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Original Article

Genomic Ancestry of North Africans Supports Back-to-Africa Migrations

There has been a Continuous Indigenous Sub-Saharan Presence in North Africa for 30ky

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Henn et al argues that several back-to-Africa migrations may account for the North African population, and a recent migration of Sub-Saharan Africans into North Africa 1.2kya and 700ya (years ago). The archaeological, linguistic and genetic evidence contradicts this claim. This evidence indicates a continuous indigenous African presence in North Africa for the past 30ky (thousand years)[1].

Henn et al argue that 40kya people may have made a back migration into Africa from the Levant. This is impossible because at this time the Levant was still occupied by the Neanderthal people [1].

There is considerable evidence that there was third migration out of Africa across the Straits of Gibraltar into Iberia during the Paleolithic. The first anatomically modern humans (amh) arrived in Western Eurasia and settle in Iberia. It was from Iberia that Cro-Magnon man spread the Aurignacian culture to Eastern Europe and the Levant [1].

The extraction and examination of ancient mtDNA from Cro Magnon skeletons dating to the Aurignacian period[2-3] allow us to perceive the DNA carried by the first amh in Western Eurasia.. The mtDNA recovered from the skeletons belonged to haplogroup N [2]. The people in Europe [4-6] and later the Levant [7] during this period were Sub-Saharan Africans.

Little is known about the origin and phylogeographic patterning and demography of hg N which share a common root with its L3 counterpart. The TMRCA mtDNA ancestor of hgs L3, M and N lived around 94.3kya[3].

Since Cro-Magnon man had to have crossed the Straits of Gibraltar to enter Iberia there had to have been a long existence of L3(M,N) in North Africa for haplogroup N , to have been carried by Cro-Magnon man to Iberia[1-3].

The genomic evidence indicates that Sub-Saharan Africans had migrated from East Africa into the Sahara and West Africa thence North Africa [4]. Haplogroup L0d is the most ancient mtDNA in Africa[5].

The TMRCA for L0d 106kya. L0d is found only in West Africa, East Africa and South Africa [5]. A major haplotype L0d is AF-24 which is delineated by Ddel site at 10394 and A1uI site of np 10397, the same as L3(M,N). The TMRCA of mtDNA L3(M,N) is 94.3kya [5].

Anatomically modern humans (amh) arrived in Senegal during the Sangoan period (100-80kya) from East Africa [8]. Gonder argues that TMRCA of mtDNA L3(M,N) and their derivatives is around 94.3ky[5]. This was 30ky before non-African L3(M,N) exited Africa[9].

The Senegambians carry AF-24, L0d and L3(M,N). Given the early spread of the Sangoan culture from Tanzania to West Africa, suggest that L3(M,N) had probably spread to West Africa with the Sangoan culture bearers. This would explain the presence of basal nucleotides characteristic of macrogroup L3(M) in West Africa. This indicates that the Aurignacians who carried haplogroup N, probably originally lived in Senegambia before they made their way across the Straits of Gibraltar into Iberia.

The genetic evidence also illustrates that haplogroup L3 has a long history in Iberia. This should not be surprising since haplogroup N was discovered among the ancient skeletons associated with the Aurignacian culture. Much of the ancient mtDNA found in Iberia has no relationship to the people presently living in Iberia [10].

Luis Pericot was sure that the populations associated with the Gravettian (32kya) and Solutrean (23kya) cultures were phylogenetically Sub-Saharan African[10]. Dominguez found that the lineages recovered from ancient skeletons associated with these cultures belonged to the African lineages L1b,L2 and L3[10]. Almost 50% of the lineages from the Abautz Chalcolithic deposits and Tres Montes, in Navarre are the Sub-Saharan lineages L1b,L2 and L3.

The appearance of phylogenetically related sequences of hg L3 present in many ancient Iberian skeletons suggest that this haplogroup may have a long history in Iberia. The fact that hg N came to Iberia with the Cro-Magnon people in Aurignacian times suggest that carriers of L3 may have also been part of this population movement. This would place not only place Sub-Saharan populations carrying haplogroup N, but also mtDNA L3 in North Africa prior to 30kya..

In summary Sub-Saharan Africans have been in North Africa for the past 40ky- not 1.2ky [1,3] as claimed by Henn et al. These Sub-Saharan Africans carried haplogroup L3(M,N) [2,10]. The fact these populations crossed into Iberia across the Straits of Gibraltar make it clear that Sub-Saharan Africans were already in North Africa before this exit into Europe this makes Sub-Saharan Africans indigenous to North Africa..

The North Africans who carry Levantine and European genome probably result from the Vandal invasion of North Africa, and Greco-Roman colonies established in North Africa over the past 2ky. Most European females entered during the Vandal period and Ottoman slave trade. The Ottoman Turks mainly imported European females into North Africa—not Sub-Saharan females. This would

mean that they introduced these genes to North Africa

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No competing interests declared.

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