Poster No: 5014
Adress: Middle East Technical University, 06530 Ankara, Turkey
Tel: +90 0312 210 51 79
Fax: +90 0312 210 79 76

Mitochondrial DNA (mtDNA) Haplogroup Compositions of Three Native Turkish Sheep Breeds and their Implications on the Conservation Studies

Eren YÜNCÜ[1] Evren KOBAN[2] İnci TOGAN[1]
[1]Middle East Technical University, 06531 Ankara Turkey
[2]TUBITAK Marmara Research Center, Gebze 41470, Kocaeli, Turkey

ABSTRACT

Sheep domestication is believed to have occurred at least by three separate events in different domestication centers. Archeological studies suggest that Turkey might be harboring the earliest one. Since there were no wild sheep in Europe before domestication, European domestic sheep might be mainly extends of this center. However, native Turkish sheep might still be harboring variability which is absent in extend breeds. Their high genetic variability can be a signature for maintained diversity since domestication. Therefore they must be conserved. Furthermore, Turkey is close to other assumed domestication centers. Hence, Turkish breeds might also be admixture of products of these domestication centers. The evolutionary history of breeds may help to resolve different causes of high diversity in Turkish breeds.

The aim of the study is to determine composition of sheep mtDNA haplogroups indicating three domestication events, among native breeds, as a part of a national project TURKHAYGEN-I. Three native Turkish breeds (Karayaka, Akkaraman, Gökçeada) are studied for mtDNA control and ND4 regions by RFLP and SSCP methods, respectively. Results are employed to enlarge existing data to reveal evolutionary history of the Turkish sheep breeds. Results will also be used to prioritize Turkish domestic sheep breeds in conservation studies.