

## SUPPLEMENTARY MATERIAL

# Four New Anthraquinones with Histone Deacetylase Inhibitory Activity from *Ventilago denticulata* Roots

Nattika Hangsamai <sup>1</sup>, Kanokwan Photai <sup>1</sup>, Thidathep Mahaamnart <sup>1</sup>, Somdej Kanokmedhakul <sup>1</sup>,  
Kwanjai Kanokmedhakul <sup>1</sup>, Thanaset Senawong <sup>2</sup>, Siripit Pitchuanchom <sup>3</sup> and Mongkol  
Nontakitticharoen <sup>1,\*</sup>

<sup>1</sup> Natural Products Research Unit, Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand; nattika\_h@kkumail.com (N.H.); kanokwan\_kp@kkumail.com (K.P.); m\_thidathep@kkumail.com (T.M.); somdej@kku.ac.th (S.K.); kwanjai@kku.ac.th (K.K.)

<sup>2</sup> Natural Products Unit, Department of Biochemistry, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand; sthanaset@kku.ac.th

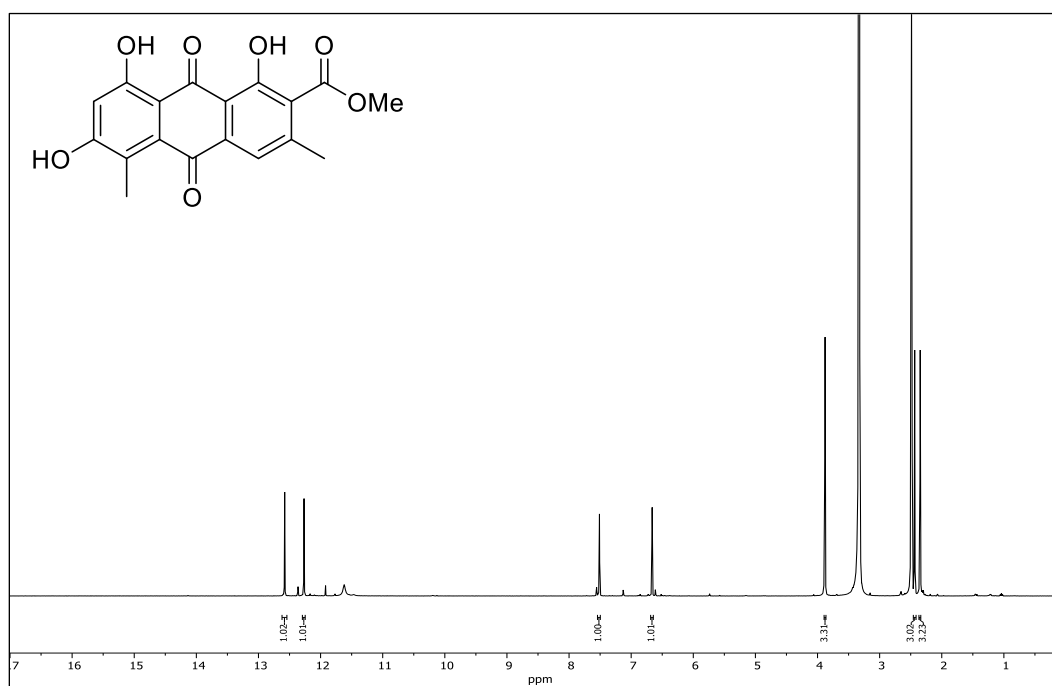
<sup>3</sup> Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Mahasarakham University, Maha Sarakham 44150, Thailand; siripit.p@msu.ac.th

\* Correspondence: mongbu@kku.ac.th; Tel.: +66 43-009-700 ext 42174

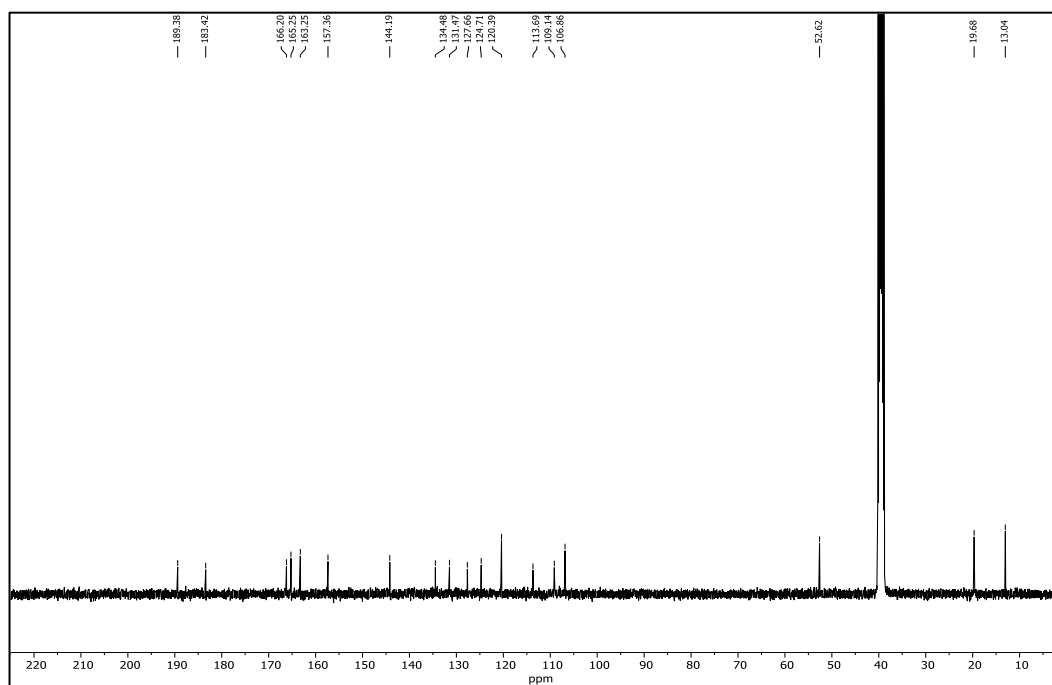
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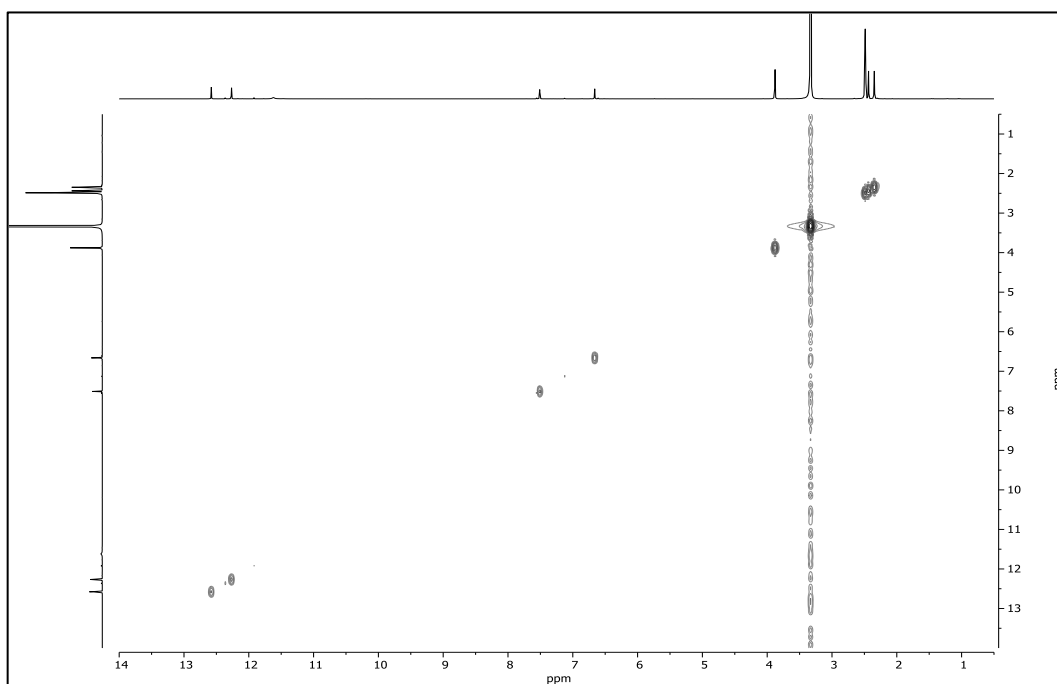
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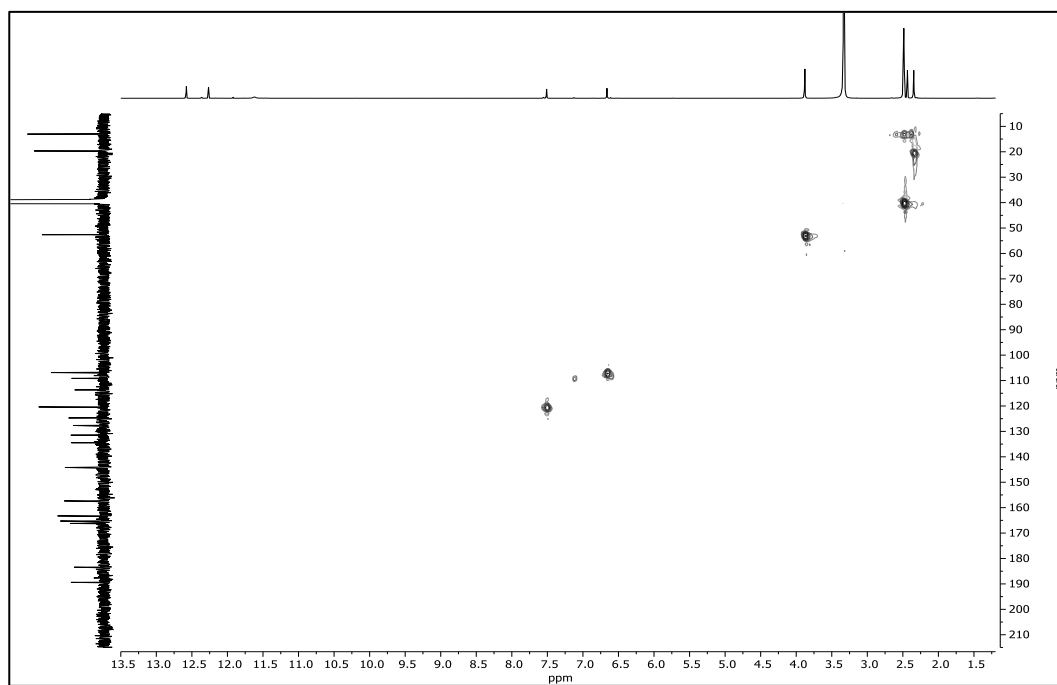
**Figure S1.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of compound **1**



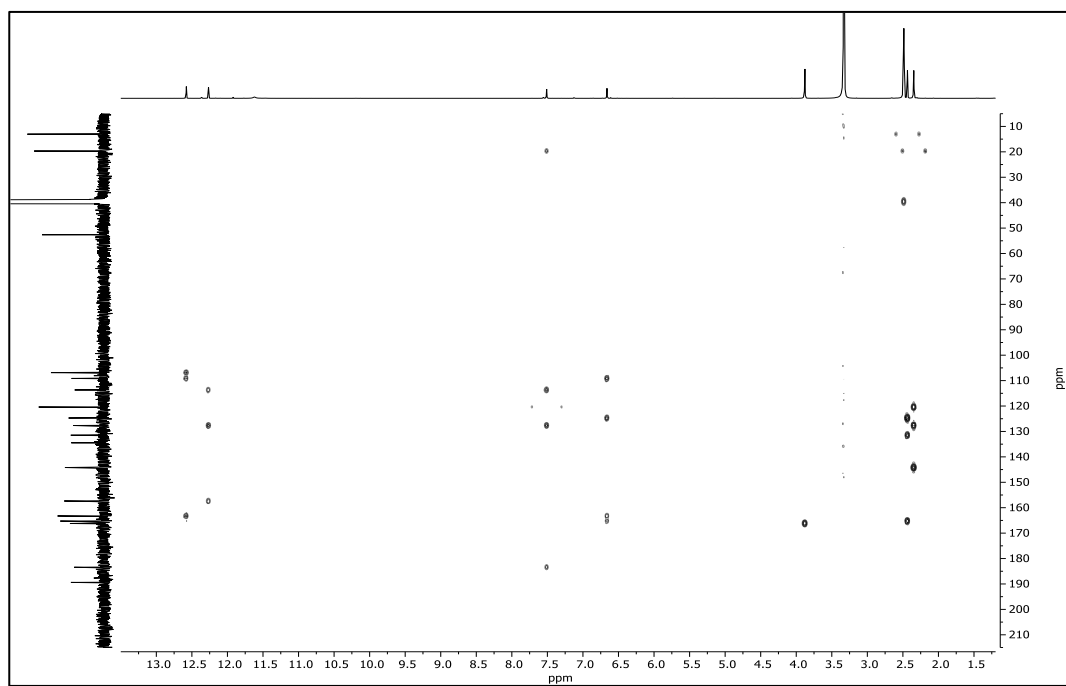
**Figure S2.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of compound **1**



