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2010 Tetrahedron Prize for Creativity in Organic Chemistry Treasure from Microorganism: Discovery, Chemicalbiology and Total Synthesis

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Synthetic Medicinal Chemistry, Faculty of Pharmaceutical Sciences, Doshisha Women's College of Liberal Arts, Kodo, Kyotanabe 610-0395, Japan

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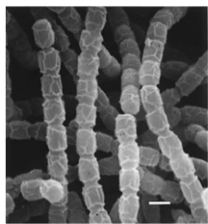
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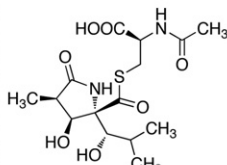
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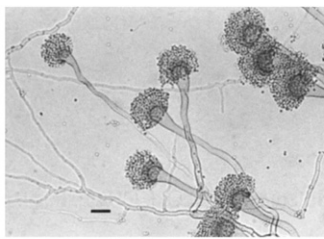
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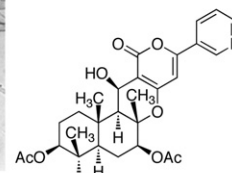
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Lactacystin



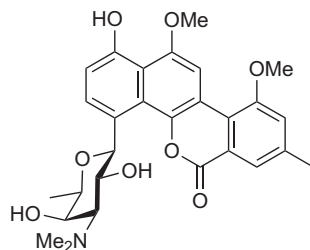
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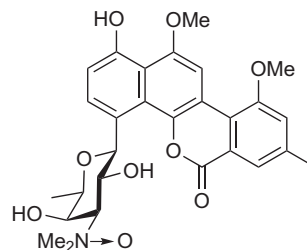
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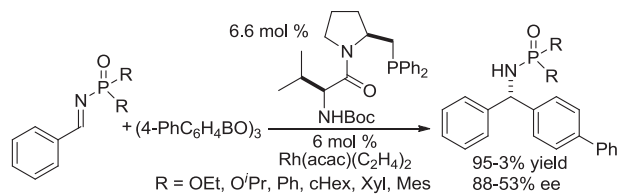


