

• Review in Journal (雑誌総説)

- 1) Tomohiro. Tomohiro, Makoto Hashimoto, Yasumaru Hatanaka, Cross-Linking chemistry and biology: Development of multifunctional photoaffinity probes, *Chem. Record*, 5, 385-395 (2005).
- 2) Makoto Hashimoto, Yasumaru Hatanaka, Recent progress in diazirine-based photoaffinity labeling, *Eur. J. Org. Chem.*, 2513-2523 (2008)
- 3) Makoto Hashimoto, Yuta Murai, Synthesis of photoreactive aromatic α -amino acids and effective hydrogen-deuterium exchange for aromatic α -amino acids, (光反応性芳香族 α -アミノ酸誘導体の合成と芳香族 α -アミノ酸を標的とした効率の水素—重水素交換反応), *J. Syn. Org. Chem. Jpn.*(有機合成化学協会誌), 72, 360-369 (2014)
- 4) Lei Wang, Yuta Murai, Takuma Yoshida, Masashi Okamoto, Zetryana Puteri Tachrim, Yasuyuki Hashidoko, Makoto Hashimoto, Utilization of acidic α -amino acids as acyl donors: an effective stereocontrollable synthesis of aryl-keto α -amino acids and their derivatives, *Molecules*, 19, 6349-6367 (2014); doi:10.3390/molecules19056349.
- 5) Zetryana Puteri Tachrim, Lei Wang, Yuta Murai, Takuma Yoshida, Natsumi Kurokawa, Fumina Ohashi, Yasuyuki Hashidoko, Makoto Hashimoto, Trifluoromethanesulfonic acid as acylation catalyst: Special feature for C- and/or O-acylation reactions, *Catalysts*, 7, 40 (2017); doi:10.3390/catal7020040

• Review in Book(単行本総説)

- 1) Makoto Hashimoto, Yuta Murai, Geoffery D. Holman, Yasumaru Hatanaka, Selective hydrogenation and transfer hydrogenation for post-functional synthesis of trifluoromethylphenyl diazirine derivatives for photoaffinity labeling, Hydrogenation, Edited by Iyad Karamé, ISBN 978-953-51-0785-9, pp.121-136, Publisher: InTech (2012).
- 2) Makoto Hashimoto, Multifunctional photoprobes for identification of ligand sites within biomolecules, In: Yasumaru Hatanaka, Makoto Hashimoto (eds) Photoaffinity labeling for structural probing within protein. Springer, Tokyo, pp. 1-11 (2017)
- 3) Yuta Murai, Lei Wang, Makoto Hashimoto, (2017) Synthesis of diazirinyl photophore and optically pure diazirinylphenylalanines for photoaffinity labeling. In: Yasumaru Hatanaka, Makoto Hashimoto (eds) Photoaffinity labeling for structural probing within protein. Springer, Tokyo, pp. 111-128 (2017)
- 4) Makoto Hashimoto, Diaziridines and diazirines, Three-membered heterocycles, and all fused systems with a three-membered heterocyclic ring, In: Comprehensive Heterocyclic Chemistry IV (Reference Module in Chemistry, Molecular Sciences and Chemical Engineering), 1-16 (2019); <https://doi.org/10.1016/B978-0-12-409547-2.14763-8>

Original article (selected)

- 1) Katsuyoshi Masuda, Ayako Koizumi, Takumi Misaka, Yasumaru Hatanaka, Keiko Abe, Takaharu Tanaka, Masaji Ishiguro, Makoto Hashimoto, Photoactive ligands probing the sweet taste receptor. Design and synthesis of highly potent diazirinyl D-phenylalanine derivatives, *Bioorg. Med. Chem. Lett.*, 20, 1081-1083 (2010).
- 2) Ryo Murashige, Yuka Hayashi, Syo Ohmori, Ayuko Torii, Yoko Aizu, Yasuyuki Muto, Yuta Murai, Yuji Oda, Makoto Hashimoto, Comparisons of O-acylation and Friedel-Crafts acylation of phenols and acyl chlorides and Fries rearrangement of phenyl esters in trifluoromethanesulfonic acid: Effective synthesis of optically active

homotyrosines, *Tetrahedron*, 67, 641-649 (2011); <https://doi.org/10.1016/j.tet.2010.11.047>

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4) Yuta Murai, Lei Wang, Katsuyoshi Masuda, Yasuko Sakihama, Yasuyuki Hashidoko, Yasumaru Hatanaka, Makoto Hashimoto, Rapid and controllable hydrogen-deuterium exchange on aromatic rings of α -amino acids and peptides, *Eur. J. Org. Chem.*, 5111–5116 (2013).

