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インドネシア産海綿 *Acanthostrongylophora ingens* から得られた二つの新規 manzamine 類縁体の構造と活性

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【Objective】 In our continuous search for proteasome inhibitors from marine organisms, we found that two specimens of marine sponge *Acanthostrongylophora ingens* collected in Indonesia showed the proteasome inhibition. The bioassay-guided purification afforded two new alkaloids, acantholactam (**1**) and bajotalamine (**2**), along with two known alkaloids, manzamine A¹⁾ (**3**) and *neo*-kauluamine (**4**).²⁾

【Results and discussion】 The structures of **1** and **2** were established by 2D NMR spectra. Compound **1** contains a γ -lactam ring substituted with a (*Z*)-2-hexenoic acid at the nitrogen atom, which is probably biosynthetically related to an eight membered ring in **3**. Although more than 80 manzamine congeners have been reported so far, the structure of **1** is unprecedented in the manzamine family. Compound **2** has an ether linkage in the eight membered ring. During the storage of **2** in a freezer, **2** converted to its dimer, of which spectral data were completely identical to those of **4**. This result indicates that **4** might be an artifact in the sponge extract.

1) Sakai, R. *et al.*, *J. Am. Chem. Soc.* **1986**, *108*, 6404. 2) El-Sayed, K. A. *et al.*, *J. Am. Chem. Soc.* **2001**, *123*, 1804.

