey (Oral Biology, University of Pittsburgh), M. Costa (Pediatric Dentistry and Orthodontics Universidade Federal Do Rio De Janeiro, Rio de Janeiro, Brazil), J. Granjeiro (Biomedical Sciences Universidade Federal Fluminense, Niteroi, Brazil) and A. Vieira (Oral Biology, University of Pittsburgh).

Exome Sequencing of Twelve Families with Distinct *Amelogenesis Imperfecta*

J.C. Hu (Department of Biologic and Material Sciences, University of Michigan, Ann Arbor, MI), S. Wang (Department of Biologic and Material Sciences, University of Michigan, Ann Arbor, MI), F. Seymen (Department of Pedodontics, Istanbul University, Istanbul, Turkey), B.M. Reid (Department of Biologic and Material Sciences, University of Michigan, Ann Arbor, MI), and J.P. Simmer (Department of Biologic and Material Sciences, University of Michigan, Ann Arbor, MI).

Exome Sequencing and Homozygosity Mapping of Consanguineous Families with AI

S. Wang, J.C. Hu, and J.P. Simmer (all Department of Biologic and Material Sciences, University of Michigan, Ann Arbor, MI).

Caries Affect and Susceptibility to Periapical Pathology Formation

S. Khaliq and A. Vieira (both Oral Biology University of Pittsburgh).

Medical Sequencing of *De Novo* Ectodermal Dysplasia in Identical Twins

A. Modesto (Pediatric Dentistry, University of Pittsburgh), C. Ventura (Pediatric Dentistry, University of Pittsburgh), K. Deeley (Oral Biology, University of Pittsburgh), D. Studen-Pavlovich (Pediatric Dentistry, University of Pittsburgh), and A. Vieira (Oral Biology, University of Pittsburgh).

Genetic Variation in 13q31.1 and Caries Experience in Primary Teeth

S. Linkowski (Oral Biology, University of Pittsburgh), E.C. Kuchler (Oral Biology, University of Pittsburgh), A. Patir (Istanbul Medipol University, Istanbul, Turkey), M. Yildirim (Istanbul University, Istanbul, Turkey), K. Deeley (University of Pittsburgh), F. Seymen (Department of Pedodontics, Istanbul University, Istanbul, Turkey), and A. Vieira (Oral Biology, University of Pittsburgh).

Association Analysis of Patients with Hypodontia and *FGFR2/RUNX2* Gene Single-Nucleotide-Polymorphisms.

L.A. Morford, A. Vu, K.C. Kirk, M.S. Gilbey, G. Falcao-Alencar, M. Sakamoto, D.W. Fardo, and J.K. Hartsfield (all University of Kentucky, Lexington, KY).

***WNT10A* Mutation Causes to Tooth Agenesis and Mild Ectodermal Dysplasia**

J. Bonds, L. Xiang, G. Mues, and R. D'Souza (all Biomedical Sciences, Baylor College of Dentistry, Dallas, TX).

Role of LDB1 Transcription Cofactor in Mammalian Calvaria Development

J. Cesario (Department of Basic Science and Craniofacial Biology, New York University College of Dentistry, New York, NY), A. Landin Malt (Department of Basic Science and Craniofacial Biology, New York University College of Dentistry, New York, NY), Y. Zhao (Laboratory of Mammalian Genes and Development, Program on Genomics of Differentiation, Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, MD), H. Westphal (Laboratory of Mammalian Genes and Development, Program on Genomics of Differentiation, Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, MD), and J. Jeong (Department of Basic Science and Craniofacial Biology, New York University College of Dentistry, New York, NY).



Lab News (continued)

Phenotypic Expression in Nonsyndromic Single-Suture Craniosynostosis: Head Shape in Siblings

M.R. Bastin (University of Pittsburgh), P. Zhu (University of Pittsburgh), E. Chou (University of Pittsburgh), H.J. Maurer (University of Pittsburgh), P.M. Gandhi (University of Pittsburgh), Y.K. Cloonan (Department of Epidemiology, University of Pittsburgh), M. Govil (Center for Craniofacial and Dental Genetics, University of Pittsburgh), J.E. Losee (University of Pittsburgh), and S.M. Weinberg (Department of Oral Biology, University of Pittsburgh)

Genetic Homozygosity and Phenotypic Variability in Rabbits with Familial Craniosynostosis

M. Mooney (Oral Biology, University of Pittsburgh), J. Cray JR. (College of Medicine, Georgia Health Sciences University, Augusta, GA), M. Marazita (Oral Biology, University of Pittsburgh), G. Cooper (Oral Biology, University of Pittsburgh), J. Losee (Oral Biology, University of Pittsburgh), and M. Siegel (Oral Biology, University of Pittsburgh)

