

MAYA CHRISTINE METNI PILKINGTON

Department of Anthropology
Genomic Analysis and Technology Core
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RESEARCH INTERESTS

Molecular evolution and models of modern human origins, population genetics and genomics, the evolution of human disease and traits under selection, paleoanthropology, Old World Prehistory, and primate evolution.

EDUCATION

THE UNIVERSITY OF ARIZONA

Ph.D. Anthropology, Minor Ecology and Evolutionary Biology 2000-present

KENT STATE UNIVERSITY

M.A. Anthropology 2000

WASHINGTON UNIVERSITY IN ST. LOUIS

B.A. French and Anthropology 1996

UNIVERSITE PAUL VALERY MONTPELLIER FRANCE

Semester of Study Abroad 1995

SCHOLARSHIPS, FELLOWSHIPS AND GRANTS

Michael A. Cusanovich Dissertation Writing Fellowship, 2006-2007
William and Nancy Sullivan Fellowship, Department of Anthropology, 2006
Dissertation Improvement Grant, National Science Foundation, 2004-2006
Women in Science and Engineering Travel Stipend, 2004
IGERT Fellowship in Genomics, National Science Foundation, 2004-2005
IGERT Fellowship in Genomics, National Science Foundation, 2003-2004
Social and Behavioral Sciences Grant, SBSRI, 2003
Riecker Grant, Department of Anthropology, 2003
Mary Alice Sherry Helm Scholarship, Department of Anthropology, 2002
Riecker Grant, Department of Anthropology, 2001
Emil W. Haury Grant, Department of Anthropology, 2001
Graduate Fellowship, Department of Anthropology, Kent State University, 1998-2000

LABORATORY RESEARCH EXPERIENCE

**GRADUATE RESEARCH ASSISTANT, GENOMIC ANALYSIS AND TECHNOLOGY CORE.
THE UNIVERSITY OF ARIZONA, TUCSON, ARIZONA.**

Polymerase Chain Reaction (PCR), agarose gel electrophoresis, Denaturing High Performance Liquid Chromatography (DHPLC), Restriction Fragment Length Polymorphism procedures (RFLP), sequencing and analysis of global sample of mtDNA for NIH project. Other loci include Betaglobin, Group Specific Component (*Gc*), Vitamin D Receptor (*VDR*), the non-recombining portion of the Y chromosome and two X-linked genes (*PDHA1* and *RRM2P4*). Extensive experience with the programs Sequencher, OLIGO, Arlequin, DnaSP, BioEdit, Mega, Genetree, IM, and GeneTree and migrate. Arizona Research Labs. 2001- present.

**LABORATORY MANAGER, GENOMIC ANALYSIS AND TECHNOLOGY CORE.
THE UNIVERSITY OF ARIZONA, TUCSON, ARIZONA.**

Laboratory administration in lab focused on the study of humans. Responsibilities included procurement and maintenance of equipment and consumables, maintenance of all laboratory chemicals, training of new researchers, and overall organization of the lab. Arizona Research Labs. Spring 2006.

**GRADUATE RESEARCH ASSISTANT, ZOOARCHAEOLOGY LAB OF THE ARIZONA STATE MUSEUM.
THE UNIVERSITY OF ARIZONA, TUCSON, ARIZONA.**

Identification of mammalian specimens for completion of the museum's database. Department of Anthropology. Fall 2000, Spring 2001.

**GRADUATE RESEARCH ASSISTANT, FOR PROFESSOR MARY STINER.
THE UNIVERSITY OF ARIZONA, TUCSON, ARIZONA.**

Catalogue of Levantine fossil sites, including location and contents as well as related articles. Department of Anthropology. Fall 2001.

**GRADUATE RESEARCH ASSISTANT. NORTHEASTERN OHIO UNIVERSITIES COLLEGE
OF MEDICINE, ROOTSTOWN, OHIO.**

Extensive confocal microscopy in conjunction with studies of Chiroptera teeth. Part of an ongoing investigation of the relationship between the volume and surface area of bat teeth and the pH of their saliva. Principle investigator: Dr. E. Dumont. Department of Anatomy. Spring 1999-Spring 2000.

**GRADUATE RESEARCH ASSISTANT. NORTHEASTERN OHIO UNIVERSITIES COLLEGE
OF MEDICINE, ROOTSTOWN, OHIO.**

Technician and fossil preparator of fossil whales (Cetacea). Casting and moulding, acid preparation, research database maintenance. Principle investigator: Dr. H. Thewissen. Department of Anatomy. Spring 1999- Spring 2000.

TEACHING EXPERIENCE

NATURAL HISTORY OF OUR CLOSEST LIVING RELATIVES (PRIMATOLOGY) , THE UNIVERSITY OF ARIZONA

Primary instructor for introductory course in comparative primate biology. Position required entire course development, including choice of text, writing of syllabus, and creation of lectures. Summer 2006 and Summer 2003.

HUMAN GENETICS AND EVOLUTION

Guest Lecturer. Teach class on Human Evolution: Neandertals, Anatomically Modern Humans and the genetic evidence available to address questions of admixture and speciation from both extant humans and fossils. Spring 2004, 2005, 2006.

HUMAN VARIATION IN THE MODERN WORLD, THE UNIVERSITY OF ARIZONA

Teaching Assistant, weekly discussions and laboratory sessions, graded essays and examinations. Topics included an introduction to genetics, human evolution, nutrition and metabolism, cancer, HIV and AIDS, the immune and endocrine systems, and plant productivity. Fall 2001.

