

## CHERYL A. HILL

Department of Anthropology  
The Pennsylvania State University  
409 Carpenter Building  
University Park, PA 16802

Phone: (814) 865-2066  
Fax: (814) 863-1474  
Email: cah277@psu.edu

### EDUCATION

- 2008 (*expected*) Ph.D., Anthropology, Pennsylvania State University  
Thesis: Evolutionary and Developmental History of Temporal Bone  
Pneumatization in Homininae  
Committee: Carol Gay, Joan Richtsmeier (chair), Timothy Ryan, Alan  
Walker, Kenneth Weiss
- 2003 M.A., Anthropology, Pennsylvania State University  
Thesis: Eigenshape Analysis of the Ts65Dn Vertebral Canal  
Advisor: Joan Richtsmeier
- 1999 B.A., Anthropology, with distinction, University of Kansas

### RESEARCH INTERESTS

Craniofacial growth, development and evolution, temporal bone pneumatization, phenotype-genotype correlations, craniofacial disorders

### TEACHING EXPERIENCE

- 2006 Instructor, "ANTH 021: Introduction to Biological Anthropology," Pennsylvania State University
- 2006 Graduate Teaching Assistant, "ANTH 021: Introduction to Biological Anthropology," Pennsylvania State University
- 2005 Graduate Teaching Assistant, "ANTH 411: Forensic Anthropology," Pennsylvania State University
- 2005 Instructor, "ANTH 021: Introduction to Biological Anthropology," Pennsylvania State University
- 2003 Laboratory Teaching Assistant, "ANTH 466: The Skull," Pennsylvania State University
- 2003 Guest Lecturer, "ANTH 444: Primitive Warfare," Pennsylvania State University
- 1999-2001 Assistant Language Teacher, Kitaura Board of Education, Kitaura, Japan

### RESEARCH EXPERIENCE

- 2007-2008 Research assistant, Dr. Joan Richtsmeier, Pennsylvania State University.  
Project Title: Nonsyndromic Craniosynostosis: Phenotype/Genotype Correlations
- 2004-2007 Research with Dr. Joan Richtsmeier. Analyses of FGFR2+/S252W and Fgfr2+/P253R mouse models for Apert syndrome
- 2001-2007 Research with Dr. Joan Richtsmeier. Quantitative analyses of morphology of Ts65Dn, Ts1Cje, Ts65Dn *Ets2* mouse models for Down syndrome.

1998-1999 Undergraduate research with Dr. David Frayer. Analysis of mandibular ramus flexure in human populations

### GRANTS

2007 Research and Graduate Studies Office (RGSO) Travel Grant, Pennsylvania State University. \$300

2006 Baker Fund Travel Grant, Pennsylvania State University. \$400

2005-2006 L.S.B. Leakey Foundation: Evolutionary and Developmental History of Temporal Bone Pneumatization in Hominids. \$10,000

2005-2007 National Science Foundation Dissertation Improvement Grant: Quantitative Analysis of Temporal Bone Pneumatization in Homininae. \$11,973

2005 Baker Fund Dissertation Award, Pennsylvania State University. \$1900

2005 Hill Foundation Post-Comprehensive Award, Pennsylvania State University. \$1900

2005 Baker Fund Travel Grant, Pennsylvania State University. \$300

2003 RGSO Travel Grant, Pennsylvania State University. \$350

### FELLOWSHIPS AND AWARDS

2006-2007 Weiss Graduate Scholar Fellowship, Pennsylvania State University. \$18,000/year and tuition waiver

2002-2005 National Science Foundation Graduate Fellowship. ≈\$26,000/year and tuition waiver

2001-2002 Weiss Graduate Scholar Fellowship, Pennsylvania State University. \$16,000/year and tuition waiver

1999 Phi Beta Kappa, University of Kansas

1998 Mortarboard Honor Society, University of Kansas

1998 J. Michael Young Undergraduate Research Award, University of Kansas

1998 Harry S. Nelson Social Sciences Scholarship, University of Kansas

1995-1999 Watkins Berger Scholarship, University of Kansas

### PROFESSIONAL DEVELOPMENT

2003 Attended the 44<sup>th</sup> Annual Short Course in Medical and Experimental Mammalian Genetics, July 13-25, Jackson Laboratories, Bar Harbor, Maine.

