

CURRICULUM VITAE

Cecil M. Lewis, Jr.

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Education

Post-doctoral Human Genetics, University of Michigan Medical School, 2005-2007
Ph.D. (Distinction) Anthropology, University of New Mexico, 2005
M.A. Anthropology, University of New Mexico, 2001
B.A. Anthropology, University of Washington, 1996

Faculty Appointments

2007-present Assistant Professor, Department of Anthropology, University of Oklahoma
2007-present Affiliated Faculty, Ecology and Evolutionary Biology, University of Oklahoma
2007-present Affiliated Faculty, Center for Applied Social Research, University of Oklahoma
2008-present Affiliated Faculty, Oklahoma Tobacco Research Center
2008-present Affiliated Faculty, Health Science Center Graduate College, Univ. of Oklahoma

Professional Interests

Molecular anthropology, human population history, human evolution, ancient DNA, Andean archaeology, bioarchaeology, genetic data analysis

External Awards and Grants

2009-2014 NSF #0845314 [PI] "CAREER: Research, education, and capacity building - genomic structure of native Peruvian populations" (rank: highly competitive)
2009-2012 NHGRI/NIH R01 HG005172-01 [co-investigator] "Indigenous Communities and Human Microbiome Research" (score: 122)
2009-2010 Wenner-Gren Foundation Gr. ICRG - 87 [PI] "International Collaborative Research Grant: Mitochondrial Population Genomics in Peru"
2008-2009 Oklahoma Tobacco Research Center, Seed Grant [PI] "Genetic Risks for Lung Cancer in Oklahoma African Americans"
2005-2007 Genome Science Training Program, National Institutes of Health
2004, 2002 Dissertation Fieldwork Grant and Supplement, Wenner-Gren Foundation #6891
2002 Dissertation Improvement Grant, National Science Foundation #0221962
2000 Sigma Xi Grants-in-Aid of Research

Publications

Refereed Articles:

Early View Lewis, CM, Jr, Hierarchical Modeling of Genome-Wide Short Tandem Repeat (STR) Markers Infers Native American Prehistory. *American Journal of Physical Anthropology*.
2009 Lewis, CM, Jr, Difficulties in rejecting a local ancestry with mtDNA haplogroup

- data in the South Central Andes. *Latin American Antiquity* 20(1): 76-90.
- 2008 Verrelli, BC, CM Lewis Jr, AC Stone, GH Perry, Different Selective Pressures Shape the Molecular Evolution of Color Vision in Chimpanzee and Human Populations. *Molecular Biology and Evolution* 25(12):2735-2743.
- 2008 Tito, RY, S Macmil, G Wiley, F Najjar, L Cleeland, C Qu, P Wang, F Romagne, S Leonard, AJ Ruiz, K Reinhard, BA Roe, CM Lewis Jr. Phylotyping and Functional Analysis of Two Ancient Human Microbiomes. *PLoS ONE* 3(11):e3703
- 2008 Lewis, CM, Jr, JC Long, Native South American genetic structure and prehistory inferred from hierarchical modeling of mtDNA. *Molecular Biology and Evolution*. 25(3):478-486.
- 2007 Wang, Sijia, CM Lewis Jr., M Jakobsson, S Ramachandran, N Ray, G Bedoya, W Rojas, MV Parra, JA Molina, C Gallo, G Mazzotti, G Poletti, K Hill, AM Hurtado, D Labuda, W Klitz, R Barrantes, MC Bortolini, FM Salzano, ML Petzl-Erler, E Llop, F Rothhammer, L Excoffier, MW Feldman, NA Rosenberg, and Andrés Ruiz-Linares, Genetic Variation and Population Structure in Native Americans. *PLoS Genetics*. 3(11):e185.
- 2007 Lewis, CM, Jr, JE Buikstra, AC Stone, Ancient DNA and genetic continuity in the South Central Andes. *Latin American Antiquity*. 18(2):145-160.
- 2007 Lewis, CM, Jr, B Lizárraga, RY Tito, PL Gonzalez, GC Iannacone, AC Medina, REM Abanto, SIP Santillán, FADI Cruz, AMC Fernandez and AC Stone, Mitochondrial DNA and the Peopling of South America. *Human Biology*. 79(2):159-178.
- 2004 Lewis, CM, Jr, R Tito, B Lizárraga, AC Stone, Land, Languages, and Loci, MtDNA HV1 in Native Americans and the Genetic History of Perú. *American Journal of Physical Anthropology*. 127(3):351-360.
- 2002 Monsalve, MV, AC Stone, CM Lewis, A Rempel, M Richards, D Strathoff, DV Devine, Molecular analysis of the Kwaday Dän Sinchi ancient remains found in a glacier in Canada. In *American Journal of Physical Anthropology*. 119:288-291.
- 1999 Lawson, AE, CM Lewis, and JP Birk, Why Do Students “Cook” Lab Data? A Case Study of the Tenacity of Misconceptions. *Journal of College Science Teaching*. 24(3):191-198.

