

Kari Leigh Allen

Curriculum Vitae

Anatomy and Neurobiology
Washington University School of Medicine
3566 Scott Avenue, St. Louis, MO 63110

(314) 362-3446 (fax)
(314) 747-6572 (office)
kari.allen@wustl.edu

Research Interests

2015-Current **Assistant Professor**, Department of Anatomy and Neurobiology, Washington University School of Medicine in St. Louis

Assistant Professor, Department of Anthropology, Washington University in St. Louis

2014 **Postdoctoral Research Fellow**, Department of Anatomy and Neurobiology, Washington University School of Medicine in St. Louis

Research Associate, Department of Anthropology, Washington University in St. Louis

Research Interests

Primate Anatomy, Functional Morphology, Paleanthropology, Anthropoid Evolution, Phylogenetic Comparative Statistics, Three-dimensional Landmark-based Geometric Morphometrics

Education

2014 **Ph.D.**, Biological Anthropology and Anatomy, Duke University
Advisor: Richard F. Kay, Ph.D., Professor, Duke University
Dissertation Title: Brain size and shape in anthropoid evolution.
Certificate of College Teaching (CCT) at Duke University

2008 **M.A.**, Biological Anthropology, New Mexico State University
Thesis title: The hand of *Kenyanthropus africanus* from Maboko Island (Kenya).

2005 **B.A.**, Anthropology, State University of New York at Potsdam
minor certificates: Biological Anthropology, Studio Art)

Grants Awarded

2012 **NSF Doctoral Dissertation Improvement Grant**, “Brain Size and Shape in Early Anthropoid Primates.” (\$19,152, BCS-1232534)

2012 **Duke University Graduate School International Travel Grant for Dissertation Research** (\$1,750), for data collection and software training at Anthropologisches Institut, Universität Zürich, Switzerland

2011 **Leakey Foundation Research Grant**, “Brain Size and Shape in Early Anthropoid Primates.” (\$11,000, #3820200)

Fellowships and Awards

2013-2014 **Bass Instructorship**, Duke University competitive fellowship, teaching award and living stipend for academic year.

2013 **Mentoring Award**, Duke University, Evolutionary Anthropology (\$900), for participation in undergraduate research mentoring.

Kari Leigh Allen

- 2013 **Pollitzer Travel Award**, competitive essay award, American Association of Physical Anthropologists (AAPA) for conference travel.
- 2011 **Mentoring Award**, (\$500) Duke University, Evolutionary Anthropology, undergraduate research mentoring.
- 2007 **Merit-Based G.A. Enhancement Fellowship**, competitive graduate assistant fellowship, provides additional living stipend, New Mexico State University
- 2007 **Mike Watts Outstanding Leadership Fellowship**, competitive graduate assistant fellowship, provides additional living stipend, New Mexico State University
- 2007 **Graduate Student Conference Travel Award**, New Mexico State University
- 2001-2005 **Mountain Scholar**, State University of New York at Potsdam, annual academic scholarship

Professional Experience

- 2014 **Ad-hoc Reviewer**, American Journal of Physical Anthropology, John Wiley & Sons, Inc.
- 2012 **Freelance Copyeditor**, Journal of Human Evolution, Elsevier Publishing.
- 2011 **Research Assistant**, Duke University, Department of Evolutionary Anthropology, Project: Estimating body mass for Miocene primates of Patagonia, PI: R.F. Kay, Ph.D.
- 2004 **Internship**, State University of New York at Potsdam, preliminary analysis of methodological capabilities for analysis of genetic marker clusters as indication of social patterns in medieval cemetery populations, PI: B. Usher, Ph.D.

Teaching Experience

- 2014 **Postdoctoral Fellow**, Medical Gross Anatomy, Washington University School of Medicine
- 2014 **Primary Instructor**, *3D Visualization in Anthropology*, Duke University, Department of Evolutionary Anthropology (original course developed for Bass Instructor Fellowship).
- Primary Instructor**, *Anatomy and Physiology*, Duke Talent Identification Program (TIP), one-month intensive summer course for gifted middle and high school students.
- 2013 **Primary Instructor**, *Introduction to Evolutionary Anthropology*, Summer Session II, Duke University, Department of Evolutionary Anthropology
- 2013 **Primary Instructor**, *Introduction to Evolutionary Anthropology*, Summer Session II, Duke University, Department of Evolutionary Anthropology
- 2008-2013 **Teaching Assistant**, Duke University, Evolutionary Anthropology
Human Embryology (Primary Instructor: K. Smith, C. Wall)
Human Body (Primary Instructor: Fall- C. Wall, Summer- R. Kay)
Anthropology of the Skeleton (Primary Instructor: D. Marchi)
Primate Skeleton (Primary Instructor: B. Williams)
Primate Anatomy (Primary Instructor: B. Williams)
Introduction to Forensic Anthropology (Primary Instructor: S. Churchill)
Medical Gross Anatomy (Primary Instructor: R. Kay, D. Schmitt)
Primate Adaptation (Primary Instructor: B. Williams)