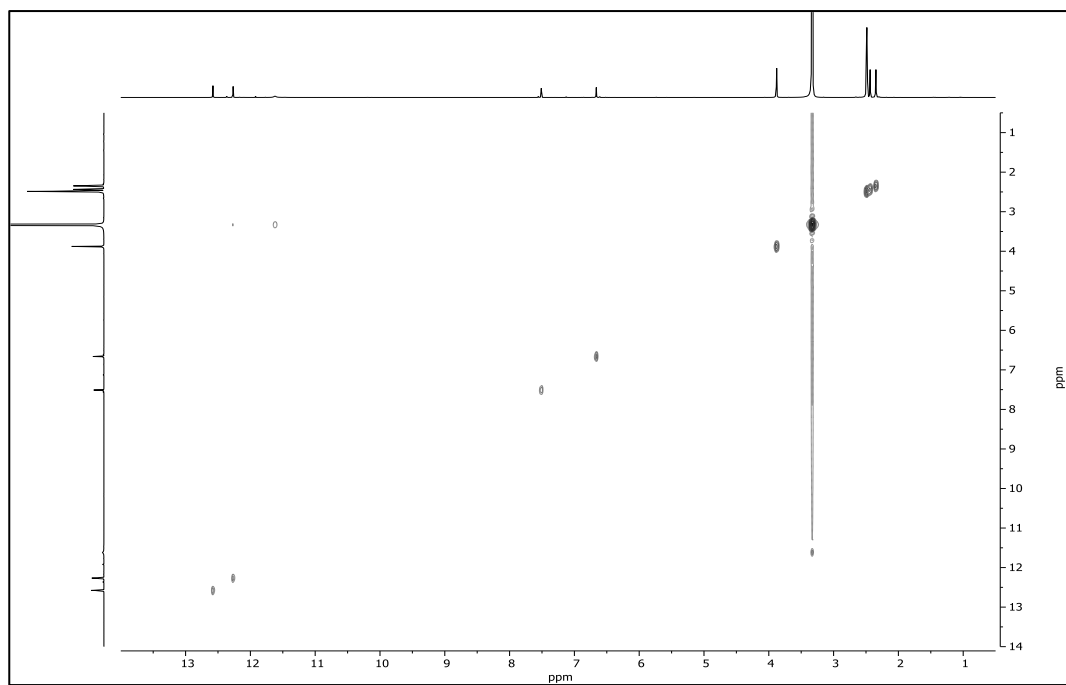
**Figure S3.** COSY (CDCl<sub>3</sub>) spectrum of compound **1**



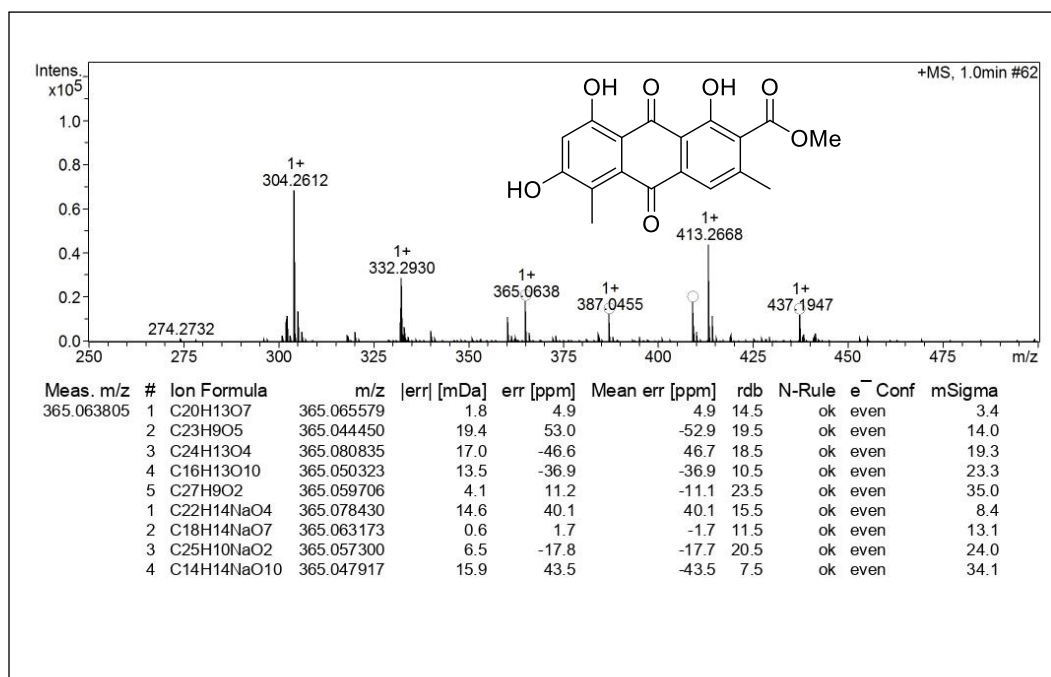
**Figure S4.** HSQC (CDCl<sub>3</sub>) spectrum of compound **1**



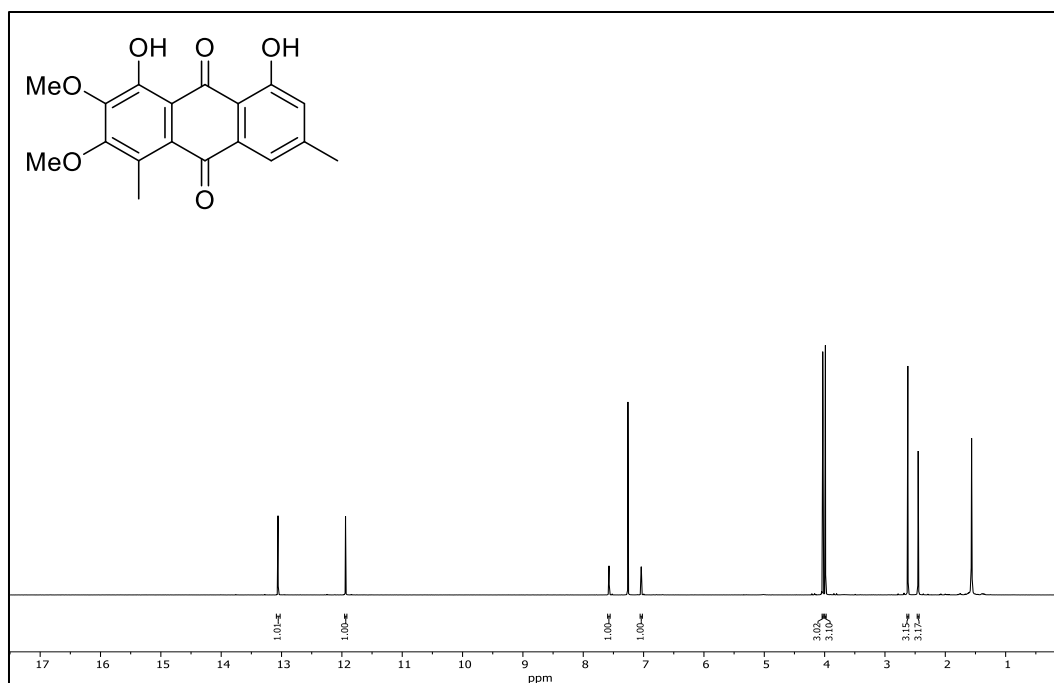
**Figure S5.** HMBC (CDCl<sub>3</sub>) spectrum of compound **1**



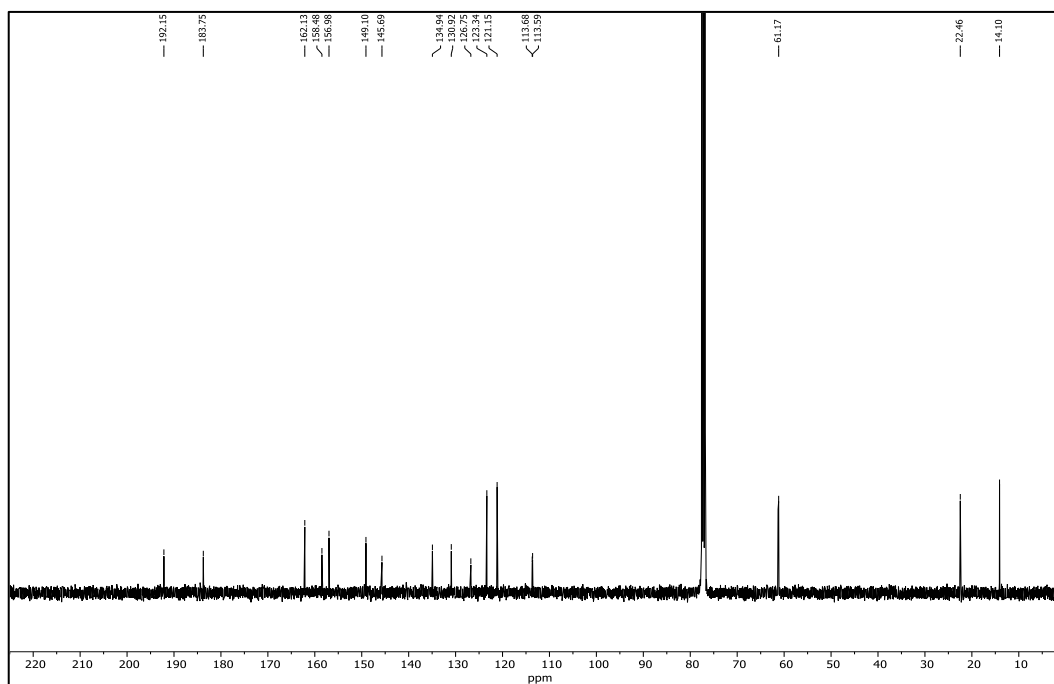
**Figure S6.** NOESY (CDCl<sub>3</sub>) spectrum of compound **1**



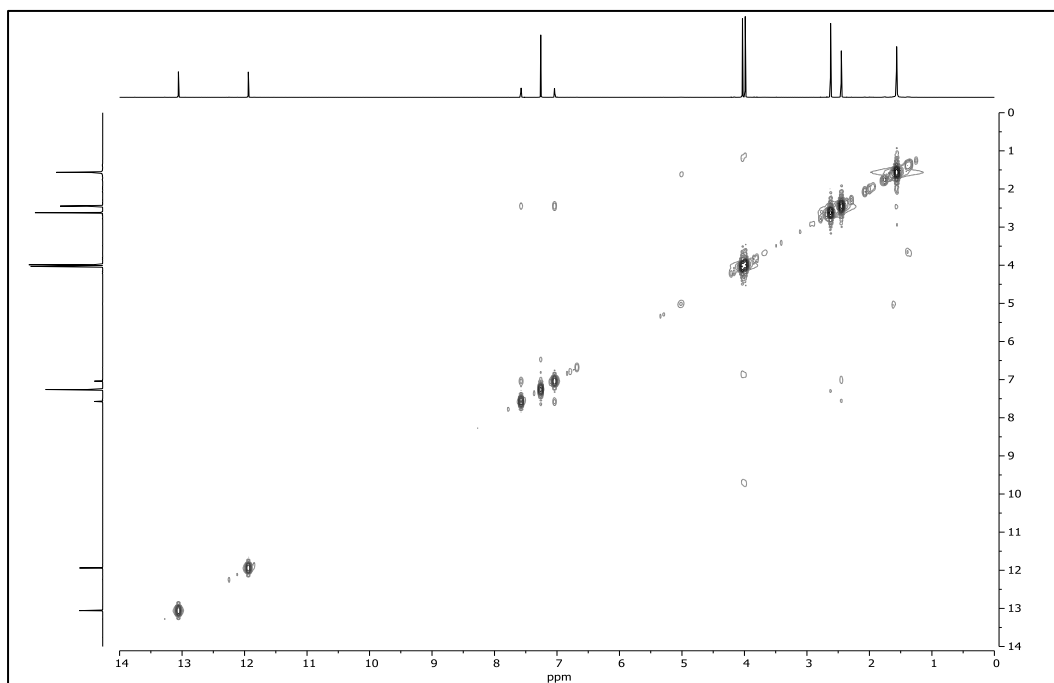
**Figure S7.** MS spectrum of compound **1**