Edited Volumes:

- in press Lewis, CM, Jr and TA Tung, Considerations when sampling human osteological remains. In *New Bioarchaeological Perspectives: Essays in Honor of Jane E. Buikstra*, edited by B. Ó. Donnabháin and M. C. Lozada. Cotsen Institute of Archaeology, UCLA, Los Angeles, CA.
- 2007 Long, JC, N Scott, and CM Lewis, Jr, Race, Genetics, in Health. In *Encyclopedia of Race and Racism*. N.Watkins ed. Macmillan Library Reference.
- 2005 Lewis, CM, Jr, and AC Stone, MtDNA diversity at the archaeological site of Chen Chen in Perú. In *Biomolecular Archaeology: Genetic Approaches to the Past*. D.Reed ed. Proceedings from the 19th Annual Visiting Scholar Conference, Southern Illinois University Press.

External Services

Reviewer:

Molecular Biology and Evolution

Current Anthropology
Biology Letters
Journal of Field Archaeology
Latin American Antiquity
Chungara
Human Biology

Annals of Human Genetics
American Journal of Physical Anthropology
Journal of Archaeological Science
Journal of Parasitology
FEMS Microbiology Letters
Human Frontier Science Program

- 2007 Committee member, American Association of Anthropological Genetics Award for Outstanding Student Presentation on Anthropological Genetics
2004 Consultant, "Mummy Autopsy", Atlantic Productions (Discovery)

Services in Oklahoma

- 2009-present Presenter & Organizer, Annual Continuing Education Workshop for K12 and Community College Teachers in Oklahoma
2008-present Professionalization Workshops, Department of Anthropology, Univ. of Oklahoma
2007-present Celebrate Darwin 2009 Steering Committee Member, at Univ. of Oklahoma
2007 Friends of the College of Art & Science lecture organizer, Univ. of Oklahoma

Advising and Mentoring

Graduate Students

Lauren Cleeland (PhD chair, 2008-present), Andrew Ozga (PhD chair, 2009-present), Lauren O'Shea (MA chair, 2007-present), Alexandra Tito (MA chair, 2007-present)

Interns and Professionals

Raul Tito (Research Scientists, 2007-present)
Susan Polo (Visiting Scholar, 2009)

Bioinformatics interns from Universit of Auvergne, France

- 2008 Sylvain Leonard, Frédéric Romagné
2009 Thomas Marliac, Anaïs Ambiehl, Céline Debuiselle, Ludovic Roy

Undergraduate Interns

Nisha Patel (2007-present), Diana Wiedemann (2008), Blake Stamps (2008-2009), Sarah Whitten (2008), Ashesh Bhakta (2009), Nina K. Friedman (2009)

Courses Taught

Graduate (or advanced undergrad): taught at University of Oklahoma

Introduction to Population Genetics, Analyzing Human Variation

Undergraduate: taught at University of Oklahoma

Introduction to Biological Anthropology, Genetic Perspectives on Human Evolution

Professional Reports

- 2005 Intercontinental to Intrasite Genetic Analyses of Ancient and Contemporary Native American Communities. PhD dissertation, University of New Mexico
2004 Lewis, CM, Jr, AC Stone, An ancient Y-chromosome DNA analysis of the possible remains of William Benjamin Bridger: Atlantic Productions and Discovery Communication's: Mummy Autopsy.

- 2004 Lewis, CM, Jr, Report on ancient DNA from the YA1-59-1 tooth sample from the archaeological site of El Yaral, Perú.
- 2003 Lewis, CM, Jr, AC Stone, Forensic mtDNA analysis of a Cochiti Pueblo skeleton. Office of the Medical Investigator. Albuquerque, NM
- 2000 Lewis, CM, Jr, Skeletal Analysis Report for 40 individuals from the Archaeological Sites of Descanso and La Cruz, Ilo, Perú. Centro Mallqui, Ilo, Perú: 243.
- 1999 Lewis, CM, Jr, Skeletal Analysis Report for Quasar (#359) Skeletons. The Center for American Archeology, Kampsville, IL: 7.

