Journal Club No.783 January 9, 2018

New Secondary Metabolites from Marine Cyanobacteria of the Genus *Moorea* Collected in Malaysia and Saudi Arabia

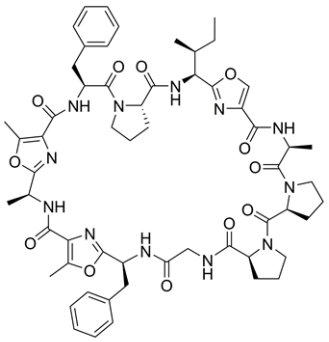
（マレーシアおよびサウジアラビア由来海洋ラン藻 Moorea 属からの新規２次代謝産物探索）

Julius Lopez

This topic was my research theme for my PhD course.

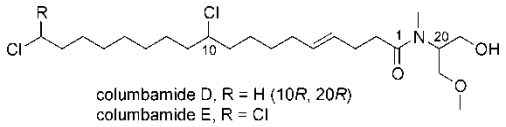
Journals

Wewakazole B, a Cytotoxic Cyanobactin from the Cyanobacterium *Moorea producens* Collected in the Red Sea
Lopez, J. A. V. et al. & Okino, T.* (Hokkaido University)
Journal of Natural Products, 79, 1213–1218 (2016)



wewakazole B

Columbamides D and E: Chlorinated Fatty Acid Amides from the Marine Cyanobacterium *Moorea bouillonii* Collected in Malaysia
Lopez, J. A. V. et al. & Okino, T.* (Hokkaido University)
Organic Letters, 19, 4231–4234 (2017)



columbamide D, R = H (10*R*, 20*R*)
columbamide E, R = Cl

Abstract

Marine cyanobacteria have been a consistent source of significant bioactive compounds with novel structures. By doing marine natural products research, we gain insight into the chemistry of the subject organisms and their communities, as well as their ecological significance. Having this thrust, the main objective of this study is to discover novel bioactive compounds from cyanobacteria collected from understudied maritime areas. A total of 44 marine cyanobacterial samples from Malaysia and Saudi Arabia were collected and identified by 16S rRNA gene sequencing. Solvent extraction and partition were performed and the extracts were subjected to LC/MS profiling and cytotoxicity screening against human MCF7 breast cancer cells. Dereplication was accomplished by using the mass data and the MarinLit database. This led to the isolation and structure elucidation of a new cyanobactin, wewakazole B, from Saudi Arabian *Moorea producens*; and new chlorinated fatty acid amides, columbamides D and E, from Malaysian *Moorea bouillonii*. The isolation, structure elucidation, and bioactivity of these compounds will be discussed in this presentation.