**Figure S8.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of compound **2**

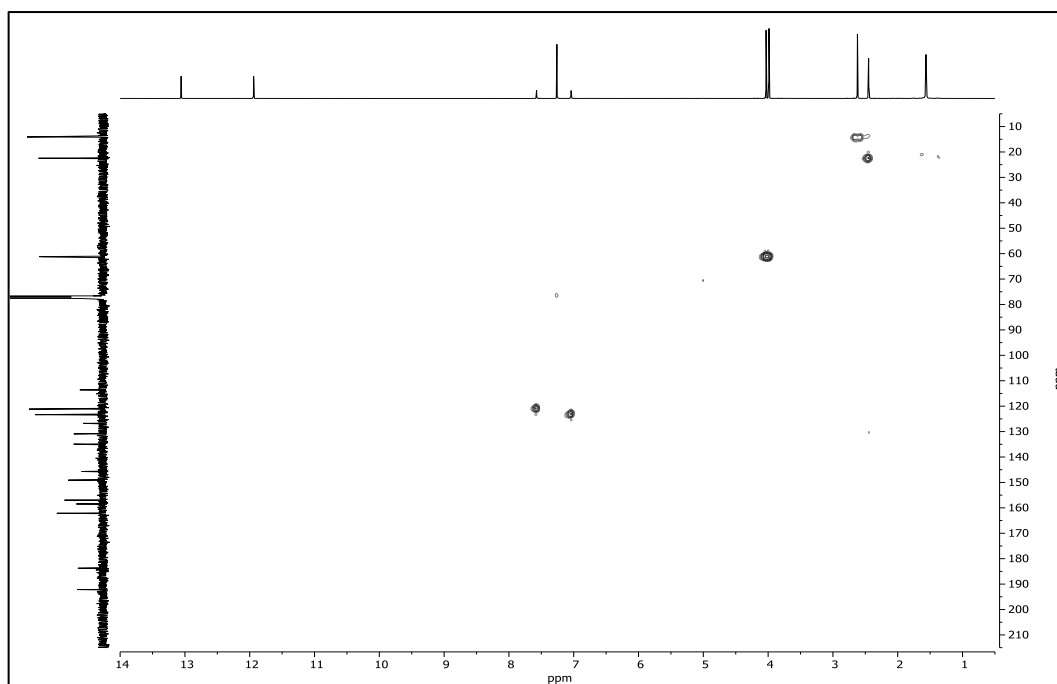


**Figure S9.**  $^{13}\text{C}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of compound **2**

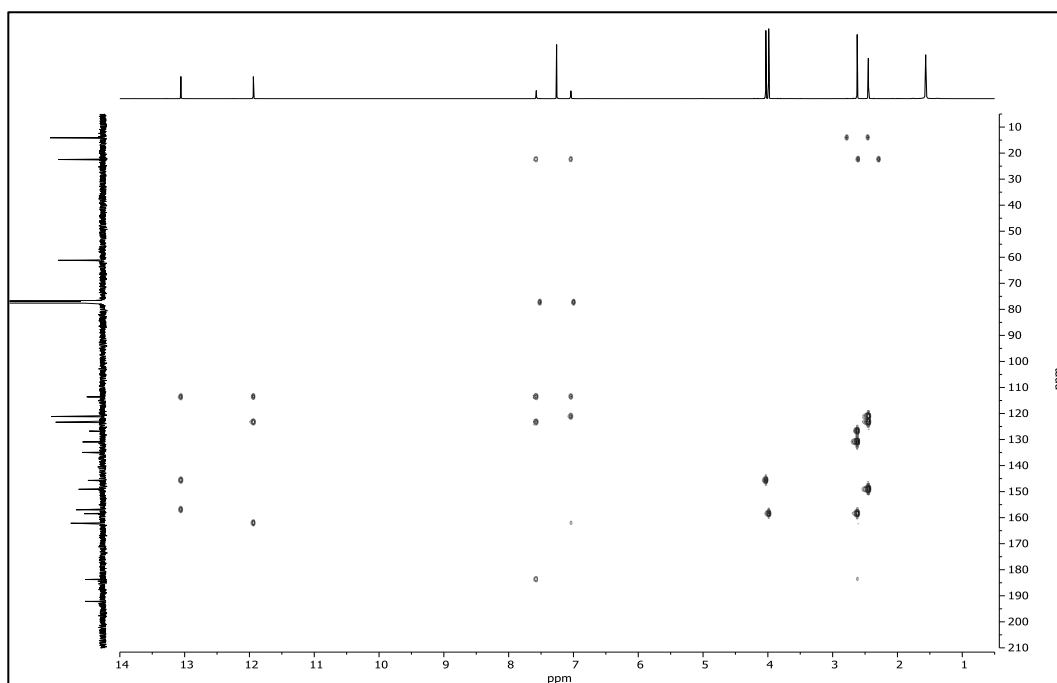


**Figure S10.** COSY ( $\text{CDCl}_3$ ) spectrum of compound **2**

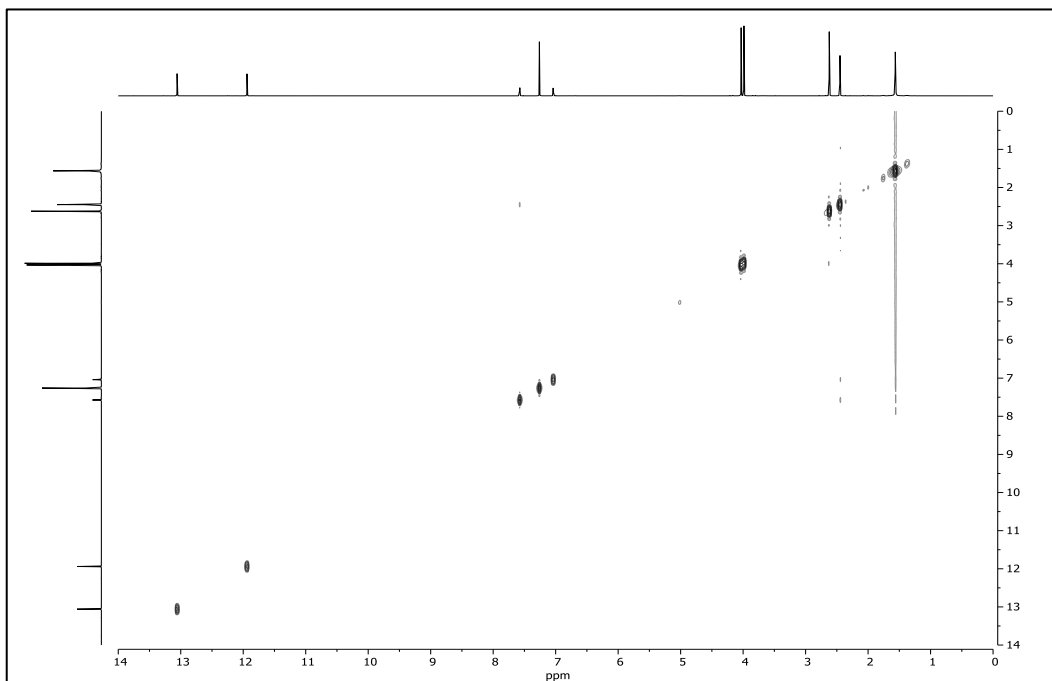




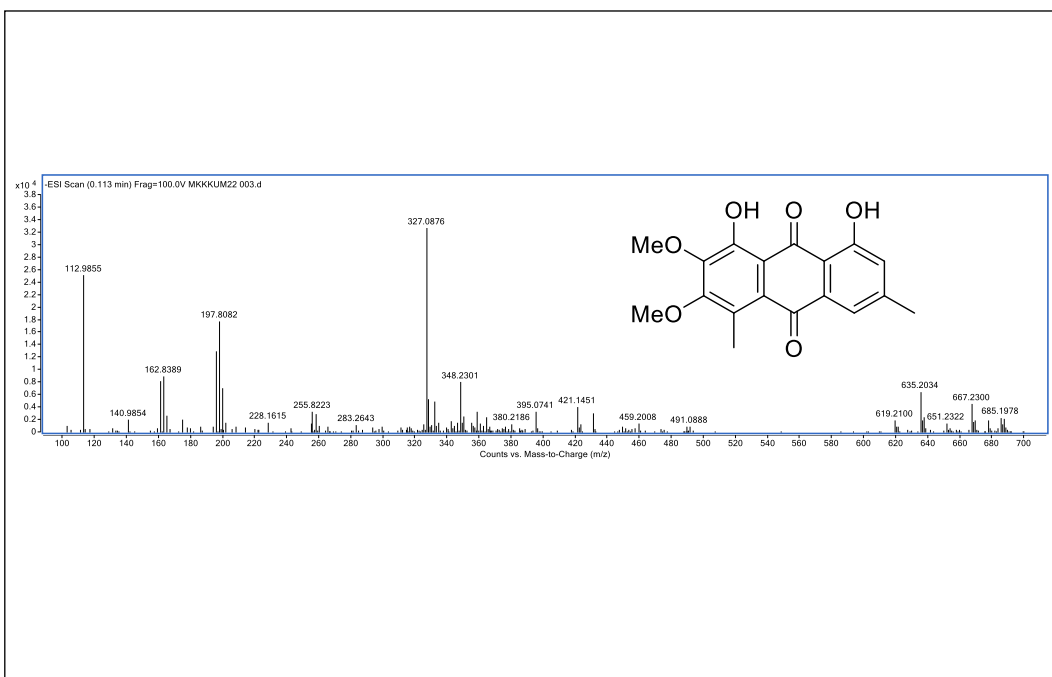
**Figure S11.** HSQC (CDCl<sub>3</sub>) spectrum of compound **2**



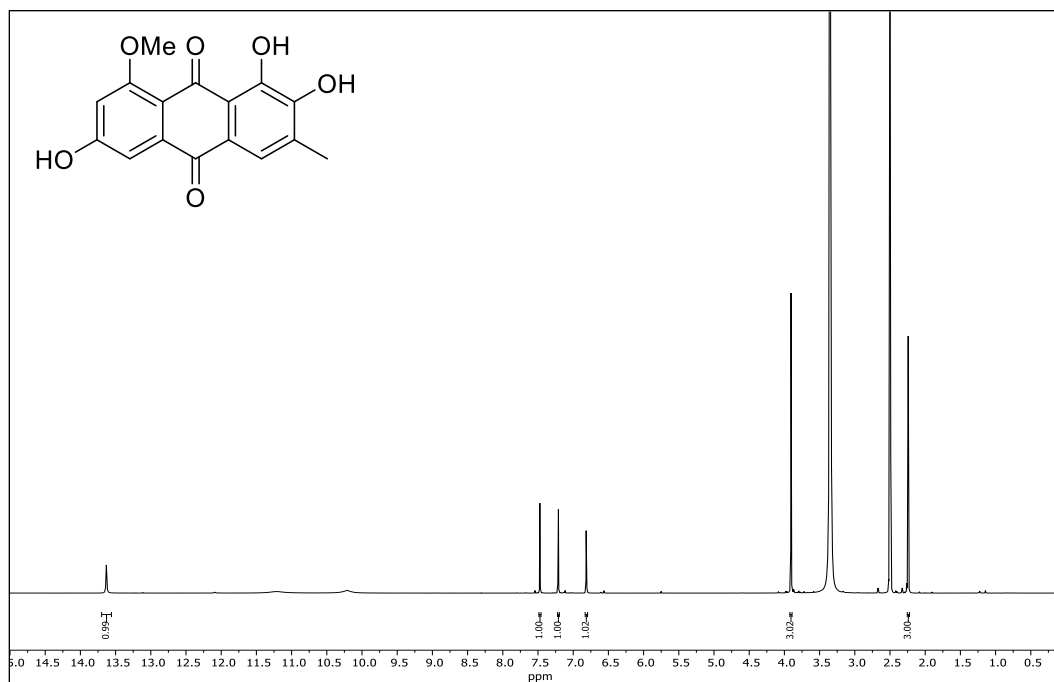
**Figure S12.** HMBC (CDCl<sub>3</sub>) spectrum of compound **2**



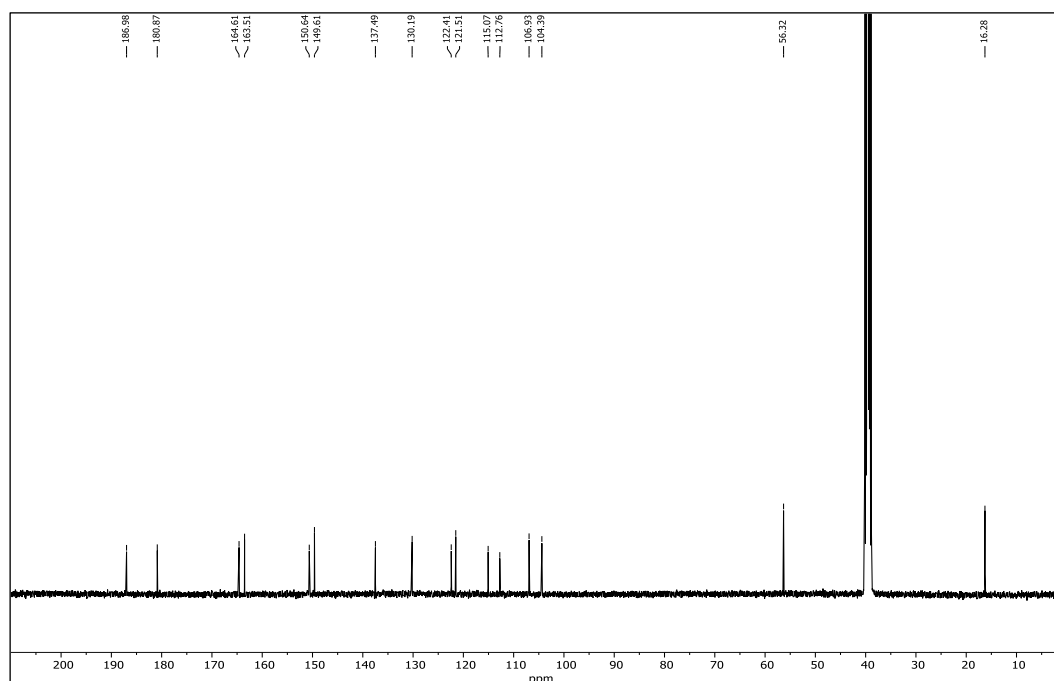
**Figure S13.** NOESY (CDCl<sub>3</sub>) spectrum of compound **2**



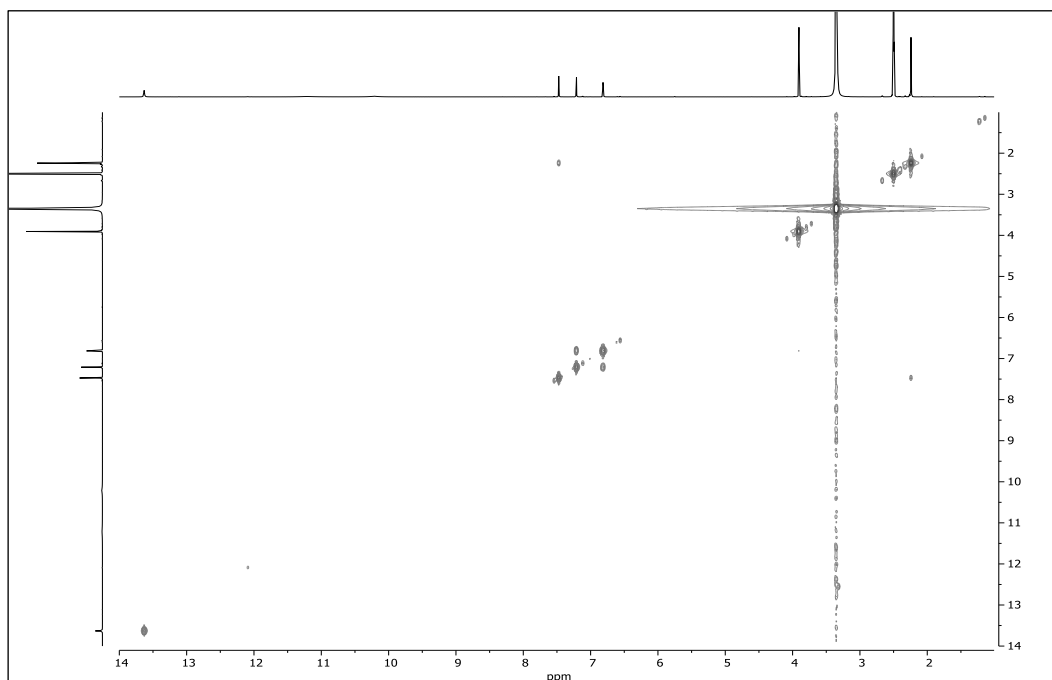
**Figure S14.** MS spectrum of compound **2**



