

CURRICULUM VITAE

Katsuhiro Nakanishi

Position: Assistant Professor
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Education

Ph.D. in Pharmaceutical Sciences, University of Shizuoka, Japan, March 2014

Employment

2026-present Assistant Professor, Laboratory of Microbiology and Immunology,
School of Pharmaceutical Sciences, University of Shizuoka
2015-2026 Research Assistant Professor, Laboratory of Microbiology and Immunology,
School of Pharmaceutical Sciences, University of Shizuoka
2014-2015 Visiting researcher, Laboratory of Microbiology and Immunology,
School of Pharmaceutical Sciences, University of Shizuoka
2013-2015 Research Fellow of the Japan Society for the Promotion of Science

Membership of academic societies

The Pharmaceutical Society of Japan
The Japanese Society of Immunology
The Japanese Society for Plant Biotechnology

Research interest

Mucosal immunology, Gut microbiota, Plant-made pharmaceuticals

Publications

Okamura Y, **Nakanishi K**, Inada R, Maeda R, Maeshima K, Mizutani M, Ohashi W, Ikawa M, Sugiura Y, Takeda K, Umemoto E: GPR35 mediates monocyte recruitment to the sites of *Listeria monocytogenes* infection. *Cell. Mol. Life Sci.* 82, 433 (2025)

Nakanishi K, Ajiro T, Yukishima K, Tsukamoto Y, Kikuta J, Sawa S, Tomura M, Kinoshita N, Shimanuki W, Suzuki A, Arai S, Maeshima K, Ichisawa T, Katakai T, Hayasaka H, Ishii M, Umemoto E: Pyruvate–GPR31 axis induces LysoDC dendrite protrusion to M-cell pockets for effective immune responses. *Gut microbes.* 17, 2536089 (2025)

Nakanishi K, Takase T, Ohira Y, Ida R, Mogi N, Kikuchi Y, Matsuda M, Kurohane K, Akimoto Y, Hayakawa J, Kawakami H, Niwa Y, Kobayashi H, Umemoto E, Imai Y: Prevention of Shiga toxin 1-caused colon injury by plant-derived recombinant IgA. *Sci. Rep.* 12, 17999 (2022)

Nakanishi K, Mogi N, Kikuchi Y, Matsuda M, Matsuoka T, Shiina K, Morikane S, Kurohane K, Niwa Y, Kobayashi H, Imai Y: Plant-derived secretory component gives protease-resistance to Shiga toxin 1-specific dimeric IgA. *Plant Mol Biol.* 106, 297-308 (2021)

Nakanishi K, Matsuda M, Ida R, Hosokawa N, Kurohane K, Niwa Y, Kobayashi H, Imai Y: Lettuce-derived secretory IgA specifically neutralizes the Shiga toxin 1 activity. *Planta.* 250, 1255-1264 (2019)

Nakanishi K, Morikane S, Hosokawa N, Kajihara Y, Kurohane K, Niwa Y, Kobayashi H, Imai Y: Plant-derived secretory component forms secretory IgA with shiga toxin 1-specific dimeric IgA produced by mouse cells and whole plants. *Plant Cell Rep.* 38, 161-172 (2019)

Nakanishi K, Morikane S, Ichikawa S, Kurohane K, Niwa Y, Akimoto Y, Matsubara S, Kawakami H, Kobayashi H, Imai Y: Protection of Human Colon Cells from Shiga Toxin by Plant-based Recombinant Secretory IgA. *Sci. Rep.* 7, 45843 (2017)

Kurohane K, Nagano K, **Nakanishi K**, Iwata K, Miyake M, Imai Y: Shiga toxin-induced apoptosis is more efficiently inhibited by dimeric recombinant hybrid-IgG/IgA immunoglobulins than by the parental IgG monoclonal antibodies. *Virulence*, 5, 819–824 (2014)

Iwata K, Kurohane K, **Nakanishi K**, Miyake M, Imai Y: Stable expression and characterization of monomeric and dimeric recombinant hybrid-IgG/IgA immunoglobulins specific for Shiga toxin. *Biol. Pharm. Bull.*, 37, 1510-1515 (2014)

Nakanishi K, Narimatsu S, Ichikawa S, Tobisawa Y, Kurohane K, Niwa Y, Kobayashi H, Imai Y: Production of Hybrid-IgG/IgA Plantibodies with Neutralizing Activity against Shiga Toxin 1. *PLoS One*, 8, e80712 (2013)

Tobisawa Y, Maruyama T, Tanikawa T, **Nakanishi K**, Kurohane K, Imai Y: Establishment of recombinant hybrid-IgG/IgA immunoglobulin specific for Shiga toxin. *Scand. J. Immunol.*, 74, 574-584 (2011)

URL of Laboratory of Microbiology and Immunology

<http://w3pharm.u-shizuoka-ken.ac.jp/bisei/English/index.html>