

CURRICULUM VITAE

MICHIO SATO

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EDUCATION:

Ph.D., M.S., Bioorganic Chemistry Hokkaido University, Sapporo, Japan Thesis Advisor: Professor Nabeta Kensuke	March 2011
B.Sc., Bioorganic Chemistry Hokkaido University, Sapporo, Japan Thesis Advisor: Professor Nabeta Kensuke	March 2006

PROFESSIONAL EXPERIENCE:

2015-2017	UCLA, Chemical and Biomolecular Engineering Postdoctoral Fellow Principal Investigator: Professor Yi Tang
2014-2015	UC Berkeley, Chemical and Biomolecular Engineering Visiting scholar Principal Investigator: Assistant professor Wenjun Zhang
2011-2014	School of Pharmacy, University of Shizuoka Postdoctoral Fellow Principal Investigator: Professor Kenji Watanabe Research: Biosynthetic study on azaphilones from fungi
2006-2011	Department of Applied Bioscience, Hokkaido University Principal Investigator: Professor Kensuke Nabeta Research: Biological activity of ppGpp in chloroplasts

HONORS AND AWARDS:

Postdoctoral fellowship (Fellowship of Astellas Foundation, JAPAN) 2015-2016
Postdoctoral fellowship (The Uehara Memorial Foundation, JAPAN) 2014-2015
Training Grant. Japan Society for the Promotion of Science 2009-2011

PROFESSIONAL SOCIETIES:

American chemical society
Japan Society for Bioscience, Biotechnology, and Agrochemistry
The Pharmaceutical Society of Japan

PUBLICATIONS:

1. Kishimoto S, Tsunematsu Y, **Sato M**, Watanabe K. "Elucidation of biosynthetic pathways of natural products."
Chem. Rec., 2017, *in press*.
2. **Sato M**, Dander J.E, Sato C, Hung Y.S, Gao S.S, Tang M.C, Hang L, Winter J.M, Garg N.K, Watanabe K, Tang Y. "Collaborative Biosynthesis of Maleimide- and Succinimide-Containing Natural Products by Fungal Polyketide Megasyntases."
J. Am. Chem. Soc., 2017, *in press*.
3. Kishimoto S, **Sato M**, Tsunematsu Y, Watanabe K. "Evaluation of Biosynthetic Pathway and Engineered Biosynthesis of Alkaloids."
Molecules, 2016, 21, E1078.
4. **Sato M**, Winter J.M, Kishimoto S, Noguchi H, Tang Y, Watanabe K. "Collaborative Biosynthesis of Maleimide- and Succinimide-Containing Natural Products by Fungal Polyketide Megasyntases."
Org. Lett., 2016, 18, 1446-1449.
5. **Sato M**, Yagishita F, Mino T, Uchiyama N, Patel A, Chooi Y.H, Goda Y, Xu W, Noguchi H, Yamamoto T, Hotta K, Houk K.N, Tang Y, Watanabe K. "Involvement of Lipocalin-like CghA in Decalin-Forming Stereoselective Intramolecular [4+2] Cycloaddition."
ChemBioChem, 2015, 16, 2294-2298.
6. Winter J.M, Cascio D, Dietrich D, **Sato M**, Watanabe K, Sawaya M.R, Vederas J.C, Tang Y. "Biochemical and Structural Basis for Controlling Chemical Modularity in Fungal Polyketide Biosynthesis."
J. Am. Chem. Soc., 2015, 137, 9885-9893.
7. **Sato M**, Yamada H, Hotta K, Noguchi H, Watanabe K. " Identification and characterization of

shanorellin biosynthetic pathway.”

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8. **Sato M**, Takahashi T, Ochi K, Matsuura H, Nabeta K, Takahashi K. “Overexpression of *RelA/SpoT* homologs, *PpRSH2a* and *PpRSH2b*, induces the growth suppression of the moss *P. patens*.”
Biosci. Biotechnol. Biochem., **2015**, 79, 36-44.
9. Hotta K, Keegan R.M, Ranganathan S, Fang M, Bibby J, Winn M.D, **Sato M**, Lian M, Watanabe K, Rigden D.J, Kim C.Y. “Conversion of a disulfide bond into a thioacetal group during echinomycin biosynthesis.”
Angew. Chemie. Int. Ed. Engl., **2014**, 86, 242-248.
10. Nakazawa T, Ishiuchi K, **Sato M**, Tsunematsu Y, Sugimoto S, Gotanda Y, Noguchi H, Hotta K, Watanabe K. “Targeted disruption of transcriptional regulators in *Chaetomium globosum* activates biosynthetic pathways and reveals transcriptional regulator-like behavior of aureonitol.”
J. Am. Chem. Soc., **2013**, 135, 13446-13455.
11. **Sato M**, Nakazawa T, Tsunematsu Y, Hotta K, Watanabe K. “Echinomycin biosynthesis.”
Curr. Opin. Chem. Biol., **2013**, 17, 537-545.
12. Winter J.M, **Sato M**, Sugimoto S, Chiou G, Garg N.K, Tang Y, Watanabe K. “Identification and characterization of the chaetoviridin and chaetomugilin gene cluster in *Chaetomium globosum* reveal dual functions of an iterative highly-reducing polyketide synthase.”
J. Am. Chem. Soc., **2012**, 134, 17900-17903.
13. Ishiuchi K, Nakazawa T, Ookuma T, Sugimoto T, **Sato M**, Tsunematsu Y, Ishikawa N, Noguchi H, Hotta, K, Moriya, H, Watanabe, K. “Establishing a new methodology for genome mining and biosynthesis of polyketides and peptides through yeast molecular genetics.”
ChemBioChem, **2012**, 13, 846-854.
14. Kitaoka N, Matsubara T, **Sato M**, Takahashi K, Wakuta S, Kawaide H, Matsui H, Nabeta K, Matsuura H. “Arabidopsis CYP94B3 encodes jasmonyl-L-isoleucine 12-hydroxylase, a key enzyme in the oxidative catabolism of jasmonate.”
Plant Cell Physiol., **2011**, 52, 1757-1765.
15. Hashimoto T, Takahashi K, **Sato M**, Bandara P.K.G.S.S, Nabeta K. “Cloning and characterization of an allene oxide cyclase, PpAOC3, in *Physcomitrella patens*.”
Plant Growth Regulation, **2011**, 65, 239-245.
16. Saruwatari T, Praseuth A.P, **Sato M**, Torikai K, Noguchi H, Watanabe K. “A comprehensive overview on genomically directed assembly of aromatic polyketides and macrolide lactones using

fungal megasynthases.”

J. Antibiot., **2011**, 64, 9-17.

17. Bandara P.K.G.S.S, Takahashi K, **Sato M**, Matsuura H, Nabeta K. “Cloning and Functional Analysis of an Allene Oxide Synthase in *Physcomitrella patens*.”

Biosci. Biotechnol. Biochem., **2009**, 73, 2356-2359.

18. **Sato M**, Takahashi K, Ochiai Y, Hosaka T, Ochi K, Nabeta K. “Bacterial alarmone, guanosine 5'-diphosphate 3'-diphosphate (ppGpp), predominantly binds the β ' subunit of plastid-encoded plastid RNA polymerase in chloroplasts.”

ChemBioChem, **2009**, 10, 1227-1233.