THE HUMAN SPECIES: HEREDITY, ENVIRONMENT, AND BEHAVIOR, THE UNIVERSITY OF ARIZONA.

Teaching Assistant, weekly group lecture/discussion sections during which the principles of evolutionary biology were taught for this general science course. Lectured on early hominid evolution and helped create and grade examinations and essays. Spring 2001.

INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY, KENT STATE UNIVERSITY.

Teaching Assistant, wrote and graded examinations, led review sessions on human evolution and population genetics, presented lecture on Neandertals and modern humans. Topics included: introduction to genetics, species concepts, fossilization, primate evolution, human evolution and the impact of disease on human populations. Fall 1999.

FIELD RESEARCH EXPERIENCE

PROJECT LEADER FOR JOINT RESEARCH EXPEDITION IN NORTHERN LEBANON: QADISHA VALLEY PROJECT

Together with Dr. Corine Yazbeck (St. Joseph's University) and Dr. Andrew Garrad (University College London), led archaeological expedition in northern Lebanon. Basic site reconnaissance and recording, and preparation of a novel site for future excavations. Lower, Middle and Upper Paleolithic. Representing the University of Arizona, funded by Department of Anthropology Riecker Grant. August 2003.

FIELD ASSISTANT. THE INSTITUTE OF HUMAN ORIGINS: HAELA CAVE, ISRAEL.
Middle/ Lower Paleolithic Site. Drs Y. Rak, B. Kimbell, and E. Hovers. Complete site survey, surface collection, sub-surface excavation, and mapping. Joint project- Hebrew University, Tel Aviv University, and the Institute of Human Origins. Summer 1999.

VISITING RESEARCHER. ST. JOSEPH'S UNIVERSITY, BEIRUT, LEBANON.
Collections Research, Middle/Lower Paleolithic Sites. Examination of previously unstudied fossil fauna from local cave deposits. Identification and cataloging of faunal collections. Site surveys for possible future excavations. Summer 1998.

VISITING RESEARCHER AND FIELD ASSISTANT. THE UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG, SOUTH AFRICA.
Middle Stone Age Site (Erfkroon). Drs L.R. Berger, J. Brink, and S. Churchill. Complete site survey, surface collection, mapping with laser theodolite, transit usage, faunal analysis, taphonomy, site photography. Employed by the University of the Witwatersrand and The National Museum of South Africa in Bloemfontein. Other work included the site of Drimolen. July-December 1997.

LANGUAGE SKILLS

FRENCH: fluent in reading, speaking and writing. Academic translation for publication.
SPANISH: knowledgeable in reading, speaking and writing.
ARABIC: rudimentary reading and understanding.

PUBLICATIONS

Battini, C, Coia, V, Battaglia, C, **Metni Pilkington, M**, Comas, D, Calafell, F, Spedini, G, Rocha, J, Destro-Bisol. (2006) Phylogeography of the human mitochondrial L1c haplogroup: genetic signatures of the prehistory of Central Africa. *Molecular Phylogenetics and Evolution*. Accepted.

Wilder, JA, Kingan, SB, Mobasher, Z, **Metni Pilkington, M**, Hammer, MF. (2004) Global Patterns of Human mtDNA and Y Chromosome Structure are not Influenced by Higher Rates of Female Migration. *Nature Genetics* 36 (11): 1238.

PRESENTATIONS

Pilkington, MM, Bigham, AW, Kingan, SB, Mobasher, Z, Wilder, JA, Wood, ET, Hammer, MF (2004). Patterns of human variation as reflected by multi-locus genetic comparisons. American Association of Physical Anthropology meeting (Podium)

Hammer, MF, Wood, ET, **Pilkington, MM**, Bigham, AW, Mobasher, Z, Koki, G, Mgone, C, Friedlaender, J (2004). Patterns of genomic variation in the Baining of New Britain in relation to other world populations. American Association of Physical Anthropology meeting (Podium-presented by E. Wood)

Pilkington, MM, Hammer, MF (2003). The Roles of Selection and Demography in Shaping Patterns of Variation in Vitamin D-Binding Protein (DBP). American Society of Human Genetics Meeting and IGERT sponsored Evolutionary Genomics meeting. *American Journal of Human Genetics* 73 (5): 1253. (Poster)

Pilkington MM, Wilder JA, Mobasher Z, Strassman B, Friedlaender J, Hammer MF (2003) Sampling Bias and the *Cytochrome Oxidase III* Locus of Mitochondrial DNA. American Association of Physical Anthropology meeting. *American Journal of Physical Anthropology*: 168-168 Suppl. 36. (Podium)

Wood, EW, **Pilkington MM** et al. (2003). Nucleotide Variability at the Human Betaglobin Locus. American Association of Physical Anthropology meeting. *American Journal of Physical Anthropology*: 227-227 Suppl. 36 2003. (Podium-presented by E. Wood)

Metni MC (1999). A re-examination of a proposed Neandertal maxilla from Ksar 'Akil Rock Shelter, Antelias, Lebanon. American Association of Physical Anthropology meeting. *American Journal of Physical Anthropology*: 202-202 Suppl. 28. (Poster)

Metni MC (1998). A Human Maxilla from Level XXV of Ksar 'Akil Rock Shelter, Antelias, Lebanon. The Proceedings of the Dual Congress, Sun City, South Africa. (Poster)

ACADEMIC REFERENCES

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The University of Arizona
Life Sciences South 231
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DR. JOHN W. OLSEN
Department Head and Professor
Department of Anthropology
The University of Arizona
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