

University of the Pacific, Arthur A. Dugoni School of Dentistry
Institute of Dental History and Craniofacial Study
Spencer R. Atkinson Library of Applied Anatomy (SRA)
P&S Comparative Anatomy Collection (P&S)

Citations resulting from SRA and P&S studies (Organized chronologically under topics listed below)

Last revised August 2018

Atkinson Library of Applied Anatomy Skull Collection

CLINICAL APPLICATIONS

Dentistry & Orthodontics

- Cephalometrics
- Dental Anesthesia
- Dental Developmental Age
- Dental Radiology
- Dental Wear
- Implant Technology
- Orthodontic Treatment
- Periodontal Conditions
- TMJ Mechanics

Craniofacial Growth & Development

- Craniofacial Morphology
- Craniofacial Ontogeny
 - Cranial shape changes*
 - Craniofacial spaces*
 - Facial*
 - Frontal*
 - Mental Foramen*
 - Sutures*
- Craniofacial Surgery
 - Cleft Palate Repair*
 - Distraction Osteogenesis*
 - Plastic Surgery*

RESEARCH APPLICATIONS

Dental & Craniofacial Conditions

- Artificially Induced Craniofacial Conditions in Historic & Prehistoric Times
- Congenital or Pathological Conditions in Historic Times
- Congenital or Pathological Conditions in Prehistoric Times
 - Craniosynostosis*

Endocranial Hyperostosis
Hydrocephaly
Hyperostosis Frontalis Interna
Microcephaly
Osteochondrodysplasia
Recognition and Diagnosis
Trigonocephaly
Tuberculosis

Craniofacial Variation & Evolution

Ontogenetic Change

Basicranium
Cranium
Foramen Magnum
Frontal
Masticatory System
Nasopharynx

Modern Geographic Variation

Variation within Prehistoric or Extinct Populations

Forensic Studies

Assessing Forensic Variables: Sex & Ancestry
Bite Mark Identification
Craniofacial Trauma

TEACHING APPLICATIONS

Human Osteology

ABOUT THE ATKINSON COLLECTION

P&S Comparative Anatomy Collection

Research & Teaching Applications

Atkinson Library of Applied Anatomy Skull Collection

CLINICAL APPLICATIONS

Dentistry & Orthodontics

Cephalometrics

- Abousheta, T. 2016. Accuracy and reliability of linear measurements for intraoral scan augmented CBCT images. MSD in Orthodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, CA.
- Baumrind, S. 2011. The AAOF craniofacial growth legacy collections project: a powerful new instrument for orthodontic teaching and research. Paper presented at the 2011 Midwestern Society of Orthodontists Annual Meeting, American Association of Orthodontists, Chicago, IL.
- Sallapudi, N. 2001. Validity of stereo X-rays in locating landmarks in dry skulls. MSD in Orthodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, CA.
- Caillouel, B. 2001. Analysis of the difference between right and left facing cephalometric X-rays. MSD in Orthodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, CA.
- Strassner, M. 1975. A study of sources of error in cephalometric technique and interpretation. MSD in Orthodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry, San Francisco, CA.

Dental Anesthesia

- Park, S., Lee, Y, Lee Y. Tran, T., and Richards, G.D. 2018. Variation in and assessment of inferior alveolar nerve block landmarks in children and adolescents. Poster presented at the 20th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA, May 23, 2018 (Received ADA/Dentsply Award [Student Clinicians of the ADA (SCADA) Award] to participate in ADA/Dentsply Student Research Competition at the 2018 ADA Annual Meeting, October 18-22, 2018 Honolulu, HI.)
- Lambert, R., Suri, R. and Richards, G.D. 2017. New landmark and modification of the standard inferior alveolar block injection. Poster presented at the ADA/Colgate Dental Student conference on Research, Gaithersburg, MD, October 1-3, 2016 and at the 95th General Session International Association for Dental Research, San Francisco, CA, March 22-25, 2017. *J. Dent. Res.* 96A:0634 (Abstract) (Among recipients of awards for best UOP student research projects).
- Lambert, R., Suri, R., Prokes, R. and Richards, G.D. 2017. New landmark and modification of the standard inferior alveolar block injection. Poster presented at the 19th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, May 31, 2017.
- Lambert, R.E., Suri, R. and Richards, G.D. 2016. A new insertion landmark and modification for the standard technique for inferior alveolar nerve block injections. Poster presented at the CDA Table Clinic Competition, Anaheim, CA, May 13-14 (Awarded 3rd place) and 18th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA May 25 (Awarded Senior Research Excellence Award).
- Prokes, R., Lambert, R.E. and Richards, G.D. 2015. Inferior alveolar nerve block injections: anatomical basis and technique simplification. Poster presented at the 17th Annual

- Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA May 27 (Awarded Senior Research Excellence Award).
- Prokes, R. and Richards, G.D. 2015. A new insertion landmark and modification of the standard technique for inferior alveolar nerve block injections. Poster presented at the Student Research Competition at the San Francisco Dental Society, San Francisco, CA, February 21, 2015 and the AADR SF Section Research Event, San Francisco, CA, April 14, 2015.
- Prokes, R. and Richards, G.D. 2014. A new insertion landmark and modification of the standard technique for inferior alveolar nerve block injections. Poster presented at the 16th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA, May 28, 2014.
- McMichael, G. 2012. The implications of bony and soft tissue variation for success rates in mandibular nerve (V3) anesthesia. Poster presented at the 52nd ADA/DENTSPLY Student Clinical Research Program competition and the 14th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA.
- Hochwald, A.L., Blaseio, A.R.P., Asadi, H. and Richards, G.D. 2012. Implications of masticator (pterygomandibular) space variations for inferior alveolar injection efficacy. Poster presented at the 14th Annual Pacific research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA.
- Gulland, S., Hann, K., McMichael, G. and Richards, G.D. 2011. The implications of bony and soft tissue variation for success rates in mandibular nerve (V3) anesthesia. Poster presented at the 13th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA.
- Budenz, A.W. 2007. The importance of technique selection for administration of local anesthetics. *Contemporary Oral Hygiene* 7(4):20-26.
- Mardini, S., Rapal, K., Moore, S., Olson, M., and Richards, G.D. 2001. Mandibular nerve block failures: anatomical considerations. Poster presented at the Student Competition Table Clinic, Scientific Session of the California Dental Association, Anaheim, CA.
- Mardini, S., Rapal, K., and Richards, G.D. 2001. Mandibular nerve block failures: Anatomical considerations. Paper presented at the 3rd Annual Student Research Competition, University of the Pacific, School of Dentistry, San Francisco, CA.
- Mardini, S., Rapal, K., Moore, S., and Richards, G.D. 2000. Sulcus colli region ontogeny and mandibular nerve (V3) anesthesia. Poster presented at the Hinman Student Research Symposium, Memphis, TN.
- Casagrande, A. 1994. The long buccal nerve injection, is it necessary in pediatric patients? Poster presented at the Student Research Competition, University of the Pacific, School of Dentistry, San Francisco, CA.
- Casagrande, A. 1994. Is the long buccal injection a clinical necessity in children? Poster presented at the Student Competition Table Clinic, Scientific Session of the California Dental Association, Anaheim, CA.

Dental Developmental Age

- Becker, D.E., Castellon-Hinkle, N.A., Cirillo, L.E., Burke, E.M., Ding, J., Jabbour, R.S. and Richards, G.D. 2015. Impacts of the number and types of teeth employed in assessing developmental ages from skeletal samples. Poster presented at the 96th AAAS Annual Meeting, Pacific Division, San Francisco, CA, June 14-17, *Proceedings AAAS Vol. 34*, Part I 254:164-165 (Abstract), and at the Undergraduate Research Symposium, Annual Meeting of the American Association of Physical Anthropologists, St. Louis, MO, March 25th-28th, *Amer. J. Phys. Anthropol.*, 156(S60):81 (Abstract).