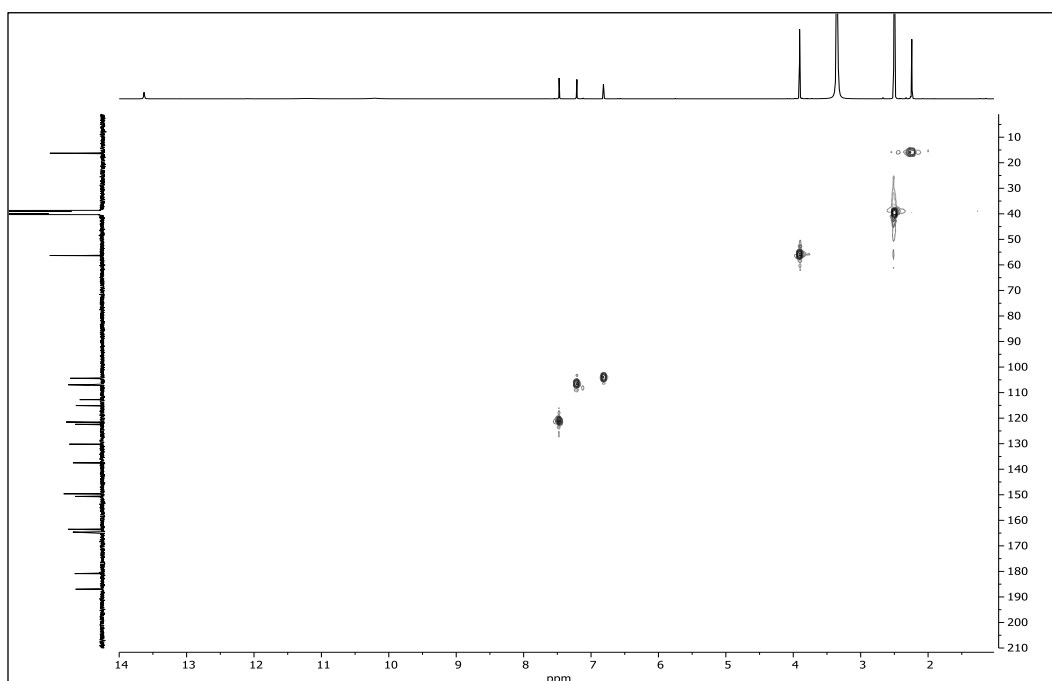
**Figure S15.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of compound **3**



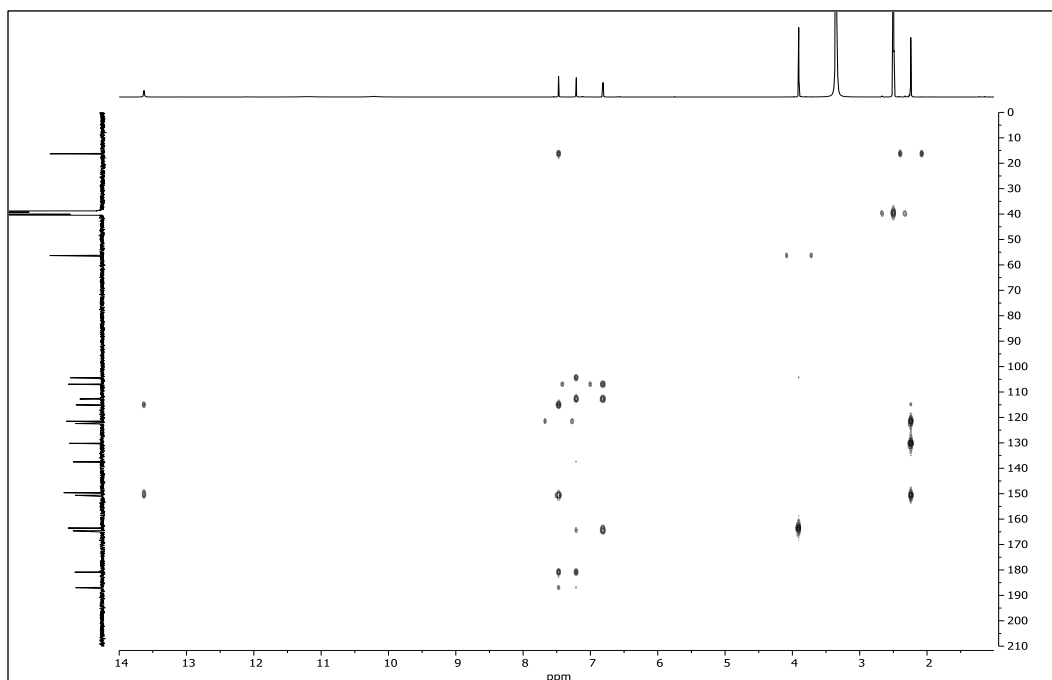
**Figure S16.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of compound **3**



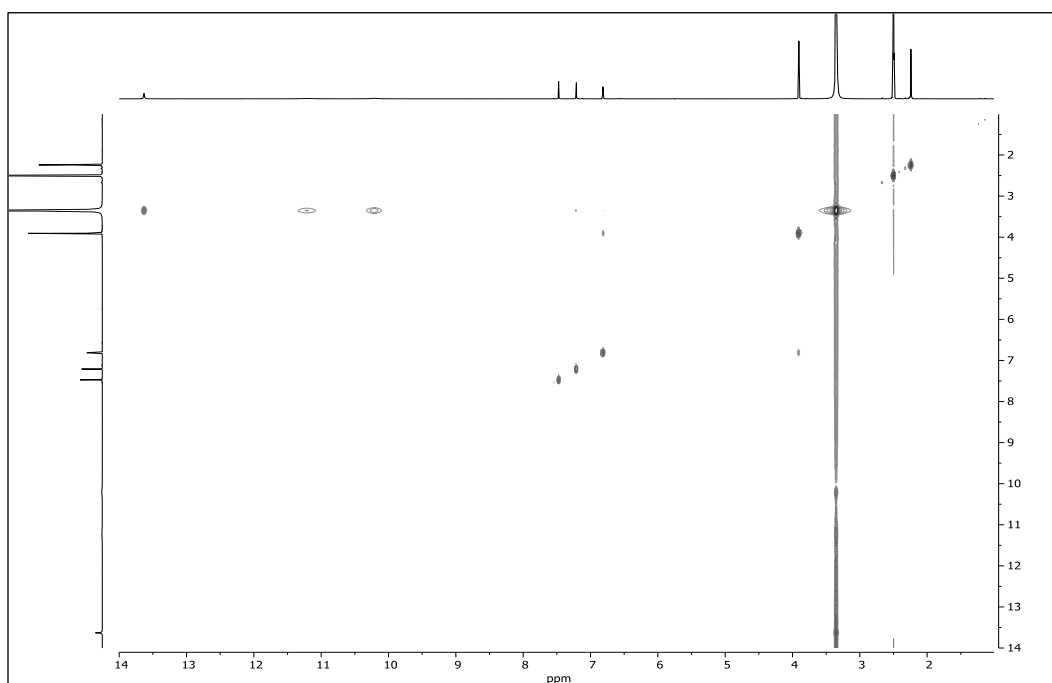
**Figure S17.** COSY (CDCl<sub>3</sub>) spectrum of compound **3**



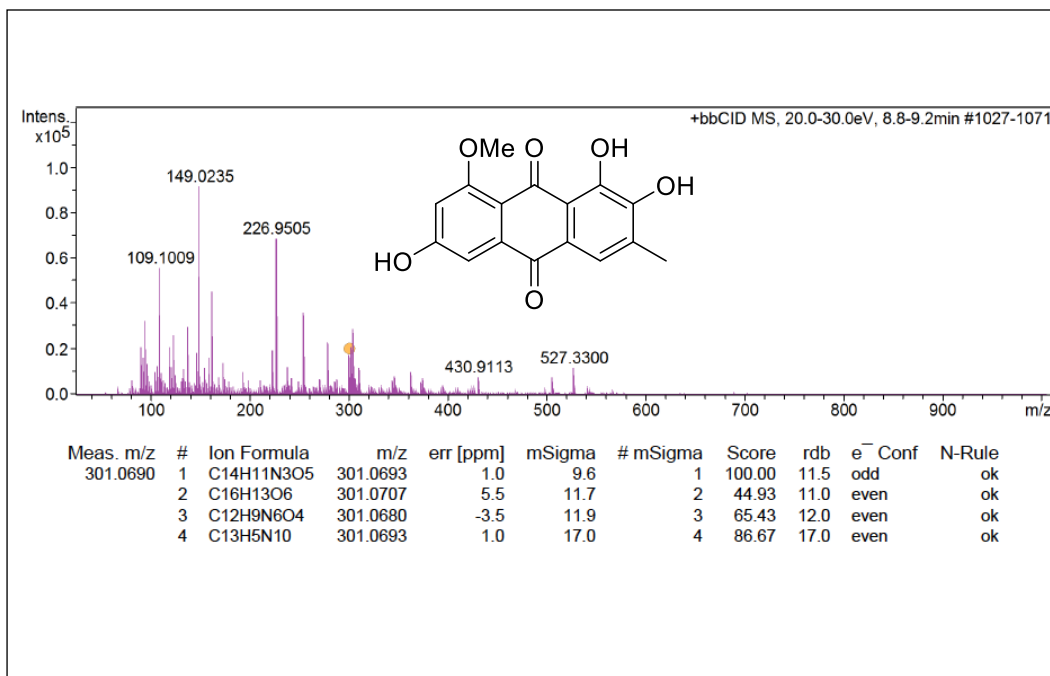
**Figure S18.** HSQC (CDCl<sub>3</sub>) spectrum of compound **3**



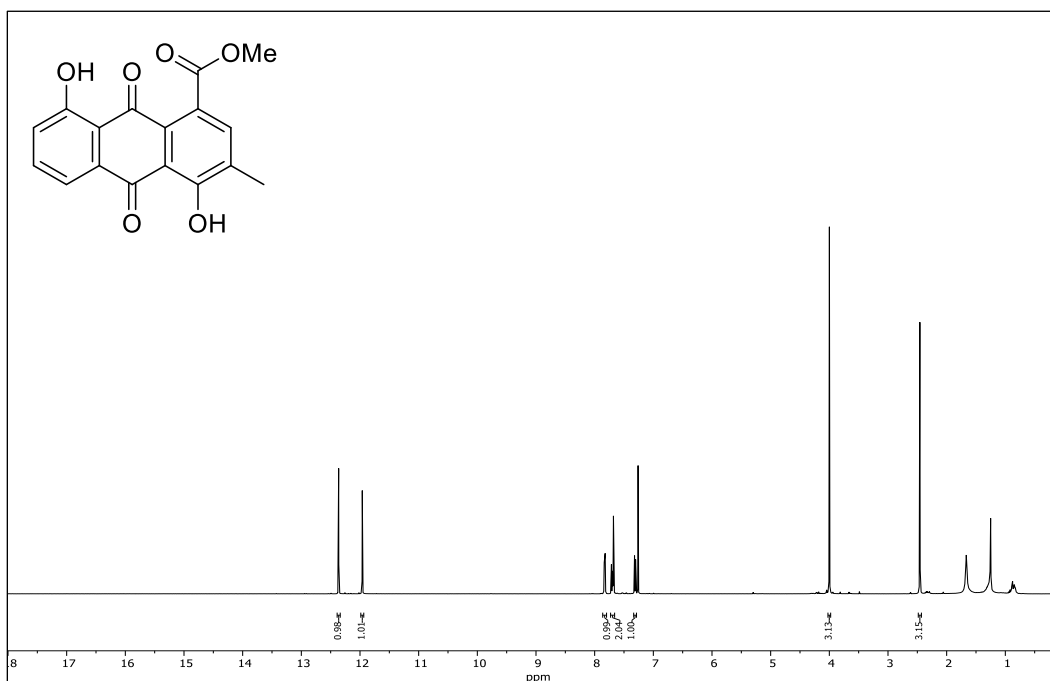
**Figure S19.** HMBC (CDCl<sub>3</sub>) spectrum of compound **3**



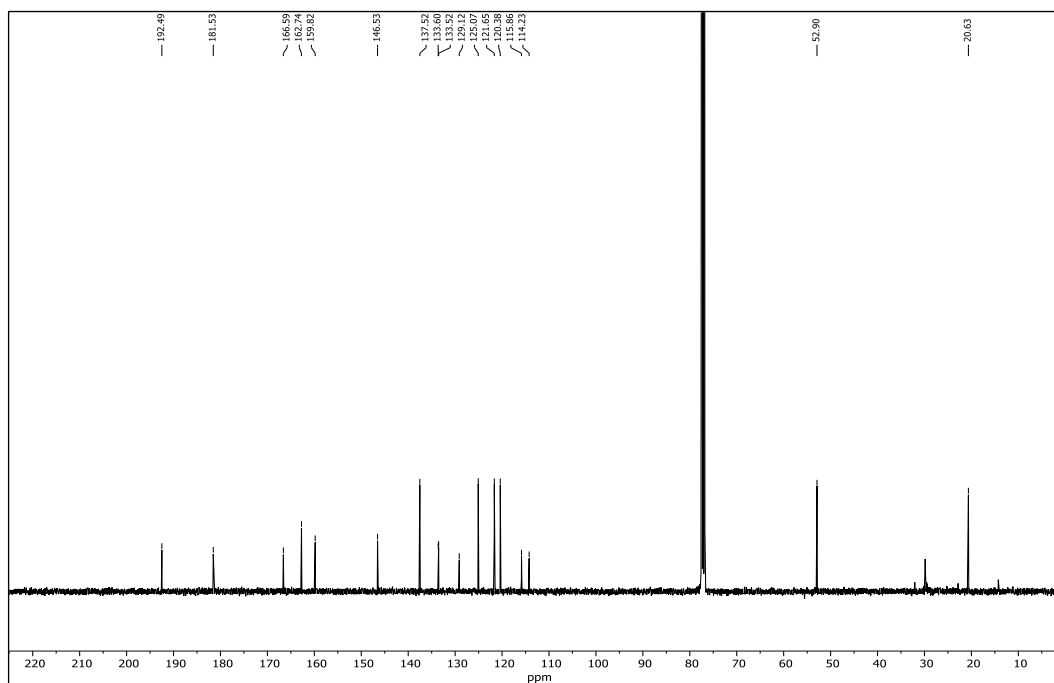
**Figure S20.** NOESY (CDCl<sub>3</sub>) spectrum of compound **3**



