

Curriculum Vitae

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Education and Appointments

1995-1999	Faculty of Science, Kyoto University
1999-2001	Graduate School of Biostudies, Kyoto University
2001-2005	Osaka University Graduate School of Medicine Ph.D. in Medical Science
2005-2007	Research Associate, Laboratory of Immunodynamics, Graduate School of Medicine, Osaka University
2007-2012	Assistant professor, Laboratory of Immunodynamics, Graduate School of Medicine, Osaka University
2012-2020	Associate professor, Laboratory of Immune Regulation, Graduate School of Medicine, Osaka University
2020-present	Professor, Laboratory of Microbiology and Immunology, School of Pharmaceutical Sciences, University of Shizuoka

Research Field of Interest

Mucosal Immunology, Gut microbiota, Metabolites

Selected Publications

1. Simmons S, Sasaki N, **Umemoto E**, Uchida Y, Fukuhara S, Kitazawa Y, Okudaira M, Inoue A, Tohya K, Aoi K, Aoki J, Mochizuki N, Matsuno K, Takeda K, Miyasaka M, and Ishii M. High-endothelial cell-derived S1P regulates dendritic cell localization and vascular integrity in the lymph node. *eLife*. 8: e41239. 2019
2. *Morita N, ***Umemoto E**, Fujita S, Hayashi A, Kikuta J, Kimura I, Haneda T, Imai T, Inoue A, Mimuro H, Maeda Y, Kayama H, Okumura R, Aoki J, Okada N, Kida T, Ishii M, Nabeshima R, Takeda K. (*equal contribution) GPR31-dependent dendrite protrusion of intestinal CX3CR1⁺

- cells by bacterial metabolites. *Nature*. 566:110-114. 2019
3. Maeda Y, Kurakawa T, **Umemoto E**, Motooka D, Ito Y, Gotoh K, Hirota K, Matsushita M, Furuta Y, Narazaki M, Sakaguchi N, Kayama H, Nakamura S, Iida T, Saeki Y, Kumanogoh A, Sakaguchi S, Takeda K. Dysbiosis Contributes to Arthritis Development via Activation of Autoreactive T Cells in the Intestine. *Arthritis Rheumatol*. 68:2646-2661. 2016
 4. Takeda A, Kobayashi D, Aoi K, Sasaki N, Sugiura Y, Igarashi H, Tohya K, Inoue A, Hata E, Akahoshi N, Hayasaka H, Kikuta J, Scandella E, Ludewig B, Ishii S, Aoki J, Suematsu M, Ishii M, Takeda K, Jalkanen S, *Miyasaka M, ***Umemoto E**. (*equal correspondence). Fibroblastic reticular cell-derived lysophosphatidic acid regulates confined intranodal T-cell motility. *eLife*. 5: e10561. 2016
 5. Ishihara S, Nishikimi A, **Umemoto E**, Miyasaka M, Saegusa M, Katagiri K. Dual functions of Rap1 are crucial for T-cell homeostasis and prevention of spontaneous colitis. *Nat Commun*. 6:8982. 2015
 6. Masahata K, **Umemoto E**, Kayama H, Kotani M, Nakamura S, Kurakawa T, Kikuta J, Gotoh K, Motooka D, Sato S, Higuchi T, Baba Y, Kurosaki T, Kinoshita M, Shimada Y, Kimura T, Okumura R, Takeda A, Tajima M, Yoshie O, Fukuzawa M, Kiyono H, Fagarasan S, Iida T, Ishii M, Takeda K. Generation of colonic IgA-secreting cells in the caecal patch. *Nat Commun*. 5:3704. 2014
 7. ***Umemoto E**, Takeda A, Jin S, Luo Z, Nakahogi N, Hayasaka H, Lee CM, Tanaka T, Miyasaka M. (*correspondence) Dynamic changes in endothelial cell adhesion molecule nepmucin/CD300LG expression under physiological and pathological conditions. *PLoS One*. 8: e83681. 2013
 8. #Bai Z, #Cai L, #***Umemoto E**, #Takeda A, Tohya K, Komai Y, Veeraveedu PT, Hata E, Sugiura Y, Kubo A, Suematsu M, Hayasaka H, Okudaira S, Aoki J, Tanaka T, Albers HM, Ovaa H, *Miyasaka M. (#equal contribution, *equal correspondence). Constitutive lymphocyte transmigration across the basal lamina of high endothelial venules is regulated by the autotaxin/lysophosphatidic acid axis. *J Immunol*. 190:2036-2048. 2013
 9. ***Umemoto E**, *Otani K, Ikeno T, Verjan Garcia N, Hayasaka H, Bai Z, Jang MH, Tanaka T, Nagasawa T, Ueda K, Miyasaka M. (*equal contribution) Constitutive plasmacytoid dendritic cell migration to the splenic white pulp is cooperatively regulated by CCR7- and CXCR4-mediated signaling. *J Immunol*. 189:191-199. 2012
 10. Verjan Garcia N, **Umemoto E**, Saito Y, Yamasaki M, Hata E, Matozaki T, Murakami M, Jung YJ, Woo SY, Seoh JY, Jang MH, Aozasa K, Miyasaka M. SIRP α /CD172a regulates eosinophil homeostasis. *J Immunol*. 187:2268-2277. 2011
 11. Jin S, ***Umemoto E**, Tanaka T, Shimomura Y, Tohya K, Kunizawa K, Yang BG, Jang MH, Hirata T, Miyasaka M. (*correspondence). Nepmucin/CLM-9, an Ig domain-containing sialomucin in vascular endothelial cells, promotes lymphocyte transendothelial migration in vitro. *FEBS Lett*.

582:3018-3024. 2008

12. Furukawa Y, **Umemoto E**, Jang MH, Tohya K, Miyasaka M, Hirata T. Identification of novel isoforms of mouse L-selectin with different carboxyl-terminal tails. *J Biol Chem.* 283:12112-12119. 2008
13. **Umemoto E**, Tanaka T, Kanda H, Jin S, Tohya K, Otani K, Matsutani T, Matsumoto M, Ebisuno Y, Jang MH, Fukuda M, Hirata T, Miyasaka M. Nepmucin, a novel HEV sialomucin, mediates L-selectin-dependent lymphocyte rolling and promotes lymphocyte adhesion under flow. *J Exp Med.* 203:1603-1614. 2006
14. Takeuchi E, Tanaka T, **Umemoto E**, Tomita T, Shi K, Takahi K, Suzuki R, Ochi T, Miyasaka M. VLA-4-dependent and -independent pathways in cell contact-induced proinflammatory cytokine production by synovial nurse-like cells from rheumatoid arthritis patients. *Arthritis Res.* 4: R10. 2002
15. Park CG, Takahara K, **Umemoto E**, Yashima Y, Matsubara K, Matsuda Y, Clausen BE, Inaba K, Steinman RM. Five mouse homologues of the human dendritic cell C-type lectin, DC-SIGN. *Int Immunol.* 13:1283-1290. 2001,