

第 525 回 難研セミナー

第 98 回 難治疾患共同研究拠点セミナー

下記により難研セミナーを開催しますので、多数御来聴下さい。

記

日 時 : 平成 26 年 11 月 26 日(水) 17 : 30 ~ 18 : 30

場 所 : M&D タワー9 階 大学院講義室 4

演 者 : 清野 宏 教授 東京大学医科学研究所所長
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演 題 : Mucosal Innate Immune Cells for the Regulation of Symbiosis and Inflammation

要 旨 : The surface barrier system including both mucosa and skin continuously exposed to infinite beneficial and harmful antigens including commensal and pathogenic microbe, in handling its day-to-day duties. To this end, the mucosal immune system (MIS) has been shown to be enriched with the variety of innate and acquired immune cells. Our studies have provided a new evidence for the intra-tissue habitation of commensal flora (e.g., *Alcaligenes*) in the gut associated lymphoid tissues (e.g., Peyer's patch:PP) which involve in the creation of homeostatic condition. Recent evidences have suggested that intestinal innate lymphoid cells (ILCs) play a critical role in the containment of *Alcaligenes* in PP. Intestinal epithelial cells(ECs) possess unique $\alpha(1,2)$ - fucose- moiety and these cells are thus refereed as fucosylated ECs (F-ECs) which are contributing in the formation of co-habitation platform for commensal bacteria. These F-ECs are induced and regulated by mucosal ILCs. The other group of innate immune cells, mast cells (MCs) expressing P2X7 purinoceptors play critical role in the induction and regulation of intestinal inflammation via extracellular ATP. In contrast, skin MCs do not express P2X7. Their distinct expression of P2X7 on mucosal and skin MCs is regulated by their surrounding environments. Thus, our data provide a new perspective of the surface connections with innate immune cells, epithelial cells and microbiota for the mucosal and skin mutualisums.

参考文献 :

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3. Kurashima, Y., et al. 2012. Extracellular ATP mediates mast cell-dependent intestinal inflammation through P2X7 purinoceptors. *Nature Commun.* 3:1034
4. Goto, Y., et al. 2012. Epithelial barrier: An interface for the cross-communication between gut flora and immune system. *Immunol Rev.* 245:147-163.
5. Obata, T., et al. 2010. Indigenous opportunistic bacteria inhabit mammalian gut-associated lymphoid tissues and share a mucosal antibody-mediated symbiosis. *Proc. Natl. Acad. Sci. USA.* 107: 7419-7424.

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共 催 : 病態細胞生物学分野 清水重臣