A720 The Unusual Bias of Ala Codons in Ungulate Mitochondrial DNA

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The Cytochrome b genes of ungulates show a unique bias for adenine in the third position of alanine codons. This bias is not related to overall compositional bias or compositional skew between the two strands. Other mitochondrial genes do not show the same bias. Sequences of the Ala tRNA for 18 species do not reveal any changes to the primary sequence of the genes. If differential codon usage is related to tRNA binding efficiencies, it may be due to a posttranscriptional modification or subtle 3-dimensional change in the shape of the tRNA.

A721 AFLP and Microsatellite DNA Technique: Applications to the Population Studies of Korean Mammals

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Because of the destruction of the ecosystem and the lack of applicable genetic knowledge, there are many mammalian species that attract special attentions for better managements in the Korean peninsula. Better understanding the genetic statuses of the species is one of the most important steps we first take to manage and conserve the species. Thus new tools of genetic analyses that can provide a fine scale resolution of the animal populations are always demanded. We are here describe two newly developed molecular genetic techinques applicable to the Korean mammals. These techniques are believed to provide an insight to understanding fine genetic structures of the animal populations, and furthermore they can be used to generate genetic markers for quantitative trait loci(QTL) analyses.