



Effects of sex and age on chicken *TBC1D1* gene mRNA expression

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ABSTRACT. The objective of this study was to investigate the effects of sex and slaughter age of chickens on fatty acid composition and *TBC1D1* gene expression in 4 different tissues: breast muscle, thigh muscle, abdominal fat, and subcutaneous fat. Sixty Erlang mountainous chickens (hybrid SD02 x SD03) were raised under the same conditions and slaughtered at 8, 10, and 13 weeks of age. The results showed that the sex of the animal significantly affected the content of arachidic acid (C20:0), sinapic (C22:1), linoleic (C18:2n-6), eicosapentaenoic (C20:5n-3), and docosahexaenoic acids (C22:6n-3), whereas other fatty acid contents were not affected. Age had a significant effect on most monounsaturated fatty acids, except for octadecenoic acid (C18:1). *TBC1D1* mRNA was abundant in all tissues at all 3 ages of slaughter. Cocks exhibited higher *TBC1D1*

mRNA levels than hens in the thigh muscle and abdominal fat at 10 and 13 weeks, respectively.

Key words: Age; Chicken; Fatty acids; Sex; TBC1D1