Ercc1 Deficiency Impairs Bone Homeostasis via an NF- κ B-dependent Mechanism

Q. Chen (University of Pittsburgh), K. Liu (Oral Biology, University of Pittsburgh), A. Robinson (Department of Human Genetics, University of Pittsburgh), C. Clauson (University of Pittsburgh Cancer Institute), P. Robbins (Department of Microbiology and Molecular Genetics, University of Pittsburgh Cancer Institute), L. Niedernhofer (Department of Microbiology and Molecular Genetics, University of Pittsburgh Cancer Institute), H. Ouyang (Comprehensive Care, Restorative Sciences and Endodontics, University of Pittsburgh)

Genetic Susceptibility to Dental Caries Differs Between the Sexes

J.R. Shaffer (Human Genetics, University of Pittsburgh), X. Wang (University of Pittsburgh), R. Weyant (University of Pittsburgh), R.J. Crout Sr. (School of Dentistry, West Virginia University, Morgantown, WV), D.W. McNeil (Dental Practice and Rural Health, West Virginia University, Morgantown, WV), and M.L. Marazita (Oral Biology, Human Genetics, University of Pittsburgh)

Genetic Cytotoxicity of the Milhomen Extract (*Aristolochia birostris*)

M. Bezamat, A. Spitz, D.L. Da Silva, D. Alviano, M.G. Cabral, and A.M. Bolognese (all from Universidade Federal Do Rio de Janeiro, Brazil)

BCL3 Gene Role in Facial Morphology

B. Lace (Latvian Biomedical Study and Research Centre, Riga, Latvia), I. Kempa (Latvian Biomedical Study and Research Centre, Riga, Latvia), J. Stavusis (Latvian Biomedical Study and Research Centre, Riga, Latvia), A. Krumina (Latvian Biomedical Study and Research Centre, Riga, Latvia), I. Akota (Institute of Stomatology, Riga Stradins University, Riga, Latvia), B. Barkane (Institute of Stomatology, Riga Stradins University, Riga, Latvia), A. Vieira (Oral Biology, University of Pittsburgh), E. Nagle (Department of Biology and Microbiology, Riga Stradins University, Riga, Latvia), I. Grinfelde (Institute of Stomatology, Riga Stradins University, Riga, Latvia), and I. Maulina (Institute of Stomatology, Riga Stradins University, Riga, Latvia)

Discriminative Polymorphisms for Cleft Lip Microforms in BMP4 Exon 4

M. Gomez (Pacific Craniofacial Team and Cleft Prevention Program, Department of Orthodontics, University of the Pacific, San Francisco, CA), M. Tolar (Pacific Regenerative Dentistry Laboratory, Department of Orthodontics, University of the Pacific, San Francisco, CA), S. Marwaha (Pacific Craniofacial Team and Cleft Prevention Program, Department of Orthodontics, University of the Pacific, San Francisco, CA), K. Liu (Department of Orthodontics, University of the Pacific, San Francisco, CA), A. Balghonaim (Department of Orthodontics, University of the Pacific, San Francisco, CA), W. Touni (Department of Orthodontics, University of the Pacific, San Francisco, CA), E. Nordberg (Department of Orthodontics, University of the Pacific, San Francisco, CA), and M.M. Tolarova (Pacific Craniofacial Team and Cleft Prevention Program, Department of Orthodontics, University of the Pacific, San Francisco, CA)

Wnt Inhibitors Prevent Ossification in the Embryonic Frontal Bone

H. Szabo-Rogers (Oral Biology, University of Pittsburgh), J. Tabler (King's College London, London, England), W. Barrell (King's College London, London, England), and K.J. Liu (Craniofacial Development, King's College London, London, England)

Bmp-2 Controls Postnatal Dentinogenesis and Links to Amelogenesis

A. Rakian, W. Yang, J. Gluhak-Heinrich, M. Harris, Y. Cui, and S.E. Harris (all Department of Periodontics, University of Texas—San Antonio/Health Science Center, San Antonio, TX)

Relationship Between Ameloblastin Concentration and the Quality Enamel Produced

Y.P. Chun (Periodontics, University of Texas at San Antonio, TX), R.J. Fajardo (Orthopaedics, University of Texas at San Antonio, TX), and C.E. Smith (Anatomy and Cell Biology, McGill University, Montreal, QC, Canada)

Emerging Subphenotypes of Oral Clefts and Associated Dental Anomalies

I.M. Faraco Junior (Oral Biology, Porto Alegre, Brazil), M.L. Marazita (Oral Biology, Human Genetics, University of Pittsburgh), M. Arnaudo (Dentistry, ECLAMC, Bahia Blanca, Argentina), F. Carvalho (Genetics, UFRJ, Rio de Janeiro, Brazil), F. Poletta (Genetics, ECLAMC at CEMIC, Buenos Aires, Argentina), J. Mereb (Pediatrics, ECLAMC, El Bolson, Argentina), E. Castilla (Genetics, ECLAMC at FIOCRUZ, Rio de Janeiro, Brazil), I.M. Orioli (Genetics, UFRJ, Rio de Janeiro, Brazil), and A. Vieira (Oral Biology, University of Pittsburgh)