### SERVICE AND OUTREACH

2007 Volunteer, Children's Day, Matson Museum of Anthropology, Pennsylvania State University

2005-2006 Site Coordinator, Take Your Daughters and Sons to Work Day, Paleoanthropology Lab, Pennsylvania State University

2005 Presentation on "Forensic Anthropology," Delta Program, State College High School, State College, Pennsylvania

2003-present Counselor Advocate, Women's Resource Center (Sexual Assault and Domestic Violence), State College, Pennsylvania

1999 Museum Exhibit, "Neandertals in Kansas," Museum of Anthropology, University of Kansas.

**LANGUAGE CAPABILITIES**

Japanese: reading, writing, speaking

**PROFESSIONAL MEMBERSHIPS**

American Association of Physical Anthropologists

American Cleft-Palate Craniofacial Association

Sigma Xi

Society for American Archaeology

**PUBLICATIONS**

2007 **Hill CA**, Reeves RH, Richtsmeier JT. Effects of aneuploidy on skull growth in a mouse model of Down syndrome. *Journal of Anatomy* 210: 394-405.

2005 Wang Y, Xiao R, Yang F, Karim BO, Iacovelli AJ, Cai J, Lerner CP, Richtsmeier JT, Leszl JM, **Hill CA**, Yu K, Ornitz DM, Elisseeff J, Huso DL, Jab EW. Abnormalities in cartilage and bone development in the Apert syndrome FGFR2+/S252W mouse. *Development* 132(15): 3537-3548.

2000 **Hill CA**. Evaluating mandibular ramus flexure as a morphological indicator of sex. *American Journal of Physical Anthropology* 111: 573-577.

In revision **Hill CA**, Richtsmeier JT. Methods for analyzing three-dimensional structure in temporal bone pneumatization. *Journal of Human Evolution*.

Submitted Sun M, Wang Y, Xiao R, **Hill CA**, Iacovelli AJ, Richtsmeier JT, Huso DL, Jabs EW. Genotype-phenotype correlations reveal less severe craniofacial effects in the Fgfr2+/P253R mouse model for Apert syndrome as compared to the Fgfr2+/S252W mouse. *Development*.

In prep **Hill CA**, Reeves RH, Richtsmeier JT. Morphological analyses of *Ets2* mouse model for Down syndrome. *American Journal of Medical Genetics*.

In prep **Hill CA**, Richtsmeier JT. Quantitative analyses of the development of temporal bone pneumatization in humans. *Anatomical Record*.

**PRESENTATIONS**

2008 **Hill CA**. The development of temporal bone pneumatization in humans. *American Journal of Physical Anthropology (submitted)*.

2008 Percival C, **Hill CA**, Sun M, Wang Y, Jabs EW, Richtsmeier JT. Phenotypic variation within and between 'genetically homogeneous' mouse litters. *American Journal of Physical Anthropology (submitted)*.

2007 **Hill CA**, Reeves R, Sussan TE, Richtsmeier JT. The effects of *Ets2* on the craniofacial skeleton in Down syndrome. Poster presented at Expert workshop on the