Kari Leigh Allen

2006-2008 **Teaching Assistant**, New Mexico State University, Anthropology
Introduction to Anthropology (Primary Instructor: L. Lucero)
Physical Anthropology (Primary Instructor: M. McCrossin)
Human Osteology (Primary Instructor: W. Trevathan)
Advanced Human Evolution (Primary Instructor: B. Benefit)

Field Experience

- 2011 **Crew Member**, Late Eocene mammalian fossil recovery, Devil's Graveyard Formation, West Texas, Director: E. C. Kirk, Ph.D.
- 2010 **Crew Member**, Late Eocene-Early Oligocene fossil recovery, Fayum, Egypt, Directors: E.L. Simons, Ph.D., E. Seiffert, Ph.D.
- 2005 **Crew Member**, Medieval cemetery archeological excavation, Giecz, Poland, Director: M. Polcyn, Ph.D., Slavia Foundation Poznan, Poland.

Publications

- Allen, K.L.**, Cooke, S.B., Gonzales, L.B., Kay, R.F., 2015. Dietary inference from upper and lower molar morphology in platyrrhine primates. PLoS ONE. 10(3): e0118732. doi: 10.1371/journal.pone.0118732.
- Kay, R. F., Perry, J. M. G., Malinzak, M., **Allen, K.L.**, Kirk, E. C., Plavcan, J. M., (2012). The Paleobiology of Santacrucian Primates. In: Vizcaino, S., Bargo, S., Kay, R.F., (Eds.), Early Miocene Paleobiology in Patagonia. Cambridge: Cambridge University Press.
- Allen, K. L.**, and Kay, R. F., (2011). Dietary Quality and Encephalization in Platyrrhine Primates. Proceedings of the Royal Society B: Biological Sciences. 279(1729): 715-21. doi: 10.1098/rspb.2011.1311.
- Gongora, J., Cuddahee, R. E., do Nascimento, F. F., Palgrave, C. J., Lowden, S., Ho, S. Y. W., Simond, D., Damayanti, C. S., White, D. J., Tay, W. T., Randi, E., Klingel, H., Rodrigues-Zarate, C. J., **Allen, K.**, Moran, C. & Larson, G. (2011). Rethinking the evolution of extant sub-Saharan African suids (Suidae, Artiodactyla). Zoologica Scripta, 40(4), 327-335. doi: 10.1111/j.1463-6409.2011.00480.x

Conference Papers (*presented by K.L. Allen)

- 2015 ***Allen, K.L.** Endocranial globularity and brain size in primates. American Journal of Physical Anthropology (Poster). 156(S60): 68.
- Boyer, D.M., Bloch, J.I., Kirk, E.C., Gilbert, C.C., **Allen, K.L.**, Gunnell, G.F., Yapuncich, G.S., Kay, R.F., Seiffert, E.R. Re-evaluation of promontorial arterial dominance in early primates (abstract in review). Society for Vertebrate Paleontology, Dallas, TX.
- 2014 ***Allen, K.L.** Changes in endocast shape precede encephalization in anthropoid evolution. American Journal of Physical Anthropology (Podium). 153(S58): 65.
- 2013 ***Allen, K.L.** The evolution of endocast shape in primates (Poster). Society for Vertebrate Paleontology, Los Angeles, CA.
- ***Allen, K.L.** The evolution of global endocast shape in primates (Podium). American Journal of Physical Anthropology. 150(S56): 66.

