

Prehistoric Atlantic and Pacific Transoceanic Genetic and Cultural Contacts with America

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Introduction: Transatlantic cultural (Solutrean North Spain/France) and/or gene exchanges have occurred between America First Inhabitants and people coming from Atlantic Europe, Pacific Ocean and America in prehistorical times. **Aims:** We have studied genetic and cultural relatedness among Amerindian, European, Pacific and World wide populations for autosomal HLA genes in order to clarify America peopling. **Methods:** HLA DNA typing has been done by standard methodologies. 14,430 chromosomes have been studied from our own data base: 1) Relatedness studies with HLA genes in Aymara (Titikaka Lake Area First Inhabitants, Bolivia) and other Amerindian, Asian Pacific Islanders and Mediterranean populations have been performed by using Arlequin software programs for obtaining genetic distances and Neighbour Joining trees. Also, correspondence analyses among populations were carried out., 2) Alberite Dolmen (Cadiz, southern, Spain) and Titikaka Lake Tiwanaku common culture characters were searched and found, particularly those related to ritual voice amplification artifacts. **Results:** Genetically, HLA alleles in South America are shared with Pacific Islanders and North Americans also share mtDNA characteristics with Europeans. Solutrean prehistorical European culture is also found in ancient American tools. In addition, Polynesian cultural traits are also found in ancient South America. **Conclusions:** Our conclusions are: a) Pacific Easter Island (Chile, 2,182 miles far from mainland) cultural and genetic contacts seem to be evident with Tiwanaku (Bolivia) culture; this supports Tor Heyerdal expeditions conclusions about South America and Easter Island extant contacts in antiquity, b) America genetic markers relate it both with Europe and Pacific Islands, c) Genetics needs to be contextualized in the frame of other knowledge areas, like Physical Anthropology and Archaeology in order to obtain more information about World populations origins and Americas peopling.

Finally, Genetics by itself have been unable to satisfactorily explain population relatedness up until now, particularly regarding to Americas peopling: a integrative view of Pacific and Atlantic Oceans genetic and cultural relationships between Pacific Islands, Americas and southern West Europe (Iberian/Celts) in prehistoric time is discussed.

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