## 学位論文の要旨

所 属	三重大学大学院医学系研究科 生命医科学専攻 病態解明医学講座	氏 名	張 凌 雲
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## 主論文の題名

The inflammatory changes of adipose tissue in late pregnant mice

## 主論文の要旨

The infiltration of M1 macrophages and M2 macrophages in subcutaneous and parametrial adipose tissue were analyzed to investigate whether inflammatory change inadipose tissue occurs in late pregnancy. C57BL/6N female mice were fed a normal chow diet for 4 weeks prior to mating at 10 weeks of age and were sampled on day 17 of pregnancy. The serum levels of adipokines and biochemical markers were measured using ELISA and enzymatic methods. The identification of M1 and M2 was analyzed by double immunofluorescence. The gene expression of adipokines was analyzed by quantitative RT-PCR. The pregnant group showed adipocyte hypertrophy, higher macrophage infiltration and higher M1/M2 in both SAT and PAT compared with the non-pregnant group. Serum levels of FFA, TNF-α, IL-6 and IL-10 were higher, and adiponectin were lower in the pregnant group than those in the non-pregnant group. The gene expressions of CD68, Itgax, CCR2, TNF- $\alpha$  and PAI-1 in SAT during pregnancy were significantly higher than those in the non-pregnant group, as were the gene expressions of CD68, Emrl, Itgax, MCP-1, TNF-\alpha, IL-6, PAI-1, adiponect in, and IL-10 in PAT. These results suggest that low-grade inflammation of adipose tissue indicated by increased macrophage infiltration occurs in late normal pregnancy.