

主要論文

天然物の合成生物学研究

Genome Mining-Based Discovery of Fungal Macrolides Modified by Glycosylphosphatidylinositol (GPI)-Ethanolamine Phosphate Transferase Homologues

Morishita, Y., Aoki, Y., Ito, M., Hagiwara, D., Torimaru, K., Morita, D., Kuroda, T., Fukano, H., Hoshino, Y., Suzuki, M., Taniguchi, T., Mori, Keiji., Asai, T.*

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Synthetic biology based construction of biological activity-related library of fungal decalin-containing diterpenoid pyrones.

Tsukada, K., Shinki, S., Kaneko, A., Murakami, K., Irie, K., Murai, M., Miyoshi, H., Dan, S., Kawaji, K., Hayashi, H., Kodama, E. N., Hori, A., Salim, E., Kuraishi, T., Hirata, N., Kanda, Y., Asai, T.*

Nature Commun. **11**, Article number: 1830 (2020), doi.org/10.1038/s41467-020-15664-4.

The Discovery of Fungal Polyene Macrolides via a Postgenomic Approach Reveals a Polyketide Macrocyclization by trans-Acting Thioesterase in Fungi.

Morishita, Y., Zhang, H., Taniguchi, T., Mori, K., Asai, T.*

Org. Lett. **2019**, *21*, 4788-4792.

Use of a biosynthetic intermediate to explore the chemical diversity of pseudo-natural fungal polyketides

T. Asai*, K. Tsukada, S. Ise, N. Shirata, M. Hashimoto, I. Fujii, K. Gomi, K. Nakagawara, E. N. Kodama, Y. Oshima*

Nature Chem. **2015**, *7*, 737-743.

休眠遺伝子の活性化法の開発と新規天然物探索

Use of plant hormones to activate silent polyketide biosynthetic pathways in *Arthrinium sacchari*, a fungus isolated from a spider.

Y. Morishita, Y. Okazaki, Y. Y. Luo., J. Nunoki, T. Taniguchi, Y. Oshima, T. Asai*

Org. Biomol. Chem. **2019**, *17*, 780-784.

Structurally Diverse Chaetophenol Productions Induced by Chemically Mediated Epigenetic Manipulation of Fungal Gene Expression

T. Asai*, T. Yamamoto, N. Shirata, T. Taniguchi, K. Monde, I. Fujii, K. Gomi, Y. Oshima*

Org. Lett. **2013**, *15*, 3346-3349.

Aromatic Polyketide Production in *Cordyceps indigotica*, an Entomopathogenic Fungus, Induced by Exposure to a Histone Deacetylase Inhibitor

T. Asai*, T. Yamamoto, Y. Oshima*

Org. Lett. **2012**, *14*, 2006-2009.

植物の腺毛分泌物の化学成分研究

Fatty acid derivatives and dammarane triterpenes from the glandular trichome exudates of *Ibicella lutea* and *Proboscidea louisiana*

T. Asai, N. Hara, Y. Fujimoto*

Phytochemistry, **2010**, *71*, 877-894.

Acylglycerols (=glycerides) from the glandular trichome exudate on the leaves of *Paulownia tomentosa*

T. Asai, N. Hara, S. Kobayashi, S. Kohshima, Y. Fujimoto*,

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Geranylated flavanones from the secretion on the surface of the immature fruits of *Paulownia tomentosa*,

T. Asai, N. Hara, S. Kobayashi, S. Kohshima, Y. Fujimoto*

Phytochemistry, **2008**, *69*, 1234-1241.