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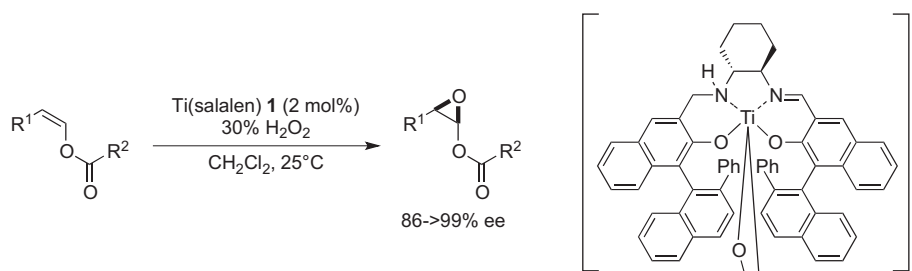
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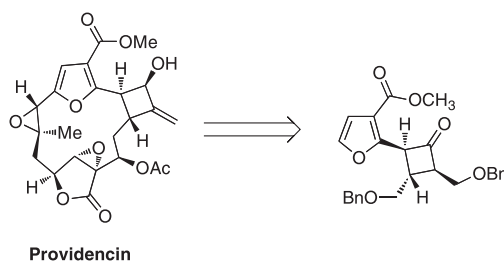
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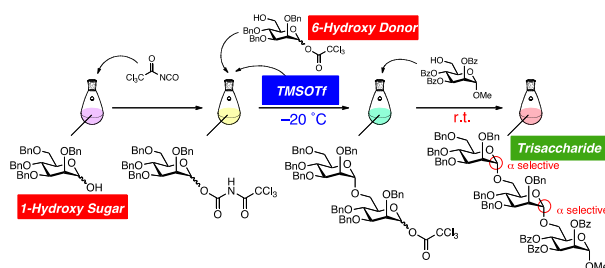
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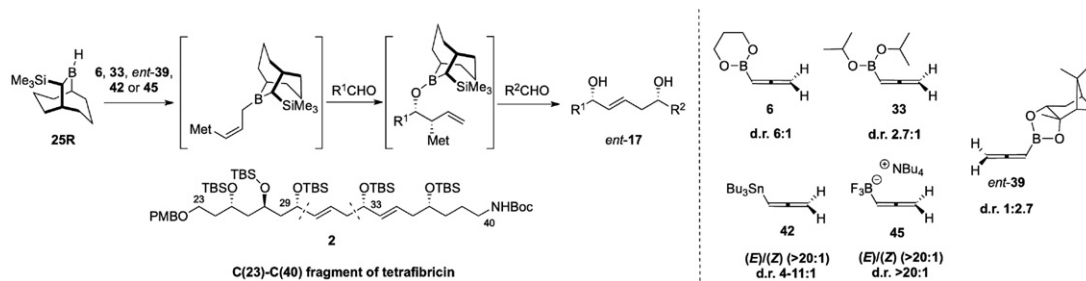
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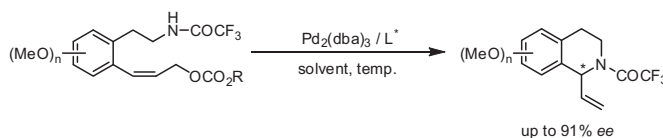
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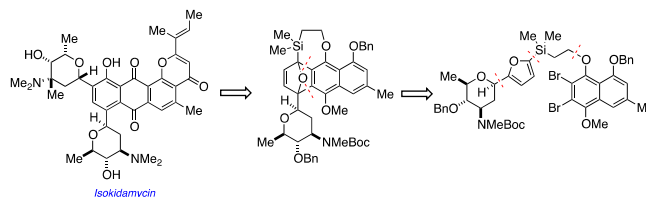
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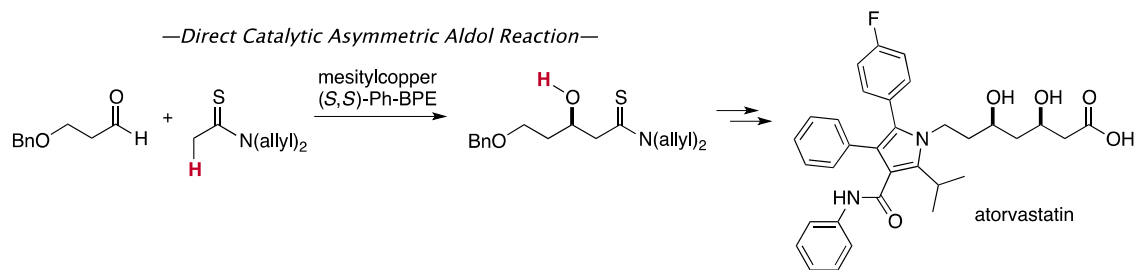
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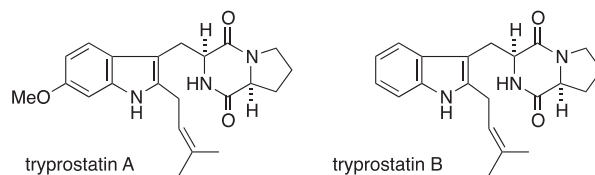