Dental Radiology

- Cirillo, L.E., MacKinnon, A.T., Prince, J.R., Bartelink, E.J. and Richards, G.D. 2016. Effects of X-ray microtomography on stable isotope values and sample quality. Poster presented at the 85th Annual Meeting of the American Association of Physical Anthropologists, Atlanta, GA, April 12-16, *Amer. J. Phys. Anthropol.* 159(S62):177 (Abstract).
- Horton, C.F., Richards, G.D., White, T.D., MacDowell, A., Jabbour, R.S., and Nasiatka, J. 2010. Color centers induced in dental enamel during synchrotron microcomputed tomography: phase I assessment. Paper presented at the 79th Annual Meeting of the American Association of Physical Anthropologists, Albuquerque, NM. *Am. J. Phys. Anthropol.* Vol. 141, Suppl. 50:131 (Abstract).
- Olejniczak, A.J. and Grine, F.E. 2006. Assessment of the accuracy of dental enamel thickness measurements using micro-focal X-ray computed tomography. *Anat. Rec.* 288A:263-275.
- Kahn, S.V. 1993. Test of X-ray methods and criteria. M.S.D. in Orthodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry.
- Kahn, S.V., Richards, G.D., and Watrous, A.C. 1993. Developmental-age: test of X-ray methods and assessment of criteria. Paper presented at the Annual Meeting of the University of the Pacific, School of Dentistry, Asilomar Conference Center, Pacific Grove, CA and at the 71st Annual Meeting of the International Association for Dental Research/American Association for Dental Research, Chicago, IL. *J. Dent. Res.* 72:341 (Abstract).

Dental Wear

- Noble, W. 2017. Non-cariou cervical lesions - don't call them abfractions. Lecture delivered - Faculty Cross-Training, University of Pacific, Dugoni School of Dentistry, San Francisco, CA, January 18, 2017.
- Noble, W. 2017. Restoration of cervical lesions. Lecture delivered - IPT I Curriculum, February 9, University of Pacific, Dugoni School of Dentistry, San Francisco.
- Noble, W. 2017. Saliva, GERD, erosion and bruxism - how they relate. Lecture delivered - IPT II Curriculum, University of Pacific, Dugoni School of Dentistry, San Francisco, CA, February 24, 2017.
- Noble, W. 2017. Management of complex dental restorations. Paper presented to the Bui Study Group, San Jose, CA, June 9, 2017.
- Temnitzer, U. 2017. Is the link between occlusal wear and non-cariou cervical lesions a myth or reality? Paper presented at the 82nd Annual Meeting of the Pacific Coast Society for Prosthodontics, Coeur d'Alene, ID, June 28-July 1, 2017.
- Noble, W. 2017. Patterns of wear of prehistoric hunter-gatherers - clues to how diet affects changes in the masticatory apparatus. Paper presented at the Meeting of the Canadian-American Institute of Cariology, Avandaro, Mexico, September 10, 2017.
- Noble, W. 2017. Dental wear: Is it physiologic or pathologic? Paper presented to the Facultad de Odontologia, Universidad Intercontinental, Mexico City, Mexico, September 11, 2017.
- Noble, W. 2018. Managing complex restorative cases in clinical practice. Lecture delivered - ICS III Curriculum lecture, University of San Francisco, CA, February 1, 8 and 15, 2018.
- Temnitzer, U. 2017. Is the link between occlusal wear and non-cariou cervical lesions a myth or reality? Paper presented at the 82nd Annual Meeting of the Pacific Coast Society for Prosthodontics, June 28-July 1, Coeur d'Alene, ID.
- Eversole, L.R., Pappas, J.R. and Graham, R. 1985. Dental occlusal wear and degenerative disease of the temporomandibular joint: a correlational study utilizing skeletal material from a contemporary population. *J. Oral Rehabil.* Vol. 12:401-406.

Wong, J.Y. 1985. The effects of mandibular ramal height discrepancy on dental attribution. M.S.D. in Orthodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry.

Implant Technology

Hazdovac, A., Osborne, S. and Richards, G.D. 2018. Root analogue implant creation: establishing procedures for the general dentist. Poster presented at the 20th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA, May 23, 2018 (Received AADR/Dentsply-Sirona Award to participate in 97th IADR General Session/48th AADR Annual Meeting, Vancouver, BC, June 19-22, 2019).

Chicchon, I., Richards, G.D., Nattestad, A. and Tolar, M. 2013. Simplifying the dental implant: review of new technologies applied to root analogue implants. Poster presented at the 15th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA.

Orthodontic Treatment

Rouleau, A. 2013. Evaluation of tooth size measurement methods made with the iCAT 8x8 "QuickScan" Cone Beam CT. MSD thesis, Dept. of Orthodontics, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA.

Corbett, J.S. 1998. The relationship of the incisive canal to maxillary median diastema. M.S.D. in Orthodontics, Loma Linda University.

Beck, B.W. 1985. Symmetry as measured from foramen rotundum. M.S.D. in Orthodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry.

Champlin, T.L. 1984. Bilateral relationships of the maxillary dentition as measured from foramen spinosum. M.S.D. in Orthodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry.

Atkinson, S.R. 1968. A key to occlusion. *Amer. J. Ortho.* 54(3):217-233.

Atkinson, S.R. 1966. Jaws out of balance; part I. *Amer. J. Ortho.* 52(1):47-55.

Atkinson, S.R. 1966. Jaws out of balance; part II. *Amer. J. Ortho.* 52(5):371-380.

Atkinson, S.R. 1966. "Open-bite" malocclusion. *Amer. J. Ortho.* 52(12):877-886.

Atkinson, S.R. 1965. Normal jaws in action. *Amer. J. Ortho.* 5(7):510-528.

Atkinson, S.R. 1964. Balance – The magic word. *Amer. J. Ortho.* 50(3):189-202.

Atkinson, S.R. 1963. An unexplored field of communication. *Amer. J. Ortho.* 49(8):588-592.

Atkinson, S.R. 1951. The mesiobuccal root of the maxillary first molar. *So. Calif. State Dent. J.*, December:2-12.

Atkinson, S.R. 1950. The third molar problem. *J. Oral Surg.* 8:136-142.

Atkinson, S.R. 1949. Changing dynamics of the growing face. *Amer. J. Ortho.* 35(11):815-836.

Atkinson, S.R. 1943. The permanent maxillary lateral incisor. *Amer. J. Ortho. and Oral Surg.* 29(12):685-698.

Atkinson, S.R. 1942. Some anatomic factors guiding treatment therapy. *Amer. J. Ortho. and Oral Surg.* 28(11):704-720.

Atkinson, S.R. 1940. Growth and development of teeth and jaws (A) Mandible (B) Maxilla. *Am. J. Ortho. and Oral Surg.* 26:829-842.

Atkinson, S.R. 1939. Orthodontics as a life factor. *Amer. J. Ortho. and Oral Surg.* 25(12):1133-1142.

Atkinson, S.R. 1937. The strategy of orthodontic treatment. *J. Amer. Dent. Assoc.* 24:560-574.

Periodontal Conditions

- McCoy, G. 1999. Dental compression syndrome: A new look at an old disease. *J. Oral Implantol.* 25(1):35-49.
- Bryan, R.L. 1972. Study of jaw, bones and teeth of human skulls from Mexico. M.S.D. in Periodontics, University of the Pacific, Arthur A. Dugoni School of Dentistry.
- Larato, D.C. 1970. Furcation involvements: incidence and distribution. *J. Periodontol.* 41(9):499-501.

TMJ Mechanics

- Mah, R.T. 1992. Craniofacial relationships and TMJ loading. Master's thesis, Department of Mechanical Engineering, University of Alberta, Edmonton, Alberta, Canada.
- McEvoy, S.P. 1990. The effects of craniofacial morphology on human temporomandibular joint loading. Master's thesis, Department of Mechanical Engineering, University of Alberta, Edmonton, Alberta, Canada.
- Walker, L. 1989. Conformation and mechanics of the temporomandibular joint. Table Clinic, Scientific Sessions of the California Dental Association, Anaheim, CA.

CLINICAL APPLICATIONS

Craniofacial Growth & Development

Craniofacial Morphology

- Tran, T., Oh, H. and Richards, G.D. 2018. Mandibular shape in 6.0-8.0 year olds: A geometric morphometric assessment. Poster presented at the CDA Annual Meeting, Table Clinic Competition, Anaheim, CA, May 17-19, 2018, and the 20th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA, May 23, 2018.
- Pagano, A.S., Wang, E., Yuan, D., Fischer, D., Bluestone, C., Marquez, S. and Laitman, J. 2017. Cranial indicators identified for peak incidence of otitis media. *Anat Rec.* 300(10):1721-1740, October.
- Tran, T., Oh, H. and Richards, G.D. 2017. Geometric morphometric assessment of mandibular shape in 6.0-8.0 year olds. Poster presented at the 95th General Session International Association for Dental Research, San Francisco, CA, March 22-25, 2017. *J. Dent. Res.* 96A:3150 (Abstract), and the 19th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, May 31, 2017 (Received Hinman Symposium Award).
- Ding J., Cirillo L.E., McGough A.M., Jabbour R.S and Richards G.D. 2015. Facial shape in trigonocephaly: a metric and geometric morphometric assessment. Poster presented at the 96th AAAS Annual Meeting, Pacific Division, San Francisco, CA, June 14-17, *Proceedings AAAS* Vol. 34, Part I 252:163-164 (Abstract), and at the Undergraduate Research Symposium, Annual Meeting of the American Association of Physical Anthropologists, St. Louis, MO, March 25th-28th, *Amer. J. Phys. Anthropol.* 156(S60):121 (Abstract).
- Pagano, A. S., Wang, E. and Laitman, J.T. 2012. Growth change in cartilaginous Eustachian tube angulation and its relationship with age at onset of otitis media. Poster presented at the 2012 American Association of Anatomists Annual Meeting, San Diego, CA. *FASEB J.* 26 Suppl. 907.6 (Abstract).

