

Supplementary Materials

Antibacterial Bicyclic Fatty Acids from a Korean Colonial Tunicate *Didemnum* sp.

Hiyoung Kim^{1,2}, Jusung Lee², Tae Gu Lee³, Inho Yang⁴, Jungwook Chin⁵, Boon Jo Rho⁶, Hyukjae Choi⁷, Sang-Jip Nam⁸, Dongyup Hahn^{9,10,*} and Heonjoong Kang^{2,10,11,*}

¹ Department of Biomedical Science and Engineering, Konkuk University, Seoul 05029, Korea

² Laboratory of Marine Drugs, School of Earth and Environmental Sciences, Seoul National University, NS-80, Seoul 08826, Korea

³ Safety Research Team, Crop Protection Research Institute, FarmHannong Co., Ltd, Nonsan 33010, Korea

⁴ Department of Convergence Study on the Ocean Science and Technology, Korea Maritime and Ocean University, Busan 49112, Korea

⁵ New Drug Development Center, Daegu-Gyeongbuk Medical Innovation Foundation, Daegu, 41061, Korea

⁶ Natural History Museum, Ewha Womans University, Seoul 03760, Korea

⁷ College of Pharmacy, Yeungnam University, Gyeongsan 38541, Korea

⁸ Department of Chemistry and Nano Science, Ewha Womans University, Seoul 03760, Korea

⁹ School of Food Science and Biotechnology & Department of Integrative Biology, Kyungpook National University, Daegu 41566, Korea

¹⁰ Interdisciplinary Graduate Program in Genetic Engineering, Seoul National University, NS-80, Seoul 08826, Korea

¹¹ Research Institute of Oceanography, Seoul National University, Seoul 08826, Korea

* Correspondence: dohahn@knu.ac.kr; Tel.: +82-53-950-5756 (D.H.)
hjkang@snu.ac.kr; Tel.: +82-2-880-5730 (H.K.)

