

Bafilomycins from a Sponge-associated *Streptomyces* sp.

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Introduction

Actinomycetes are known to be prolific producers of antibiotics and other biomedically-important compounds [1]. Here, we investigated the chemodiversity and bioactivity of sponge-associated *Streptomyces* sp. from the Philippines.

Experimental

^1H and 2D NMR spectra were recorded on a Agilent VNMRS-600 equipped with its 1.5-mm HTS Cold Probe using residual solvent signals as internal standards.

Results and Discussion

Antiproliferative activity-guided purification of the culture broth of *Streptomyces* sp. afforded four compounds with antiproliferative activity against HepG2 hepatocellular carcinoma cell line. Structure elucidation indicated that these compounds belong to the bafilomycin class of compounds, with the major compound being bafilomycin A1.

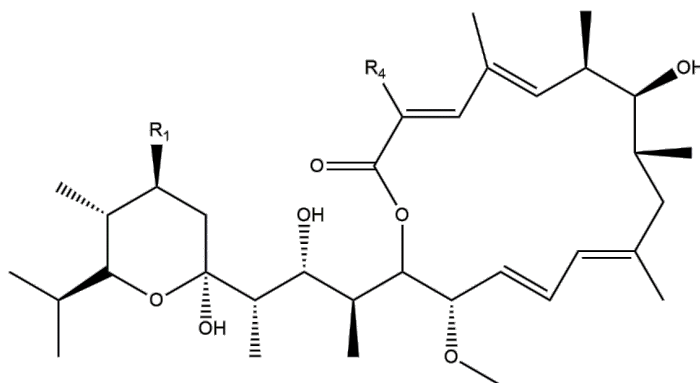


Fig.1 Bafilomycins from a sponge-associated *Streptomyces* sp.

Conclusions

Bafilomycins were determined as the antiproliferative principle of a *Streptomyces* sp.

Acknowledgements

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References

- [1] Genilloud O. *Natural Products Reports*, **34**, 1203-1232 (2017).
- [2] Yan, Y. *et al.*, *Scientific Reports*, **6**, 37052 (2016).
- [3] Yoshimori, T. *et al.*, *Journal of Biological Chemistry*, **266**, 17707-17712 (1991).