

Supplementary Materials

Characterization of Bioactivities and Biosynthesis of Angucycline/Angucyclinone Derivatives Derived from *Gephyromycinifex aptenodytis* gen. nov., sp. nov.

Wen-Zhuo Zhu ¹, Shu-Heng Wang ¹, Hui-Min Gao ¹, Ya-Ming Ge ², Jun Dai ³,
Xiao-Ling Zhang ^{1,4,*} and Qiao Yang ^{1,4,5,*}

¹ Department of Marine Chemistry, College of Marine Science and Technology, Zhejiang Ocean University, Zhoushan 316022, China; zhuwenzhuo@zjou.edu.cn (W.-Z.Z.); wangshuheng@zjou.edu.cn (S.-H.W.); gaohuimin@zjou.edu.cn (H.-M.G.)

² National Engineering Research Center for Marine Aquaculture, Zhejiang Ocean University, Zhoushan 316021, China; geyaming@zjou.edu.cn

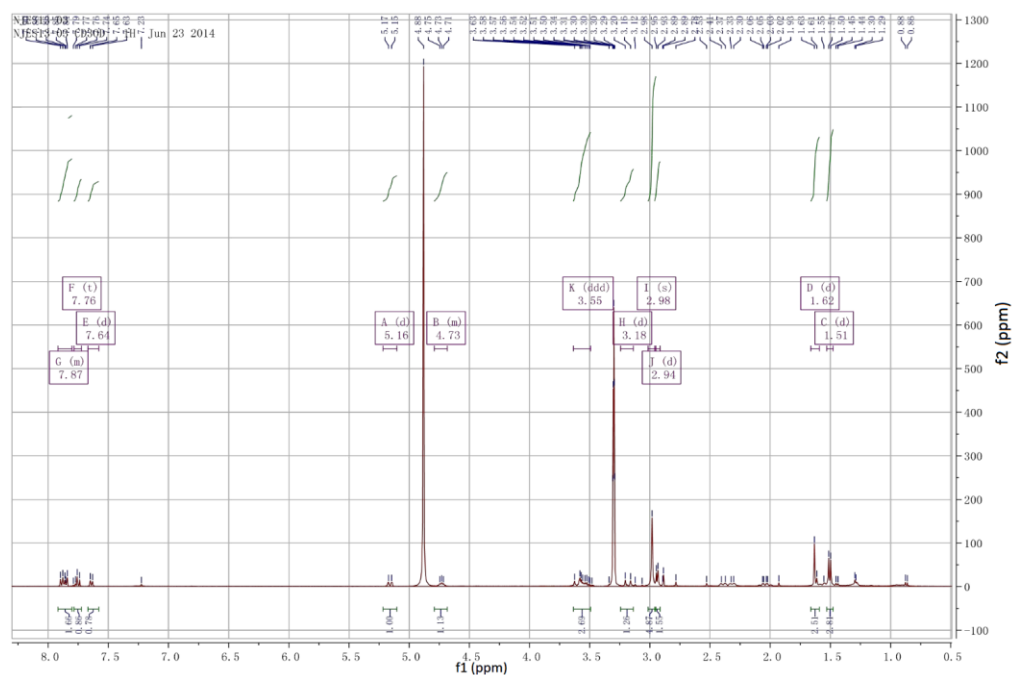
³ Natural “111” Center for Cellular Regulation and Molecular Pharmaceutics, Key Laboratory of Fermentation Engineering (Ministry of Education), College of Bioengineering, Hubei University of Technology, Wuhan 430068, China; jundai@hbut.edu.cn

