S43-7 A new strategy for the synthesis of highly substituted alkaloids

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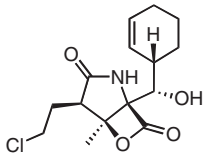
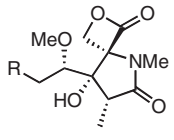
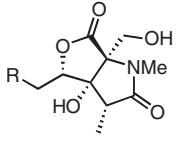
Salinosporamide A, oxazolomycin A, and neooxazolomycin have intriguing molecular architectures consisting of a highly substituted lactam core, which make these alkaloids challenging targets for synthesis. These compounds also attract much attention as a leading compound for drug discovery due to their potent antitumor and proteasome inhibitory activities. In this symposium, we will discuss a new methodology for the synthesis of heterocyclic compounds which relies on a Conia-ene type cyclization via the carbometalation of an indium enolate with an acetylenic triple bond. We will also discuss the synthesis of the above-mentioned alkaloids based on this new methodology.



salinosporamide A



oxazolomycin A



neooxazolomycin