

# Lack of association of single nucleotide polymorphisms of the bovine *Flt-1* gene with growth traits in Chinese cattle breeds

Y.H. Pang<sup>1,2</sup>, C.Z. Lei<sup>1</sup>, C.L. Zhang<sup>2</sup>, X.Y. Lan<sup>1</sup>, S. Shao<sup>2</sup>, X.M. Gao<sup>2</sup>, J.Q. Wang<sup>3</sup> and H. Chen<sup>1</sup>

<sup>1</sup>College of Animal Science and Technology, Northwest A and F University, Shaanxi Key Laboratory of Molecular Biology for Agriculture, Yangling, Shaanxi, China

<sup>2</sup>Institute of Cellular and Molecular Biology, Xuzhou Normal University, Xuzhou, Jiangsu, China

<sup>3</sup>Research Center of Cattle Engineering Technology in Henan, Zhengzhou, Henan, PR China

Genet. Mol. Res. 10 (1): 359-367 (2011)

Received August 27, 2010

Accepted December 8, 2010

Published March 1, 2011

DOI 10.4238/vol10-1gmr1041

Corresponding author: H. Chen

E-mail: chenhong1212@263.net

**ABSTRACT.** We analyzed 20 exons, with their intron-exon boundaries, of the bovine *Flt-1* gene, using a strategy combining PCR amplification and single-strand conformational polymorphism analysis (PCR-SSCP), followed by nucleotide sequence analysis, in 675 cattle. We then looked for associations between polymorphisms and growth traits. Twelve novel SNPs (ss#184956516, ss#184956517, ss#184956518, ss#184956519, ss#251343993, ss#251343994, ss#251343995, ss#251343996, ss#251343997, ss#251343998, ss#251343999, and ss#251344000) were detected in the bovine *Flt-1* gene in all three breeds. We observed no significant associations between these polymorphisms and birth weight, body weight and average daily gain during different growth periods (6, 12, 18, and 24 months old) ( $P > 0.05$ ), or in body height, body length, heart girth, or height at the hip in Nanyang cattle breeds.

**Key words:** Single nucleotide polymorphism; Chinese cattle; *Flt-1* gene