

POLYMORPHISMS OF THE TYROSINASE (TYR) GENE IN BACTRIAN CAMEL (*Camelus bactrianus*) WITH DIFFERENT COAT COLOUR

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ABSTRACT

The aim of this study was to determine if any correlation exists between tyrosinase polymorphisms and different coat colour in bactrian camels. The coding region of the bactrian camel tyrosinase gene was sequenced. It was determined to encode a protein that is 530 amino acids long. Six and three single nucleotide polymorphisms were identified within exon 1 and exon 5 of TYR gene, respectively. In exon 1, two were silent mutations and four were single nucleotide polymorphisms (SNPs) that alter the amino acid sequence (P38L, H211P, W238R, V258A); In exon 5, one was silent mutations and two were single nucleotide polymorphisms (SNPs) that alter the amino acid sequence (Q473R, K505E). No mutation correlated completely with coat colour in bactrian camels at the TYR genotypes. Further studies with larger numbers of animals were required to investigate or verify these association.

Key words: Bactrian camel, coat colour, polymorphism, SNP, *tyrosinase* gene