Conference Papers, Posters, and Invited Lectures

- 2009 Obregón, A, R Tito, L Williamson, and Lewis, CM, Deep sequencing APOE in an African American population: Implications for genetic testing. Poster presentation at the 28th Annual education conference, National Society of Genetic Counselors, Atlanta, GA (Candidate, best poster award).
- 2009 Tito, RY and Lewis, CM Jr. From coprolites to ancient human microbiomes. Poster presented at the 78th annual meeting of the American Association of Physical Anthropologists, Chicago, IL.
- 2009 Obregón, A, Tito, R, Sanghera, D, and Lewis, CM Jr, Deep Sequencing APOE to Identify Population-Specific Haplotypes in African Americans. Poster presentation at the 34th Annual Graduate Research Education and Technology Symposium, University of Oklahoma Health Sciences Center, Oklahoma City, OK. (Winner: Sigma Xi, poster award)
- 2009 Lewis, CM Jr, What does DNA have to contribute to Anthropology? *Invited Lecture*, at the Annual Conference of the Oklahoma Society of Community Colleges, Midwest City, OK.
- 2009 Lewis, CM Jr, The practical importance of Native American population genetics. *Invited Lecture*, at the Johnson Humrickhouse Museum symposium Questions, New Science: Reinterpreting Native American origins in the light of modern methods and technology, Coshocton, OH.
- 2008 Lewis, CM Jr, Archaeological and ethnohistoric contributions to understanding human genetic variation in the South Central Andes, Podium presentation at the 27th Northeast Conference on Andean Archaeology and Ethnohistory, Bangor, Maine.
- 2008 Lewis, CM Jr and Cleeland, L. First Contact: The Archaeologist's Role in Ancient DNA Investigations. Podium presentation at the 73rd annual meeting of the Society for American Archaeology, Vancouver, BC.
- 2008 JC Long, CM Lewis Jr, J Li, R Malhi, K Hunley, Allelic Variability and Tests for Natural Selection at the Human ALDH2 Locus, Paper presented at the 77th annual meeting of the American Association of Physical Anthropologists, Columbus, OH.
- 2007 Cleeland, L. and CM Lewis Jr. Ancient DNA on the Front Line: The Archaeologist's Place in Ancient DNA Research. Podium presentation at the 65th Annual Plains Anthropological Conference, Rapid City, South Dakota.
- 2007 Lewis, CM, Jr, South American Genetic Variation and Origins. *Invited Lecture*, University of Maine, Orno, Maine.

- 2007 Lewis, CM, Jr, A New Model for Native South American Genetic Variation and Origins. *Invited Lecture*, Vanderbilt University, Nashville, Tennessee.
- 2006 Lewis, CM, Jr, and JC Long, A New Model for South American Origins and Diversity Inferred from Hierarchical Modeling of mtDNA Variation. Podium presentation at the American Society of Human Genetics 56th annual meeting, New Orleans, Louisiana.
- 2006 Long, JC, CM Lewis, J Li, RS Malhi, K Hunley. Allelic Variability and Tests for Natural Selection at the Human ALDH2 Locus. Poster presentation at the American Society of Human Genetics 56th annual meeting, New Orleans, Louisiana.
- 2006 Lewis, CM, Jr, and JC Long, Native South American Prehistory Inferred from Hierarchical Modeling of mtDNA Data. Poster presented at the 50th Anniversary and Symposium for the Department of Human Genetic at the University of Michigan, Ann Arbor, Michigan.
- 2006 Lewis, CM, Jr, and JC Long, Generalized hierarchical modeling and the peopling of South America. Paper presented at the 75th annual meeting of the American Association of Physical Anthropologists, Anchorage, Alaska.
- 2006 Lewis, CM, Jr, AK Wilbur, JE Buikstra, Genetic continuity of prehistoric and contemporary communities in the South Central Andes supported by mitochondrial DNA. Paper presented at the 71st Annual Meeting of the Society for American Archaeology San Juan, Puerto Rico.
- 2005 Lewis, CM, Jr, JE Buikstra, AC Stone, Gene flow and the Andes: tests of migration at the archaeological site of Chen Chen. Paper presented at the 74th Annual Meeting of the American Association of Physical Anthropology, Milwaukee, Wisconsin.
- 2005 Verrelli, B, CM Lewis, and AC Stone, Contrasting evolutionary histories at human and chimpanzee G6PD and OPN1LW genes. Society of Molecular Biology and Evolution meetings, Auckland, New Zealand.
- 2005 Stone, AC, GS Cabana, RY Tito, PW Lopez, GC Iannacone, CM Lewis, B Lizarraga, Population structure and history in Peru. Paper presented at the 74th Annual Meeting of the American Association of Physical Anthropology, Milwaukee, Wisconsin.
- 2005 Cabana, GS, CM Lewis, AC Stone, Inference of population history from DNA haplogroup frequencies using computer simulation modeling. Paper presented at the 74th Annual Meeting of the American Association of Physical Anthropology, Milwaukee, Wisconsin.
- 2004 Lewis, CM, Jr, AC Stone, MtDNA diversity at the archaeological site of Chen Chen, Perú: Implication for Andean Genetic History. Paper presented at the 69th Annual Meeting of the Society for American Archaeology, Montreal, Canada.
- 2003 Lewis, CM, Jr, Analysis of closely related species. Paper presented at the Universidad de Richardo Palma, Lima, Peru.
- 2002 Lewis, CM, Jr, L Salter, R Tito, B Lizárraga, AC Stone, Migraciones de las Poblaciones Andinas Reveladas por ADN Mitocondrial (mtDNA). Paper presented at the Universidad Nacional Mayor de San Marcos, Lima, Perú.
- 2002 Stone, AC, J Benn, AK Wilbur, H Lin, CM Lewis, E Trudeau, J Feurstein, and M Hammer, Chimpanzee population structure and history from Y chromosome and

