LATE-STAGE INDOLE SYNTHESIS ENABLES THE TOTAL SYNTHESIS OF TRYPTOPHAN CONTAINING PEPTIDES

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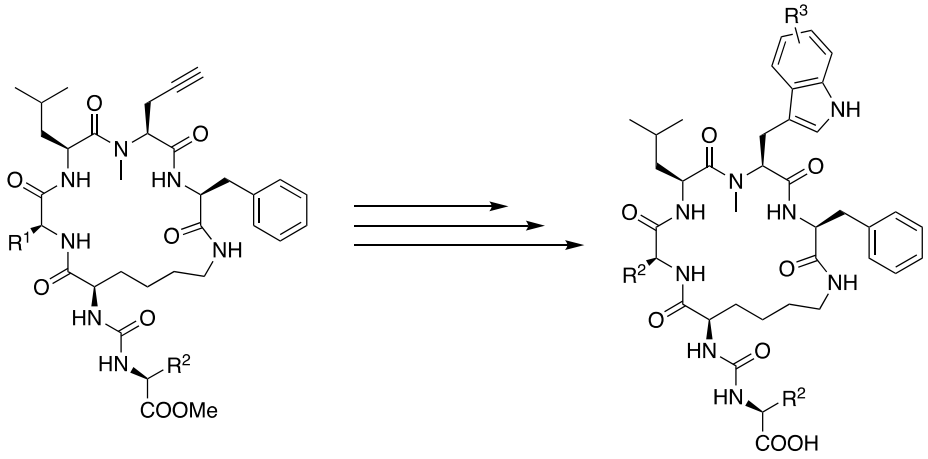
The peptidic natural products keramamide A,[1a] keramamide L[1b] and mozamide A[1c] were isolated from marine sponges and belong to the class of anabaenopeptin-type peptides, a large family of cyanobacterial natural products. We present the first total syntheses of these molecules which led to revision of their configurations.

In order to enable the syntheses of different natural products and derivatives from a common precursor (e.g. for SAR studies), the indole moiety of the tryptophan units was installed on a late stage on the cyclized peptides.[2] This strategy called for especially mild reaction conditions, which will be presented on the poster.



So far, not much is known about the biological activities of these natural compounds. The latest results concerning bioactivities shall also be presented.

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[1] (a) J. Kobayashi, M. Sato, M. Ishibashi, H. Shigemori, T. Nakamura, Y. Ohizumi, *J. Chem. Soc. Perkin Trans. 1* **1991**, 2609–2611; (b) H. Uemoto, Y. Yahiro, H. Shigemori, M. Tsuda, T. Takao, Y. Shimonishi, J. Kobayashi, *Tetrahedron* **1998**, *54*, 6719–6724; (c) E. W. Schmidt, M. K. Harper, D. J. Faulkner, *J. Nat. Prod.* **1997**, *60*, 779–782.

[2] L. Junk, U. Kazmaier, *Angew. Chem.* **2018**, *130*, 11602–11606; *Angew. Chem. Int. Ed* **2018**, *57*, 11432–11435; L. Junk, U. Kazmaier, *J. Org. Chem.* **2019**, *84*, 2489–2500.