

## The Effects of Fatty Acid Composition by Hormones in Ovariectomized Mouse Liver

Eun Young Jeong<sup>\*</sup>, Soo Han Hwang, Doo Hak Yoon<sup>1</sup> and Tae Hun Kim<sup>1</sup>,

Seong Hwan Lee, Chang Soo Lee

<sup>\*</sup>Division of Life Science, Konkuk University,

<sup>1</sup>National Livestock Research Institute

This study was carried out to investigate the effects of fatty acid composition by ovariectomy and hormones in the mouse liver. By ovariectomy in mouse liver, the composition of saturated fatty acids of palmitic acid(16:0) and stearic acid(18:0) were markedly increased approximately 45~60% in the total lipid. However, the composition of unsaturated fatty acids of palmitoleic acid(16:1), oleic acid(18:1) and linoleic acid(18:2) were markedly decreased approximately 30~40% in the total lipid. Treatment of mouse with estrogen suppressed the increase of saturated fatty acids of palmitic acid(16:0) and stearic acid(18:0) composition and blocked the decrease of unsaturated fatty acids of palmitoleic acid(16:1), oleic acid(18:1) and linoleic acid(18:2) composition. Treatment of mouse with progesterone and testosterone suppressed the increase of saturated fatty acids of palmitic acid(16:0) and stearic acid(18:0) composition and blocked the decrease of unsaturated fatty acids of palmitoleic acid(16:1), oleic acid(18:1) and linoleic acid(18:2) composition, except the monounsaturated fatty acid(18:1) composition. Thus, estrogen treatment showed effects blocking the decrease of monounsaturated fatty acid(18:1) by ovariectomy.