

# SPECIAL SEMINAR

共催：医学セミナー 第73回 免疫学セミナー

“REGULATION OF INTESTINAL HOMEOSTASIS”

Wed. September 19

17 : 00-18 : 30

Institute of Medicine  
4<sup>th</sup>-floor Room #483

医学医療系棟  
4階483号室



Guest Speaker

**Dr. Kiyoshi Takeda**

Professor

Department of Microbiology and Immunology,  
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## Abstract

Intestine is a unique tissue where several environmental factors including commensal bacteria and dietary components exist. In a healthy condition, activity of intestinal immunity is finely regulated to prevent inflammatory responses to these environmental factors. Dysregulated interaction of intestinal environmental factors and intestinal immunity causes development of inflammatory bowel disease (IBD) represented by Crohn's disease and ulcerative colitis.

We are analyzing the mechanisms by which gut homeostasis is regulated by focusing on barrier function of colonic epithelial cells that are responsible for segregation of intestinal bacteria and immunity. Indeed, the presence of bacteria on the epithelial surface of the large intestine was reported in several mouse models of intestinal inflammation. We found that Lypd8, which is selectively expressed on colonic epithelial cells, blocks direct interaction of intestinal bacteria with the host cells.

We are also analyzing how intestinal bacteria, which do not directly contact the intestinal epithelia, act on the host. In this regard, we recently identified bacterial metabolites that initiate immune responses by acting of intestinal myeloid cells. We will also discuss the bacterial metabolites.



This seminar is hosted with:

**Ph.D. Program in Human Biology**

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