- mtDNA data. Human Origins and Disease Conference, Cold Spring Harbor Laboratory, New York.
- 2002 Stone, AC, J Benn, AK Wilbur, H Lin, CM Lewis, E Trudeau, J Feurstein, and M Hammer, Population structure and history of *Pan* from Y chromosome and mtDNA data. Society of Molecular Biology and Evolution meetings, Sorrento, Italy.
- 2002 Lewis, CM, Jr, L Salter, R Tito, B Lizárraga, AC Stone, An Investigation of Genetic, Linguistic, and Geographical Distance in American Indians Using Multivariate and Phylogenetic Procedures: Contributions from Ancash, Perú and the Introduction of POML. Paper presented at the 71th Annual Meeting of the American Association of Physical Anthropology, Buffalo, New York.
- 2002 Lewis, CM, Jr, and AC Stone, A Molecular Genetic Study of the Prehistoric Tiwanaku Colony of Chen Chen: Implications for the Genetic Relationships of Tiwanaku Peoples and the Peopling of South America. Poster presented at the 67th Annual Meeting of the Society for American Archaeology, Denver, Colorado.
- 2000 Stone, AC, MR Bonner, CM Lewis, and M Hammer, What subspecies are they? Mitochondrial DNA and Y chromosome diversity in captive Pan troglodytes. The American Association of Physical Anthropologists meeting, San Antonio, Texas.
- 2001 Monsalve, MV, AC Stone, CM Lewis, A Rempel, M Richards, D Strathoff, DV Devine, Molecular analysis of the Kwaday Dän Sinchi ancient remains found in a glacier in Canada. Poster presented at the IV World Congress of Mummy Studies, Nuuk, Greenland.
- 2001 Stone, AC, CM Lewis, J Grutt, M Hammer, Pan troglodytes and Pan paniscus diversity: results from the Y Chromosome. Poster presented at the 70th Annual Meeting of the American Association of Physical Anthropology, Kansas City, Missouri.
- 2001 Davidson, E, HE Cate, CM Lewis, M Hunter, Data Manipulation in the Undergraduate Classroom: What are We Teaching? Paper in the 2000 ORI RRI Conference Proceedings, Washington D.C.
- 2000 Stone, AC, R Bonner, CM Lewis, M Hammer, What Subspecies are They? Mitochondrial DNA and Y Chromosome Diversity in Captive Pan Troglodytes. Poster presented at the 69th Annual Meeting of the American Association of Physical Anthropology, San Antonio, Texas.
- 1999 Lewis, CM, Jr, Integrating Darwinian Archaeology: A Biological Perspective. Paper presented at the 64th Annual Meeting of the Society for American Archaeology, Chicago, Illinois.

Laboratory Employment

- 2004-2005 Research technician, human molecular genetics
School of Life Sciences, Arizona State University
- 1999 to 2003 Research assistant, molecular anthropology
Anthropology Department, University of New Mexico
- 1998 Lab assistant, osteology
Maxwell Museum, University of New Mexico
- 1994 Lab assistant, fauna analysis

- 1994 Donald Grayson, University of Washington
Student, Zooarchaeology and field ecology Field School
Frank Bayham and Raymond J. Bogiatto, California State University at Chico
- 1993 Lab assistant, anthropometric analysis
Laura Newel, University Washington

Excavation Experience

- 1999 El Descanso, Peru
Directed by Centro Mallqui, Peru
- 1998 Comanche Springs Archaeological
Directed by Dr. Ann F. Ramenofsky
- 1998 Terramar-Palo Verde Ruin
Directed by Northland Research, Inc.
- 1996 Rudd Creek Ruin
Archaeological Field School, Arizona State University

Professional Affiliations

American Association of Physical Anthropologists
Society for American Archaeology
American Society of Human Genetics
Oklahoma Science Teachers Association
Oklahoman's For Excellent is Science Education

Languages

English, Spanish, C++, R