- biology of chromosome 21 genes: towards gene-phenotype correlations in Down syndrome, Washington DC.
- 2007 Richtsmeier JT, **Hill CA**, Willmore KE, Fisher EM, Tybulewicz V, Sharpe P, Reeves R. Skull shape in Down syndrome mouse models. Presentation at Expert workshop on the biology of chromosome 21 genes: towards gene-phenotype correlations in Down syndrome, Washington DC.
- 2007 **Hill CA**. Three-dimensional analysis of temporal bone pneumatization patterns in olive baboons. *American Journal of Physical Anthropology Supplement* 44: 129.
- 2007 Liberton D, Bauchet M, McEvoy B, **Hill C**, Richtsmeier JT, Frudakis T, Shriver M. Variation in facial features among regional European populations measured from 3D photographs. *American Journal of Physical Anthropology Supplement* 44: 156.
- 2007 Richtsmeier JT, Weiss KM, Buchanan A, Walker A, Jablonski N, Frazier BC, Willmore KE, Lawson H, Yan P, **Hill CA**, Roseman CC, Cheverud JM, Falk D, Hildebolt CF, Rogers J. Developmental genetic basis of primate craniofacial variation and human origins. *American Journal of Physical Anthropology Supplement* 44: 198.
- 2006 **Hill CA**, De Leon J. Biological and cultural implications of craniofacial disorders depicted in Olmec art. *Society for American Archaeology*.
- 2006 **Hill CA**. Three-dimensional analysis of temporal bone pneumatization. *American Journal of Physical Anthropology Supplement* 42: 103-104.
- 2005 **Hill CA**, Reeves RH, Richtsmeier JT. Mandibular changes in mouse models for human craniofacial disorders, *American Journal of Physical Anthropology Supplement* 40:115.
- 2005 Wang Y, Xiao R, Yang F, Karim BO, Iacovelli AJ, Cai J, Lerner CP, Richtsmeier JT, Leszl JM, **Hill CA**, Yu K, Ornitz DM, Elisseeff J, Huso DL, Jab EW. Abnormalities in cartilage and bone development in the Apert syndrome FGFR2+/S252W mouse. Presentation at the Society of Craniofacial Genetics meetings, Salt Lake City, UT.
- 2004 **Hill CA**, Zumwalt A, Leszl JM, Epstein CJ, Reeves RH, Cole TM III, Richtsmeier JT. Directional asymmetry in mouse models for craniofacial disorders. Presentation at American Cleft-Palate Craniofacial Association meetings, Chicago, IL.
- 2003 Richtsmeier JT, Cole TM, Leszl JM, **Hill CA**, Budd JL, Reeves RH. Developmental instability of the skull in aneuploidy. *European Society for Evolutionary Biology, 9<sup>th</sup> Congress*.
- 2003 **Hill CA**, Reeves RH, Epstein CJ, Valeri CJ, Lindsay ES, Baxter LL, Cole TM III, Richtsmeier JT. Developmental instability and skeletal phenotypes in Down syndrome. *American Journal of Physical Anthropology Supplement* 36:114.

- 2002 Richtsmeier JT, Leszl J, **Hill CA**, Aldridge K, Aquino V, Reeves RH. Development of skull dysmorphology in Ts65Dn segmentally trisomic mice. *American Journal of Human Genetics* 71(4):280.
- 2002 **Hill CA**, Richtsmeier JT. Vertebral anomalies in a mouse model for Down syndrome. Poster presented at the Pennsylvania State University Graduate Exhibition.
- 1999 **Hill CA**. Mandibular ramus flexure as a morphological indicator of sex. *American Journal of Physical Anthropology Supplement* 28:152.

## REFERENCES

Dr. Joan Richtsmeier  
Professor  
Department of Anthropology  
Pennsylvania State University  
University Park PA 16802  
PHONE: 814-863-0562  
EMAIL: [jta10@psu.edu](mailto:jta10@psu.edu)

Dr. Kenneth Weiss  
Evan Pugh Professor of Biological Anthropology and Genetics  
Department of Anthropology  
Pennsylvania State University  
University Park PA 16802  
PHONE: 814-865-0989  
EMAIL: [kmw4@psu.edu](mailto:kmw4@psu.edu)

Dr. Alan Walker  
Evan Pugh Professor of Biological Anthropology and Biology  
Department of Anthropology  
Pennsylvania State University  
University Park PA 16802  
PHONE: 814-865-3122  
EMAIL: [axw9@psu.edu](mailto:axw9@psu.edu)

Dr. David Frayer  
Professor  
Department of Anthropology  
University of Kansas  
626 Fraser Hall  
Lawrence KS 66045  
PHONE: 785-864-2633  
EMAIL: [frayer@ku.edu](mailto:frayer@ku.edu)