

Letter to the editor
**GENETIC VARIATION IN GENES INVOLVED IN THE LIPID
METABOLISM IN CUBAN ZEBU**

Dear Editor

The bovine species *Bos indicus* is more resistant than *Bos taurus*, essentially in tropical and subtropical atmospheres, reason why its introduction in the improvement programs was necessary to increase the rusticity and the resistance of the genotypes specialized in milk production. The Cuban Zebu, result of the mixture of different *indicus* races (Gir, Guzerat, Nelore, Hindu Brazil and Brahman) has been the population bases to transform our unproductive cattle ranch, towards higher levels of meat and milk production, besides contributing the genes of resistance to tropical means. Until the moment, studies of functional analysis of key genes in the lipid metabolism have not been carried out in this genotype. With the development of the genomic and the techniques associated it, it has been possible to know chromosomal regions responsible for a part of the genetic variance associated to a quantitative character of the different cattle species.

Considering the productive importance of the Cuban Zebu to guarantee the nourishing sustainability, the identification of the variability of the genes: diacylglycerol O-acyltransferase (DGAT-1), solute carrier family 27 (fatty acid transporter) (SLC27A3), fatty acid synthase (FASN), bovine melanocortin receptor 4 (MC4-R) and stearoyl-CoA desaturase (SCD) was carried out. All of them were related to the lipid metabolism looking for simple nucleotide polymorphisms (SNP) in regulating regions as in exon sequences. In the majority of the regions, besides corroborating the polymorphisms described for *Bos indicus*, new mutations were identified. It is a preliminary report, so it is precise to corroborate its influence in the function of the genetic product of each gene analyzed and go deep in the effect of the association of these mutations with the productive characteristics of interest.

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