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Research Keywords

Molecular imaging, MRI, Fluorescent probes, Photo-activation

Academic Career

B.S., 1988, University of Tokyo; Ph.D., 1994, University of Tokyo (advisor: Masaaki Hirobe); Postdoctoral Training, 1994-1995, University of California, San Diego (advisor: Roger Y. Tsien); Postdoctoral Training, 1995-1996, The Scripps Research Institute (advisor: Donald Hilvert); Assistant Professor, 1997-2000, University of Tokyo (advisor: Tetsuo Nagano); Associate Professor, 2000-2005, University of Tokyo (advisor: Tetsuo Nagano); Professor, 2005-present, Osaka University

Selected Publications

T. Nonomura, M. Minoshima, *K. Kikuchi "Light-Activated Gene Expression System Using a Caging-Group-Free Photoactivatable Dye", *Angew. Chem. Int. Ed.* 63, (2024), e202416420.

Y. Konishi, M. Minoshima, K. Fujihara, T. Uchihashi & *K. Kikuchi, "Elastic Polymer-coated Nanoparticles with Fast Clearance for ¹⁹F MR Imaging", *Angew. Chem. Int. Ed.* 62, e202308565 (2023).

M. Minoshima, T. Umeno, K. Kadooka, M. Roux, N. Yamada. & *K. Kikuchi, "Development of a Versatile Protein Labeling Tool for Live-Cell Imaging Using Fluorescent β -Lactamase Inhibitors", *Angew. Chem. Int. Ed.* 62, e202301704 (2023).

M. Minoshima, J. Kikuta, Y. Omori, S. Seno, R. Suehara, H. Maeda, H. Matsuda, M. Ishii & *K. Kikuchi, "In vivo Multicolor Imaging with Fluorescent Probes Revealed the Dynamics and Function of Osteoclast Proton Pumps", *ACS Cent. Sci.* 5, 1059-1066 (2019).

Y. Hori, N. Otomura, A. Nishida, M. Nishiura & *K. Kikuchi, "Synthetic-Molecule/Protein Hybrid Probe with Fluorogenic Switch for Live-Cell Imaging of DNA Methylation", *J. Am. Chem. Soc.* 140, 1686-1690 (2018).

R. Sato, J. Kozuka, M. Ueda, R. Mishima, Y. Kumagai, A. Yoshimura, M. Minoshima, S. Mizukami & *K. Kikuchi, "Intracellular Protein Labeling Probes for Multicolor Single-molecule Imaging of Immune Receptor-adaptor Molecular Dynamics", *J. Am. Chem. Soc.* 139, 17397-17404 (2017).

H. Maeda, T. Kowada, J. Kikuta, M. Furuya, M. Shirazaki, S. Mizukami, M. Ishii & *K. Kikuchi, "Real-time Intravital Imaging of pH Variation Associated with Osteoclast Activity", *Nat. Chem. Biol.* 12, 579-585 (2016).

S. Hirayama, Y. Hori, Z. Benedek, T. Suzuki & *K. Kikuchi, "Fluorogenic Probes Reveal a Role of GLUT4 N-glycosylation in Intracellular Trafficking", *Nat. Chem. Biol.* 12, 853-859 (2016).

Why My Lab?

My lab can offer...

techniques in both chemical synthesis and molecular biology will be trained
study in organic chemistry, photo-physical chemistry, MRI, cell biology and immunology