



研究実績 2021

Nanami Shiotani, Takatoshi Wakabayashi, Yusuke Ogura, Yukihiro Sugimoto, Hirosato Takikawa: Studies on strigolactone BC-ring formation: Chemical conversion of an 18-hydroxycarlactonoate derivative into racemic 4-deoxyorobanchol/5-deoxystrigol via acid-mediated cascade cyclization, *Tetrahedron Letters*, 60, Article 152922, 2021Mar. DOI:org/10.1016/j.tetlet.2021.152922 IF2.275

Atsushi Okazawa, Hiroaki Samejima, Shigeru Kitani, Yukihiro Sugimoto, Daisaku Ohta: Germination stimulatory activity of bacterial butenolide hormone in *Streptomyces albus* J1074 toward seeds of a root parasitic weed *Orobanche minor*, *Journal of Pesticide Science*, 46 (2), 242-247, 2021May

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Takatoshi Wakabayashi, Ryo Yasuhara, Hirosato Takikawa, Masaharu Mizutani, Yukihiro Sugimoto: Specific methylation of (11*R*)-carlactonoic acid by an Arabidopsis SABATH methyltransferase. *Planta*, 254:8, 2021 Sep. DOI:10.1007/s00425-021-03738-6

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ジャガイモの毒はトマトの苦味から進化した！

秋山遼太，水谷正治

化学 77(2) 12-16 2022 年 2 月

Solanum palinacanthum Dunal as a potential eggplant rootstock resistant to root-knot nematodes
Gaku Murata, Taketo Uehara, Hyoung Jae Lee, Masaharu Mizutani, Yasuhiro Kadota, Yoshimi Shinmura, Takeo Saito, Kenta Uesugi
Journal of Phytopathology 2022 年 1 月 3 日

Specific methylation of (11R)-carlactonoic acid by an Arabidopsis SABATH methyltransferase
Takatoshi Wakabayashi, Ryo Yasuhara, Kenji Miura, Hirosato Takikawa, Masaharu Mizutani, Yukihiro Sugimoto
Planta 254(5) 2021 年 11 月

Tomato E8 Encodes a C-27 Hydroxylase in Metabolic Detoxification of α -Tomatine during Fruit Ripening
Ryota Akiyama, Masaru Nakayasu, Naoyuki Umemoto, Junpei Kato, Midori Kobayashi, Hyoung Jae Lee, Yukihiro Sugimoto, Yoko Iijima, Kazuki Saito, Toshiya Muranaka, Masaharu Mizutani
Plant and Cell Physiology 62(5) 775-783 2021 年 10 月 1 日

ジャガイモとトマトのアルカロイドの毒性を決定するジオキシゲナーゼの発見

秋山遼太, 水谷正治

バイオサイエンスとインダストリー 79(5) 384-385 2021 年 9 月

Characterization of C-26 aminotransferase, indispensable for steroidal glycoalkaloid biosynthesis

Masaru Nakayasu, Naoyuki Umemoto, Ryota Akiyama, Kiyoshi Ohyama, Hyoung J. Lee, Haruka Miyachi, Bunta Watanabe, Toshiya Muranaka, Kazuki Saito, Yukihiro Sugimoto, Masaharu Mizutani

The Plant Journal 2021 年 8 月 9 日

ジャガイモとトマトはおいしい野菜だが、毒がある？

秋山遼太, 中安大, 水谷正治

ファルマシア 57(8) 726-730 2021 年 8 月

Synthesis and structural confirmation of calibagenin and saxosterol

Bunta Watanabe, Katsunori Makino, Masaharu Mizutani, Hikaru Takaya

Tetrahedron 132194-132194 2021 年 5 月

Parallel evolution of UbiA superfamily proteins into aromatic O-prenyltransferases in plants

Ryosuke Munakata, Alexandre Olry, Tomoya Takemura, Kanade Tatsumi, Takuji Ichino, Cloé Villard, Joji Kageyama, Tetsuya Kurata, Masaru Nakayasu, Florence Jacob, Takao Koeduka, Hirobumi Yamamoto, Eiko Moriyoshi, Tetsuya Matsukawa, Jérémy Grosjean, Célia Krieger, Akifumi Sugiyama, Masaharu Mizutani, Frédéric Bourgaud, Alain Hehn, Kazufumi Yazaki

Proceedings of the National Academy of Sciences 118(17) e2022294118-e2022294118 2021 年 4 月 27 日

Identification and characterization of sorgomol synthase in sorghum strigolactone biosynthesis

Takatoshi Wakabayashi, Shunsuke Ishiwa, Kasumi Shida, Noriko Motonami, Hideyuki Suzuki, Hirosato Takikawa, Masaharu Mizutani, Yukihiro Sugimoto

Plant Physiology 185(3) 902-913 2021 年 4 月 2 日



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