⁴ ABI Group, Zhejiang Ocean University, Zhoushan 316022, China

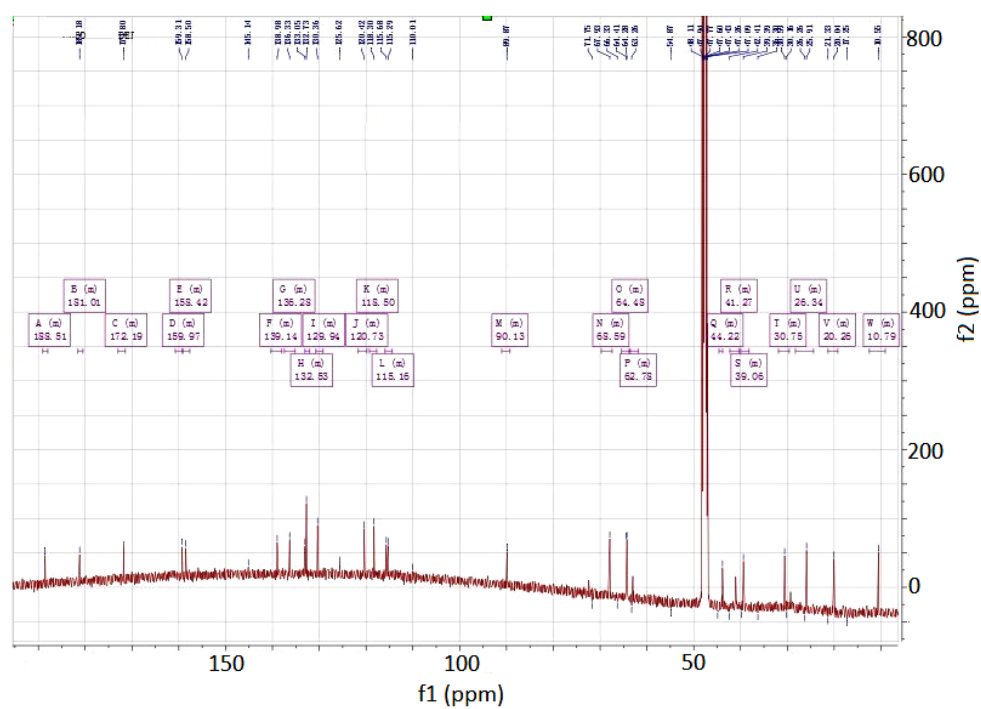
⁵ Department of Environment Science and Engineering, Zhejiang Ocean University, Zhoushan 316022, China

* Correspondence: zhangxiaoling@zjou.edu.cn (X.-L.Z.); qiaoyang1979@whu.edu.cn (Q.Y.)

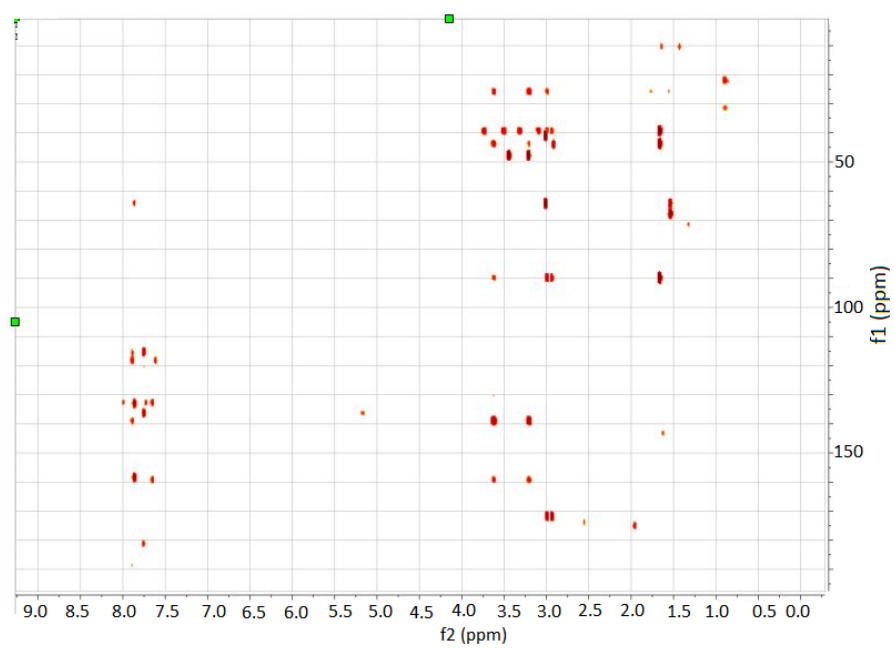
Figure S1. The NMR spectra data of 2-hydroxy-frigocyclinone (2-HF).



(1) ¹H NMR spectrum



(2) ¹³C NMR spectrum



(3) HMBC spectrum