

Alkaloids from the Marine Sponge *Monanchora arbuscula*: structures, synthesis and biological activities

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Marine organisms have been continuously investigated as a source of new bioactive metabolites. Our continuing interest in the discovery of unprecedented bioactive metabolites from marine organisms led us to identify the MeOH extract from the sponge *Monanchora arbuscula*. Sponges of the genus *Monanchora* are well-known sources of guanidine alkaloids, many of which display potent activity biological, such as cytotoxic, antibacterial, antifungal and anti-parasitic. An anti-parasitic extract from *M. arbuscula* provided us enough material to investigate the structures of the minor alkaloids present in the sponge extract. We report the isolation of six new minor constituents (**1-6**). Additionally, we have synthesized and evaluated the anti-leishmanial and anti-trypanosomal activities of monalidine A (**1**). A new member of the ptilocaulin/mirabilin/netamine alkaloid family, named arbusculidine A (**2**) has also been synthesized. The novel batzellamide A (**3**) and three new hemibatzelladines A–C (**4-6**) are also reported. The structures, syntheses of **1** and **2**, as well as the biological activities of *M. arbuscula* alkaloids will be presented and discussed.

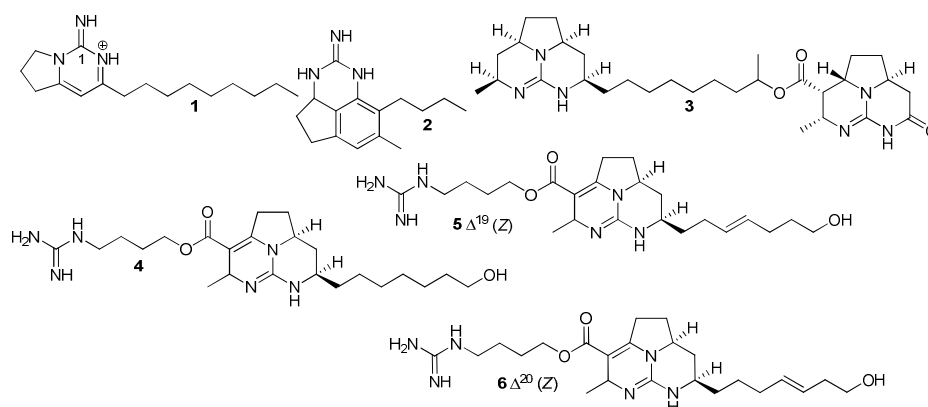


Figure 1. New guanidine alkaloids isolated from *M. arbuscula*.

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