



# Polymorphisms of the Osteocrin gene and its association with meat quality traits in Qinchuan cattle

Y.F. Huangfu<sup>1</sup>, L.S. Zan<sup>1,2</sup>, C. Adoligbe<sup>1</sup>, H.B. Wang<sup>1,2</sup>, H. Wang<sup>1</sup> and J.B. Gao<sup>1</sup>

<sup>1</sup>College of Animal Science and Technology, Northwest A&F University, Yangling, Shaanxi, China

<sup>2</sup>National Beef Cattle Improvement of Northwest A&F University, Yangling, Shaanxi, China

Corresponding author: L.S. Zan  
E-mail: zanlinsen@163.com

Genet. Mol. Res. 14 (2): 4890-4895 (2015)

Received May 7, 2014

Accepted September 19, 2014

Published May 11, 2015

DOI <http://dx.doi.org/10.4238/2015.May.11.21>

**ABSTRACT.** Here, we detected 2 SNPs, A85C and T335C, that were located on the 3rd exon and the 3 untranslated regions of the bovine Osteocrin gene, respectively, using 413 Qinchuan cattle DNA samples. PCR-SSCP and DNA sequencing methods were specifically used. Three genotypes (AA, AC, and CC) were found at A85C; yet, only 2 genotypes (TC and CC) were found at T335C. Association analysis showed that both loci were associated with certain meat quality traits, including back fat thickness and loin muscle area. At the A85C locus, individuals with the CC genotype had greater back fat thickness. In comparison, at the T335C locus, individuals with the TC genotype had greater back fat thickness and a larger loin muscle area. Therefore, these 2 SNPs could be used as genetic markers to enhance Qinchuan cattle breeding programs.

**Key words:** Polymorphisms; Qinchuan cattle; Meat quality traits