5) Lei Wang, Yuta Murai, Takuma Yoshida, Masashi Okamoto, Katsuyoshi Masuda, Yasuko Sakihama, Yasuyuki Hashidoko, Yasumaru Hatanaka, Makoto Hashimoto, Hydrogen-deuterium exchange of cross-linkable α -amino acid derivatives in deuterated triflic acid, *Biosci. Biotechnol. Biochem.*, 78, 1129-1134 (2014).

6) Lei Wang, Yuta Murai, Takuma Yoshida, Akiko Ishida, Katsuyoshi Masuda, Yasuko Sakihama, Yasuyuki Hashidoko, Yasumaru Hatanaka, Makoto Hashimoto, Alternative one-pot synthesis of (trifluoromethyl)phenyldiazirines from tosyloxime derivatives: Application for new synthesis of optically pure diazirinylphenylalanines for photoaffinity labeling, *Org. Lett.*, 17, 616-619 (2015). DOI: 10.1021/ol503630z

7) Lei Wang, Takuma Yoshida, Yasuyuki Muto, Yuta Murai, Zetryana Puteri Tachrim, Akiko Ishida, Shiori Nakagawa, Yasuko Sakihama, Yasuyuki Hashidoko, Katsuyoshi Masuda, Yasumaru Hatanaka, Makoto Hashimoto, Synthesis of Diazirine Based Photoreactive Saccharin Derivatives for the Photoaffinity Labeling of Gustatory Receptors., *Eur. J. Org. Chem.*, 3129–3134 (2015)

8) Zetryana Puteri Tachrim, Lei Wang, Takuma Yoshida, Miho Muto, Tadashi Nakamura, Katsuyoshi Masuda, Yasuyuki Hashidoko, Makoto Hashimoto, Comprehensive structural analysis of halogenated sucrose derivatives: Revisiting the reactivity of sucrose primary alcohols, *ChemistrySelect*, 1, 58-62 (2016); DOI: 10.1002/slct.201500003

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13) Zetryana Puteri Tachrim, Shiori Nakagawa, Tadashi Nakamura, Fumina Ohashi, Natsumi Kurokawa, Haruna Wakasa, Yurika Tokoro, Yasuko Sakihama, Yasuyuki Hashidoko, Takeyuki Suzuki, Makoto Hashimoto, Synthesis of deuterated cyclodopa with hydrogen/deuterium exchange, *Heterocycles*, 99, 404-414 (2019); DOI: 10.3987/COM-18-S(F)33

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15) Tomoya Nakagita, Akiko Ishida, Zetryana Puteri Tachrim, Lei Wang, Takumi Misaka, Makoto Hashimoto, Asymmetric synthesis of photophore-containing lactisole derivatives to elucidate sweet taste receptors, *Molecules*, 25, 2790 (2020); doi:10.3390/molecules25122790

Plant Response 部門

• Chapter in Book

1) Y. Sakihama, Hideo Yamasaki

Phytochemical Antioxidants: Past, Present and Future *In* **Antioxidants**. Ed. Viduranga Yashasvi Waisundara, IntechOpen, (2021). DOI: 10.5772/intechopen.95627

2) 崎浜靖子 「植物色素ベタレイン—分布, 生合成および生理機能~謎に包まれた多機能性植物色素~」*化学と生物・今日の話* 55. 582-584 (2017).