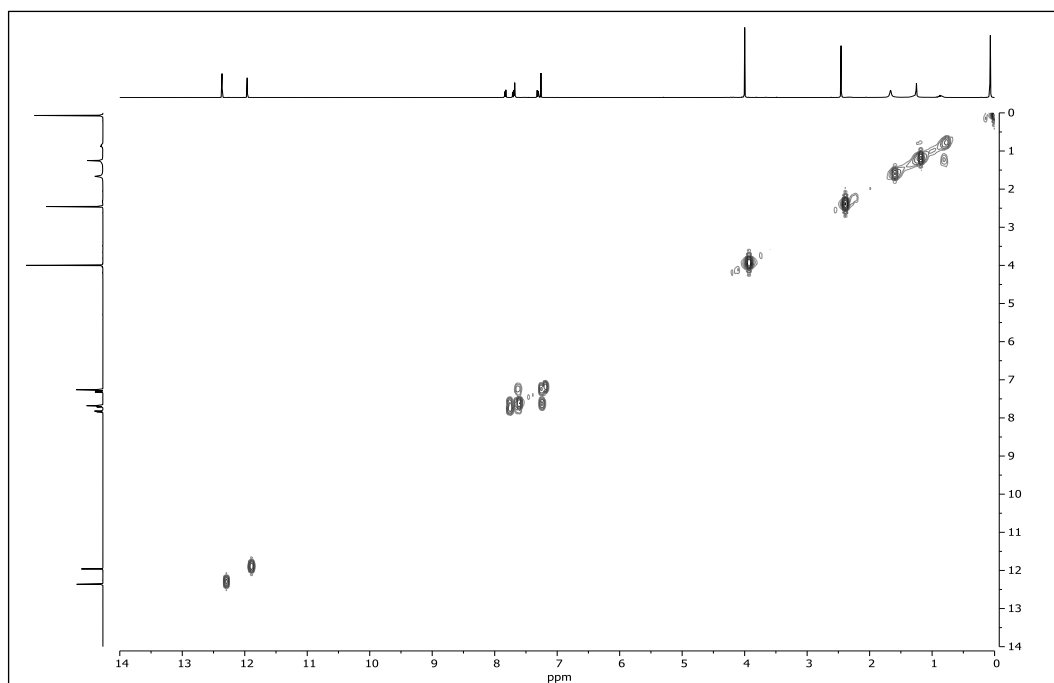
**Figure S21.** MS spectrum of compound **3**



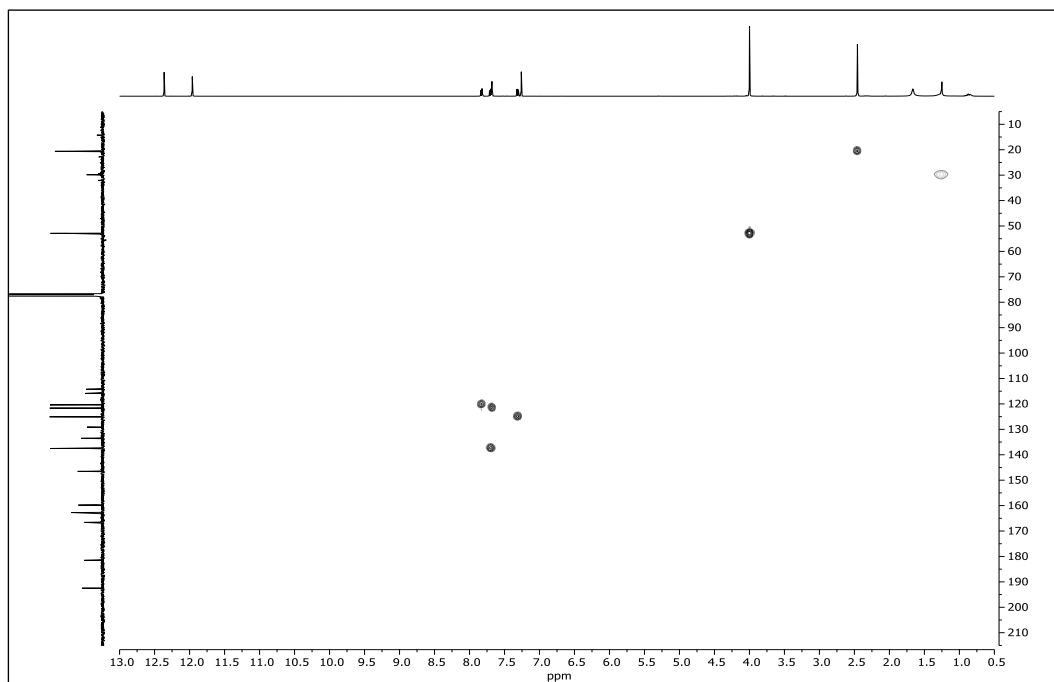
**Figure S22.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of compound **4**



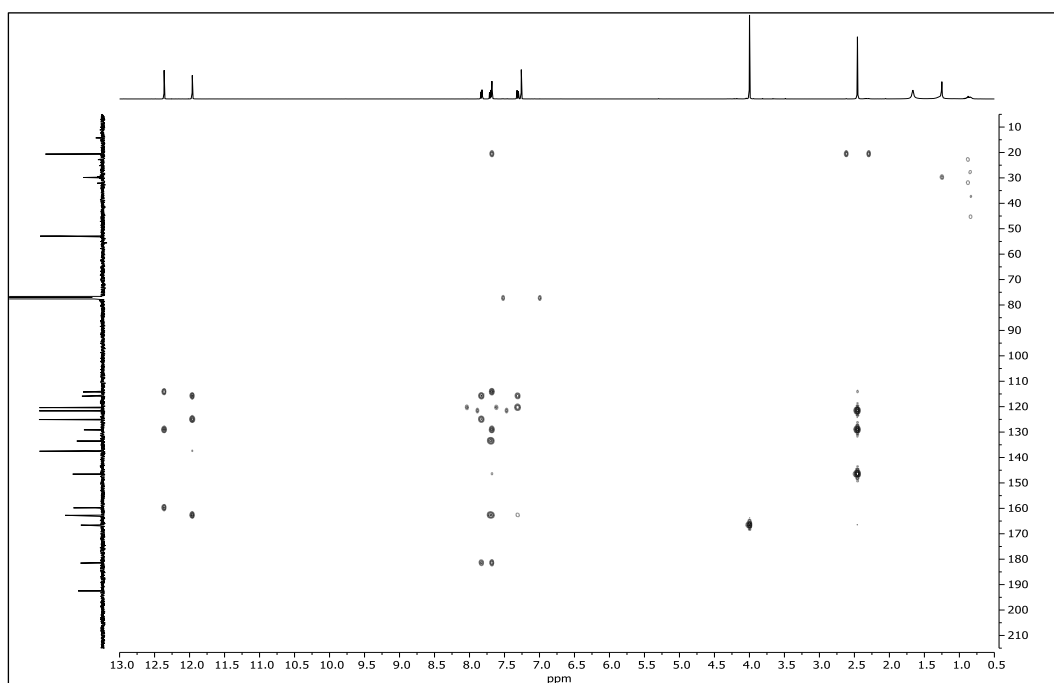
**Figure S23.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of compound **4**



**Figure S24.** COSY ( $\text{CDCl}_3$ ) spectrum of compound **4**

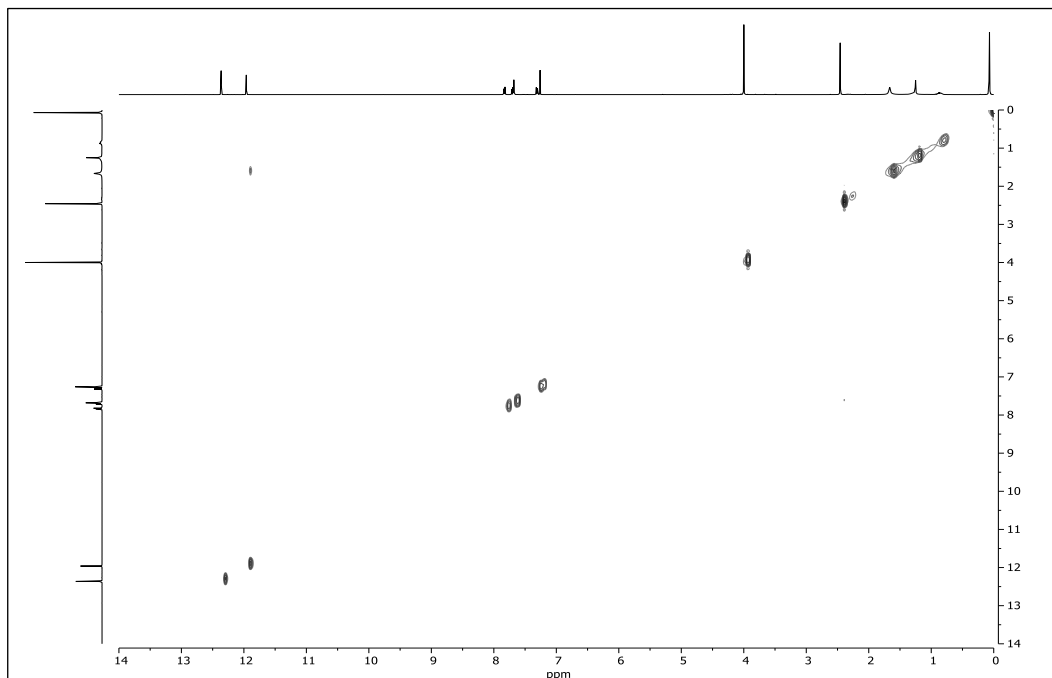


**Figure S25.** HSQC (CDCl<sub>3</sub>) spectrum of compound **4**

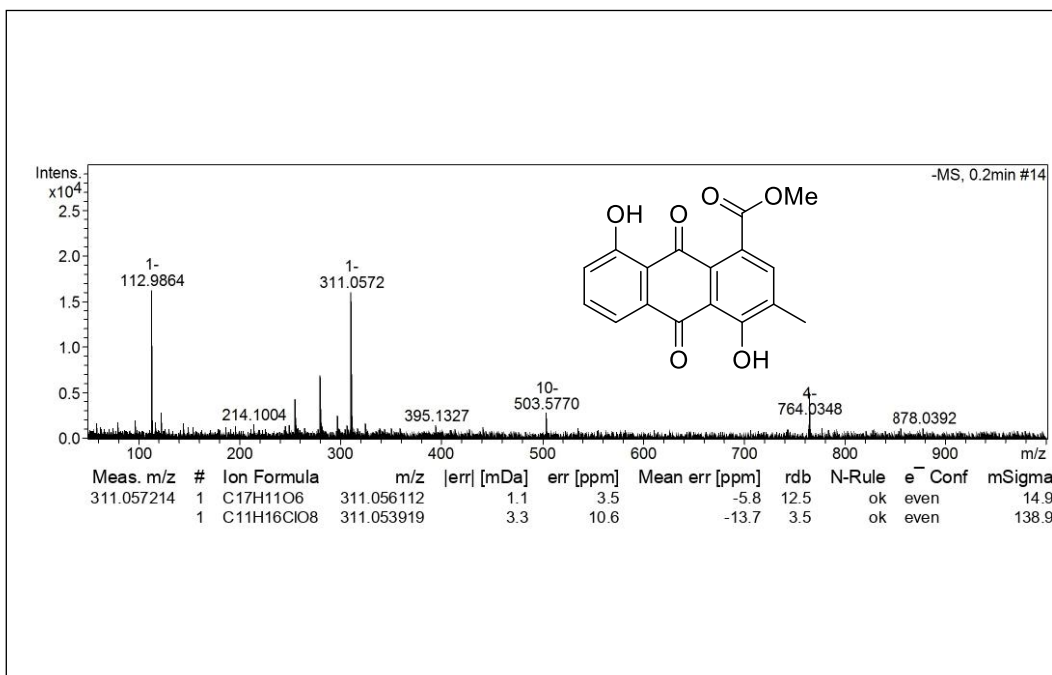


**Figure S26.** HMBC (CDCl<sub>3</sub>) spectrum of compound **4**

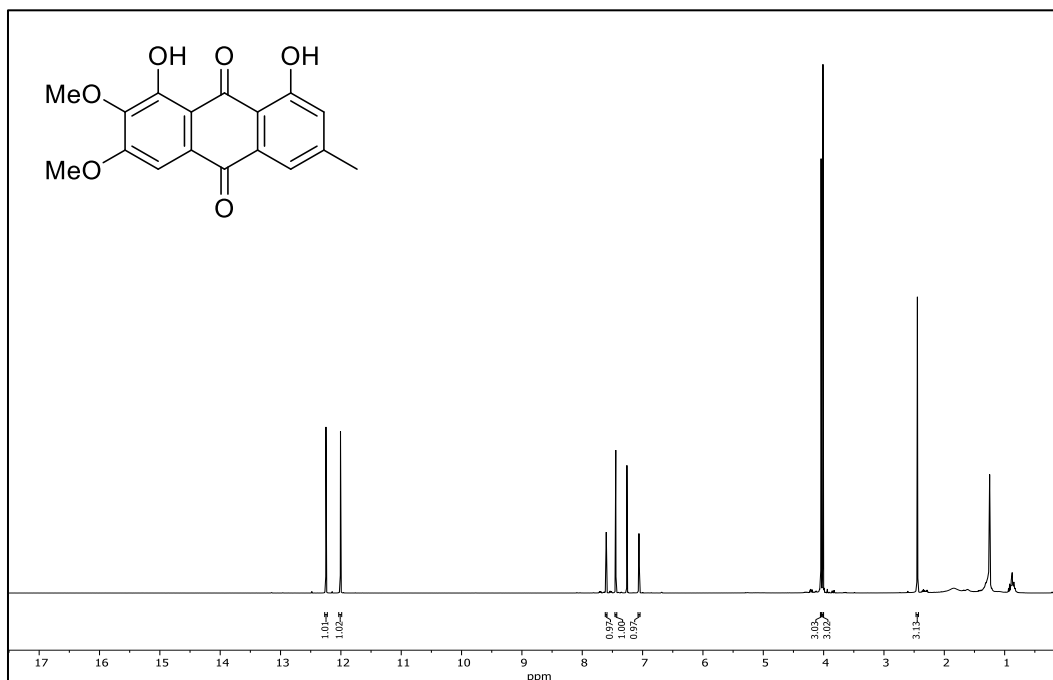




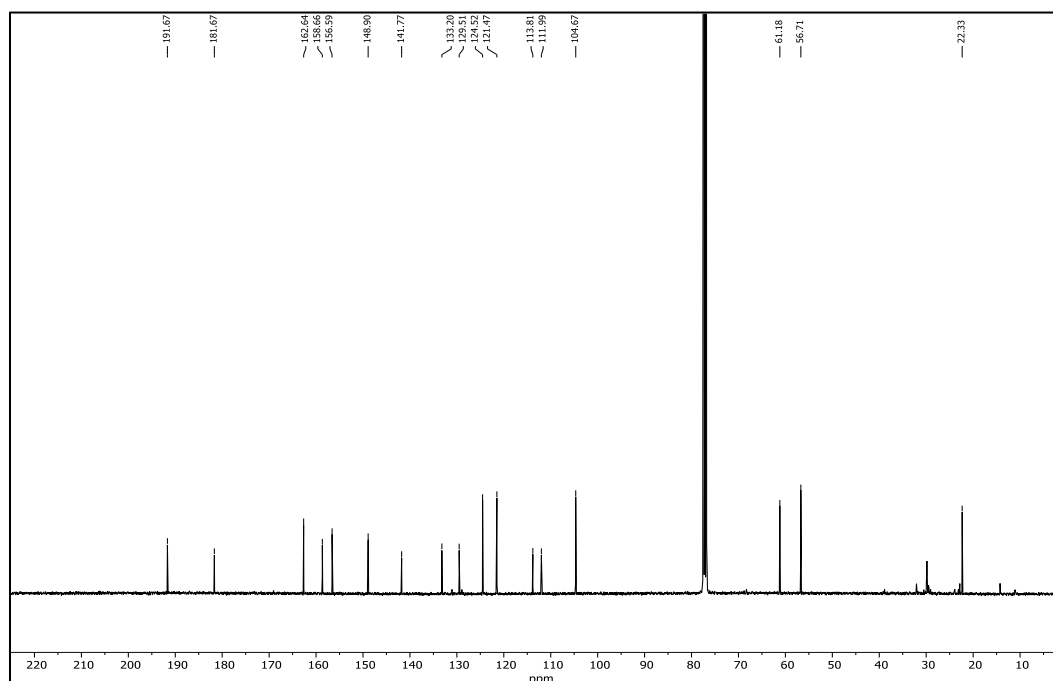
**Figure S27.** NOESY (CDCl<sub>3</sub>) spectrum of compound **4**