- Pagano, A. S., Wang, E. and Laitman, J.T. 2011. Growth change and functional morphology of the osseous choanal boundaries of humans: a 3D geometric morphometric study. Poster presented at the 2011 American Association of Anatomists Annual Meeting, Washington, D.C. *FASEB J.* 25 Suppl. 490.8 (Abstract).
- Anderson, J.Y. 2010 The human skull: definition by integrationist and modular models. Ph.D. Dissertation, Dept. of Anthropology, University of New Mexico.
- Richards, G.D., Asadi, H., Turner, S., Dechant, D., and Burk, D. 2001. Palatal deformities in cranial malformation. Poster presented at the Annual Research Conference of the University of the Pacific, School of Dentistry, Asilomar Conference Center, Pacific Grove, CA.
- Richards, G.D., Asadi, H., and Burk, D. 1999. Hemifacial microsomia: a review. Table clinic presented at the Annual Research Conference of the University of the Pacific, School of Dentistry, Asilomar Conference Center, Pacific Grove, CA.

Craniofacial Ontogeny

Cranial Shape Changes

- Becker, D.E., Castellon-Hinkle, N.A., Cirillo, L.E., Richards, G.D. and Jabbour, R.S. 2017. Growth differences and shape change in six to eight year old humans based on standard metric and 3D coordinate data. Poster presented at the 86th Annual Meeting of the American Association of Physical Anthropologists, New Orleans, April 19-22, 2017. *Am. J. Phys. Anthropol.* 162:S64, 228 (Abstract).
- Shien, T.W., Paley, M.A., Jabbour, R.S. and Richards, G.D. 2017. Cranial shape alterations, blood flow modifications, and cognitive function. Poster presented at the 42nd Annual West Coast Biological Sciences Undergraduate Research Conference, Santa Clara, CA, April 22, 2017.

Craniofacial Spaces

- Richards, G.D. and Jabbour, R.S. 2011. Ontogenetic constraints on fluid and air filled spaces of the human craniofacial complex. Paper presented at the 80th Annual Meeting of the American Association of Physical Anthropologists, Minneapolis, MN. *Am. J. Phys. Anthropol.* Vol. 144, Suppl. 52:253.

Facial

- Wang, E., Pagano, A.S. and Laitman, J.T. 2011. Functional integration of the bony orbits and piriform aperture during facial growth in humans. Poster presented at the 2011 American Association of Anatomists Annual Meeting, Washington, D.C. *FASEB J.* 25 Suppl. 489.7 (Abstract).

Frontal

- Ibarra, C.L. and Richards, G.D. 2013. A new look at frontal bone ontogeny. Paper delivered at the 82nd Annual Meeting of the American Association of Physical Anthropologists, Knoxville, TN Suppl. 56:156 (Abstract).
- Ibarra, C.L. 2013. A new look at frontal bone ontogeny. Master's thesis, Department of Anthropology, CSU East Bay.

Mental Foramen

- Moore, S., Olson, M., and Richards, G.D. 2002. Mental foramen position: ontogenetic changes and relationship to craniofacial growth theory. Poster presented at the 3rd Year Class

Retreat, University of the Pacific, School of Dentistry, Asilomar Conference Center, Pacific Grove, CA, and at the 4th Annual UOP Research Day and ADA/Dentsply Student Research Competition, University of the Pacific, School of Dentistry, San Francisco, CA.

Moore, S., Olson, M., and Richards, G.D. 2001. An ontogenetic perspective on mental foramen position: preliminary results. Poster presented at the 3rd Annual UOP Student Research Competition, University of the Pacific, School of Dentistry, San Francisco, CA.

Sutures

- Cirillo, L.E., McGough, A.M., Ding, J., Jabbour, R.S., Richards, G.D. 2014. Geometric morphometric assessment of cranial shape change in trigonocephaly. Presented at the Committee on Diversity Undergraduate Research Symposium, Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 8th-12th; *Amer. J. Phys. Anthropol.*, 153(S58):94 (Abstract), and at the West Coast Biological Sciences Undergraduate Research Conference, Azusa Pacific University, Azusa, CA, April 12, 2014.
- McGough, A.M., Cirillo, L.E., Ding, J., Jabbour, R.S., Richards, G.D. 2014. Skull and brain anatomy of a trigonocephalic juvenile: Description of the first known prehistoric case. Presented at the Committee on Diversity Undergraduate Research Symposium, Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 8th-12th; *Amer. J. Phys. Anthropol.* 153(S58):181 (Abstract), and at the West Coast Biological Sciences Undergraduate Research Conference, Azusa Pacific University, Azusa, CA, April 12, 2014.
- McGough, A.M., Alessi, M.M., Guthrie, L.C., Ibarra, C.L. and Richards, G.D. 2013. First prehistoric evidence of trigonocephaly: evidence from Santa Rosa Island, California (CA-SRI-24). Paper delivered at the 40th Annual North American Meeting of the Paleopathology Association, Knoxville, TN, April 9-10, Scientific Program (abstract) p. 54.
- Cobain, L., Nabipour, S., and Richards, G.D. 2003. The role of sutures in frontofacial growth: evidence from the metopic suture. Poster presented at the 5th Annual Pacific Research Day and ADA/Dentsply Student Research Competition, University of the Pacific, School of Dentistry, San Francisco, CA, and at the 3rd Year Class Retreat, University of the Pacific, School of Dentistry, Asilomar Conference Center, Pacific Grove, CA.
- Cobain, L., Nabipour, S., and Richards, G.D. 2002. The role of sutures in frontofacial growth: evidence from the metopic suture. Poster presented at the 4th Annual UOP Research Day and Student Research Competition, University of the Pacific, School of Dentistry, San Francisco, CA.
- Cobain, L., Nabipour, S., and Richards, G.D. 2002. The role of the sutura frontalis in frontofacial growth. Poster presented at the 8th Annual Hinman Student Research Symposium, Memphis, TN.
- Cobain, L., Nabipour, S., and Richards, G.D. 2002. The role of sutures in frontofacial growth: evidence from the metopic suture. Paper presented at the 80th General Session of the International Association for Dental Research, B.G. Sarnat Student Research Competition, San Diego, CA. *J. Dent. Res.* 81 (Spec. Iss. A):A-220.
- Richards, G.D. 1994. On sutures and synchondroses. Paper presented at the 63rd Annual Meeting of the American Association of Physical Anthropologists, Denver, CO. *Am. J. Phys. Anthropol.* Vol. 37, Suppl.18:168 (Abstract).
- Cedars, M.G., Antón, S.C., and Richards, G.D. 1992. Craniofacial morphology in unicoronal synostosis. Paper presented at the 49th Annual Meeting of the American Cleft Palate-Craniofacial Association, Portland, OR.

Craniofacial Surgery

Cleft Palate Repair

Oh, A.K., and Wong, G.B. 2001. An osteotome for outfracture of the greater palatine foramen in cleft palate repair. *Plast. Reconstr. Surg.* 107(3):820-2.

Distraction Osteogenesis

Chin, M. 2003. Le Fort I Distraction with internal, submergible devices: 52 consecutive cases. In Arnaud (ed). *Proceedings of the 4th International Congress on Cranial and Facial Bone Distraction Processes*, Monduzzi Editore.

Chin, M. 2003. Le Fort III Distraction with internal devices: long-term follow-up. In Arnaud (ed): *Proceedings of the 4th International Congress on Cranial and Facial Bone Distraction Processes*, Monduzzi Editore.

Chin, M. 1995-2002. Numerous (39) local, national and international presentations of the Le Fort Midface and Alveolar Distraction Osteogenesis techniques (Maxillofacial surgery using internal devices).

Chin, M. 2000. Midface distraction osteogenesis. In Samchukov (ed): *Craniofacial Distraction Osteogenesis*, Mosby.

Chin, M. 2000. Alveolar distraction osteogenesis. In Samchukov (ed): *Craniofacial Distraction Osteogenesis*, Mosby.

Chin, M. 1999. Alveolar distraction osteogenesis. In Stucci-McCormick (ed): *Atlas of the Oral and Maxillofacial Surgery Clinics of North America*.

