The Central Andes harbor perfect experimental conditions to study the relationship of environment, culture and the evolution of human genetic diversity. In the ~14,000 years since the onset of human presence, the population history in the Central Andes has been driven by episodes of environmental change, adaptation to ecological conditions, cultural innovations, political interactions, and population pressures. Due to the relative isolation of prehistoric Native American populations from the global gene pool until the European Contact, admixture with other continental populations can be eliminated as explanation for observed genomic changes making it ideal to study genetic adaptation, or the impact of socioecological changes on genetic structure. Recent technological advance in molecular genetics opened up new and exciting opportunities for paleogeneticists to gain insights into prehistoric population dynamics and the evolutionary adaptability of our species inconceivable just a few years ago. Here I will report on the efforts of our lab to use these genomic tools to explore Central Andean population history. I present new insights into the ancestry of early Andean highlanders, population relationships, and admixture events that help us to better understand the interaction of Central Andean groups with other regional populations of South America, but also how selection due to the exposure to physical stressors like hypoxia shaped the Andean gene pool.

Lars Fehren-Schmitz is an Assistant Professor of Anthropology at UCSC, member of the UCSC Genomics Institute, and one of the three PIs running the UCSC Paleogenomics Labs. He received his PhD in Biology in 2008 from the University of Goettingen, Germany, were he also received his MA degrees in Archaeology, and Biology. Dr. Fehren-Schmitz’s research uses ancient and modern DNA in research frameworks informed by archaeological and paleoecological sources to explore how the twin forces of culture and biology shaped human genomic diversity, demography and health.

Wednesday, May 25, 2016
12:00pm - Seminar Room

Location: Building 500
488 Escondido Mall
Room 106

If you have any questions regarding our events, please contact:

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