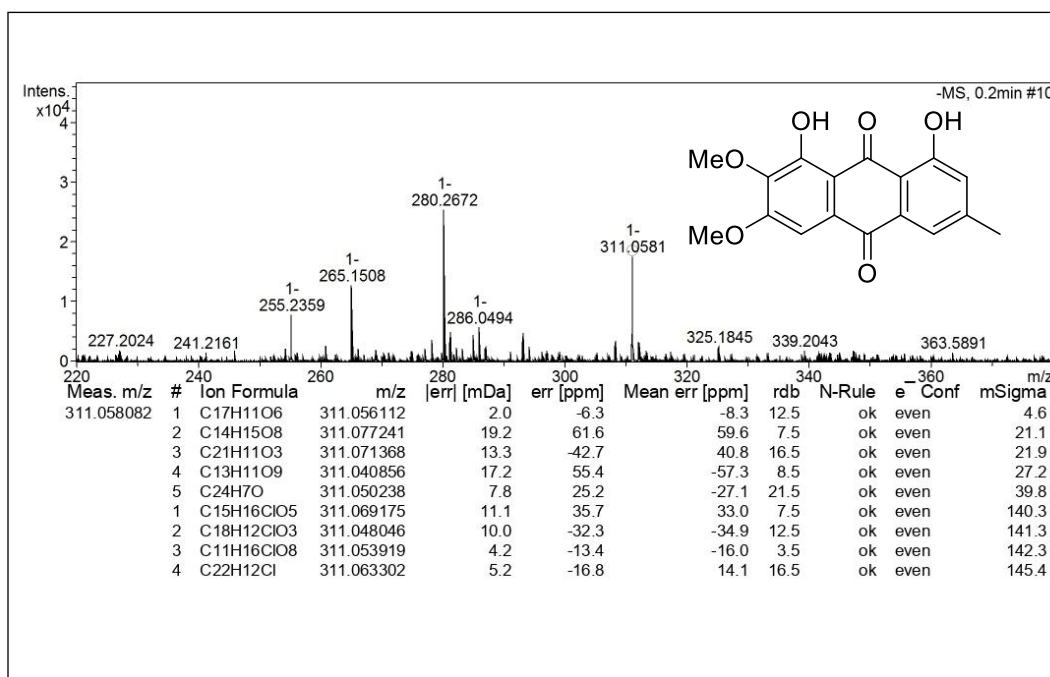
**Figure S28.** MS spectrum of compound **4**



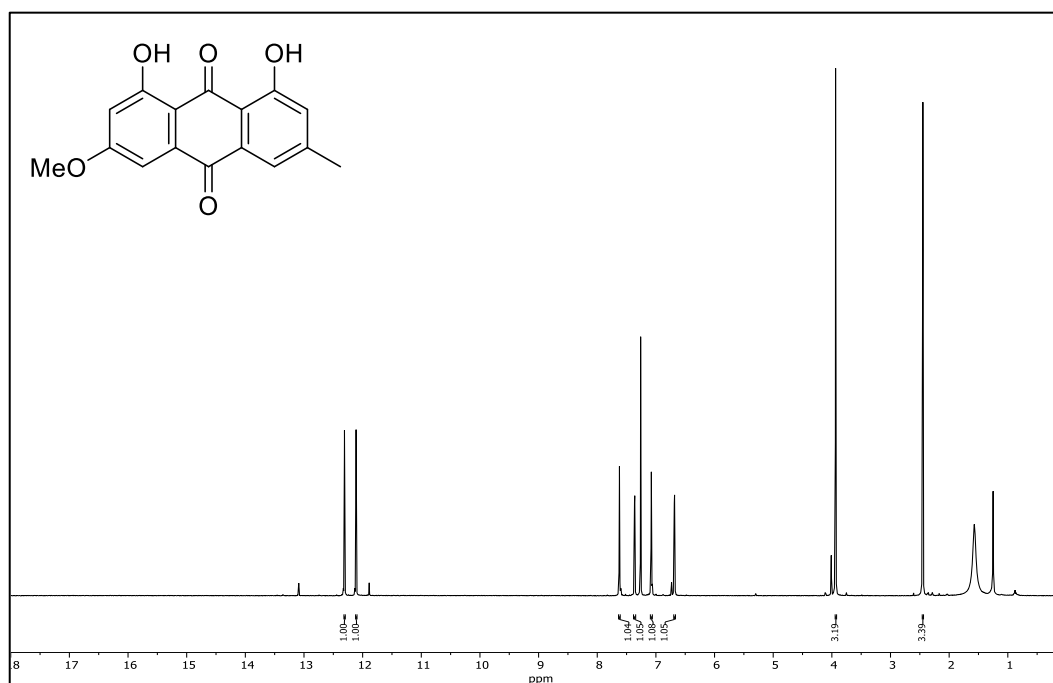
**Figure S29.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 7-Methoxyphyscion **5**



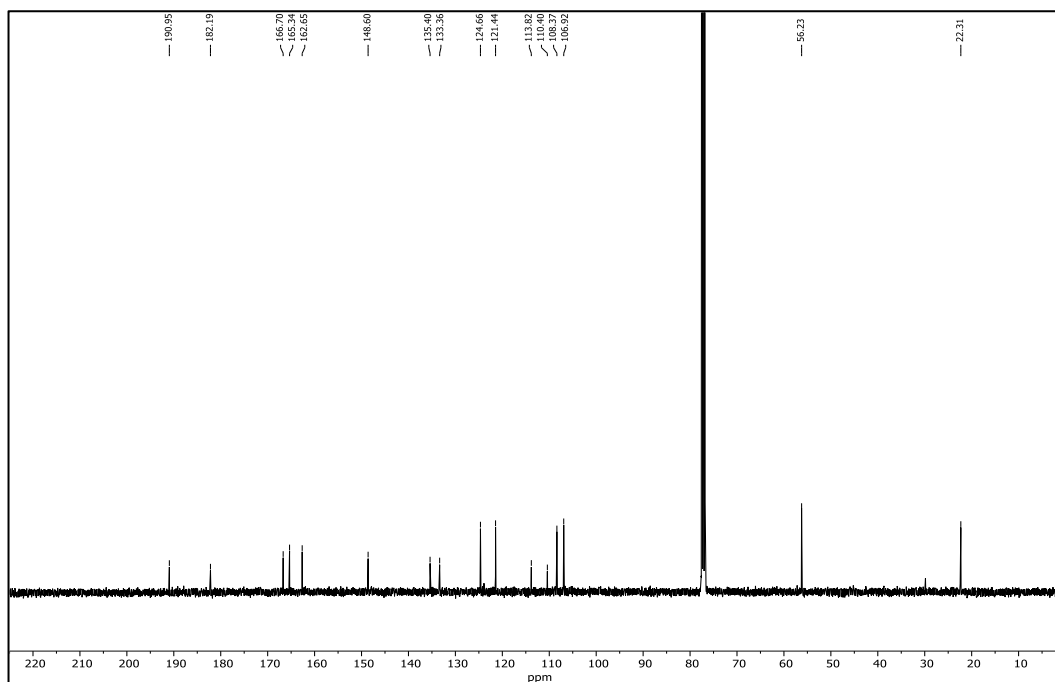
**Figure S30.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of 7-Methoxyphyscion **5**



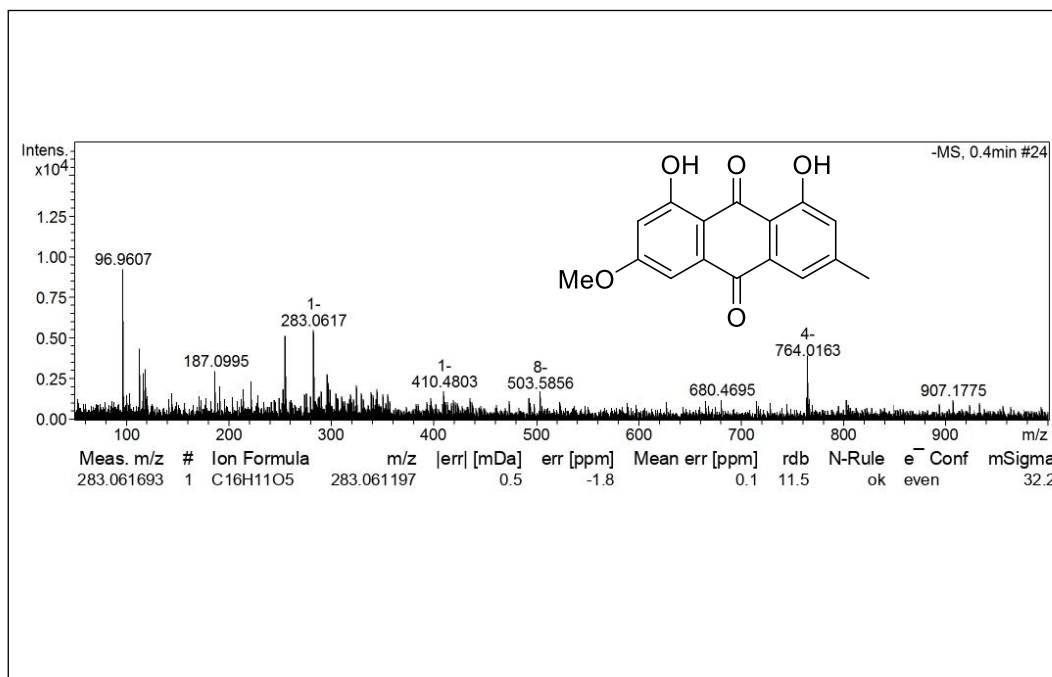
**Figure S31.** MS spectrum of 7-Methoxyphyscion **5**



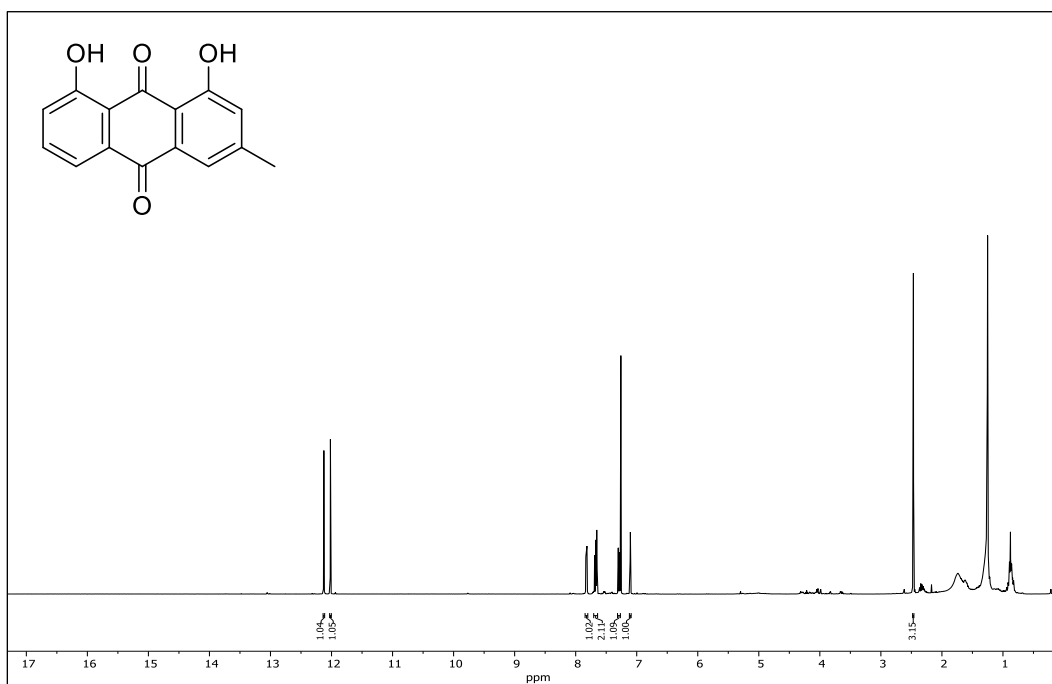
**Figure S32**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of Physcion **6**



