

Biodefense Research

1. Staffs and Students

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2. Purpose of Education

Our research projects focus on biodefense and maintenance of immunological homeostasis. Our goal is to define the molecular mechanism of immune cell differentiation and activation under healthy conditions as well as conditions of disease. To accomplish this goal, we are trying to clarify the molecular basis of induction and failure of immunological tolerance by focusing on dendritic cells and mucosa-associated lymphoid tissues. On the basis of our findings, we will further pursue our research in the hope of developing new rational therapies for prevention and treatment of disease.

3. Research Subjects

- 1) Mechanism of tolerance induction and its failure in the mucosa-associated lymphoid tissues.
- 2) Differentiation and function of dendritic cells
- 3) Regulation of hematopoiesis by immune system

4. Publications

[original papers]

1. Kanazawa Y, Saito Y, Supriatna Y, Tezuka H, Kotani T, Murata Y, Okazawa H, Ohnishi H, Kinouchi Y, Nojima, Y, Ohteki T, Shimosegawa T, and Matozaki T. Role of SIRPa in regulation of mucosal immunity in the intestine. **Genes Cells** 15, 1189-1200 (2010)
2. Asano J, Tada H, Onai N, Sato T, Horie Y, Fujimoto Y, Fukase K, Suzuki A, Mak T.W, and Ohteki T. Nod-like receptor signaling enhances dendritic cell-mediated cross-priming *in vivo*. **J Immunol** 184, 736-745 (2010)

[review articles]

1. Tezuka H, and Ohteki T. A gas governing mucosal immunity. **Vaccine** 28, 8039-8040 (2010).
2. Tezuka H, and Ohteki T. Regulation of intestinal homeostasis by dendritic cells. **Immunol Rev** 234, 247-258 (2010)