第 7 回 分子代謝医学セミナー

下記により分子代謝医学セミナーを開催しますので、多数御来聴下さい。

記

日　時： **2008 年 8 月 25 日（月）16:00～18:00**

場　所： **東京医科歯科大学［湯島地区］**
医歯学総合研究棟Ⅱ期棟　23 階セミナー室

演　者： **Ajay Chawla, M.D., Ph.D.**
（School of Medicine, Stanford University, Stanford）

演　題： Transcriptional crosstalk between metabolism and inflammation

Obesity and insulin resistance, cardinal features of metabolic syndrome, are closely associated with a state of low-grade inflammation. In adipose tissue chronic overnutrition leads to macrophage infiltration, resulting in local inflammation that potentiates insulin resistance. Because macrophages also actively participate in the resolution of inflammation, we postulated that macrophage activation programs that terminate inflammation might ameliorate obesity-induced insulin resistance. In particular, the interleukin-4 (IL-4) driven program of alternative macrophage activation has been shown to dampen inflammation and enhance repair in tissues; however, its role in obesity and insulin resistance remains unknown. We show here that the nuclear receptors PPARγ and δ are required for maturation of alternatively activated macrophages. Disruption of PPARγ in myeloid cells or adoptive transfer of PPARδ null bone marrow into wild type mice impairs alternative macrophage activation, thereby predisposing these animals to development of diet-induced obesity, insulin resistance, and glucose intolerance. Interestingly, PPARγ deficiency in myeloid cells abolishes alternative activation of adipose tissue macrophages, whereas Kupffer cells deficient in PPARδ display marked impairment in alternative activation. Together, our findings demonstrate that distinct transcriptional regulators control depot-specific maturation of alternatively activated macrophages, which exert beneficial effects on nutrient homeostasis, especially in the setting of obesity and type 2 diabetes.

連絡先：分子代謝医学分野　小川佳宏（内 4931）