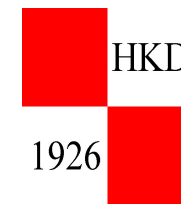




Institut Ruđer Bošković

CI. Kolokvij Zavoda za organsku kemiju i biokemiju i
Sekcije za organsku kemiju Hrvatskog kemijskog društva



Professor Takuya Kumamoto

Faculty of Pharmaceutical Sciences,
Musashino University,
Tokyo, Japan

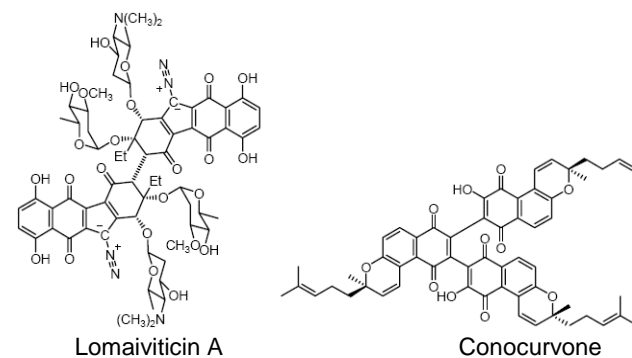
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Synthetic Studies toward Natural Products with Oligomeric Structure

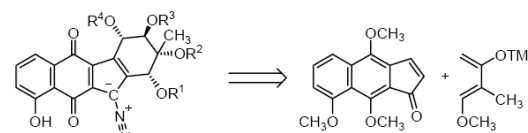
In our laboratory, synthetic studies towards natural products with oligomeric structure have been focused. One of the target is lomaiviticin A, dimeric benzofluorene containing diazoalkane moiety, potent antitumor antibiotics isolated from culture broth of marine actinomycete *Micromonospora lomaivitiensis*, and the other is conocurvone, trimeric chromenoquinone, isolated from Australian tree *Conospermum* (*Proteaceae*), possessing antiviral activity towards HIV. In this seminar, our recent synthetic research on corresponding monomeric units, kinamycins for lomaiviticin A, teretifolions B for conocurvone will be presented.

Syntheses of both compounds were approached via Diels-Alder reaction as a key step. For kinamycins, Diels-Alder reaction of benzindene and Danishefsky dienes followed by stereoselective introduction of oxygen function and diazotization led to the total synthesis of (\pm)-methyl-kinamycin C. Synthetic studies via Suzuki-Miyaura coupling has been also carried out to the synthesis of prekinamycin. For teretifoliones B, chromenoquinone structure was established with Diels-Alder reaction of benzyne derived from functionalized chromene and furans from tetronic acids.

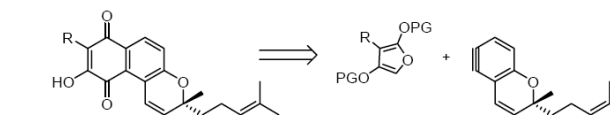


Lomaiviticin A

Conocurvone



Kinamycins



Teretifolione B (R = H)
Methylteretifolione B (R = CH₃)