

Ōmura Research Group (2017): Senior staff



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Research specialty: Analyses of microbial secondary metabolites

Publications (selected):

1. T. Nakashima, Y. Takahashi & S. Ōmura. (2017). Search for new compounds from Kitasato microbial library by physicochemical screening., *Biochem Pharmacol.* **134**, 42-55.
2. T. Nakashima, R. Miyano, H. Matsuo, M. Iwatsuki, T. Shirahata, Y. Kobayashi, K. Shiomi, G. A. Petersson, Y. Takahashi & S. Ōmura. (2016). Absolute configuration of iminimycin B, a new indolizidine alkaloid, from *Streptomyces griseus* OS-3601., *Tetrahedron Lett.* **30**, 3284-3286.
3. T. Nakashima, R. Miyano, M. Iwatsuki, T. Shirahata, T. Kimura, Y. Asami, Y. Kobayashi, K. Shiomi, G. A. Petersson, Y. Takahashi & Ōmura S. (2016). Iminimycin A, the new iminium metabolite produced by *Streptomyces griseus* OS-3601., *J Antibiot.* **69**, 611-615.
4. T. Nakashima, M. Iwatsuki, J. Ochiai, Y. Kamiya, K. Nagai, A. Matsumoto, A. Ishiyama, K. Otoguro, K. Shiomi, Y. Takahashi & S. Ōmura. (2014). Mangromicins A and B: structure and antitrypanosomal activity of two new cyclopentadecane compounds from *Lechevalieria aerocolonigenes* K10-0216., *J. Antibiot.* **67**, 253-260.
5. T. Nakashima, R. Okuyama, Y. Kamiya, A. Matsumoto, M. Iwatsuki, Y. Inahashi, K. Yamaji, Y. Takahashi, S. Ōmura. (2013). Trehangelins A, B and C, novel photo-oxidative hemolysis inhibitors produced by an endophytic actinomycete, *Polymorphospora rubra* K07-0510., *J. Antibiot.* **66**, 311-317.

Awards

2002: Best poster award (Japanese Society for Medical Mycology)

2009: Merit award (Japan Biotechnology Business Competition)

2009: Poster award (Society for Actinomycetes, Japan)

2011: JSBBA Innovative Research Program Award

Comment: Actinomycete strains are attractive microorganisms because they are able to produce a wide range of bioactive secondary metabolites. Recently, many known compounds in cultured broths could be identified by advanced analytic screening for physico-chemical properties, such as Liquid Chromatography – Photo diode array and Liquid Chromatography, Mass spectrometry. We have been undertaking purification and structure determination of predicted novel secondary metabolites from cultured broths, plus evaluation of their bioactivities. This strategy will lead us to discover more unique and useful compounds.