Chin, M. 1998. Distraction osteogenesis in maxillofacial surgery. In Lynch (ed.): *Tissue Engineering in Maxillofacial Surgery and Periodontics*, Quintessence Publishing.

Chin, M. and Toth, B. A. 1997. LeFort III advancement with gradual distraction using internal devices. *Plast. Reconstr. Surg.* 100(4):819-830.

Chin, M. and Toth, B. A. 1996. Distraction osteogenesis in maxillofacial surgery using internal devices: Review of Five Cases. *J. Oral and Maxillofac. Surg.* 54:45-53.

Chin, M. and Toth, B. A. 1995. LeFort III midface advancement using gradual distraction. *Proc. Intern. Cong. Intern. Soc. Craniofac. Surg.* Saint-Tropez (French Riviera), Monduzzi Editore, Bologna, Italy.

Toth, B. A. and Chin, M. 1998. Orbital advancement by gradual distraction. In: Toth, Keating, Ellis and Stewart (eds.) *An Atlas of Orbitocranial Surgery*. London: Martin Dunitz Ltd.

Toth, B. A. and Chin, M. 1997. Distraction osteogenesis of the midface. In: McCarthy, J. G. (ed.) *Distraction of the Craniofacial Skeleton*. New York: Springer-Verlag.

Plastic Surgery

Ousterhout, D.K. 2009. *Facial feminization surgery, a guide for the transgendered woman*. Omaha, NB: Addicus Books.

Ousterhout, D.K. (ed.) 1991. *Aesthetic contouring of the craniofacial skeleton*. Boston: Little, Brown, and Co., pp. 1-179.

Ousterhout, D.K. 1987. Feminization of the forehead: contour changing to improve female aesthetics. *Plast. Reconstr. Surg.* 79(5):701-711.

RESEARCH APPLICATIONS

Dental & Craniofacial Conditions

Artificially Induced Conditions in Historic & Prehistoric Times

- Shien, T.W., Tang, L., Lee, C., Jabbour, R.S. and Richards, G.D. 2018. Brain and vascular changes and developmental delays in 'cradle-boarded' skulls. Paper presented at the 43rd Annual West Coast Biological Sciences Undergraduate Research Conference, Saint Mary's College of California, Moraga, CA, April 14, 2018.
- Upton, C., Henley, R., Draper, D., Shien, T.W., Tang, L.W., Lee, C., Simone, P.S., Conner, C.M., Richards, G.D. and Jabbour, R.S. 2018. Positional plagiocephaly and its potential impacts on intracranial venous drainage. Paper presented at the 43rd Annual West Coast Biological Sciences Undergraduate Research Conference, Saint Mary's College of California, Moraga, CA, April 14, 2018.
- Connor, C.M., Lee, S.M.H., Simone, P.S., Upton, C., Tang, L.W., Draper, D.A., Richards, G.D. and Jabbour, R.S. 2018. Cranial shape change and developmental delays in plagiocephaly. Poster presented at the Undergraduate Diversity Symposium, 87th Annual Meeting of the American Association of Physical Anthropologists, Austin, TX, April 11-14, 2018. *Am J Phys Anthropol* 165 (S66):52 (Abstract).
- Shien, T.W., Simone, P.A., Connor, C.M., Lee, S.M.H., Tang, L.W., Jabbour, R.S. and Richards, G.D. 2018. Brain and vascular changes in culturally deformed crania. Poster presented at the Undergraduate Diversity Symposium, 87th Annual Meeting of the American Association of Physical Anthropologists, Austin, TX, April 11-14, 2018. *Am J Phys Anthropol* 165 (S66):251 (Abstract).
- McDonald, J., Escobar, J., Ribota, H., Upton, C., Henley, R., Richards, G.D. and Jabbour, R.S. 2017. Positional plagiocephaly, cranial shape change, and neurological deficits. Poster presented at the 42nd Annual West Coast Biological Sciences Undergraduate Research Conference, Santa Clara, CA, April 22, 2017.
- Kotesova, S., Oelerich, K.P., McGough, A.M., Ding, J., Jabbour, R.S. and Richards, G.D. 2015. The interface between biology and culture: description of a culturally deformed microcephalic cranium. Poster presented at the 96th AAAS Annual Meeting, Pacific Division, San Francisco, CA, June 14-17, *Proceedings AAAS* Vol. 34, Part I 253:164 (Abstract).
- Kotesova, S., Oelerich, K.P., Becker, D.E., McGough, A.M., Ding, J., Jabbour, R.S., Richards, G.D. 2014. The interface between biology and culture: Description of a culturally deformed microcephalic cranium. Presented at the Committee on Diversity Undergraduate Research Symposium, Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 8th-12th; *Amer. J. Phys. Anthropol.* 153(S58):160 (Abstract), and at the West Coast Biological Sciences Undergraduate Research Conference, Azusa Pacific University, Azusa, CA, April 12, 2014.
- Antón, S.C. and Weinstein, K.J. 1999. Artificial cranial deformation and fossil Australians revisited. *J. Hum. Evol.* 36:195-209.
- Antón, S.C., Jaslow, C.R., and Swartz, S.M., 1992. Sutural complexity in artificially deformed human (*Homo sapiens*) crania. *J. Morphol.* 214(3):321-32.
- Plourde, A.M. and Antón, S.C. 1992. Craniofacial compensation in artificially deformed children's crania. Paper presented at the 61st Annual Meeting of the American Association of Physical Anthropologists, Las Vegas, NV. *Am. J. Phys. Anthropol.* Vol. 35, Suppl. 14:132 (Abstract).

- Richards, G.D. and Antón, S.C. 1991. Facial changes subsequent to congenital and artificial vault deformation. Paper presented at the 60th Annual Meeting of the American Association of Physical Anthropologists, Milwaukee, WI. *Am. J. Phys. Anthropol.* Vol. 34, Suppl. 12:151 (Abstract).
- Antón, S.C., Jaslow, C.R., and Swartz, S.M. 1990. Sutural complexity in artificially deformed human crania. Paper presented at the 59th Annual Meeting of the American Association of Physical Anthropologists, Miami, FL. *Am. J. Phys. Anthropol.* Vol. 81(2):189 (Abstract).
- Antón, S.C. 1989. Facial structure: The influence of intentional cranial vault deformation. Paper presented at the 58th Annual Meeting of the American Association of Physical Anthropologists, San Diego, CA. *Am. J. Phys. Anthropol.* Vol. 78(2):184 (Abstract).
- Antón, S.C. 1989. Intentional cranial vault deformation and induced changes of the cranial base and face. *Am. J. Phys. Anthropol.* Vol. 79(2):253-267.
- Antón, S.C., Jaslow, C.R., and Swartz, S.M. 1989. Sutural complexity in artificially deformed human crania. Paper presented at the Centennial Meeting of the American Association of Zoologists, Boston, MA. *Amer. Zool.* 29:122A (Abstract).
- Antón, S.C. 1988. Intentional cranial vault deformation and induced changes of the cranial base and face. Paper presented at the 57th Annual Meeting of the American Association of Physical Anthropologists, Kansas City, MO. *Am. J. Phys. Anthropol.* Vol. 75(2):181 (Abstract).

Congenital or Pathological Conditions in Historic Times

- Miller, H.M. 2018. Pathological cranial lesions in a juvenile cranial collection. MA in Anthropology, CSU San Francisco, San Francisco, CA. pp. 1-101.
- Simone, P.S., Connor, C.M., Jabbour, R.S. and Richards, G.D. 2017 Premature and trauma-induced sutural fusion in a protohistoric cranium. Poster presented at the 44th Annual North American Meeting of the Paleopathology Association, New Orleans, LA, April 17-19, Scientific Program (abstract) pp. 38-39.
- Miller, H. and Wilczak, C.W. 2016. The (lack of) association between cribra orbitalia and porotic hyperostosis: when porosity is not enough. Poster presented at the 43rd Annual North American Meeting of the Paleopathology Association, Atlanta, GA, April 12-13, Scientific Program (abstract) pp. 56-57.
- Edwards, E. 2011. The attrition-periodontal disease relationship: a study from early 20th century Central America. Senior Thesis, Anthropology BA, San Francisco State University, San Francisco, CA.
- Wilczak, C.A. and Zimova Hopkins, V. 2010. Patterns of inflammatory orbital lesions in a modern anatomical sample. Poster presented at the 37th Annual North American Meeting of the Paleopathology Association, Albuquerque, NM, April 13-14, Scientific Program (abstract) p. 48.
- Peck, S. 1995. Commentary: dental anomalies in an Etruscan adolescent. *The Angle Ortho.* 65(1):80.

