

Ōmura Research Group (2017): Senior staff



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Research speciality:

Synthetic biology of antibiotic production and genome-mining of antibiotic-producing Actinomycetales microorganisms, including functional analysis of biosynthetic gene clusters and studies of cryptic biosynthetic gene clusters.

Publications (selected):

1. H. Ikeda, J. Ishikawa, A. Hanamoto, M. Shinose, H. Kikuchi, T. Shiba, Y. Sakaki, M. Hattori & S. Ōmura. (2003). Complete genome sequence and comparative analysis of the industrial microorganism *Streptomyces avermitilis*., *Nat. Biotechnol.* **21**, 526-531.
2. M. Komatsu, M. Tsuda, S. Ōmura, H. Oikawa & H. Ikeda. (2008). Identification and functional analysis of genes controlling biosynthesis of 2-methylisoborneol., *Proc. Natl. Acad. Sci. USA* **105**, 7422-7427.
3. M. Komatsu, T. Uchiyama, S. Ōmura, D. E. Cane & H. Ikeda. (2010). Genome-minimized *Streptomyces* host for the heterologous expression of secondary metabolism., *Proc. Natl. Acad. Sci. USA* **107**, 2646-2651.
4. M. Komatsu, K. Komatsu, H. Koiwai, Y. Yamada, I. Kozone, M. Izumikawa, J. Hashimoto, M. Takagi, S. Ōmura, K. Shin-ya, D. E. Cane & H. Ikeda. (2013). Engineered *Streptomyces avermitilis* host for heterologous expression of biosynthetic gene cluster for secondary metabolites., *ACS Synth. Biol.* **2**, 384-396.
5. Y. Yamada, T. Kuzuyama, M. Komatsu, K. Shin-ya, S. Ōmura, D. E. Cane, H. Ikeda. (2015). Terpene synthases are widely distributed in bacteria., *Proc. Natl. Acad. Sci. USA* **112**, 857-862.

Comment

Detailed information on *Streptomyces* genomes can be found at: <http://avermitilis.ls.kitasato-u.ac.jp>