ANALYSIS OF DGAT1 GENE POLYMORPHISM IN GOATS

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The *DGAT1* gene codifies the Diacylglycerol Acyltransferase 1 enzyme, which is involved in the production of fat exported to the milk. In bovines, it was verified that a mutation in this gene leads to the substitution of the aminoacid lysine (K) to alanine (A), being the allele A related to a small quantity of fat in the milk while the allele K is related to an increase of 49%, this polymorphism is called K232A. This project intended to verify if the genetic polymorphism detected in bovines is also occurring in caprines, since these species are related. In this study, genomic DNA was obtained from white blood cells, using CTAB reagent. A pair of *primers* designed according to the bovine genomic sequence (*GenBank:* AJ318490), was used to amplify the same region in caprines (from exon VII to exon IX of the DGAT1 gene). After 35 cycles of amplification, the fragments were digested with endonuclease *Eae*I and analyzed in a 5% polyacrilamide gel. The PCR-RFLP analysis showed the absence of the restriction sites in all fragments, what indicates the presence of lysine aminoacid in the resulting protein. This suggests that a K232A found in bovines, is not present in caprines.

Key Words: DGAT1, fat, goat