Table of Contents

Figure S1. ^1H NMR spectrum of compound **1** in methanol- d_4

Figure S2. ^{13}C NMR spectrum of compound **1** in methanol- d_4

Figure S3. COSY spectrum of compound **1** in methanol- d_4

Figure S4. HSQC spectrum of compound **1** in methanol- d_4

Figure S5. HMBC spectrum of compound **1** in methanol- d_4

Figure S6. NOESY spectrum of compound **1** in methanol- d_4

Figure S7. ^1H NMR spectrum of compound **2** in methanol- d_4

Figure S8. ^{13}C NMR spectrum of compound **2** in methanol- d_4

Figure S9. ^1H NMR spectrum of compound **3** in methanol- d_4

Figure S10. ^{13}C NMR spectrum of compound **3** in methanol- d_4

Figure S11. ^1H NMR spectrum of compound **4** in methanol- d_4

Figure S12. ^{13}C NMR spectrum of compound **4** in methanol- d_4

Figure S13. ^1H NMR spectrum of compound **5** in methanol- d_4

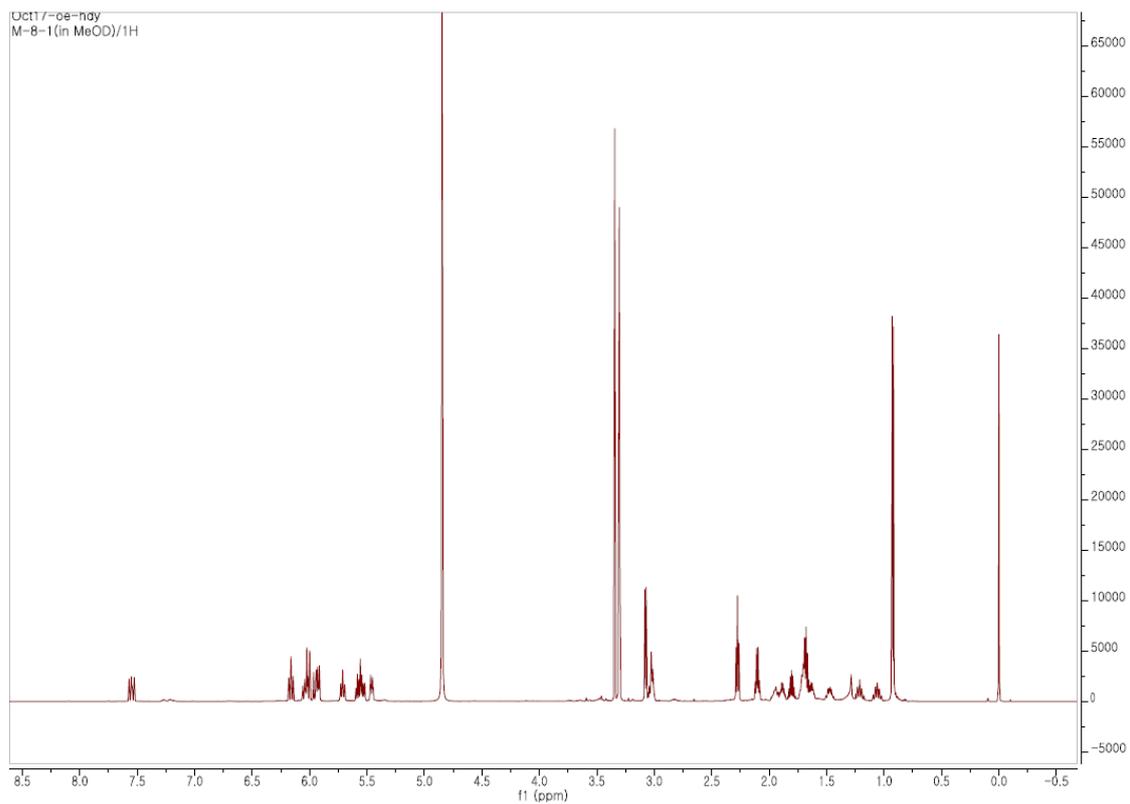


Figure S1. ^1H NMR spectrum of compound **1** in methanol- d_4