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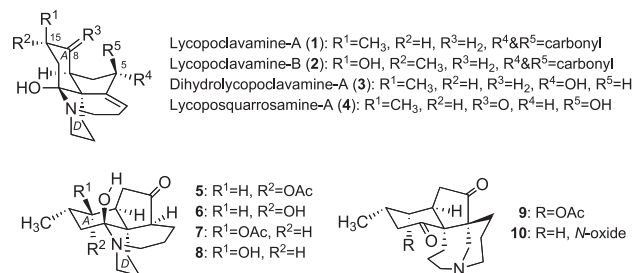
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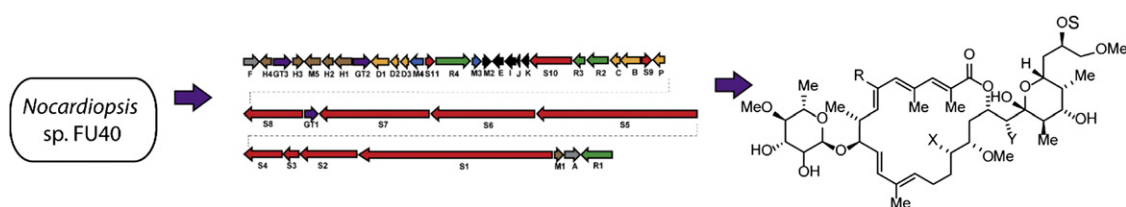
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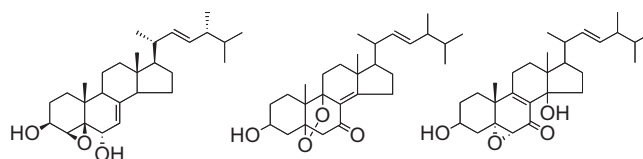
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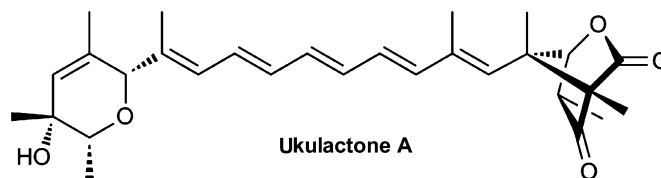
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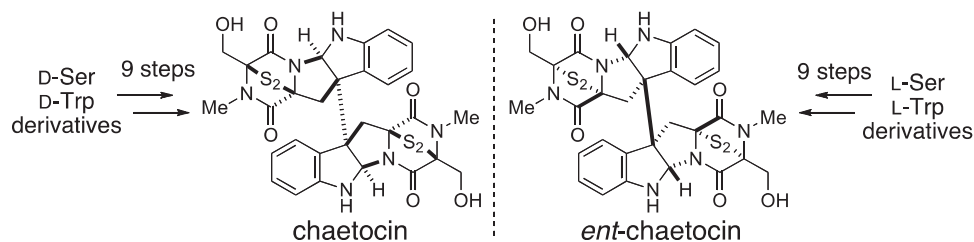
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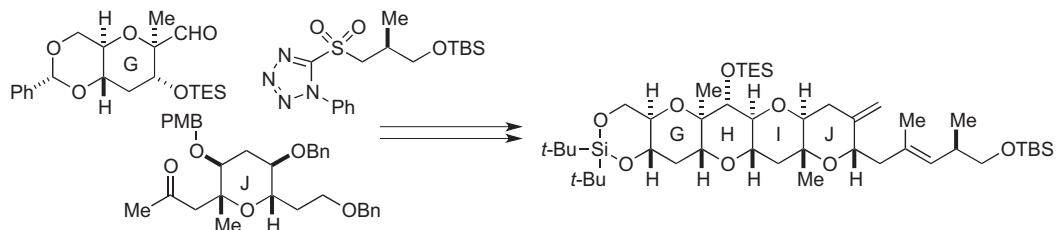
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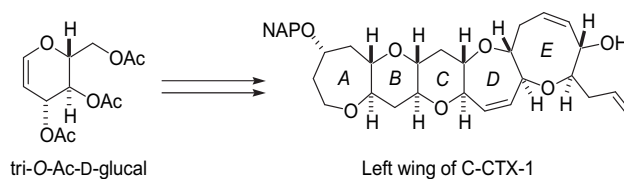
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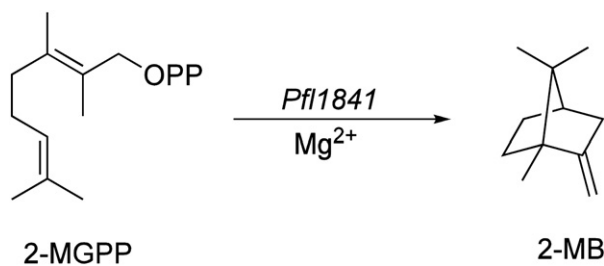
Shuji Yamashita*, Ryohei Uematsu, Masahiro Hiramata*



