The common polymorphism -631 ins GCCA was found in African-Americans with an allele frequency of 0.09 [3]. We aimed to study the frequency of this polymorphism in North African countries and also in Turkish Cypriots.

In this study, 280 Egyptians, 105 Algerians, 92 Turkish Cypriots and 6 Hemoglobin (Hb) OArab cases were included. RPS19 gene exon 1 was amplified with “F5'TTA CTA CTC CCA CTT CCG GCC AGG CAG 3', R5'TCA GGC ACG CGC GCT CTG AGG CTT CGG CGT C3' ” primers followed by digestion with the restriction enzymes HpyF10VI (MwoI, Fermentas, USA). HpyF10VI recognizes 5’-G C N N N N N G C-3’ 3% agarose gel electrophoresis was used to show the fragments, which are 295bp, 158bp and 73bp for normal sample and 173bp, 158bp, 126bp, and 73bp for homozygous sample.

In this study, we aimed to analyze the -631 ins GCCA mutation in three different Mediterranean populations, of which two were North African countries. Table 1 shows the genotype distribution in the three countries. Previously, the RPS19 gene -631 ins was reported as an African marker in African-Americans in the United States population [3]. In order to test this hypothesis, we analyzed individuals from two different North African countries. Although rare, we found this polymorphism in Algerians and Egyptians. Our finding supported the hypothesis.
Further, we previously noted the Hb O Arab mutation in the Turkish Cypriot population, hypothesizing that there could be an admixture of African descent [5]. We thus included samples from North Cyprus; however, we were unable to find this polymorphism in Turkish Cypriots.

Hb OArab was first detected in an Arab living in Israel, then in Egypt, Aden (Yemen), Bulgaria, Romania, Hungary, among American-Africans, and in Turkey. It is believed to have originated in the Sudan and to have spread from there to west Africa and to many countries once occupied by or in close contact with the Ottoman Empire [6,7]. For this reason, we screened six Hb OArab samples but none had this polymorphism. This may be due to the few samples analyzed.

In conclusion, we can say that this polymorphism is an indicator of African origin. However, it may also have spread to other Mediterranean countries, which will be the subject of another research.

Conflict of interest

No author of this paper has a conflict of interest, including specific financial interests, relationships, and/or affiliations relevant to the subject matter or materials included in this manuscript.

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