

Takayoshi Suzuki

Professor, Osaka University

Email: tkyssuzuki@sanken.osaka-u.ac.jp



Website <https://www.sanken.osaka-u.ac.jp/labs/cmc/en/>

Research Field(s) Medicinal chemistry, Organic chemistry, Chemical biology

Academic Career

B.S., 1995, University of Tokyo; Ph.D., 2005, University of Tokyo; Visiting Investigator, 2007-2008, Scripps Research Institute; Assistant Professor, 2003-2009, Nagoya City University; Lecturer, 2009-2011, Nagoya City University; Professor, 2011-2019, Kyoto Prefectural University of Medicine; Professor, 2019-present, Osaka University.

Selected Publications

1. Discrete prefrontal neuronal circuits determine repeated stress-induced behavioral phenotypes in male mice. Li, H., et al. *Neuron*, 112, 786-804.e8 (2024)
2. Discovery of Selective Histone Deacetylase 1 and 2 Inhibitors: Screening of a Focused Library Constructed by Click Chemistry, Kinetic Binding Analysis, and Biological Evaluation. Itoh, Y., et al. *J. Med. Chem.*, 66, 15171-15188 (2023)
3. Lysine-specific histone demethylase 1A (KDM1A/LSD1) inhibition attenuates DNA double strand break repair and augments efficacy of temozolomide in glioblastoma. Alejo, S., et al. *Neuro Oncol.*, 25, 1249-1261 (2023)
4. Evolution of Slow-Binding Inhibitors Targeting Histone Deacetylase Isoforms. Mukherjee, A., et al. *J. Med. Chem.*, 66, 11672-11700 (2023)
5. Recent progress on small molecules targeting epigenetic complexes. Itoh, Y., et al. *Curr. Opin. Chem. Biol.*, 67, 102130 (2022)
6. Synthetic RNA Modulators in Drug Discovery. Zamani, F., Suzuki, T. *J. Med. Chem.*, 64, 7110-7155 (2021)
7. Identification of Potent and Selective Inhibitors of Fat Mass Obesity Associated Protein Using a Fragment- Merging Approach. Prakash, M., et al. *J. Med. Chem.*, 64, 15810-15824 (2021)
8. Cross-Species Chromatin Interactomes Drive Heterochromatin, Enhancer, and Transcriptional Rewiring in Epstein-Barr Virus Positive Gastric Adenocarcinoma. Okabe, A. et al. *Nat. Genet.*, 52, 919-930 (2021)
9. Metalloprotein-Catalyzed Click Reaction for In Situ Generation of a Potent Inhibitor. Miyake, Y. et al. *ACS Catal.*, 10, 5383-5392 (2020)
10. A metabolic pathway-oriented screening targeting S-adenosyl-L-methionine reveals the epigenetic remodeling activities of naturally occurring catechols. Ogihara, S., et al. *J. Am. Chem. Soc.*, 142, 21-26 (2020)

Why My Lab?

My lab can offer chemical biology and medicinal chemistry research with a focus on organic chemistry. I believe that the most fascinating aspect of organic chemistry is the creation of substances with new functions. Organic chemistry has the power to make the impossible possible. In our laboratory, we are using the power of organic chemistry to challenge life science research. We create biologically active molecules with new functions that have never existed before, and use them in research to elucidate life phenomena (chemical biology) and to try to apply them to pharmaceuticals (medicinal chemistry research). I want my students to be internationally active.