Cloning and characterization of Pfl_1841, a 2-methylenebornane synthase in *Pseudomonas fluorescens* PFO-1

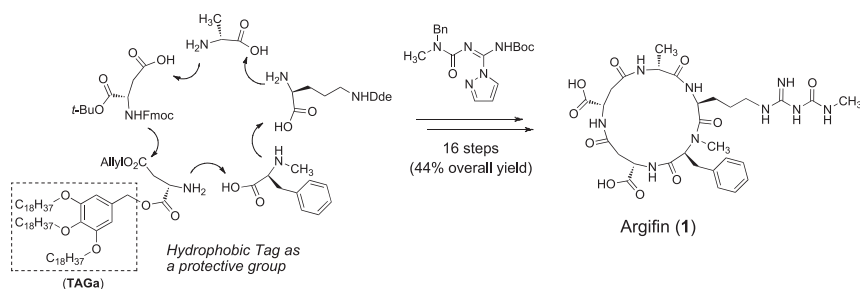
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Wayne K.W. Chou, Haruo Ikeda, David E. Cane*

**Solution-phase total synthesis of the hydrophilic natural product argifin using 3,4,5-tris(octadecyloxy)benzyl tag**

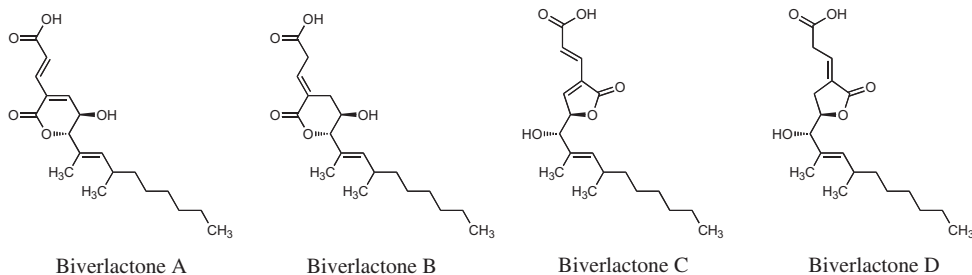
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**Biverlactones A–D, new circumventors of arbekacin resistance in MRSA, produced by *Penicillium* sp. FKI-4429**

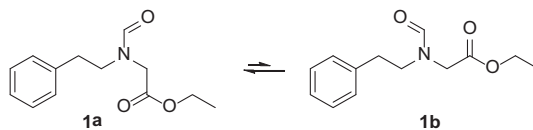
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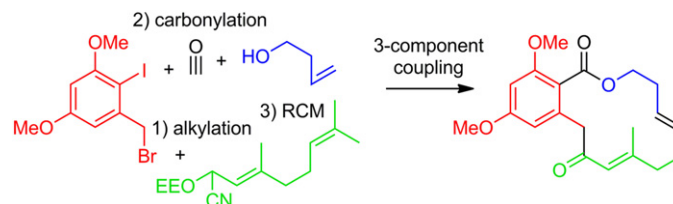
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Three-component coupling approach toward the synthesis of a resorcylic acid lactone framework

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Sakae Sugiyama, Shinichiro Fuse, Takashi Takahashi*

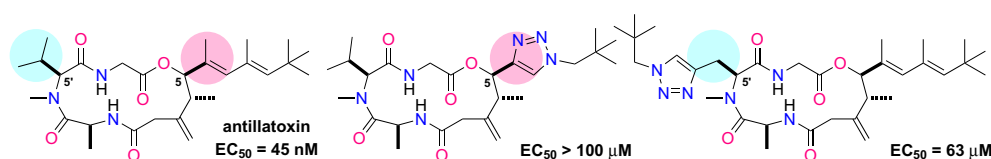


The efficient synthesis of a resorcylic acid lactone framework has been achieved via the alkylation of a protected cyanohydrin with an aromatic scaffold and carbonylation with an alcohol, followed by an RCM reaction. The key step is the alkylation/carbonylation sequence, which enables the rapid assembly of three components without extra protection/deprotection steps.

**Synthesis and biological evaluation of triazole analogues of antillatoxin**

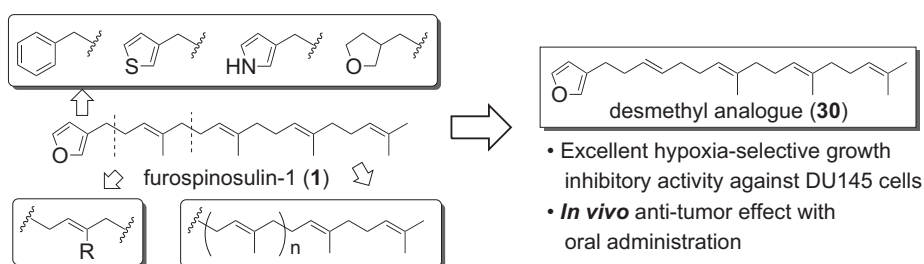
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**Concise synthesis and structure–activity relationship of furospinosulin-1, a hypoxia-selective growth inhibitor from marine sponge**

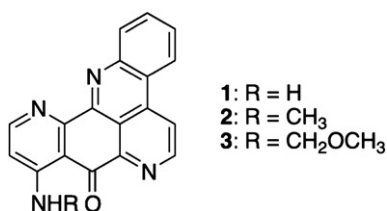
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Naoyuki Kotoku*, Shinichi Fujioka, Chiaki Nakata, Masaki Yamada, Yuji Sumii, Takashi Kawachi, Masayoshi Arai, Motomasa Kobayashi*