Congenital or Pathological Conditions in Prehistoric Times

Craniosynostosis

- McGough, A.M., Cirillo, L.E., Ding, J., Jabbour, R.S. and Richards, G.D. 2016. Premature sutural fusion and cranial shape change: Evidence from the prehistoric record. Paper presented at the Anthropology Undergraduate Research Symposium, Berkeley, CA, May 4, and Poster presented at the 43rd Annual North American Meeting of the

Paleopathology Association, Atlanta, GA, April 12-13, Scientific Program (abstract) pp. 36-37.

Antón, S.C., Cedars, M.G., and Richards, G.D. 1992. Quantification of craniofacial morphology in unicoronal synostosis. Paper presented at the 61st Annual Meeting of the American Association of Physical Anthropologists, Las Vegas, NV. *Am. J. Phys. Anthropol.* Vol. 35, Suppl. 14:44 (Abstract).

Richards, G.D. 1992. Premature metopic synostosis? Interpretation of cranial shape change in archaeologically derived individuals. Paper presented at the 61st Annual Meeting of the American Association of Physical Anthropologists, Las Vegas, NV. *Am. J. Phys. Anthropol.* Vol. 35, Suppl. 14:137-138 (Abstract).

Antón, S.C., Kolar, J., and Richards, G.D. 1992. A workshop on cranial synostosis. Presented at the 19th Annual North American Meeting of the Paleopathology Association, Las Vegas, NV, Scientific Program (abstract) pp. 2-3.

Endocranial Hyperostosis

Antón, S.C. 1997. Endocranial hyperostosis in Sangiran 2, Gibraltar 1, and Shanidar 5. *Am. J. Phys. Anthropol.* 102(1):111-122.

Hydrocephaly

Antón, S.C. and Richards, G.D. 1991. Osteological criteria for the differentiation of hydrocephalus and its subgroupings. Paper presented at the 60th Annual meeting of the American Association of Physical Anthropologists, Milwaukee, WI. *Am. J. Phys. Anthropol.* Vol. 34, Suppl. 12:44 (Abstract).

Richards, G.D. and Antón, S.C. 1991. Craniofacial configuration and postcranial development of a hydrocephalic child: with a review of cases and comments on diagnostic criteria. *Am. J. Phys. Anthropol.* 85(2):185-200.

Antón, S.C. and Richards, G.D. 1989. Cranio-facial configuration and postcranial development of a hydrocephalic child (ca. 2000 B.C. – 500 A.D.). Paper presented at the 16th Annual North American Meeting of the Paleopathology Association, San Diego, CA, Scientific Program (abstract) pp. 5-6.

Hyperostosis Frontalis Interna

Watrous, A., Anton, S.C., and Plourde, A.M. 1993. Hyperostosis frontalis interna in ancient Egyptians. Paper presented at the 62nd Annual Meeting of the American Association of Physical Anthropologists, Toronto, Canada. *Am. J. Phys. Anthropol.* Vol. 36, Suppl. 16:205 (Abstract).

Microcephaly

Richards, G.D. 1985. Analysis of a microcephalic child from the Late Period (ca. 1100-1700 A.D.) of central California. *Am. J. Phys. Anthropol.* 68(3):343-357.

Osteochondrodysplasia

Connor, C.M., Lee, Sierra M.H., Apodaca, N.K., Simone, P.S., Jabbour, R.S., and Richards, G.D. 2017. Alterations in cranial and brain shape and their impact on arteriovenous blood flow in FGFR-3 induced achondroplasia. Poster presented at the 42nd Annual West Coast Biological Sciences Undergraduate Research Conference, Santa Clara, CA, April 22, 2017.

- Lee, S.M., Apodaca, N.K., Jabbour, R.S., and Richards, G.D. 2017. Single nucleotide polymorphisms in the FGFR3 gene: interpreting cranial, neural, and vascular changes in prehistoric cases of achondroplasia. Undergraduate Diversity Symposium, 86th Annual Meeting of the American Association of Physical Anthropologists, New Orleans, April 19-22, 2017. *Am. J. Phys. Anthropol.* 162:S64, 332 (Abstract).
- Castellon-Hinkle, N.A., Becker, D.E., Fields, E., Hanson, T., Jabbour, R.S., and Richards, G.D. 2016. 3D reconstruction of an achondroplastic skeleton from prehistoric Central California. Paper presented at the 97th annual meeting of the American Association for the Advancement of Science, Pacific Division, University of California, San Diego, CA, June 15-17, 2016.
- Lee, S.M., Apodaca, N.K., Liu, J.T., Jabbour, R.S., and Richards, G.D. 2016. Neural and vascular changes in achondroplastic brains: evidence from prehistoric Central California. Paper presented at the 97th annual meeting of the American Association for the Advancement of Science, Pacific Division, University of California, San Diego, CA, June 15-17, 2016.
- McGough, A.M., Cirillo, L.E., Ding, J., Jabbour, R.S. and Richards, G.D. 2016. Premature sutural fusion and cranial shape change: Evidence from the prehistoric record. Paper presented at the 97th annual meeting of the American Association for the Advancement of Science, Pacific Division, University of California, San Diego, CA, June 15-17, 2016.
- Castellon-Hinkle, N.A., Becker, D.E., Fields, E., Hanson, T., Jabbour, R.S., and Richards, G.D. 2016. 3D reconstruction of an achondroplastic skeleton from prehistoric Central California. Poster presented at the 43rd Annual North American Meeting of the Paleopathology Association, Atlanta, GA, April 12-13, Scientific Program (abstract) pp. 36-37 (Awarded First Place [tied] for poster presentation).
- Castellon-Hinkle, N.A., Becker, D.E., Fields, E., Hanson, T., Jabbour, R.S., and Richards, G.D. 2016. FGFR3 mutations and skeletal growth in achondroplasia: Evidence from a 3D virtual reconstruction. Paper presented at the 41st Annual West Coast Biological Sciences Undergraduate Research Conference, San Diego, CA, April 9, P69, p. 22 (Abstract).
- Lee, S.M., Apodaca, N.K., Liu, J.T., Jabbour, R.S., and Richards, G.D. 2016. Neural and vascular changes associated with a mutation in the FGFR3 gene: Evidence from a 3D endocranial reconstruction. Paper presented at the Anthropology Undergraduate Research Symposium, Berkeley, CA, May 4, and at the 41st Annual West Coast Biological Sciences Undergraduate Research Conference, San Diego, CA, April 9, P19, p. 3 (Abstract).
- Ibarra, C.L., Richards, G.D., Horton, C.F. and Ojeda, H.M. and Asadi, H. 2012. COMP gene related malformations of the skull: evidence from Egyptian V-VIth dynasty skeletal remains. Poster presented at the 81st Annual Meeting of the American Association of Physical Anthropologists, Portland, OR Suppl. 50:171 (Abstract).
- Ibarra, C.L., Richards, G.D., Horton, C.F. and Ojeda, H.M. 2011. Bony criteria for differentiating osteochondrodysplasias: applications in prehistory. Poster presented at the 80th Annual Meeting of the American Association of Physical Anthropologists, Minneapolis, MN *Amer. J. Phys. Anthropol.* Vol. 144, Suppl. 52:173 (Abstract).
- Horton, C.F. and Richards, G.D. 2009. Osteochondrodysplasias in prehistory: new evidence from the V-VIth dynasty at Giza, Egypt. Poster presented at the 78th Annual Meeting of the American Association of Physical Anthropologists, Chicago, IL. *Am. J. Phys. Anthropol.* Vol. 138, Suppl. 48:152-53 (Abstract).

Recognition and Diagnosis

- Ojeda, H.M., Anderson, J.Y., Cebula, M.D., Bulger, E.A. and Richards, G.D. 2013. Human bone artifacts as markers of prehistoric populations: critical assessment of evidence from Central California. Paper delivered at the 82nd Annual Meeting of the American Association of Physical Anthropologists, Knoxville, TN Suppl. 56:211 (Abstract).
- Varghese, R.E., Burke, E.M., Bulger, E.A., Aldern, G.E., Richards, G.D. and Jabbour, R.S. 2013. Paleoepidemiology of a prehistoric central California shellmound in relation to the rise of infectious *Mycobacterium tuberculosis*. Paper delivered at the 40th Annual North American Meeting of the Paleopathology Association, Knoxville, TN, April 9-10, Scientific Program (abstract) p. 27.
- Ibarra, C.L., Ojeda, H.M., Varghese, R.E., Burke, E.M., Bulger, E.A. and Richards, G.D. 2012. Virtually reconstructing skeletons: impacts on diagnoses and dissemination of information on rare pathological conditions. Poster presented at the 39th Annual North American Meeting of the Paleopathology Association, Portland, OR, April 9-11, Scientific Program (abstract) pp. 14-15.
- Antón, S.C. 1993. Congenital conditions: what are they and what can they tell us? Paper presented at the 20th Annual Meeting of the Paleopathology Association, Toronto, Ontario, Canada, Scientific Program (abstract) p. 14.
- Richards, G.D. 1993. Congenital craniofacial conditions in prehistory: recognition and diagnosis. Paper presented at the 20th Annual North American Meeting of the Paleopathology Association, Toronto, Ontario, Canada, Scientific Program (abstract) pp. 15-16, and at the Archaeology Lecture Series at the Archaeological Research Facility, University of California at Berkeley.

