

# ADAM D. SYLVESTER, Ph.D.

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## Curriculum Vitae

Center for Functional Anatomy and Evolution  
The Johns Hopkins University  
School of Medicine  
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## EDUCATION

### Postdoctoral Fellow

The Johns Hopkins University School of Medicine, 2007 - Present  
Center for Functional Anatomy and Evolution  
Supervisor: Dr. Mark Teaford

### Postdoctoral Research Associate

The University of Tennessee, 2006-2007  
Department of Mechanical, Aerospace and Biomedical Engineering  
Supervisor: Dr. Mohamed Mahfouz.

### Ph.D. in Anthropology

The University of Tennessee, 2001-2006  
Dissertation: The Decoupling Hypothesis: A new theory for the origin of hominid bipedalism.  
Advisor: Dr. Andrew Kramer

### M.A. in Anthropology

The University of Tennessee, 1998-2000  
Thesis: Joint surface area proportions and articular curvature of AL 288-1: A functional interpretation.

### B.S. in Zoology (*magna cum laude*)

The University of Tennessee, 1992-1996

## PUBLICATIONS

Sylvester AD, Merkl BC, Mahfouz MR. In press. Reconstructing the AL 288-1 femur using three-dimensional computer models. *Journal of Human Evolution*.

Sylvester AD, Kramer PA, Jungers WL. In press. Humans are not (quite) isometric. *American Journal of Physical Anthropology*.

## AD SYLVESTER

Christensen AM, Sylvester AD. 2008. Physical matches in bones, shells and teeth: A validation study. *Journal of Forensic Sciences* 53: 694-698.

Sylvester AD, Kramer PA. 2008. Stand and Shuffle: When does it make energetic sense? *American Journal of Physical Anthropology* 135: 484-488.

Sylvester AD. 2006. Locomotor decoupling and the origin of hominin bipedalism. *Journal of Theoretical Biology* 242(3): 581-590.

Sylvester AD, Christensen AM, Kramer PA. 2006. Factors influencing osteological changes in the hands and fingers of recreational rock climbers. *Journal of Anatomy* 209: 597-609. [Cover article]

## SUBMITTED MANUSCRIPTS

Kramer PA, Sylvester AD. Bipedal form and locomotor function: Understanding the effects of size and shape on velocity and energetics. *PaleoAnthropology*.

## MANUSCRIPTS IN PREPARATION

Sylvester AD, Merkl BC, Mahfouz MR. A three-dimensional shape and functional analysis of the australopithecine distal femur AL 129-1a.

Kramer PA, Sylvester AD. Humans, geometric similarity, and the Froude number: Is “reasonably close” really close enough?

## COURSES TAUGHT

Instructor, The Johns Hopkins University School of Medicine.  
Human Anatomy, 2007-2009  
Introduction to Matlab and R Programming, Summer 2008  
Biomechanics of Primate Locomotion, Fall 2008

Instructor, Department of Mechanical, Aerospace and Biomedical Engineering (UT)  
Human Gross Anatomy (Lecture and Laboratory Dissection)  
Spring 2007

Graduate Teaching Associate, Department of Anthropology (UT)  
Human Origins  
Fall 2004, Spring 2005

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Graduate Teaching Assistant, Department of Anthropology (UT)

Human Origins, Head Teaching Assistant

Fall 2003 (Laboratory Sections), Spring 2004

Human Origins

Fall 2001 (Laboratory Sections), Spring 2002, Fall 2002 (Laboratory Sections),  
Spring 2003

Human Paleontology (Laboratory Component)

Spring 2005

Teaching Assistant, Department of Anthropology

Human Osteology (Laboratory Component)

Fall 1999

## RESEARCH EXPERIENCE

Research Assistant, Department of Mechanical, Aerospace and Biomedical Engineering

January 2006-August 2006

Responsibilities included data collection (computed tomography of skeletal elements), image processing and CT segmentation, building three-dimensional models of skeletal elements, analysis of three-dimensional shape.

Washington D.C.

Spring 2000, Summer 2002, Summer 2006

Data collection on primate postcranial skeletons at the National Museum of Natural History.

Cleveland, Ohio

Spring 2000, Summer 2002

Data collection on primate postcranial skeletons at the Cleveland Museum of Natural History.