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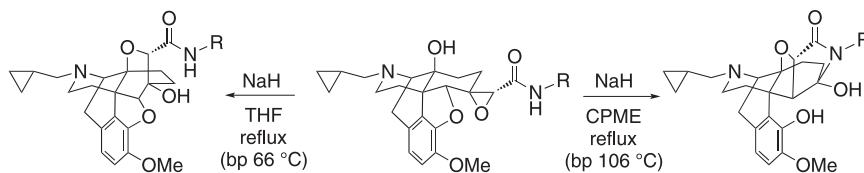
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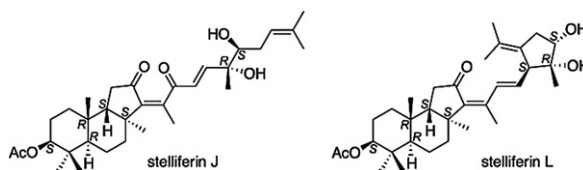
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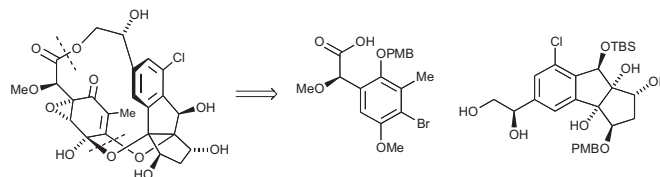
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Jeffery A. Gladding, James P. Bacci, Scott A. Shaw, Amos B. Smith, III*

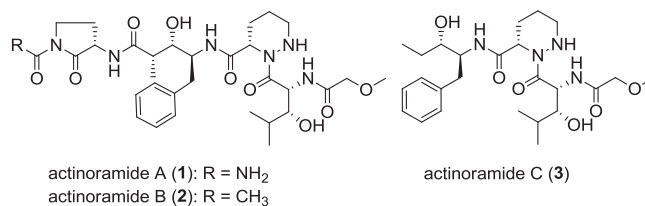
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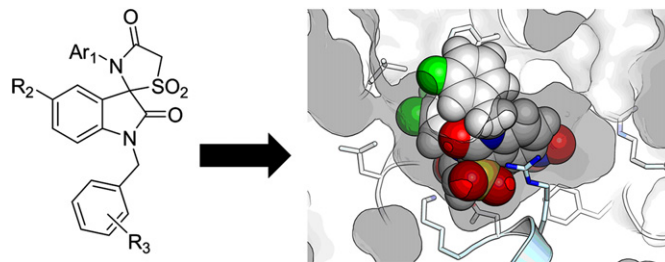
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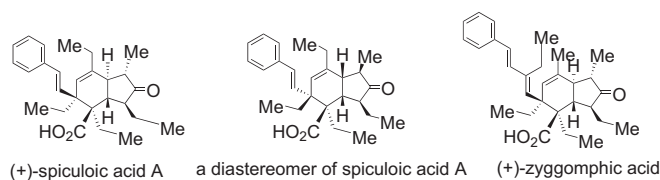
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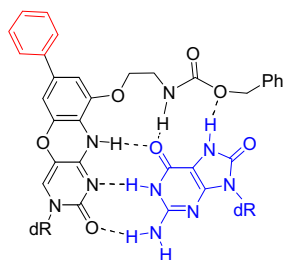
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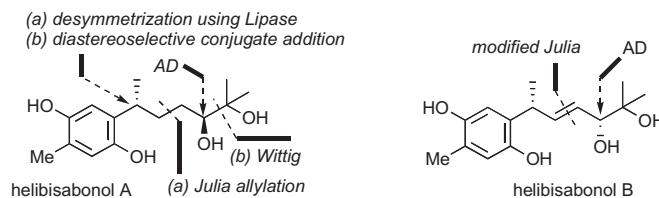
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Akari Miyawaki, Mayu Osaka, Makoto Kanematsu, Masahiro Yoshida, Koza Shishido*



*Corresponding author

 Supplementary data available via ScienceDirect

COVER

The image of the complex structure of staurosporine and the catalytic subunit of c-AMP-dependent protein kinase was produced by Dr. H. Gouda of Kitasato University, referring to the data reported by Dr. D. Bossemeyer *et al.* [Ref. 33 in Prof. Ōmura's account in this issue].

Staurosporine was discovered through a novel Chemical Screening program which was developed based on Satoshi Ōmura's fundamental belief that "microbes do not produce useless metabolites: we have little knowledge of their usefulness for mankind". Details about staurosporine are provided in Prof. Ōmura's detailed review in this issue.

Cover figure designed by H. Gouda.

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