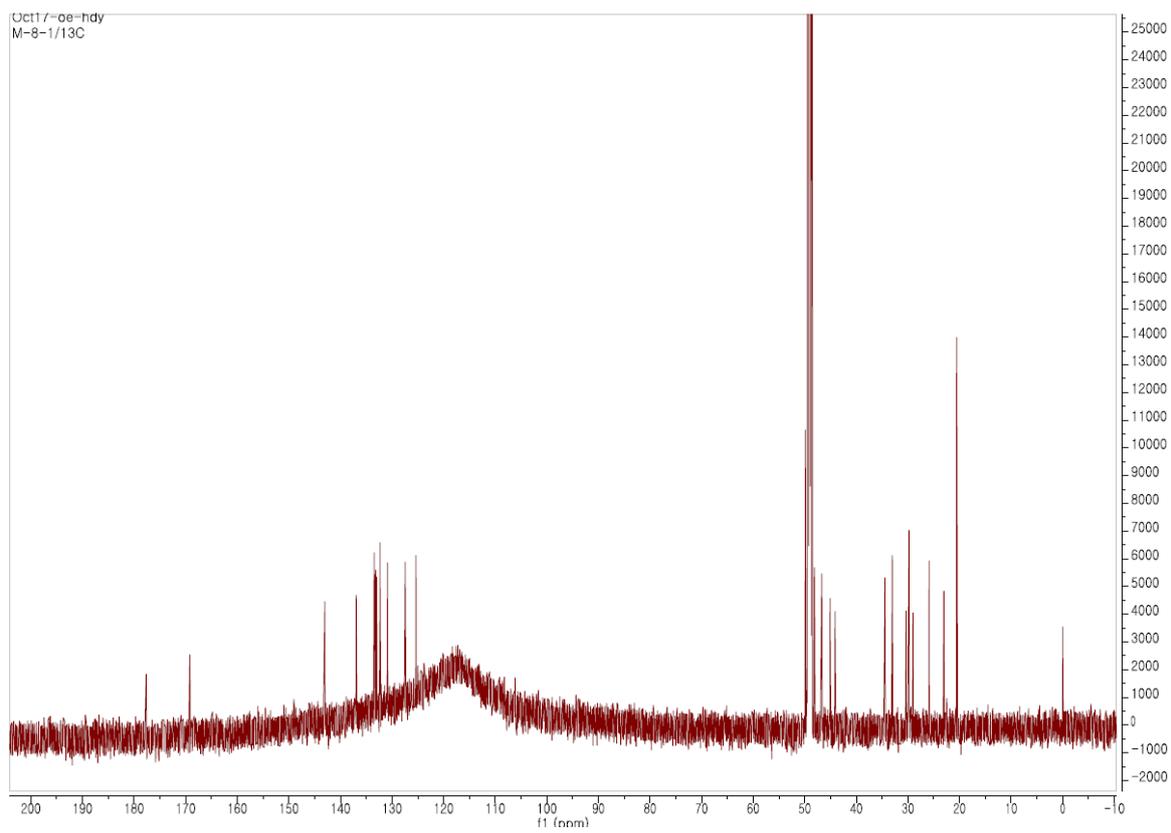


Figure S2. ^{13}C NMR spectrum of compound **1** in methanol- d_4

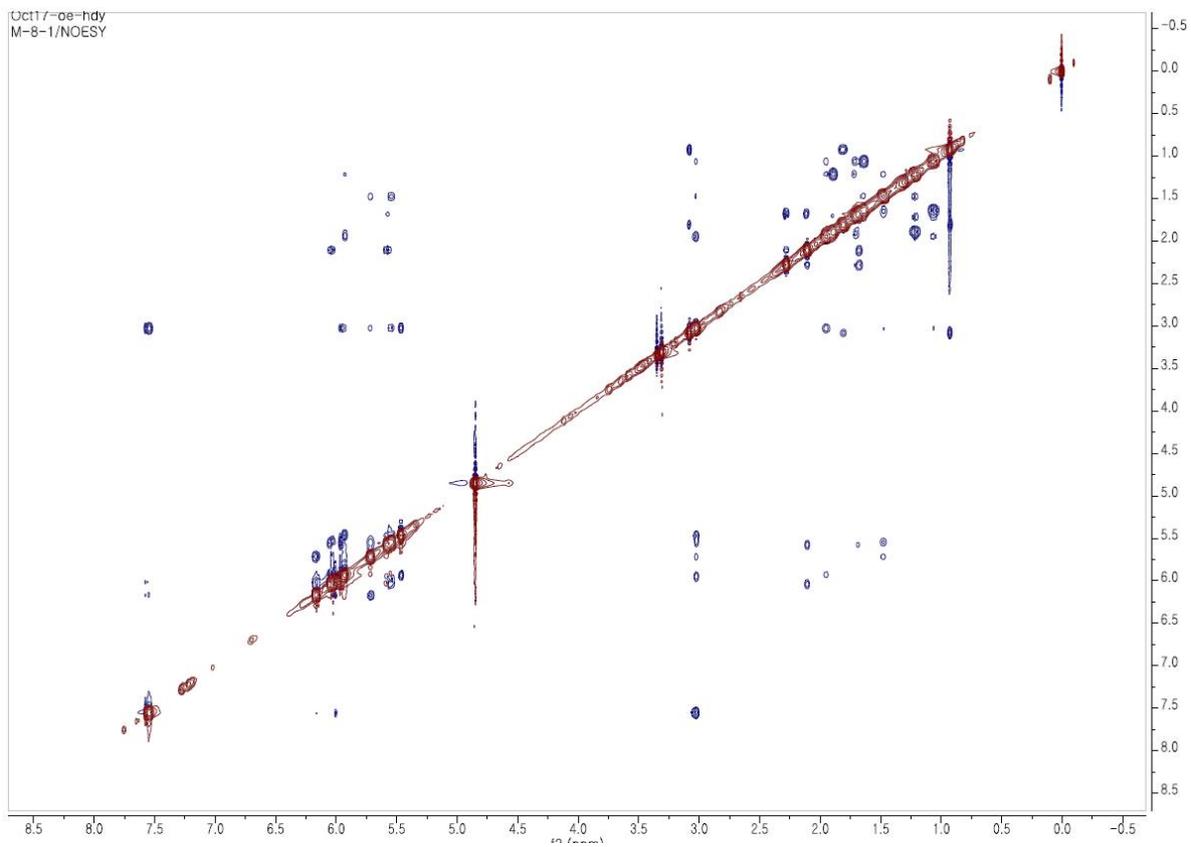


Figure S3. COSY spectrum of compound **1** in methanol-*d*₄

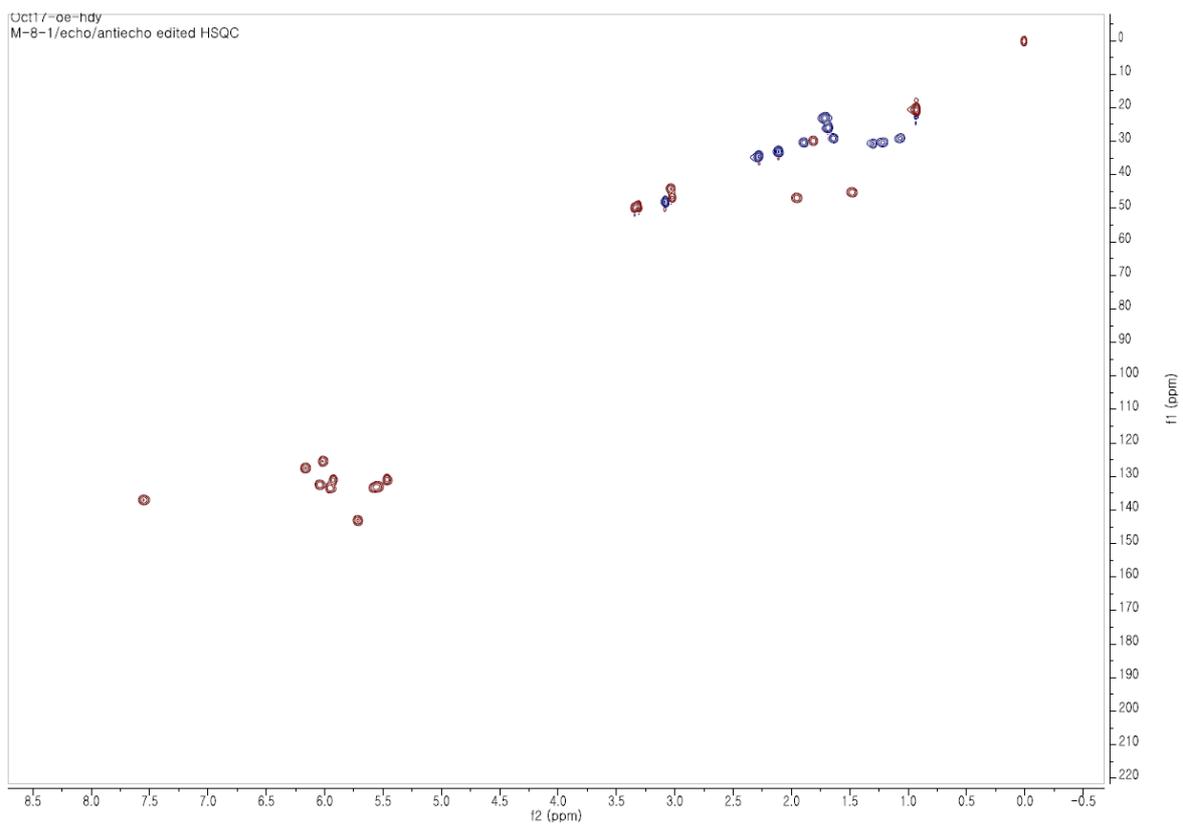


Figure S4. HSQC spectrum of compound **1** in methanol-*d*₄

