

Studies on the structure determination of aromatic alkaloids by NMR

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Marine organisms have produced a wide variety of biologically and structurally unique metabolites. Of these organisms, sponges are recognized as the most prolific sources of natural compounds. Several sponge-derived metabolites have displayed potent and diverse bioactivities which have attracted significant biomedical and synthetic attention. We have recently encountered metabolites possessing unusual carbon frameworks and functionalities from sponges of Korean and tropical waters. Herein we present the structure elucidation of three peculiar aromatic alkaloids utilizing various NMR methods:

- 1) bis(indole) alkaloids, from the sponge *Spongosorites genitrix* collected from Jaeju Island
- 2) imidazole alkaloids of an unprecedented skeletal class, from an association of the sponges *Poecillastra wondoensis* and *Jaspis* sp. collected from Keomun Island.
- 3) novel bromotyrosine-derived metabolites, from the tropical sponge *Aplysinella rhax*.