Trigonocephaly

- McGough, A.M., Cirillo, L.E., Ding, J., Jabbour, R. and Richards, G.D. 2015. Skull and brain anatomy of a trigonocephalic juvenile: description of the first known prehistoric case. Paper presented at the 96th AAAS Annual Meeting, Pacific Division, San Francisco, CA, June 14-17, *Proceedings AAAS* Vol. 34, Part I 156:133 (Abstract).

Tuberculosis

- Burke, E., Varghese, R.E., Jabbour, R.S., and Richards, G.D. 2015. *Mycobacterium tuberculosis* in prehistoric California: a review of evidence and paleoepidemiological comparisons of impacted and related populations. Paper presented at the 96th AAAS Annual Meeting, Pacific Division, San Francisco, CA, June 14-17, *Proceedings AAAS* Vol. 34, Part I 155:132 (Abstract).
- Axelrod, J.C., Varghese, R.E., Burke, E.M., Ding, J., Jabbour, R.S., Richards, G.D. 2014. *Mycobacterium tuberculosis* in prehistoric California: A review of evidence and paleoepidemiological comparisons of impacted and related populations. Presented at the Committee on Diversity Undergraduate Research Symposium, Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 8th-12th; *Amer. J. Phys. Anthropol.* 153(S58):70 (Abstract), and at the West Coast Biological Sciences. Undergraduate Research Conference, Azusa Pacific University, Azusa, CA, April 12, 2014.
- Burke, E.M., Varghese, R.E., Bulger, E.A., Ibarra, C.L., Ojeda, H.M., Jabbour, R.S. and Richards, G.D. 2013. Co-occurrence of tuberculosis and an unusual rheumatoid-like arthritis in prehistoric Central California. Paper delivered at the 82nd Annual Meeting of the American Association of Physical Anthropologists, Knoxville, TN Suppl. 56:90 (Abstract).

RESEARCH APPLICATIONS

Craniofacial Variation & Human Evolution

Ontogenetic Change

Basicranium

Richards, G.D. 2007. Basicranial ontogeny and evolution in *Homo sapiens*. Ph.D. Dissertation, Dept. of Anthropology, University of California at Berkeley, Berkeley, CA.

Cranium

Hunt, J. 2004. Morphological integration of the catarrhine cranium: an ontogenetic and phylogenetic perspective. Ph.D. Dissertation, Dept. of Anthropology, Yale University.

Foramen Magnum

Richards, G.D., Jabbour, R.S., Ibarra, C.L., Horton, C.F. and Asadi, H. 2012. Miocene-to-Recent evolution of the hominin foramen magnum. Paper presented at the 81st Annual Meeting of the American Association of Physical Anthropologists, Portland, OR. Suppl. 50:248 (Abstract).

Richards, G.D. and Jabbour, R.S. 2011. Foramen magnum ontogeny in *Homo sapiens*: a functional matrix perspective. *Anat. Rec.* 294:199-216.

Jabbour, R.S. and Richards, G.D. 2010. Foramen magnum growth in modern humans: the ventral component. Poster presented at the 79th Annual Meeting of the American Association of Physical Anthropologists, April 14-17, Albuquerque, NM. *Am. J. Phys. Anthropol.* Vol. 141, Suppl. 50:133 (Abstract).

Richards, G.D., Jabbour, R.S., and Standen, S. 2005. Foramen magnum ontogeny and evolution in humans, great apes, and fossil hominids. Poster presented at the 74th Annual Meeting of the American Association of Physical Anthropologists, Milwaukee, WI. *Am. J. Phys. Anthropol.* Vol. 126, Suppl. 40:175 (Abstract).

Frontal

Ibarra, C.L., Richards, G.D., Jabbour, R.S., and Horton, C.F. 2010. Metric, morphologic and functional analysis of frontal bone ontogeny in *Homo sapiens*. Poster presented at the 79th Annual Meeting of the American Association of Physical Anthropologists, Albuquerque, NM. *Am. J. Phys. Anthropol.* Vol. 141, Suppl. 50:132 (Abstract).

Richards, G.D., Nabipour, S., and Cobain, L. 2003. The *sutura frontalis* and frontofacial growth in Pleistocene to recent *Homo*. Paper presented at the 72nd Annual Meeting of the American Association of Physical Anthropologists, Tempe, AZ. *Am. J. Phys. Anthropol.* Vol. 120, Suppl. 36:178 (Abstract).

Masticatory System

Glowacka, H. and Schwartz G.T. 2017. The ontogeny of masticatory efficiency and implications for hominin canine reduction. Paper presented at the 86th Annual Meeting of the American Association of Physical Anthropologists, New Orleans, LA. *Am. J. Phys. Anthropol.* 162 (S64):195-196 (Abstract).

Glowacka, H. and Schwartz G.T. 2016. Biomechanics of chewing and molar emergence in Primates. Paper presented at the 4th Annual Meeting of the Southwest Association of Biological Anthropologists, Arizona State University, Tempe, AZ, November 4-5, 2016.

- Glowacka, H. 2016. The biomechanics of chewing and spatial constraints on molar emergence in Primates. Invited talk, Craniofacial Biology Research Group, University of Adelaide School of Dentistry, Adelaide, Australia, June, 2016.
- Glowacka, H. and Schwartz, G.T. 2016. Developmental coordination of the masticatory system constrains molar emergence across primates. Paper presented at the 85th Annual Meeting of the American Association of Physical Anthropologists, Atlanta, GA, April 12-16, *Amer. J. Phys. Anthropol.* 159(S62):156 (Abstract).

Nasopharynx

- Pagano, A.S. and Laitman, J.T. 2015. Three-dimensional geometric morphometric analysis of the nasopharyngeal boundaries and its functional integration with the face and external basicranium among extant hominoids. *Anat Rec*: 298:85-106.
- Pagano, A.S. 2014. The development and function of the nasopharynx and its role in the evolution of primate respiratory abilities. PhD Dissertation, Department of Anthropology, CUNY Graduate Center.

Modern Geographic Variation

- Grine, F.E. 2005. Enamel thickness of deciduous and permanent molars in modern *Homo sapiens*. *Am. J. Phys. Anthropol.* 126:14-31.
- Houghton, F.D. 2003. Skeletal maturation and estimating age-at-death during the first decade of life. Ph.D. Dissertation, Dept. of Anthropology, University of Pittsburgh.
- Grine, F.E. 2002. Scaling of tooth enamel thickness, and molar crown size reduction in modern humans. *S. Afr. J. Sci.* 98: 503-509.
- Plourde, A.M. and Richards, G.D. 1995. The 'rocker jaw' and its craniofacial correlates reconsidered. Paper presented at the 64th Annual meeting of the American Association of Physical Anthropologists, Oakland, CA. *Am. J. Phys. Anthropol.* Vol. 38, Suppl. 20:180-181 (Abstract).
- Matsumura, H. 1995. A microevolutional history of the Japanese people as viewed from dental morphology. *National Science Museum Monograph #9*, Tokyo, Japan. Pp. 1-130.
- Richards, G.D. 1994. Delineating pacific populations through analysis of craniofacial anatomy. Paper presented at The Archaeology Association of the University of Calgary, Canada, Chacmool Conference. Papers of The Archaeology Association of the University of Calgary, Canada, Chacmool Conference (Abstract).
- Matsumura, H. 1994. A microevolutional history of the Japanese people from a dental characteristics perspective. *Anthropol. Sci.* 102(2):93-118.
- Kahn, S.V., Richards, G.D., and Watrous, A.C. 1993. Developmental dental-age: roentgenographic methods and assessment of criteria. Paper presented at the 62nd Annual Meeting of the American Association of Physical Anthropologists, Toronto, Canada. *Am. J. Phys. Anthropol.* Vol. 36, Suppl. 16:120 (Abstract).
- Grine, F.E. 1992. Intraspecific variability in tooth enamel thickness and structure of an extant mammal. Paper presented at the 52nd Annual Meeting of the Society of Vertebrate Paleontology, Toronto, Canada. *J. Vert. Paleontol.* 12(3):31A (Abstract).
- Grine, F.E. 1992. Variability in enamel thickness and structure among molar tooth classes in *Homo sapiens*. Paper presented at the 61st Annual Meeting of the American Association of Physical Anthropologists, Las Vegas, NV. *Am. J. Phys. Anthropol.* Vol. 35, Suppl. 14:85 (Abstract).