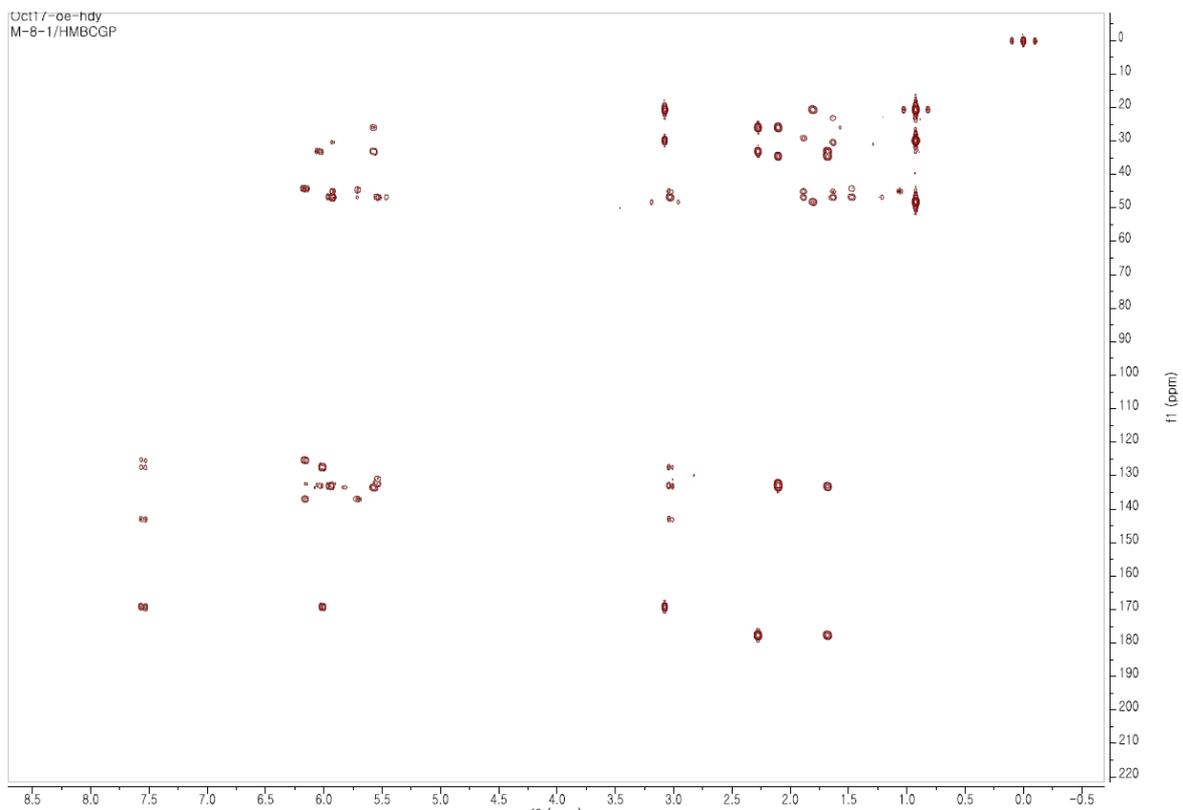


Figure S5. HMBC spectrum of compound **1** in methanol-*d*₄

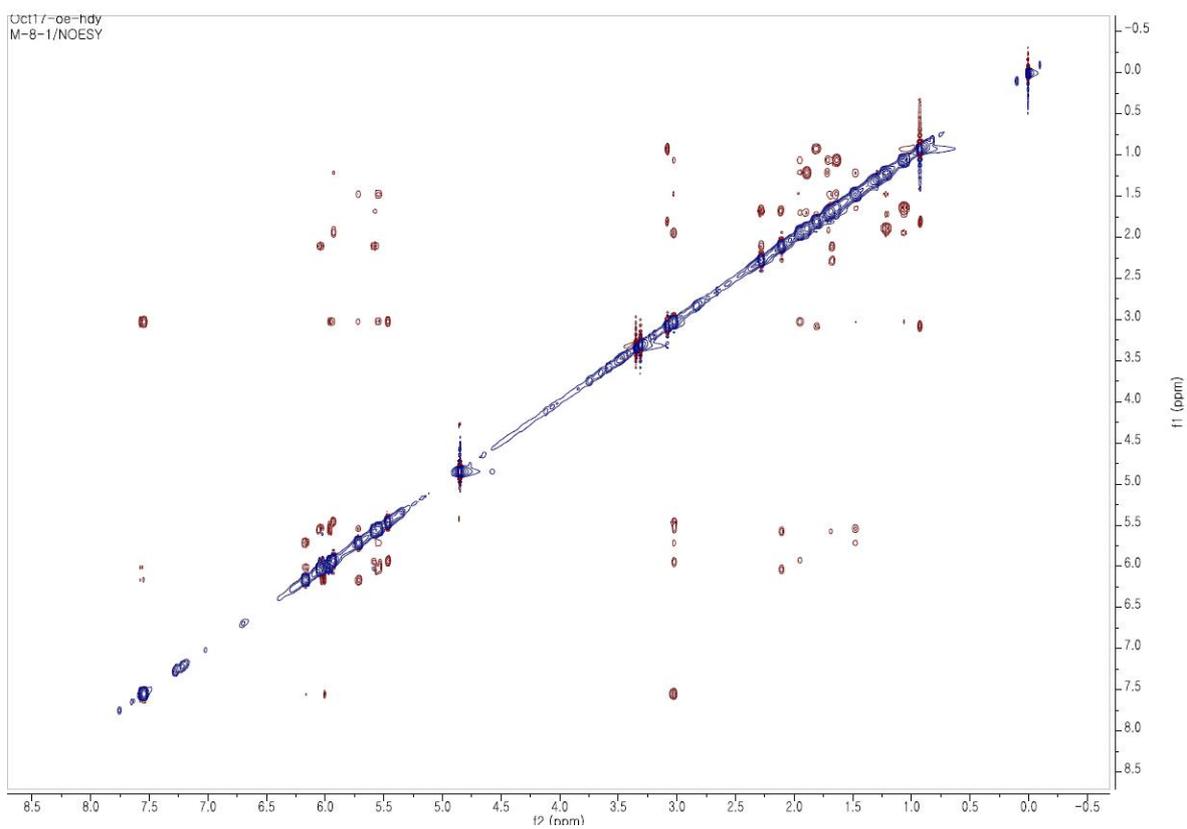


Figure S6. NOESY spectrum of compound **1** in methanol-*d*₄

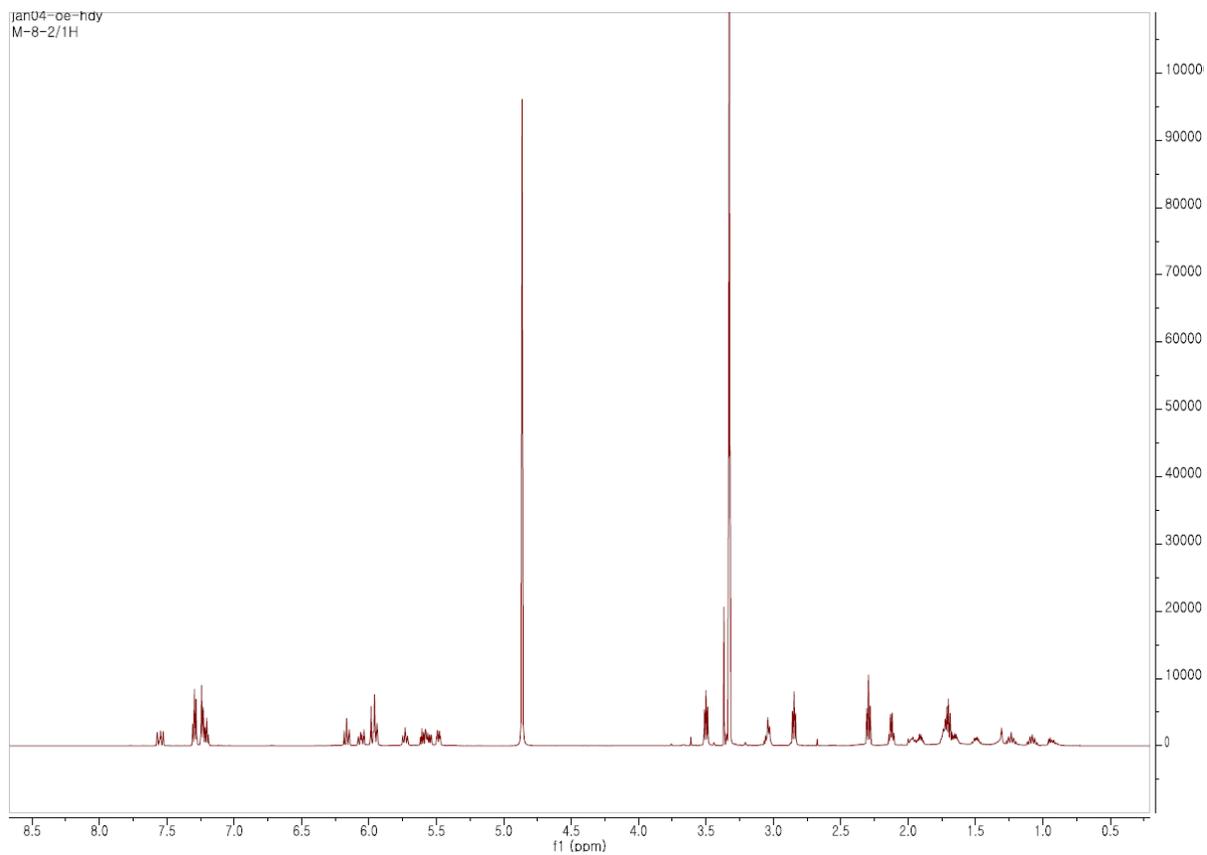


Figure S7. ^1H NMR spectrum of compound **2** in methanol- d_4