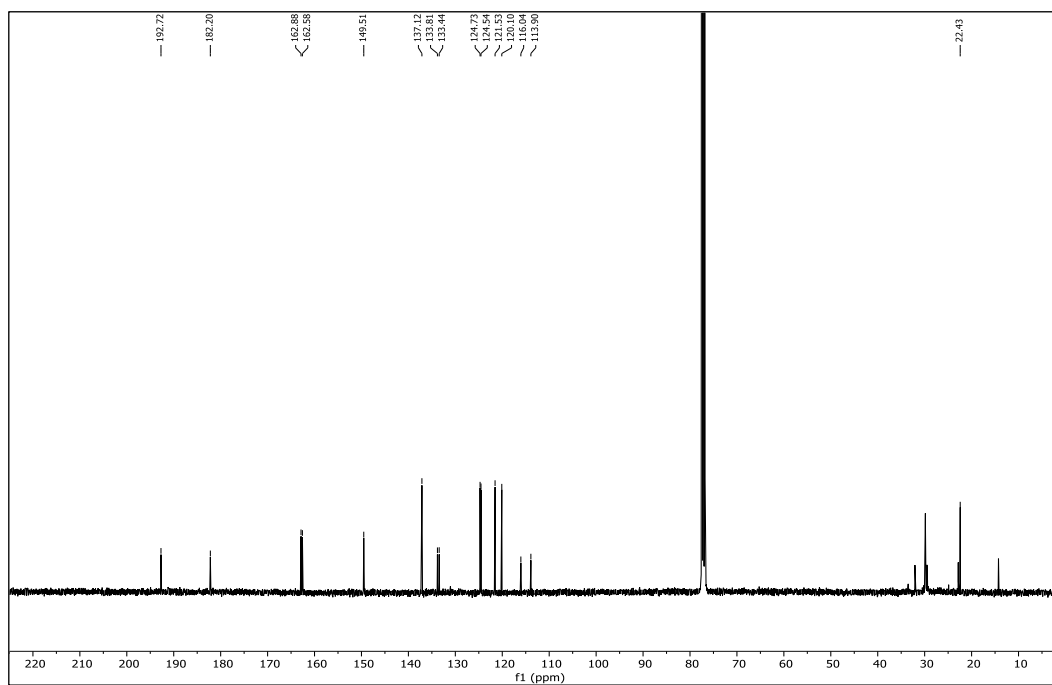
**Figure S33**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of Physcion **6**



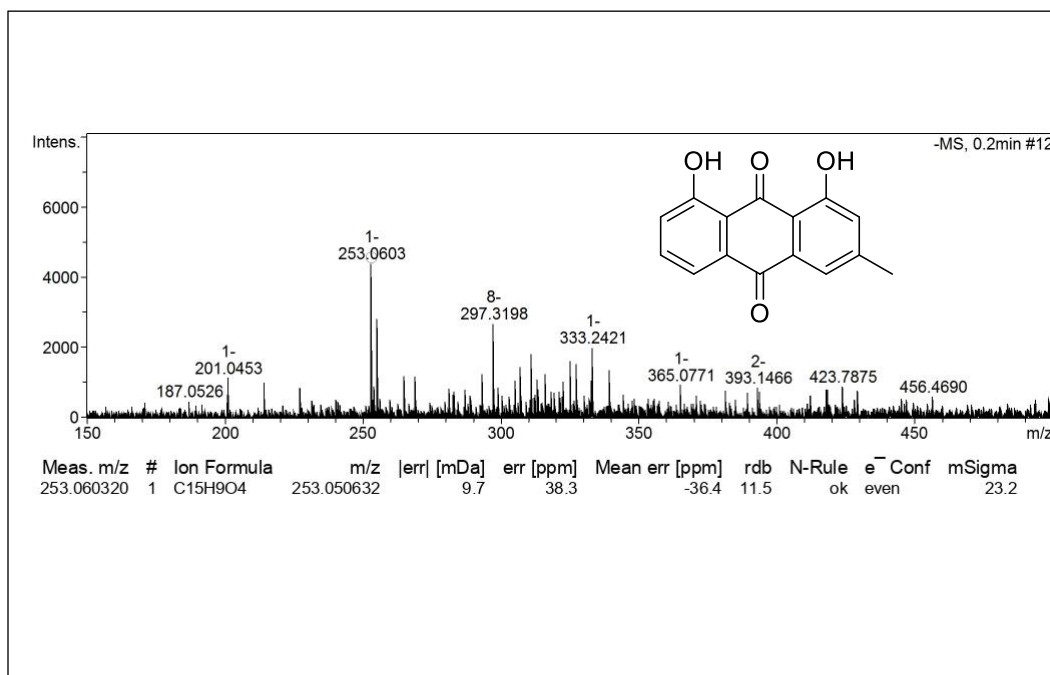
**Figure S34.** MS spectrum of Physcion **6**



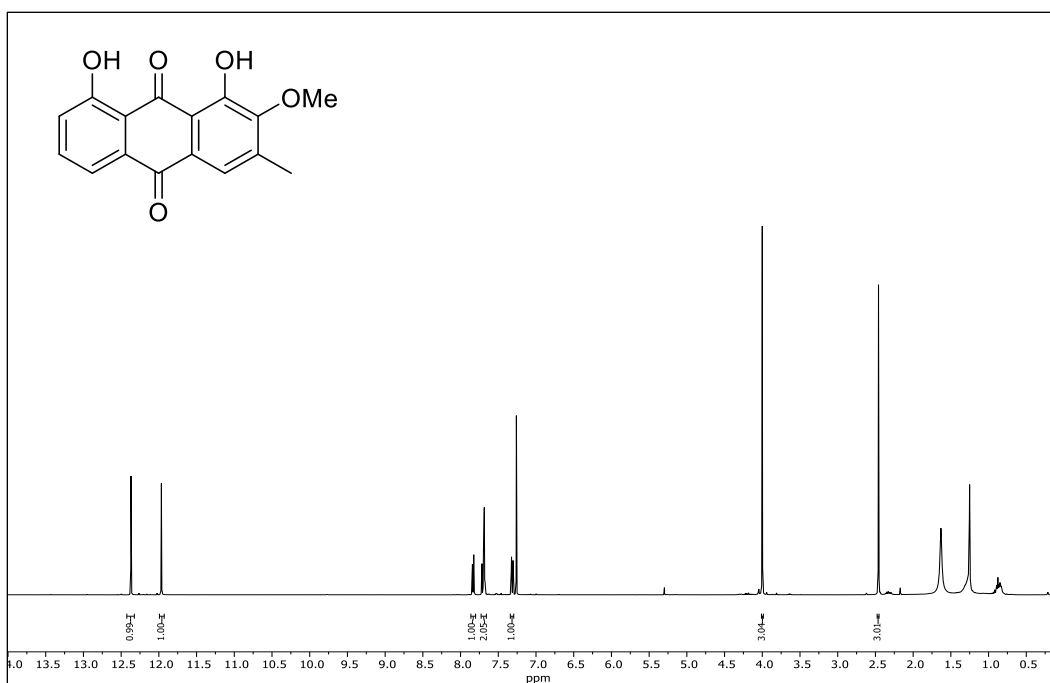
**Figure S35.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of Chrysophanol **7**



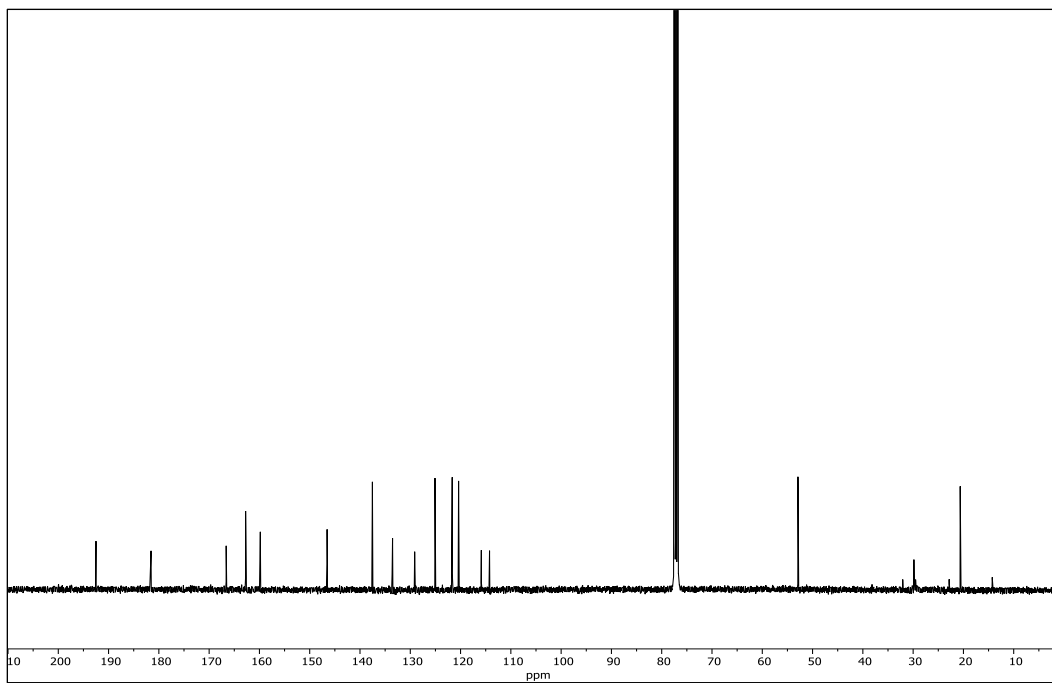
**Figure S36.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of Chrysophanol **7**



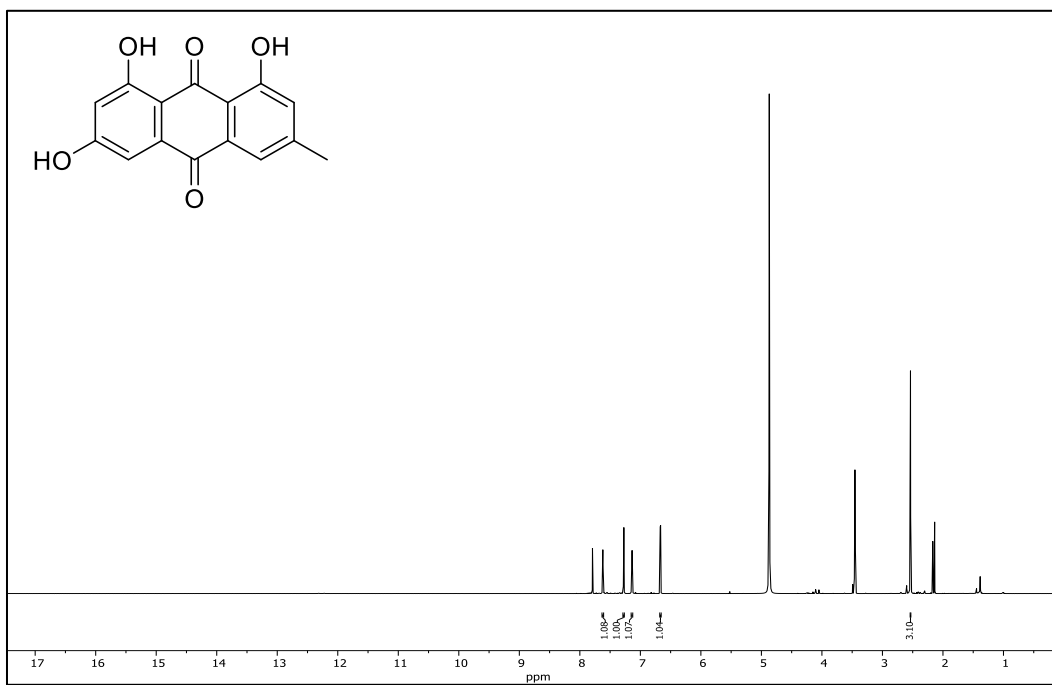
**Figure S37.** MS spectrum of Chrysophanol **7**



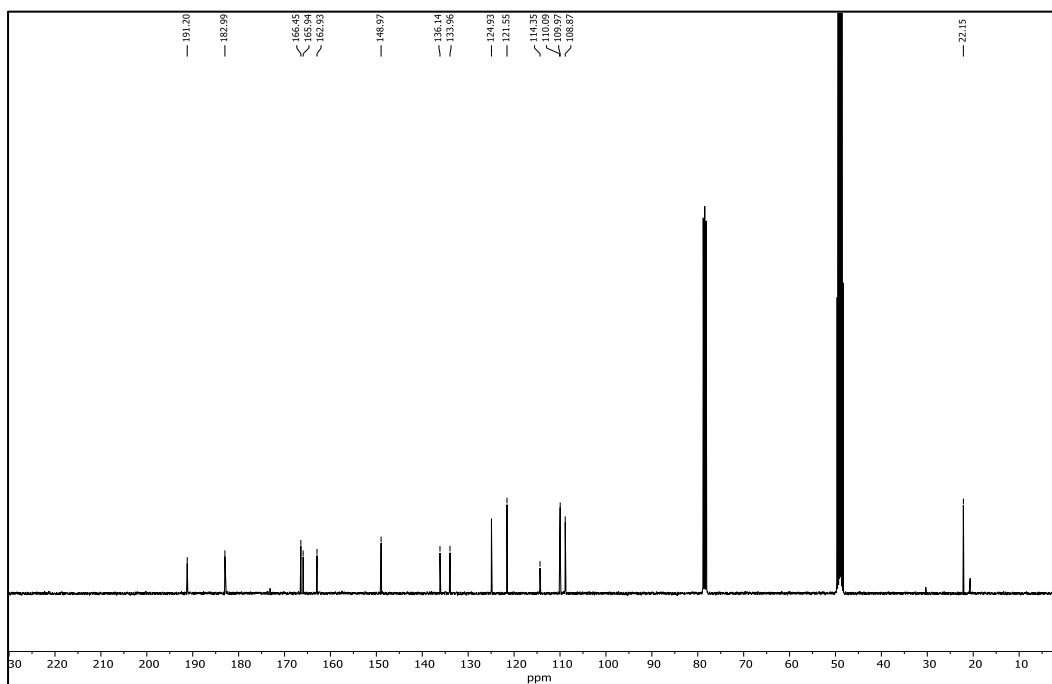
**Figure S38.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-Methoxychrysophanol **8**