## FIELD EXPERIENCE

2008: Wyoming, Eocene mammals in the Big Horn Basin.

1999: Tennessee, Historic archaeology at Ramsey House, Knoxville, TN.

## CONSULTING EXPERIENCE

2006: Zimmer Orthopaedics. Consultation for computed tomography data collection of skeletal samples held at Cleveland Museum of Natural History.

## CONFERENCE PRESENTATIONS

- Sylvester AD, Mahfouz MR. 2008. The effective mechanical advantage of the australopithecine knee. *Am J Phys Anthropol* S46: 203.
- Kramer PA, Sylvester AD. 2008. Humans, geometric similarity and the Froude number: Is “reasonably close” really close enough? *Am J Phys Anthropol* S46: 134.
- Hendrix RB, Sylvester AD. 2008. The truth, the whole truth, and nothing but the truth – so help me Darwin: Legal decisions and evolution on the classroom. *Am J Phys Anthropol* S46: 115.
- Sylvester AD, Merkl BC, Mahfouz MR. 2007. Reconstructing the AL 288-1 femur using three-dimensional computer models. *Am J Phys Anthropol* S44:228.
- Merkl BC, Sylvester AD, Mahfouz MR. 2007. A three-dimensional shape comparison of AL129-1a and modern human distal femora. *Am J Phys Anthropol* S44:171.
- Mendenall MC, Sylvester AD, Kramer PA. 2007. Walking energetics and leg length: Are modern humans geometrically similar? *Am J Phys Anthropol* S44:170.
- Kramer PA, Mendenall MC, Sylvester AD. 2007. Geometric similarity in primates as assessed from long bone length. *Am J Phys Anthropol* S44:147.
- Christensen AM, Sylvester AD. 2007. Physical Matches of Bone, Shell and Teeth. A validation study. Presented at the American Academy of Forensic Sciences 59<sup>th</sup> Annual Scientific Meeting, San Antonio, Texas.
- Moore MK, Sylvester AD, Merkl BC, Kuhn MJ, Mahfouz MR. 2006. Creating a statistical atlas of the femur from three-dimensional CT data. *Am J Phys Anthropol* S42: 134.
- Sylvester AD. 2005. Decoupling the shoulders from above-substrate locomotion: a new idea for the origin of hominid bipedalism. *Am J Phys Anthropol* S40: 202.
- Christensen AM, Sylvester AD, Kramer PA, Lubke GH. 2005. Factors influencing osteological changes in the hands of rock climbers. *Am J Phys Anthropol* S40: 88.
- Sylvester AD. 2005. The Decoupling Hypothesis: A new idea for the origin of hominin bipedalism. Abstracts of the PaleoAnthropology Society 2005 Meetings: A25.
- Sylvester AD. 2004. Geometric modeling of the center of gravity in *Pan troglodytes*. *Am J Phys Anthropol* S38: 192.
- Sylvester AD. 2001. Surface area proportions, articular curvature, and the locomotor repertoire of AL 288-1. *Am J Phys Anthropol* S32: 146-147.

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## PROFESSIONAL SERVICE

Reviewer for: American Journal of Physical Anthropology  
Naturwissenschaften

Co-organizer, Teaching Evolution & Promoting Quality Science Education Symposium. 77<sup>th</sup>  
Meeting of American Association of Physical Anthropologists (2008) Columbus, Ohio.

Docent for McClung Museum Education Program, The Origins of Humanity: Searching for  
Our Fossil Ancestors. 2001-2005.

Graduate Student Representative to the Faculty, Department of Anthropology, The  
University of Tennessee. 2004-2005.

## AWARDS AND HONORS

Graduate Student Travel Award 2005, Department of Anthropology, The University of  
Tennessee. For travel to the 2005 Paleoanthropology Society Meetings / The 74<sup>th</sup> annual  
meeting of American Association of Physical Anthropologists held in Milwaukee,  
Wisconsin.

Phi Beta Kappa, Epsilon Chapter, The University of Tennessee, 1995.

## PROFESSIONAL MEMBERSHIPS

American Association of Physical Anthropologists, Fall 2000 – Present

Paleoanthropology Society, Fall 2004- Present.

American Association of Anatomists, Fall 2008-Present