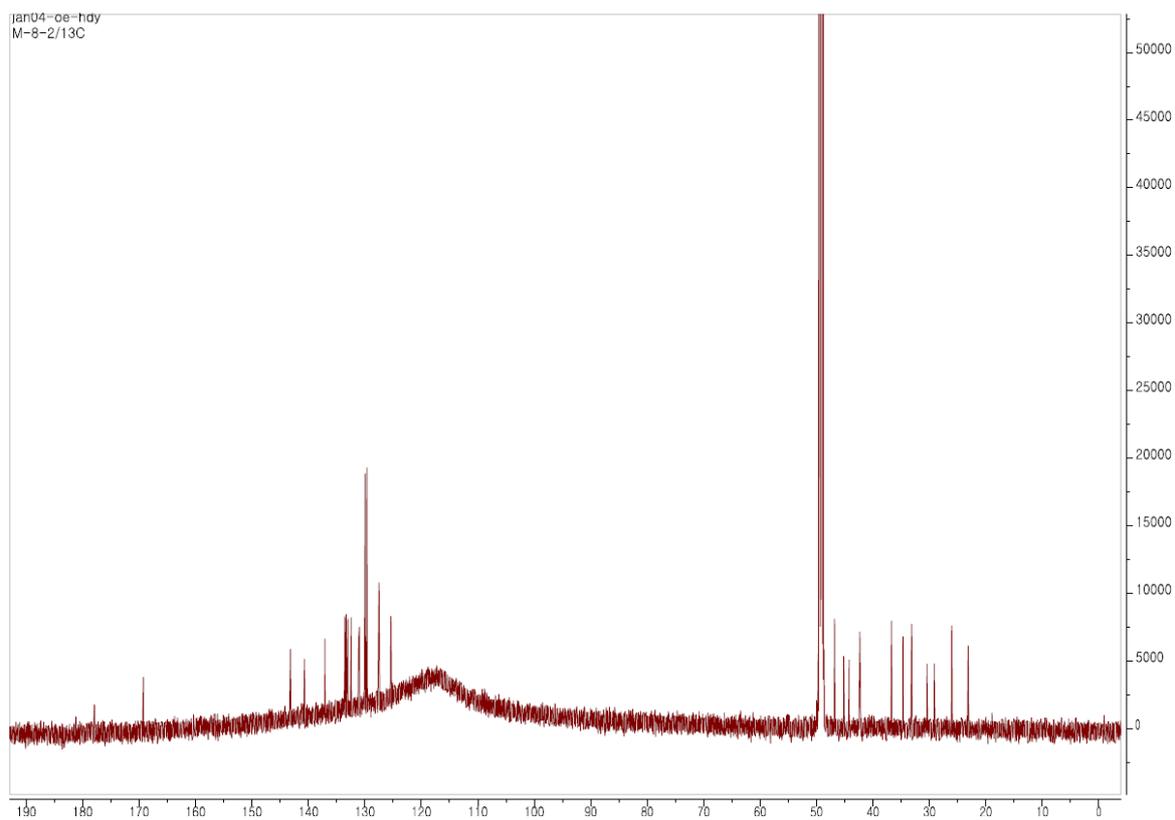


Figure S8. ^{13}C NMR spectrum of compound **2** in methanol- d_4

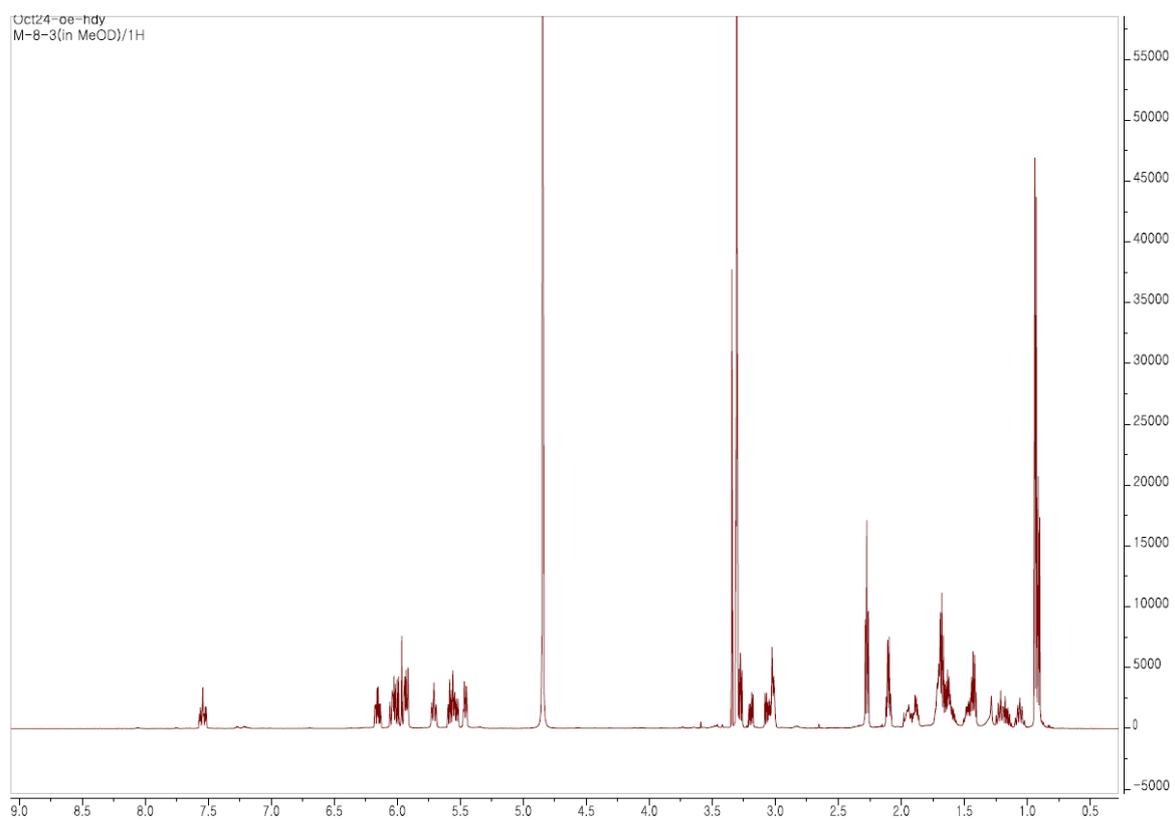


Figure S9. ^1H NMR spectrum of compound 3 in methanol- d_4

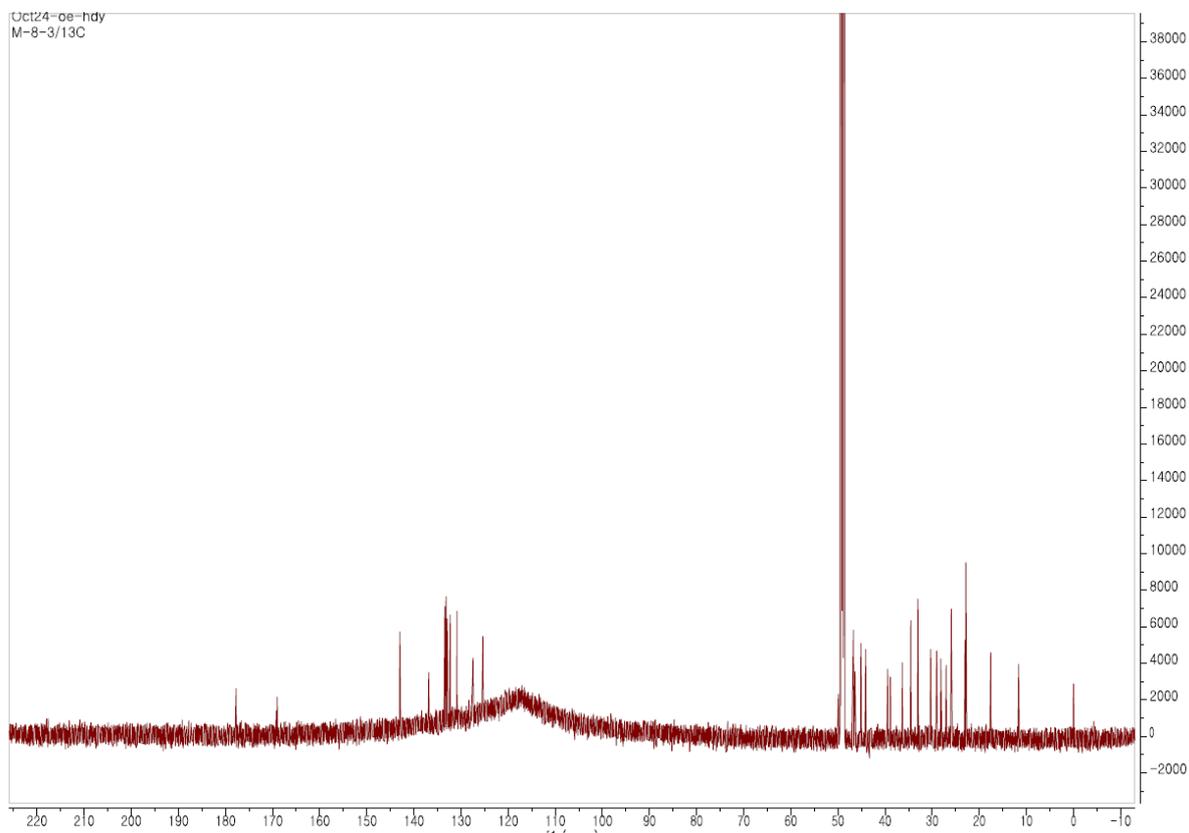


Figure S10. ^{13}C NMR spectrum of compound **3** in methanol- d_4

