

F20 POSTER

CHARACTERIZATION OF EXON 1 OF JY-1 GENE IN *Bos taurus indicus*.

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The JY-1 is a protein that acts in the oocyte of cattle. It plays a key role in the regulation of the granulose cells functions. It also influences the early embryo development. The aim of this study was to characterize the region of the exon 1 of the JY-1 gene in Nellore cattle and investigate possible polymorphisms. DNA was extracted from tail hair of 20 unrelated Nellore heifers by the Phenol-Chloroform-Isoamyl Alcohol protocol. The primers 5'TTGAGAAACAGCAGGGTGTG3' and 5'GGAATGGTGGCCAGAGACTA3' were designed to amplify the region of exon 1 and partial region of intron 1. The first exon of JY-1 is a non-coding exon and has 25 bp. The fragment amplified by the PCR has 642 bp. After the PCR reactions, the samples were sequenced and analyzed by the CodonCode Aligner program. It was possible to identify five Single Nucleotide Polymorphisms (SNPs). The positions of the SNPs (in the fragment amplified) and the substitutions are: 109A/G, 125T/G, 171T/C, 216A/G and 417A/C. The three first SNPs are located in a region before the exon 1, the fourth in exon 1 and the fifth in intron 1. Moreover, the sequence obtained for *Bos taurus indicus* is different in two other positions compared with the sequence for *Bos taurus taurus*. In the position 315, the zebu cattle has a C and the european cattle has a T and in the position 613, the zebu cattle has a G and the european cattle has a C. The sequence of 642 bp of partial JY-1 gene was submitted to NCBI GenBank with accession number JN123735. Future studies of genotyping more samples must be done in order to verify the allelic and genotypic frequencies and also the possible influence of the SNP in reproductive traits.

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