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学歴・職歴

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- 2019年7月 東京大学大学院薬学系研究科・准教授
- 2020年11月 令和2年度 東京大学卓越研究員
- 2022年10月 理化学研究所 環境資源科学研究センター・チームリーダー（主任研究員）（現職）
- 2024年10月 JST 創発的研究支援事業（有田パネル）研究者（兼任）
- 2024年10月 JST 次世代のためのASPIRE 研究代表者（兼任）

受賞歴

- 2013年6月 日本薬学会 生薬天然物部会奨励賞
- 2013年9月 日本生薬学会 学術奨励賞
- 2019年9月 日本放線菌学会 浜田賞（研究奨励賞）
- 2020年3月 日本薬学会 奨励賞
- 2020年3月 Kenji Mori Medal, Isoprenoid Society
- 2020年8月 酵素工学研究会 酵素工学奨励賞
- 2021年4月 科学技術分野の文部科学大臣表彰 若手科学者賞
- 2023年4月 長瀬研究振興賞
- 2024年9月 日本生薬学会 学術貢献賞
- 2024年11月 住木・梅澤記念賞
- 2024年12月 日本微生物学連盟 野本賞

学術論文リスト

1. Zhu, Y.,[†] Mori, T.,^{†*} Karasawa, M., Shirai, K., Chen, W., Terada, T., **Awakawa, T.**,^{*} Abe, I.* "Structure-function analysis of carrier protein-dependent 2-sulfamoylacetyl transferase in the biosynthesis of altemicidin." *Nature Commun.* 15, Article number: 10896 (2024)
***co-corresponding author**
2. **Awakawa, T.**,^{*} Mori, T., Barra, L., Ahmed, Y., Ushimaru, R., Gao, Y., Adachi, N., Senda, T., Terada, T.,^{*} Tantillo, D. J.,^{*} Abe, I.* "The structural basis of pyridoxal 5'-phosphate dependent β -NAD alkylating enzyme." *Nature Catalysis* 7, 1099-1108 (2024)
***co-corresponding author**
3. Meng, L.-H.,[†] **Awakawa, T.**,^{†*} Li, X.-M., Quan, Z., Yang, S.-Q., Wang, B.-G., Abe, I.* "Discovery of (\pm)-penindolenes reveals an unusual indole ring cleavage pathway catalyzed by P450 monooxygenase." *Angew. Chem. Int. Ed.* 63, e202403963 (2024)
†co-first author, *co-corresponding author
4. Cao, Z.-Q., Wang, G.-Q., Luo, R., Gao, Y.-H., Lv, J.-M., Qin, S.-Y., Chen, G.-D., **Awakawa, T.**, Bao, X.-F., Mei, Q.-H., Yao, X.-S., Hu, D., Abe, I., Gao, H. "Biosynthesis of enfumafungin-type antibiotic reveals an unusual enzymatic fusion pattern and unprecedented C-C bond cleavage." *J. Am. Chem. Soc.* 146, 12723–12733 (2024)
5. Zhou, L.,[†] **Awakawa, T.**,^{†*} Ushimaru R, Kanaida M, Abe I.* "Characterization of aziridine-forming α -Ketoglutarate-dependent oxygenase in l-isovaline biosynthesis." *Org. Lett.* 26, 724-727 (2024)
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6. Tsunoda, T., Abuelizz, H.A., Samadi, A., Wong, C.P., **Awakawa, T.**, Brumsted, C.J., Abe, I., Mahmud, T. "Catalytic mechanism of nonglycosidic C-N bond formation by the pseudoglycosyltransferase enzyme VldE." *ACS Catal.* 13, 13369-13382 (2023)
7. **Awakawa, T.**,^{*} Liu, W., Bai, T., Taniguchi, T., Abe, I.* "Orthoester formation in fungal meroterpenoid austalide F biosynthesis." *Phil. Trans R. Soc. B.* 378, 20220037. (2023)
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8. Shin, Y. H., Im, J. H., Kang, I., Kim, E., Jang, S. C., Cho, E., Shin, D., Hwang, S., Du, Y. E., Huynh, T. H., Ko, K., Ko, Y.J., Nam, S. J., **Awakawa, T.**, Lee, J., Hong, S., Abe, I., Moore, B. S., Fenical, W., Yoon, Y. J., Cho, J. C., Lee, S. K., Oh, K. B., Oh, D. C. "Genomic and spectroscopic signature-based discovery of natural macrolactams." *J. Am. Chem. Soc.* 145, 1886-1896 (2022)
9. Tao, H., Ushimaru, R., **Awakawa, T.**, Mori, T., Uchiyama, M., Abe, I.* "Stereoselectivity and substrate specificity of the Fe(II)/ α -ketoglutarate-dependent oxygenase TqaL." *J. Am. Chem. Soc.* 144, 21512-21520 (2022)

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11. Zhou, L., Abe, I., **Awakawa, T.*** “Biosynthesis of dihydroxyardeemin by heterologous expression.” **Tetrahedron** 127, 133095 (2022)
12. Li, X., Chen, H.-P., Zhou, L., Fan, J., **Awakawa, T.**, Mori, T., Ushimaru, R., Abe, I., Liu, J.-K. “Cordycicadins A–D, antifeedant polyketides from the entomopathogenic fungus *Cordyceps cicadae* JXCH1.” **Org. Lett.** 23, 8627–8632 (2022)
13. Barra, L.,[†] **Awakawa, T.**,^{†*} Shirai, K., Hu, Z., Bashiri, G., Abe, I.* “β-NAD as a building block in natural product biosynthesis.” **Nature** 600, 754-758 (2021)
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14. Li, X.,[†] **Awakawa, T.**,^{†*} Mori, T., Ling, M., Hu, D., Wu, B., Abe, I.* “Heterodimeric non-heme iron enzymes in fungal meroterpenoid biosynthesis.” **J. Am. Chem. Soc.** 143, 21425-21432 (2021)
†co-first author, *co-corresponding author
15. Bunno, T.,[†] **Awakawa, T.**,^{†*} Mori, T., Abe, I.* “Aziridine formation by a Fe(II)/α-ketoglutarate dependent oxygenase and 2-aminoisobutyrate biosynthesis in fungi.” **Angew. Chem. Int. Ed.** 60, 15827-15831 (2021)
†co-first author, *co-corresponding author
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17. Song, X.-J., Lv, J.-M., Cao, Z.-Q., Huang, H.-Y., Chen, G.-D., **Awakawa, T.**, Hu, D., Gao, H., Abe, I., Yao, X.-S. “Extensive expanding the chemical diversity of fusidane-type antibiotics using a stochastic combinational strategy.” **Acta Pharm. Sinica B**, 11, 1676-1685 (2021)
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cytochrome P450-dependent alkynylation.” *Angew. Chem. Int. Ed.* 59, 13531-13536 (2020)

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†co-first author, *co-corresponding author
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25. Hoshino, S., Mitsuhashi, T., Kikuchi, T., Wong, C. P., Morita, H., **Awakawa, T.**, Fujita, M., Abe, I. “Structural elucidation of tenebrathin: cytotoxic C5-substituted γ -pyrone with nitroaryl side chain from *Streptoalloteichus tenebrarius*” *Org. Lett.* 21, 6519-6522 (2019)
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*co-corresponding author
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