Hideaki Kakeya

CMI-P-06

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Research Keywords

Natural product chemistry, Chemical biology, Medicinal chemistry

Academic Career

B.S., 1989, Keio University; Ph.D., 1994, Keio University (PI: Kazuo Umezawa); 1994-2007; Research Scientist/Vice-chief Scientist, RIKEN (PI: Hiroyuki Osada); Professor, 2007-present, Kyoto University
Awards: The Sumiki Umezawa Memorial Awards (2006, Japan Antibiotics Research Association, Japan); The Pharmaceutical Society of Japan Award (2025); The Takashi Tsuruo Award, the the Japanese Association for Molecular Target Therapy of Cancer (2025)

Selected Publications

Yanagisawa, K., Kakeya, H et al. A new pyranonaphthoquinone metabolite, actinoquinonal A, and its congeners from the combined-culture of Streptomyces sp. 23-50 and Tsukamurella pulmonis TP-B0596. J. Antibiot. 78, 350-358, 2025.

Shibasaki, M., Kakeya, H. et al. Isolation and structure determination of streptospherins B-F, novel cancer stem cell inhibitors, produced by Streptomyces sp. KUSC-240. J. Antibiot. 78, 535-541, 2025.

Ozaki, M., Kakeya, H. et al. Simultaneous analysis of imidazole dipeptides, constituent amino acids, and taurine in meats using the highly sensitive labeling reagent L-FDVDA and PBr column. J. Agric. Food Chem. 72, 27538-27548, 2024.

Pan, Y., Kakeya, H. et al. Bisabosqual A: a novel asparagine synthetase inhibitor suppressing the proliferation and migration of human non-small cell lung cancer A549 cells. Eur. J. Pharmacol. 960, 176156, 2023.

Furutani, Y., Kakeya, H. et al. A small chemical compound iCDM-34 identified by in silico screening suppresses HBV DNA through activation of arylhydrocarbon receptor. Cell Death Discov. 9, 216, 2023.

Abe, T., Kakeya, H. et al. Pharmacologic characterization of TBP1901, a prodrug form of curcumin, and CRISPR-Cas9 screen for therapeutic targets of curcumin. Eur. J. Pharmacol. 935, 175321, 2022.

Kuranaga, T., Kakeya, H. et al. Highly sensitive labeling reagents for scarce natural products. ACS Chem. Biol. 15, 2499-2506, 2020.

Sugiyama, R., Kakeya, H. et al. Chemical interaction of cryptic actinomycete metabolite 5-alkyl-1,2,3,4-tetrahydroquinolines through aggregate formation. Angew. Chem. Int. Ed. 58, 13486-13491, 2019.

Why My Lab?

My lab can offer...

In-house chemical library; reagents for highly-sensitive advanced Marfey's method to detect amino acids and short peptide fragments as biomarkers; target identification of bioactive molecules