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Allozyme Variations and Genetic Differentiation in *Mesocricetus brandti* Nehring, 1898 and *Mesocricetus auratus* (Waterhouse, 1839) (Mammalia: Rodentia)


Nuri YİĞİT¹, Tolga KANKILIÇ¹, Reyhan ÇOLAK¹, Ercüment ÇOLAK¹,
Rolf GATTERMANN², Karsten NEUMANN²,
Şakir ÖZKURT³, Mohammed Moradi GHARKHELOO⁴

¹Department of Biology, Faculty of Science, Ankara University, Beşevler,
Ankara - TURKEY

²Institute of Zoology, Martin-Luther-University Halle-Wittenberg, Domplatz 4 D-06108 Halle (Saale) -
GERMANY

³Gazi University, Kırşehir Education Faculty, Kırşehir - TURKEY

⁴Department of Biology, Faculty of Science, Zanjan University, Zanjan - IRAN

 [Keywords](#)
 [Authors](#)



zool@tubitak.gov.tr

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Abstract: Allozyme variations were investigated by the electrophoretic analysis of 20 gene loci in 5 populations of *Mesocricetus brandti* and *Mesocricetus auratus* from Anatolia and Iran. Of the 20 loci analysed, 11 were monomorphic and fixed for the same allele in all 5 populations, 9 loci were polymorphic, and 1 locus differed between *M. auratus* and *M. brandti* populations. The overall mean of polymorphic loci for all the populations was 24.7% (range: 5.9%-41.2%). The mean fixation index value was $F_{ST} = 0.0748$, indicating a 7% genetic variation in the *M. brandti* populations. The obtained F_{ST} values indicated that there are moderate genetic differences between the populations of *M. brandti*. The finding that the number of migrants (N_m) was 3.09 also suggests effective gene flow across populations. The overall mean heterozygosity (H_o = direct count) for all populations (*M. brandti* and *M. auratus*) was 0.069 (range: 0.029-0.118 at different locations). The mean heterozygosity of *M. brandti* and *M. auratus* was $H_o = 0.080$ and $H_o = 0.029$, respectively. Nei's measure of genetic distance varied from $D = 0.006$ to $D = 0.026$ between populations of *M. brandti*. Nei's distances varied from $D = 0.102$ to $D = 0.122$ between *M. auratus* and *M. brandti* populations.

Key Words: *Mesocricetus* spp., allozyme, variation, Turkey

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