



## Differentially expressed genes in the liver of lean and fat chickens

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**ABSTRACT.** This study aimed to investigate gene expression in the chicken liver for lean and fat broiler lines. Birds used in this study were 2 and 4 weeks of age; they were derived from the 14th generation of Northeast Agricultural University broiler lines, which were divergently selected based on abdominal fat content. Chicken Genome Arrays were used to screen differentially expressed genes in the liver tissue from lean and fat birds. At 2 and 4 weeks of age, 770 and 452 genes were differentially expressed between the 2 lines, respectively. The differentially expressed genes were involved in Wnt, insulin signaling,

and cell cycle pathways. At 2 and 4 weeks, 42 shared, differentially expressed genes were revealed by the analysis. We speculate that these genes might regulate chicken lipid metabolism.

**Key words:** Chicken; Lean and fat broiler lines; Chicken liver; Gene expression profile