3) H. Yamasaki, N.S. Watanabe, Y. Sakihama, M.F. Cohen. An overview of methods in plant NO research: Why do we always need to use multiple methods? *In: Methods in Molecular Biology: Plant Nitric Oxide: Methods & Protocol* (K.J. Gupta ed.), Humana Press. Totowa, NJ. 1424:1-14 (2015).

• Original article (selected)

1) D.A. Suroto, S. Kitani, K.T. Miyamoto, Y. Sakihama, M. Arai, H. Ikeda, and T. Nihira. Activation of cryptic phthoxazolin A production in *Streptomyces avermitilis* by the disruption of autoregulator-receptor homologue *AvaR3*. *Journal of Bioscience Bioengineering*, (2017), <http://dx.doi.org/10.1016/j.jbiosc.2017.06.014>.

2) Y. Yamashita, M. Ota, Y. Inoue, Y. Hasebe, M. Okamoto, T. Inukai, C. Masuta, Y. Sakihama, Y. Hashidoko, M. Kojima, H. Sakakibara, Y. Inage, K. Takahashi, T. Yoshihara and H. Matsuura. Chemical Promotion of Endogenous Amounts of ABA in *Arabidopsis thaliana* by a Natural Product, Theobroxide. *Plant and Cell Physiology*, 57, 986-999 (2016).

3) S. Prama Putri, K. Ishido, H. Kinoshita, S. Kitani, F. Ihara, Y. Sakihama, Y. Igarashi, and T. Nihira, Production of antiomycete compounds active against the phytopathogens *Phytophthora sojae* and *Aphanomyces cochlioides* by clavicipitoid entomopathogenic fungi. *J. Biosci. Bioengin.*, 117, 557-562 (2014).

4) Y. Sakihama*, M. Maeda, M. Hashimoto, S. Tahara, Y. Hashidoko. Beetroot betalain inhibits peroxynitrite-mediated tyrosine nitration and DNA strand cleavage, *Free Radical Research*, 46, 93-99 (2012).

5) Md.T.Islam, M.Sakasai, Y.Hashidoko, A.Deora, Y.Sakihama, S.Tahara, Composition of culture medium influences zoosporogenesis and differentiation of *Aphanomyces cochlioides*. *Journal of General Plant Pathology*, 73, 324-329 (2007).

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- 8) Y. Sakihama, T. Shimai, M. Sakasai, T. Ito, Y. Fukushi, Y. Hashidoko and S. Tahara. A photoaffinity probe designed for host-specific signal flavonoid receptors in phytopathogenic Peronosporomycete zoospores of *Aphanomyces cochlioides*. *Archives of Biochemistry and Biophysics* 432, 145-151 (2004).
- 9) Y. Sakihama, R. Tamaki, H. Shimoji, T. Ichiba, Y. Fukushi, S. Tahara, and H. Yamasaki. Enzymatic nitration of phytophenolics: evidence for peroxynitrite-independent nitration of plant secondary metabolites. *FEBS Letters* 533, 377-380 (2003).
- 10) Y. Sakihama, S. Murakami and H. Yamasaki. Involvement of nitric oxide in the mechanism for stomatal opening in *Vicia faba* leaves. *Biologia Plantarum*. 46, 117-119 (2003).
- 11) M.F. Cohen, Y. Sakihama, Y.C. Takagi, T. Ichiba and H. Yamasaki. Synergistic effect of deoxyanthocyanins from the symbiotic fern *Azolla* on *hrm A* gene induction in the cyanobacterium *Nostoc punctiforme*. *Molecular Plant-Microbe Interactions*. 15, 875-882 (2002).
- 12) Y. Sakihama, M.F. Cohen, S.C. Grace and H. Yamasaki. Plant phenolic antioxidant and prooxidant activities: phenolics-induced oxidative damage mediated by metals in plants. *Toxicology*. 177, 67-80 (2002).
- 13) Y. Sakihama, S. Nakamura and H. Yamasaki. Nitric oxide production mediated by nitrate reductase in the green alga *Chlamydomonas reinhardtii*: an alternative NO production pathway in photosynthetic organisms. *Plant and Cell Physiology*. 43, 290-297 (2002).