Boyce, M.H. 1982. Dental morphological variation: studies of dentition from Mexico and India. Research Fellow, Dept. of Stomatology, School of Dentistry, University of California at San Francisco, unpublished manuscript.

Variation within Prehistoric or Extinct Populations

- Richards, G.D. 2006 Genetic, physiologic and ecogeographic factors contributing to variation in *Homo sapiens: Homo floresiensis* reconsidered. *J. Evol. Biol.* 19:1744-1767.
- Grine, F.E. 2004. Geographic variation in human tooth enamel thickness does not support Neandertal involvement in the ancestry of modern Europeans. *S. Afr. J. Sci.* 100: 389-394.
- Antón, S.C. and Leigh, S.R. 2003. Growth and life history in *Homo erectus*. In J. Thompson, G. Krovits and A. Nelson (eds.). *Patterns of growth and development in the genus Homo*. Cambridge University Press. Chapter 9, pp. 219-245.
- Moore, S., Richards, G.D., and Olson, M. 2003. Recent human mental foramen ontogeny: its significance for craniofacial growth theory and phylogenetics of Pleistocene *Homo*. Paper presented at the 72nd Annual Meeting of the American Association of Physical Anthropologists, Tempe, AZ. *Am. J. Phys. Anthropol.* Vol. 120, Suppl. 36:154 (Abstract).
- Richards, G.D., Jabbour, R.S., and Anderson, J.Y. 2003. *Medial mandibular ramus: ontogenetic idiosyncratic and geographic variation in Recent Homo, great apes, and fossil hominids*. 1st ed. Oxford, England: British Arch Reports, Int. Series No. S1138; pp. 1-198.
- Antón, S.C. 2002. Cranial growth in *Homo erectus*. In N. Minugh-Purvis and K.J. McNamara (eds.): *Human Evolution Through Developmental Change*. Johns Hopkins University Press. Chapter 16, pp. 349-380.
- Antón, S.C., Márquez, S., and Mowbray, K. 2002. Sambungmacan 3 and cranial variation in Asian *Homo erectus*. *J. Hum. Evol.* 43:555-562.
- Jabbour, R.S., Richards, G.D., and Anderson, J.Y. 2002. Mandibular condyle traits in Neanderthals and other *Homo*: a comparative, correlative and ontogenetic study. *Am. J. Phys. Anthropol.* 119(2):144-155.
- Nevgloski, A.J. 2002. A reassessment of four cranial features used to define the new Middle Pleistocene hominids from Spain, *Homo antecessor*. Ph.D. Dissertation, Northern Illinois University at DeKalb.
- Nevgloski, A.J. 2002. A preliminary reevaluation of the mylohyoid groove of Gran Dolina specimen ATD6-5. Poster presented at the 71st Annual Meeting of the American Association of Physical Anthropologists, Buffalo, NY. *Am. J. Phys. Anthropol.* Vol. 117, Suppl. 34:118. (Abstract).
- Antón, S.C. 2001. Cranial evolution in Asian *H. erectus*: The Ngandong hominids. *Geological Research and Development Centre Special Publication*, Indonesia. No. 27:39-46.
- Antón, S.C. 2001. Growth and life history in *Homo erectus*. Invited Paper. *Patterns of Growth and Development in the Genus Homo*. Invited Paper presented at the 70th Annual Meeting of the American Association of Physical Anthropologists, Kansas City, MO. *Am. J. Phys. Anthropol.* Vol. 114, Suppl. 32:32-33.
- Mowbray, K., Marquez, S., Antón, S.C., Swisher, C.C. III, Jacob, T., Sawyer, G.J., Broadfield, D., Laitman, J.T., Holloway, R.L., Delson, E., and Tattersall, I. 2000. The newly recovered Poloyo hominin (PL-1) from Java. Paper presented at the 69th Annual Meeting of the American Association of Physical Anthropologists, San Antonio, TX. *Am. J. Phys. Anthropol.* Vol. 111, Suppl. 30:233 (Abstract).

- Hutchinson, V.T. 2000. Circum-Mediterranean population dynamics: evidence from the Tangier maxilla. Unpublished Master's Thesis, Dept. of Anthropology, Northern Illinois University at DeKalb.
- Hutchinson, V.T. 2000. Circum-Mediterranean population dynamics: evidence from the Tangier (Morocco) maxilla. Paper presented at the 69th Annual Meeting of the American Association of Physical Anthropologists, San Antonio, TX. *Amer. J. Phys. Anthropol.*, Suppl. 30:184-185. (Abstract).
- DeGusta, D., Gilbert, W.H., and Turner, S.P. 1999. Hypoglossal canal size and hominid speech. *Proc. Natl. Acad. Sci. USA* 96:1800-1804.
- Turner, S. 1999. Hypoglossal canal size and hominid speech. Poster presented at the 68th Annual Meeting of the American Association of Physical Anthropologists, Columbus, OH.
- Antón, S.C. 1999. Rethinking the biology of *Homo erectus*: Dispersal, growth spurts, and neoteny. Invited Paper. Paper presented at the 90th annual Meeting of the American Association for the Advancement of Science, Pacific Division. San Francisco, CA, 22 June 1999 (Abstract).
- Antón, S.C. 1999. Cranial growth in *Homo erectus*: how credible are the Ngandong juveniles? *Am. J. Phys. Anthropol.* 108(2):223-236.
- Antón, S.C. 1998. The origins of modern humans and the last *H. erectus* - insights from cranial development. Paper presented at the Annual Ford Foundation Fellowship Program, Biological Sciences Session, Irvine, CA (Abstract).
- Antón, S.C. and Leigh, S.R. 1998. Paedomorphosis and neoteny in human evolution. Paper presented at the 7th Annual Meeting of the Paleoanthropology Society (held at the 63rd Annual Meeting of the Society for American Archaeology), Seattle, WA. *J. Hum. Evol.* 34:A2 (Abstract).
- Jabbour, R.S. and Richards, G.D. 1998. Condylar region morphology in Neandertal mandibles: issues of ontogeny, homology and interpretation. Paper presented at the 67th Annual Meeting of the American Association of Physical Anthropologists, Salt Lake City, UT. *Am. J. Phys. Anthropol.* Vol. 105, Suppl. 26:127 (Abstract).
- Antón, S.C. 1997. Developmental age and taxonomic affinity of the Mojokerto Child, Java, Indonesia. *Am. J. Phys. Anthropol.* 102(4):497-514.
- Antón, S.C. 1997. Cranial growth in *Homo erectus*: the development of frontal recession and occipital angulation. *Am. J. Phys. Anthropol.* Vol. 104, Suppl. 24:67 (Abstract).
- Antón, S.C. and Franzen, J.L. 1997. The occipital torus and developmental age of Sangiran-3. *J. Hum. Evol.* 33:599-610.
- Antón, S.C. 1996. Tendon-associated bone features of the masticatory system in Neandertals. *J. Hum. Evol.* 31:391-408.
- Antón, S.C. and Franzen, J.L. 1996. The occipital torus that wasn't: Sangiran-3 morphology and developmental age. Paper presented at the 65th Annual Meeting of the American Association of Physical Anthropologists, Durham, NC. *Am. J. Phys. Anthropol.* Suppl. 22:61 (Abstract).
- Jabbour, R.S. and Richards, G.D. 1996. Significance of condylar region morphology in Neandertal mandibles. Paper presented at the 95th Annual Meeting of the American Anthropological Association, San Francisco, CA.
- Antón, S.C. 1995. Taxonomic affinity of the Mojokerto child, Java, Indonesia. Paper presented at the 4th Annual Meeting of the Paleoanthropology Society (at the 64th Annual Meeting of AAPA), Oakland, CA.
- Richards, G.D. and Plourde, A.M. 1995. Reconsideration of the 'Neanderthal' Infant, Amud-7. Paper presented at the 64th Annual Meeting of the American Association of Physical

- Anthropologists, Oakland, CA. *Am. J. Phys. Anthropol.* Vol. 38, Suppl. 20:180-181 (Abstract).
- Antón, S.C. 1994. Mechanical and other perspectives on Neandertal craniofacial morphology. In: R. Corruccini and R. Ciochon (eds.), *Integrative Paths to the Past: Paleoanthropological Advances in Honor of F. Clark Howell*. New York: Prentice Hall, Chapter 29, pp. 677-695.
- Antón, S.C. 1990. Neandertals and the anterior dental loading hypothesis: A biomechanical evaluation. *Kroeber Anthropol. Soc. Papers* 71-72:67-76.
- Kimbel, W.H. 1984. Variation in the pattern of cranial venous sinuses and hominid phylogeny. *Am. J. Phys. Anthropol.* 63:243-263.

