Isotope analysis and tropical populations of South America: Reconstructing mobility and geographic origins

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Abstract: Strontium analysis on ancient human remains has been central for archaeologists in the reconstruction of mobility, geographic origins and ancient migration patterns. In this presentation, I focus on an ancient cemetery of the Bolivian Chaco, located on the eastern Andean tropical foothills. The cemetery was accidentally excavated by an international gas company in the region, revealing more than one hundred burials. Bioarchaeology, strontium isotope, and AMS radiocarbon dating on a sample of individuals, revealed that the cemetery was consistently used over three millennia. Therefore, the cemetery had a pivotal importance in the collective memory of its inhabitants. Four cultural periods were identified, ranging from the Terminal Archaic and Early Formative (1944-1691 BC), until the Regional Developments period (648-875 AD). 87Sr/86Sr signatures revealed the presence of a robust local population, although it is also evident a wider geographic variability in the last phases. In the last period the cemetery is abandoned, perhaps as a response to wider climatic fluctuations, or to the invasion of belligerent Guarani groups from the eastern tropical lowlands.

Bio: Dr. Sonia Alconini received her Ph.D. from the University of Pittsburgh (2003), and currently she is Professor at the Department of Anthropology at the University of Texas at San Antonio. She specialized in the archaeology of Andean South America, GIS and the evolution of complex societies. Dr. Alconini’s research has focused on the Inka empire, assessing the complex relations established between imperial representatives, indigenous populations and outer tribes of the Amazon and tropical regions. She has published a number of books and articles in English and Spanish, and the most recent is the Oxford Handbook of the Incas (2018).