Kari Leigh Allen

- Hartstone-Rose, A., **Allen, K.L.**, MacNeil, K., Reilly, K.M., Marchi, D. Scaling of forearm muscle architecture in primates (Poster). *American Journal of Physical Anthropology*. 150(S56): 144.
- 2012 ***Allen, K.L.**, Kay, R.F. Endocast shape and brain proportions in primates (Poster). Society for Vertebrate Paleontology, Raleigh, NC.
- *Allen, K.L.**, Kay, R.F., Hunt, K.D., Beeker, C.D., Conrad, G.W., Keller, J. Brain size and endocranial morphology of *Antillothrix* (Holocene, Dominican Republic, Hispanola) (Podium). *American Journal of Physical Anthropology*. 147(S54): 82.
- 2011 ***Allen, K.L.**, Gonzales, L.A., Cooke, S.B., Kay, R.F. Evaluation of upper molar occlusal morphology for dietary inference in mid-- to large--bodied Platyrrhini (Primates) (Poster). Society for Vertebrate Paleontology. Las Vegas, NV.
- Kay, R.F., **Allen, K.L.**, Gonzales, L.A., Krueger, K.L., Hunt, K.D. Dietary reconstruction of *Antillothrix bernensis*, a Holocene monkey from the Dominican Republic. (Podium). Society for Vertebrate Paleontology. Las Vegas, NV.
- *Allen, K.L.**, Marchi, D., Hartstone-Rose, A. Scaling of forelimb muscles in primates (Poster). *American Journal of Physical Anthropology*. 144(S52): 74.
- 2010 ***Allen, K.L.** Are primates particularly dexterous? (Poster). *American Journal of Physical Anthropology*. 141(S50): 54.
- 2009 ***Kay, R.F., Allen, K.L.** Dietary quality and brain size in primates: support for the Expensive Tissue Hypothesis (Poster). *American Journal of Physical Anthropology*. 138(S48): 163.
- 2008 ***Allen, K.L.**, McCrossin, M.L. Pisiform anatomy of *Kenyapithecus africanus* and a small-bodied "ape" from Maboko Island, Kenya (Poster). *American Journal of Physical Anthropology*. 135(S46): 58.
- 2007 ***Allen, K.L.**, McCrossin, M.L. Functional morphology of the *Kenyapithecus* hand from Maboko Island (Kenya) (Poster). *American Journal of Physical Anthropology*. 132(S44): 62.
- McCrossin, M.L., **Allen, K.L.** Articular kinematics of the knee of *Kenyapithecus* (Poster). *American Journal of Physical Anthropology*. 132(S44): 167-168.
- 2005 Usher, B.M., **Allen, K.L.** Identifying kinship clusters: SatScan for genetic spatial analysis (Poster). *American Journal of Physical Anthropology*. 126(S40): 210-211.
- *Allen, K.L.** et al. Preliminary Faunal Analysis at Fort La Presentation. (Podium). Northeastern Anthropological Association (NEAA) Annual Meeting, Lake Placid, NY.

Society Membership

American Association of Physical Anthropology
American Anatomical Association
Society for Vertebrate Paleontology
Paleoanthropology Society of America

Kari Leigh Allen

Workshops Attended

- 2011 University of Texas CT short course, training in computer tomography (CT) analysis, University of Texas at Austin, TX
- 2010 AnthroTree Workshop, training in phylogenetic comparative methods, University of Massachusetts at Amherst, MA

Service

- 2014 **Graduate Mentor**, Evolutionary Anthropology, Duke University, mentoring undergraduate (Richa Lavigna) for senior Honors Thesis: *Use of Virtual Endocasts to Reconstruct Primate Brain Proportions*.
- 2013 **Volunteer Instructor**, Science Under the Stars, Duke University, K-12 educational outreach science demonstrations, Booth: Primate Brain Evolution.
- 2013 **Volunteer Assistant Instructor**, FEMMES (Females Excelling More in Math, Engineering and Science) Capstone Event, "Otolaryngology, head and neck surgery: How do we care for our sensory end organs?", Duke University, February 23, 2013.
- 2012 **Volunteer, Participant**, Women in Science and Engineering (WiSE) Research Symposium, Duke University, December 1, 2012.
- Volunteer Instructor**, Science Under the Stars, Duke University, K-12 educational outreach science demonstrations, CSI: Durham-skeletal identification.
- 2008 **Treasurer of Graduate Student Council**, New Mexico State University, duties: overseeing \$20,000 annual budget for graduate student research grants, leading finance council, revising council charter.
- 2007 **President of Sociology-Anthropology Graduate Student Organization**, New Mexico State University, duties: voting member for department at Graduate Student Council meetings, reviewing grant applications and distributing research funds to graduate student members, organizing community service and outreach events.

Manuscripts In Preparation

1. "Endocranial shape changes precede encephalization in early anthropoid evolution."
2. "Endocranial globularity and encephalization in extant anthropoid primates."
3. "Volume based methods for estimating brain proportions in extinct primates."

Additional Ongoing Research Activities

1. Paleobiology of *Antillothrix bernensis* from Hispanola, collaboration with Dr. R.F.Kay (Duke University) and Dr. K.D. Hunt (Indiana University).
2. Geometric morphometric and volumetric analysis of subfossil lemuroid endocasts (*Archaeolemur*, *Babakotia*, *Hapalemur*, *Mesopropithecus*, *Propithecus*).
3. Three-dimensional morphological integration of the endocranium and facial skeleton in extant and fossil anthropoid primates.
4. Intraspecific and interspecific variation in dental dimension and non-metric dental traits in the Awash baboons (*Papio hamadryas*, *Papio anubis*, and *P.hamadryas* x *P.anubis* hybrids), collaboration with J.Phillips-Conroy (Washington University in St. Louis).