RESEARCH APPLICATIONS

Forensic Studies

Assessing Forensic Variables: Sex and Ancestry

- Cirillo, L. and Dechant, D. 2017. Practical efforts to identify unknown skeletal collections. Paper presented at the 2017 Northern Data Sharing Meeting of the Society for California Archaeology, Vallejo, CA, September 30, 2017.
- Ramirez, E.J. 2006 Variation in the upper-midface of modern 'Hispanic' samples compared to Caucasoid and Amerindian samples. Unpublished manuscript, McNair Scholars Program, University of Wyoming.
- Ramirez, E.J. 2006. Variation in the upper-midface of modern 'Hispanic' samples compared to Caucasoid and Amerindian samples. Paper presented at the 75th Annual Meeting of the American Association of Physical Anthropologists, Anchorage, Alaska. *Am. J. Phys. Anthropol.* Vol. 129, Suppl. 42:151 (Abstract).
- McCabe, T. 1997. Implications of intermixture on human cranial morphology. Ph.D. Dissertation, Dept. of Anthropology, University of New Mexico.
- Snodgrass, J.J. 1995. Craniometric determination of sex and ancestry in the forensic setting: accuracy and assumptions. Paper presented at the 22nd Annual Western Anthropology and Sociology Undergraduate Research Conference, Santa Clara University, CA. *Proc. West. Anthropol. and Sociol. Undergrad. Res. Conf.* 22:9 (Abstract).
- Prutsman, J.J. 1994. The role of admixture in the identification of skeletal remains: a metric analysis of Mexican crania. Unpublished Master's Thesis, Dept. of Anthropology, University of Tennessee at Knoxville.
- Prutsman, J.J. 1994. The role of admixture in the identification of skeletal remains: a metric analysis of Mexican crania. Paper presented at the Annual Meeting of the American Academy of Forensic Sciences, San Antonio, TX.
- Galloway, A., Antón, S.C., and Simmons, T. 1992. The Spencer R. Atkinson collection: 1400 missing identities. Paper presented at the 1992 Annual Meeting of the American Academy of Forensic Sciences.

Bite Mark Identification

- Tonn, E.M., Long, D.J., and Dechant, D. 2004. A comparison of intercanine widths among various animals and humans. Paper presented at the 56th Annual Meeting of the American Academy of Forensic Sciences, Dallas, Texas. *Proc. Amer. Acad. Forensic Sciences*, Vol. 10, F16:206 (Abstract).

Craniofacial Trauma

Dechant, D. 2011. The Atkinson collection: applications to forensics. Invited Speaker. Paper presented at the 2nd International Forensic Anthropology Seminar, Instituto de Investigaciones Antropológicas, Universidad Nacional Autónoma de México, Mexico City.

TEACHING APPLICATIONS

Human Osteology

White, T.D., Black, M.T. and Folkens, P.A. 2011. *Human osteology*, 3rd ed. San Francisco: Academic Press, Pp. 1-688.

White, T.D. 2005. *The human bone manual*. Amsterdam, Boston: Elsevier Academic, pp. 1-464.

White, T.D. 1991. *Human osteology*. San Francisco: Academic Press, pp. 1-455.

ABOUT THE ATKINSON COLLECTION

Mead, R. "The Story of a Face." *The New Yorker* 19 March 2018: 46-57.

Dechant, D. and Richards, G.D. 2015. Topics in craniofacial research involving the Atkinson Skull Collection. CE lecture presented at the University of the Pacific, Dugoni School of Dentistry, San Francisco, CA.

Dechant, D. 2011. The Atkinson collection: clinical, research and teaching applications. CE lecture presented at the University of the Pacific, Dugoni School of Dentistry, San Francisco, CA.

Dechant, D. 2011. The Atkinson collection: research applications. Poster presented at the 13th Annual Pacific Research Day, University of the Pacific, Dugoni School of Dentistry, San Francisco, CA.

Dechant, D. 2000. Skeletons in the closet: the Spencer R. Atkinson Library of Applied Anatomy. *Contact Point* 80 (3):15-19.

Shapiro, D. and Richtsmeier, J.T. 1997. Brief communication: a sample of pediatric skulls available for study. *Amer. J. Phys. Anthropol.* 103:415-416.

Antón, S.C. 1993. Lessons from the past: The A.W. Ward Museum of Dentistry, University of the Pacific. *Bull. Hist. Dent.* 41(1):35-37.

Freisinger, S.D. 1985. UOP's least known famous library. *Contact Point* 63:18-20.

Bryant, R. 1964. Atkinson Library of Applied Anatomy. *Contact Point* 42(4):120-121.

Bryant, R. 1964. Atkinson gift receives worldwide acclaim. *Contact Point* 42(8):281.

Taber, L. 1964. A library without books. *Contact Point* 42(4):122-124.

P&S Comparative Anatomy Collection Research & Teaching Applications

Bae, S. and Dechant, D. 2013. Siblings or Strangers? A cranial and dental comparison between *Alouatta seniculus* and *Ateles geoffroyi*. Poster presented at the 13th Annual Pacific Undergraduate Research and Creativity Conference (PURCC), University of the Pacific, Stockton, CA and the 15th Annual Pacific Research Day, University of the

- Pacific, Dugoni School of San Francisco, CA.
- Bhangu, A. and Dechant, D. 2013. Keep Calm and Chew On: A comparison of dietary adaptations in *Indri indri* and *Loris tardigradus*. Poster presented at the 13th Annual Pacific Undergraduate Research and Creativity Conference (PURCC), University of the Pacific, Stockton, CA and the 15th Annual Pacific Research Day, University of the Pacific, Dugoni School of San Francisco, CA.
- Tabatabaifar, H. and Dechant, D. 2013. Comparison of the Olive Baboon and Black & White Colobus Monkey in relation to cranial and dental evolution. Poster presented at the 13th Annual Pacific Undergraduate Research and Creativity Conference (PURCC), University of the Pacific, Stockton, CA and the 15th Annual Pacific Research Day, University of the Pacific, Dugoni School of San Francisco, CA.
- Patel, P. and Dechant, D. 2012. A tail of two monkeys: dietary choice in relation to cranial and dental anatomy in the red howler monkey and olive baboon. Poster presented at the 12th Annual Pacific Undergraduate Research and Creativity Conference (PURCC), University of the Pacific, Stockton, CA and the 14th Annual Pacific Research Day, University of the Pacific, Dugoni School of San Francisco, CA.
- Tsu, L. and Dechant, D. 2012. Preferred diet – got insects or leaves? A comparison of *C. guereza* and *S. oerstedii*. Poster presented at the 12th annual Pacific Undergraduate Research and Creativity Conference (PURCC), University of the Pacific, Stockton, CA and the 14th Annual Pacific Research Day, University of the Pacific, Dugoni School of San Francisco, CA.
- Antón, S.C. 1999. Macaque masseter muscle: internal architecture, fiber length and cross-sectional area. *Intern. J. Primatol.* 20(3):441-462.
- Antón, S.C. 1996. Cranial adaptation to a high altitude diet in Japanese macaques. *Intern. J. Primatol.* 17(3):401-427.
- Anton, S.C. 1994. Masticatory muscle architecture and bone morphology in primates. Ph.D. Dissertation, Dept. of Anthropology, University of California at Berkeley.
- Antón, S.C. 1993. Internal masticatory muscle architecture in the Japanese macaque: influence on bony morphology. Paper presented at the 62nd Annual Meeting of the American Association of Physical Anthropologists, Toronto, Canada. *Am. J. Phys. Anthropol.* Vol. 36, Suppl. 16:50 (Abstract).
- Anderson, P.K.B. and Antón, S.C. 1993. Human bone modification?: An island example and its implications. Paper presented at the 58th Annual Meeting of the Society for American Archaeology, St. Louis, MO.
- Jordan, R.E., Abrams, L. and Kraus, B.S. 1992. *Kraus' Dental Anatomy and Occlusion*, 2nd edition. Chapter 16, The Vertebrates, pp. 293-318. St. Louis, MO: Mosby-Yearbook, Inc.
- Meikle, E. and Day, M.B. 1986. Tooth development in fossil *Theropithecus*. Poster presented at the 55th Annual Meeting of the American Association of Physical Anthropologists, Albuquerque, NM. *Am. J. Phys. Anthropol.* Vol. 69(2):239 (Abstract).