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Center for Cancer Immunotherapy and Immunobiology
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Education

- 1987 B. Pharm.; Faculty of Pharmaceutical Sciences, Tohoku University (Sendai, Japan)
- 1989 M. Pharm.; Graduate School of Pharmaceutical Sciences, Tohoku University (Sendai, Japan)
- 1998 Ph.D.; Graduate School of Pharmaceutical Sciences, Tohoku University (Sendai, Japan)

Appointments

- 1998-1999 Postdoctoral Fellow; School of Medicine, Tokai University (Isehara, Japan)
- 1999-2000 Assistant Professor; Institute for Immunological Sciences, Hokkaido University (Sapporo, Japan)
- 2000-2004 Visiting Fellow; National Institute of Allergy and Infectious Diseases, National Institutes of Health (Bethesda, MD)
- 2004-2010 Assistant Professor; Department of Pharmacological Sciences, Northeastern University (Boston, MA)
- 2010-2015 Principal Research Scientist; New England Inflammation and Tissue Protection Institute, Northeastern University (Boston, MA)
- 2015-2016 Temporary Lecturer, Center for Drug Discovery, Northeastern University (Boston, MA)
- 2016-present Professor, Department of Immunology, Foundation for Biomedical Research and Innovation at Kobe (Kobe, Japan)
- 2017-2021 Adjunct Associate Professor, Graduate School of Medicine, Kyoto University (Kyoto, Japan)
- 2021-present Visiting Professor, Center for Cancer Immunotherapy and Immunobiology Graduate School of Medicine, Kyoto University (Kyoto, Japan)

Selected publications

Ohta, A. and Sitkovsky, M.: Role of G-protein-coupled adenosine receptors in downregulation of inflammation and protection from tissue damage. *Nature* 414: 916-920, 2001.

Ohta, A., Gorelik, E., Prasad, S.J., Ronchese, F., Lukashev, D., Wong, M.K.K., Huang X., Caldwell, S., Liu, K., Smith, P., Chen, J.-F., Jackson, E.K., Apasov, S., Abrams, S., and Sitkovsky, M.: A2A adenosine receptor protects tumors from anti-tumor T cells. *Proc Natl Acad Sci U S A* 103, 13132-13137, 2006.

Ohta, A., Ohta, A., Madasu, M., Kini, R., Subramanian, M., Goel, N., and Sitkovsky, M. A2A adenosine receptor may allow expansion of T cells lacking effector functions in extracellular adenosine-rich microenvironments. *J Immunol* 183:5487-5493, 2009.

Ohta, A., Kini, R., Ohta, A., Subramanian, M., Madasu, M., and Sitkovsky, M. The development and immunosuppressive functions of CD4+ CD25+ FoxP3+ regulatory T cells are under influence of the adenosine-A2A adenosine receptor pathway. *Front Immunol* 3:190, 2012.

Subramanian, M., Kini, R., Madasu, M., Ohta, A., Nowak, M., Exley, M., Sitkovsky, M., and Ohta, A. Extracellular adenosine controls NKT-cell-dependent hepatitis induction. *Eur J Immunol* 44:1119-1129, 2014.

Hatfield, S.M., Kjaergaard, J., Lukashev, D., Schreiber, T.H., Belikoff, B., Abbott, R., Sethumadhavan, S., Philbrook, P., Ko, K., Cannici, R., Thayer, M., Rodig, S., Kutok, J.L., Jackson, E.K., Karger, B., Podack, E.R., Ohta, A., Sitkovsky, M. Immunological mechanisms of the anti-tumor effects of supplemental oxygenation. *Sci Transl Med* 7: 277ra30, 2015.

Ohta, A. A Metabolic Immune Checkpoint: Adenosine in Tumor Microenvironment. *Front Immunol* 7: 109, 2016.

Abbott, R.K., Silva, M., Labuda, J., Thayer, M., Cain, D.W., Philbrook, P., Sethumadhavan, S., Hatfield, S., Ohta, A., and Sitkovsky, M. The Gs Protein-coupled A2a Adenosine Receptor Controls T Cell Help in the Germinal Center. *J Biol Chem* 292: 1211-1217, 2017.

Ohta, A. Oxygen-dependent regulation of immune-checkpoint mechanisms. *Int Immunol* 30: 335-343, 2018.

Ashoori, M.D., Suzuki, K., Tokumaru, Y., Ikuta, N., Tajima, M., Honjo, T., and Ohta, A. Inactivation of the PD-1-dependent immunoregulation in mice exacerbates contact hypersensitivity resembling immune-related adverse events. *Front Immunol* 11: 618711, 2021.

Patents

Methods for using extracellular adenosine inhibitors and adenosine receptor inhibitors to enhance immune response and inflammation

US patent **8,080,554**

December 20, 2011

Methods for using extracellular adenosine inhibitors and adenosine receptor inhibitors to enhance immune response and inflammation

US patent **8,716,301**

May 6, 2014

Method of preparing adenosine-resistant anti-tumor T lymphocytes for adoptive immunotherapy

US patent **8,883,500**

November 11, 2014