

Comparison of DNA polymorphism of bovine pituitary-specific transcription Factor and Leptin Gene Between Iranian *Bos indicus* and *Bos taurus* Cattle Using PCR-RFLP.

ABSTRACT

Variations at DNA level contribute to the genetic characterization of livestock populations and this may help to identify possible hybridization events as well as past evolutionary trends. The leptin and Pit-1 are attractive candidate genes for production and reproduction traits in cattle. A total of 247 animals from four breeds from two species of Iranian cattle populations include *Bos taurus* (Sarabi, Golpayegani) and *Bos indicus* (Sistani, Taleshi) were genotyped for the Pit-1 *Hinf*I and leptin *Sau*3AI polymorphisms by the Polymerase Chain Reaction and Restriction Fragment Length Polymorphism (PCR-RFLP). The genotype and gene frequencies for each group were determined and shown to be quite variable among the breeds. The allele B for the leptin gene and allele A for the Pit-1 gene were investigated high frequency in *Bos indicus*. Candidate gene approach may be a useful method to measure of genetic distance for cross breeding program between taurin and indicine cattle.

Keyword: Pit-1; Leptin; *Bos indicus*; PCR-RFLP; Polymorphism.