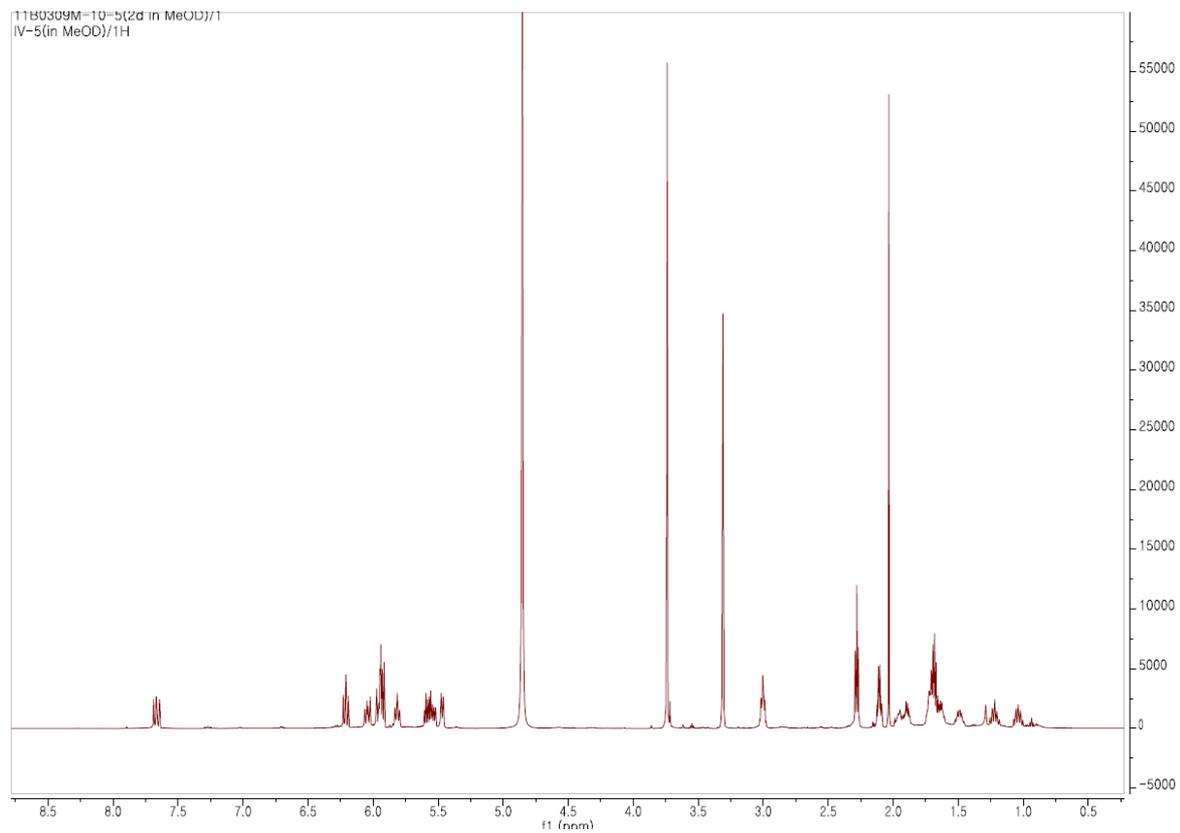


Figure S11. ^1H NMR spectrum of compound 4 in methanol- d_4

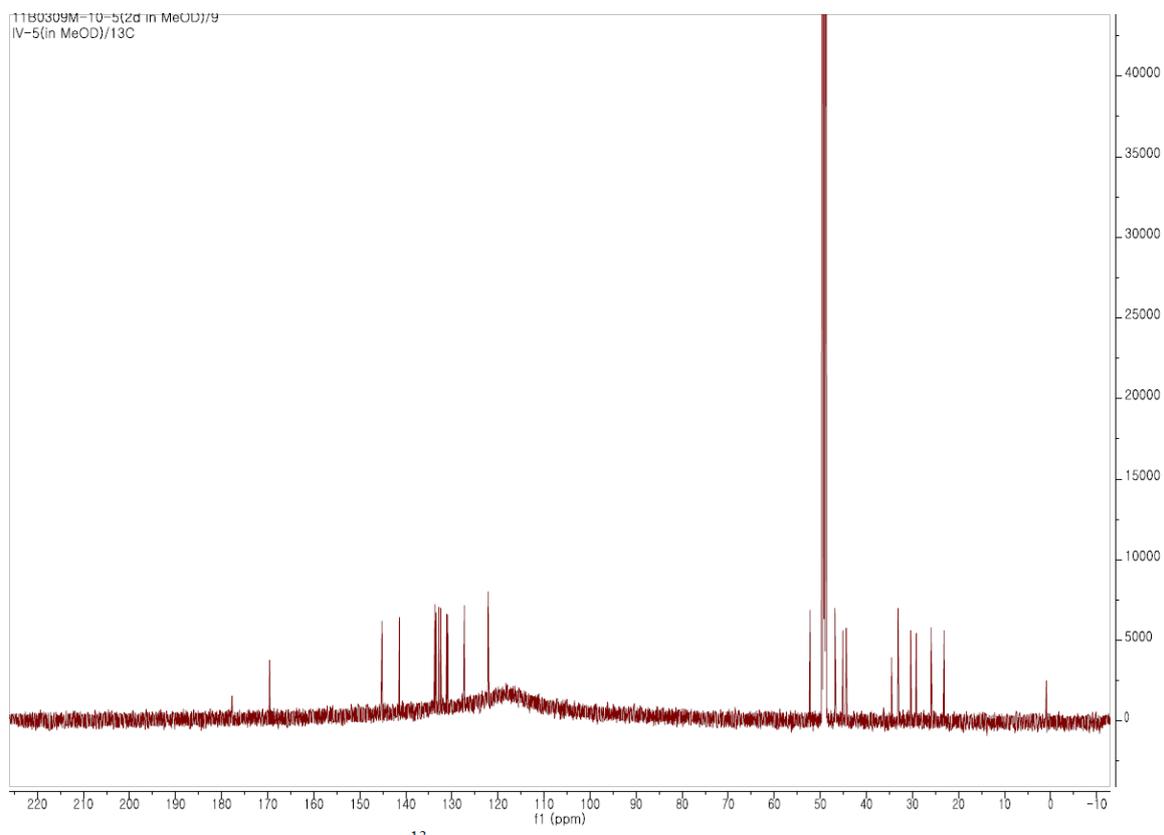


Figure S12. ^{13}C NMR spectrum of compound **4** in methanol- d_4

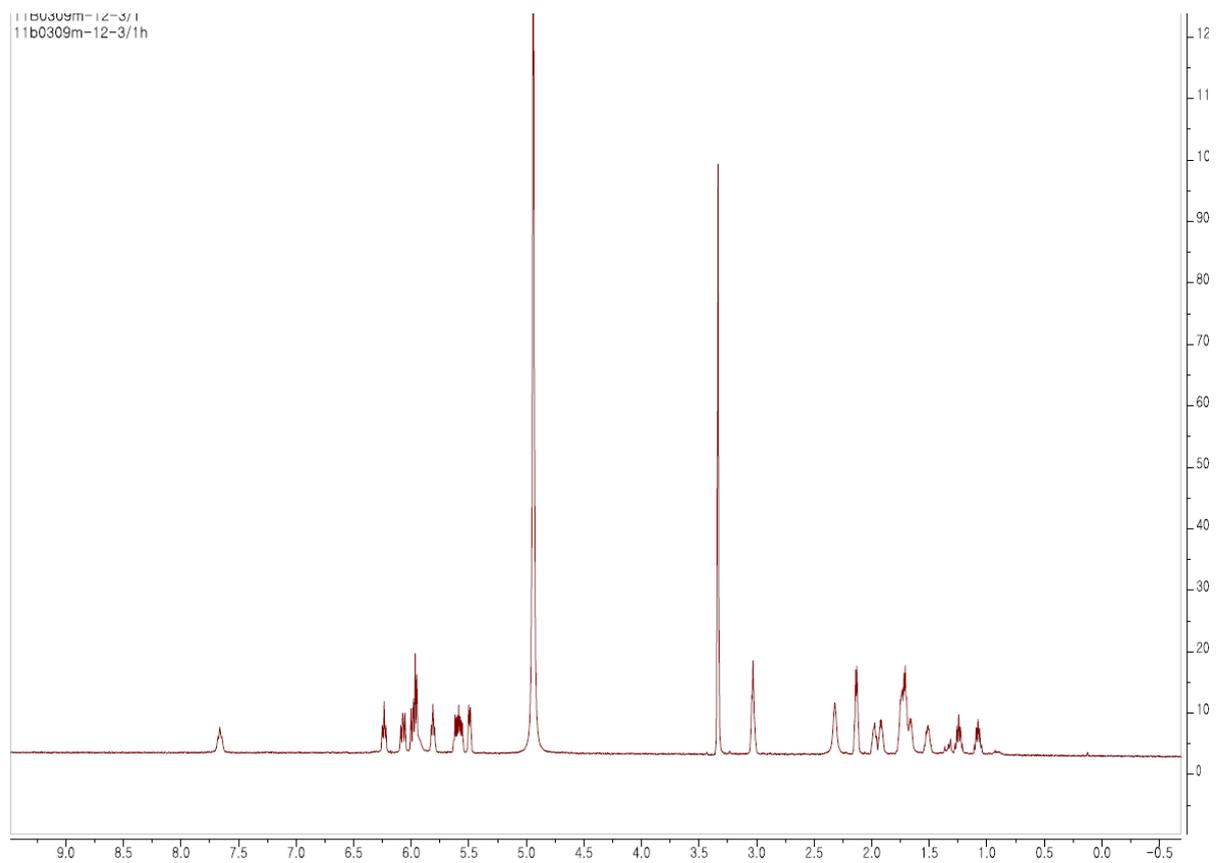


Figure S13. ^1H NMR spectrum of compound 5 in methanol- d_4