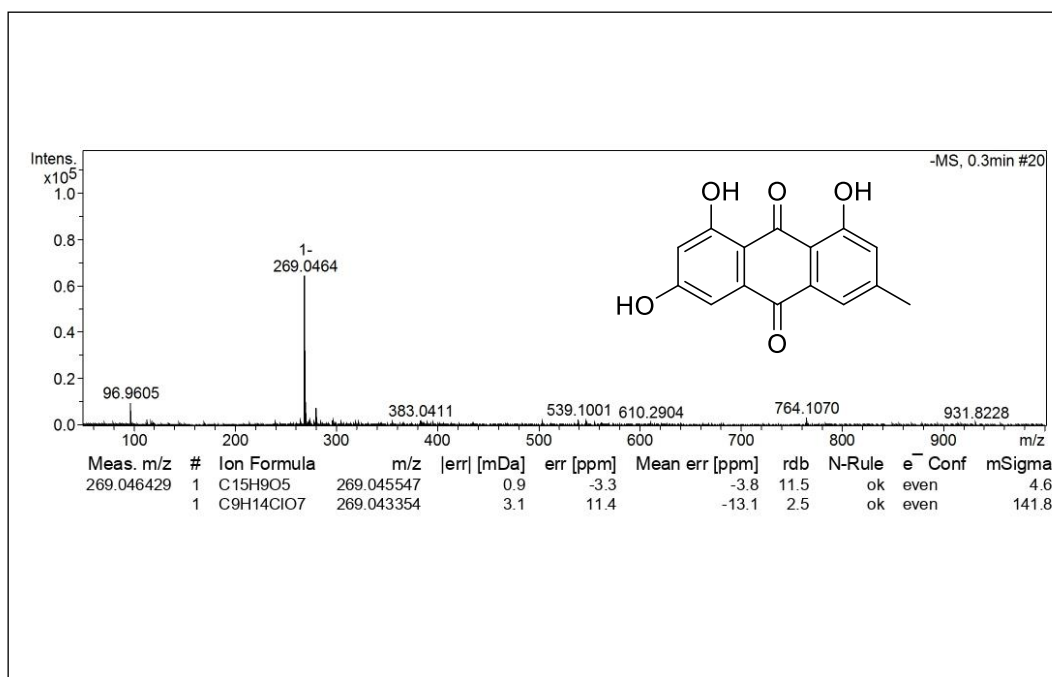
**Figure S39.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of 2-Methoxychrysophanol **8**



**Figure S40.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{CD}_3\text{OD}$ ) spectrum of Emodin **9**

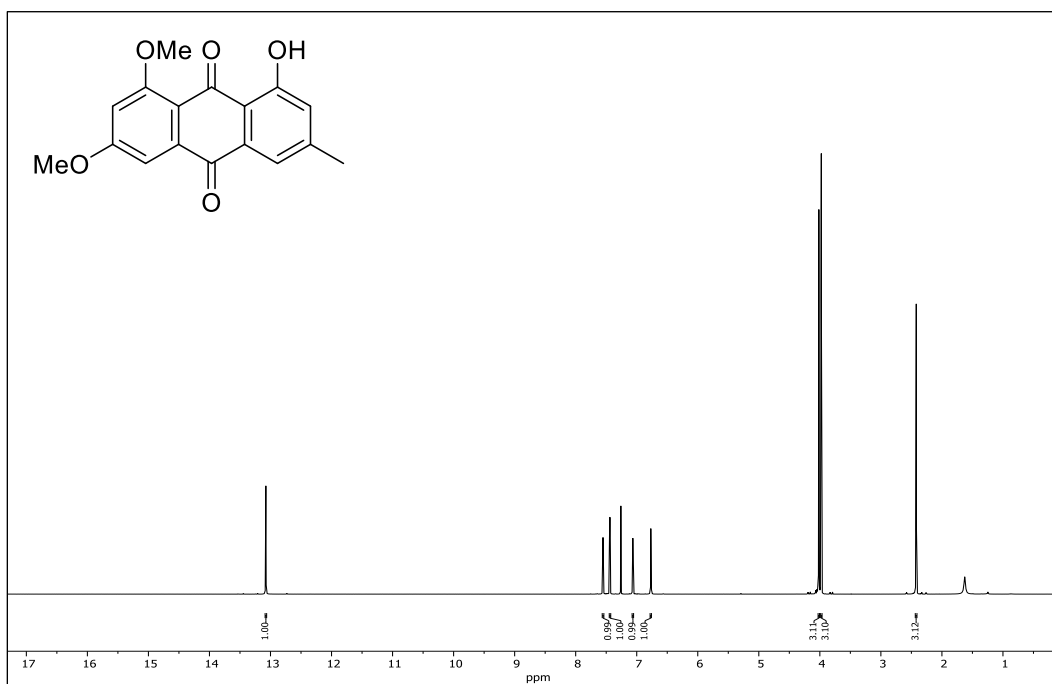


**Figure S41.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3+\text{CD}_3\text{OD}$ ) spectrum of Emodin **9**

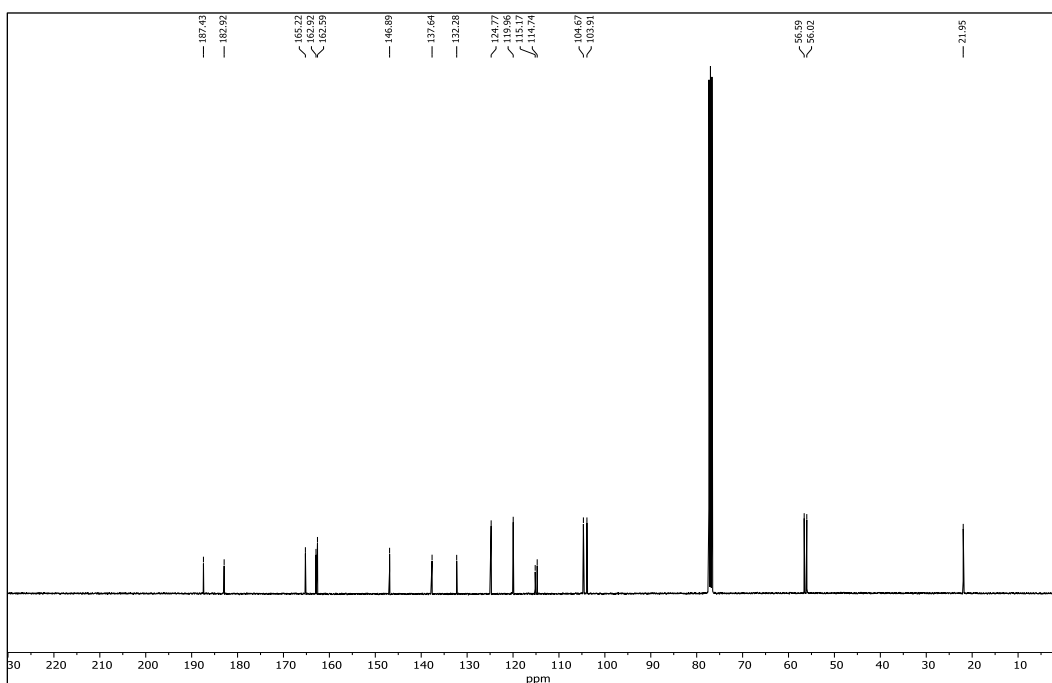


**Figure S42.** MS spectrum of Emodin **9**

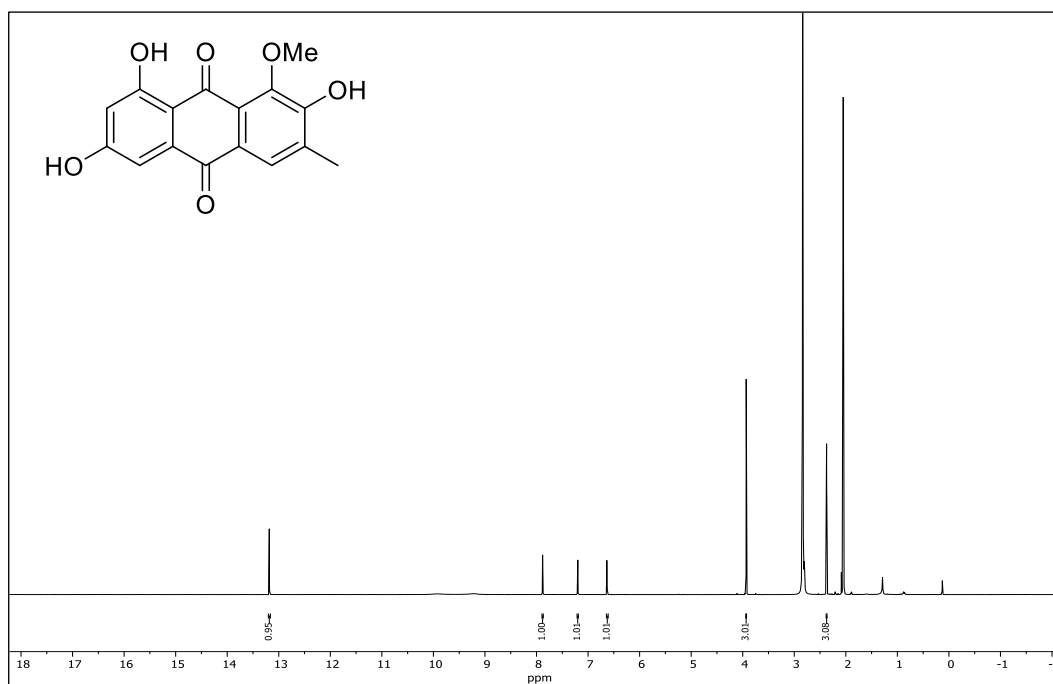




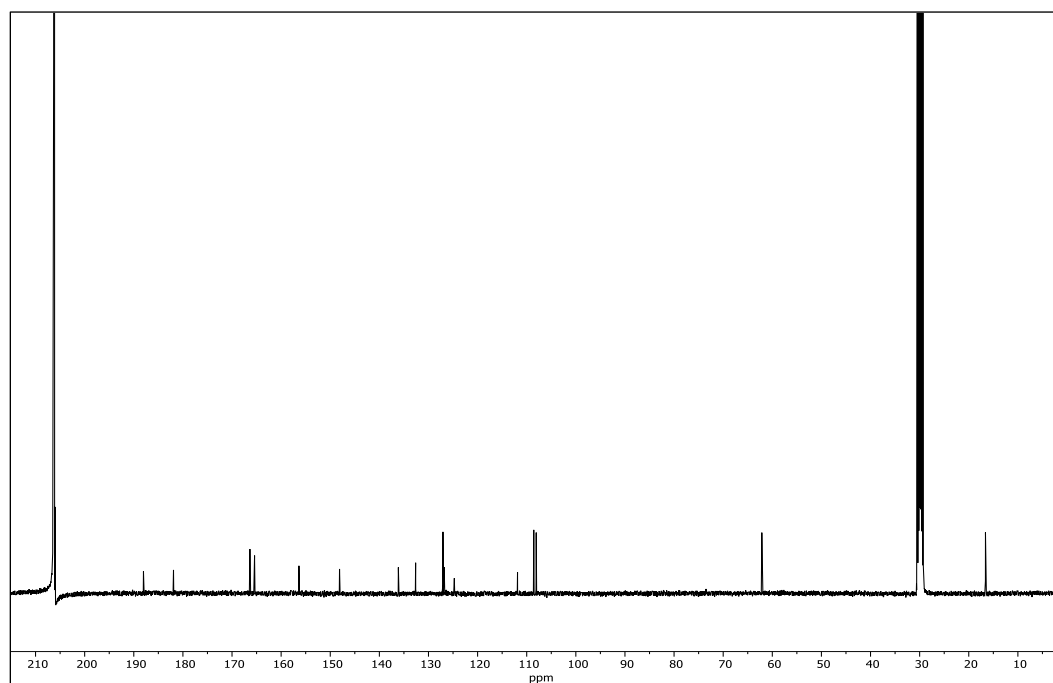
**Figure S43.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of Emodin-6,8-dimethyl ether **10**



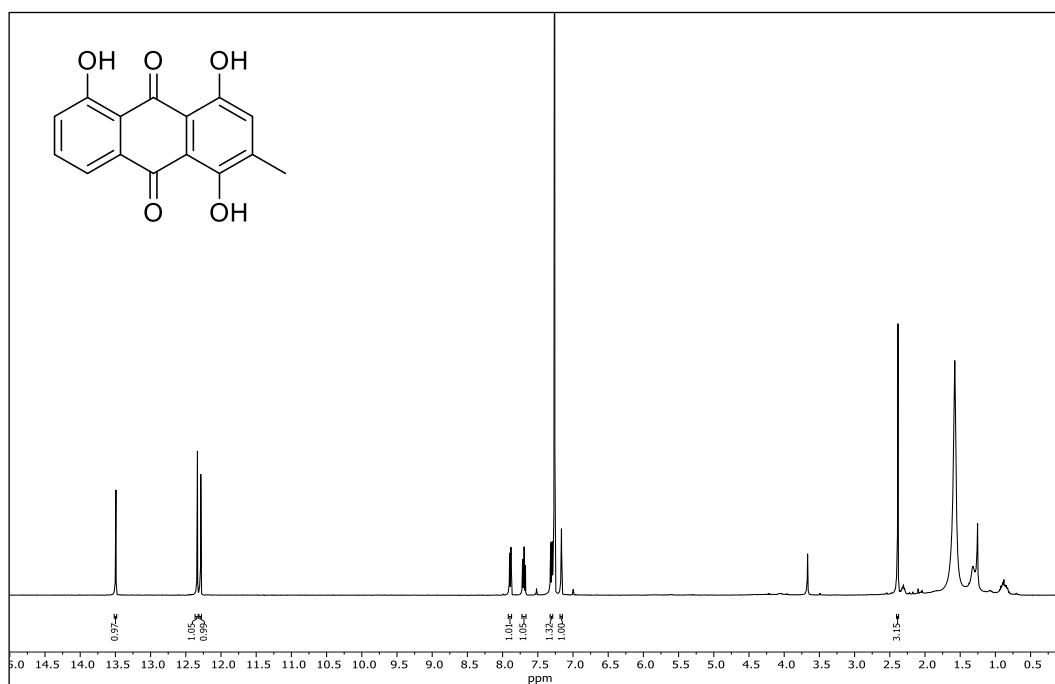
**Figure S44.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of Emodin-6,8-dimethyl ether **10**



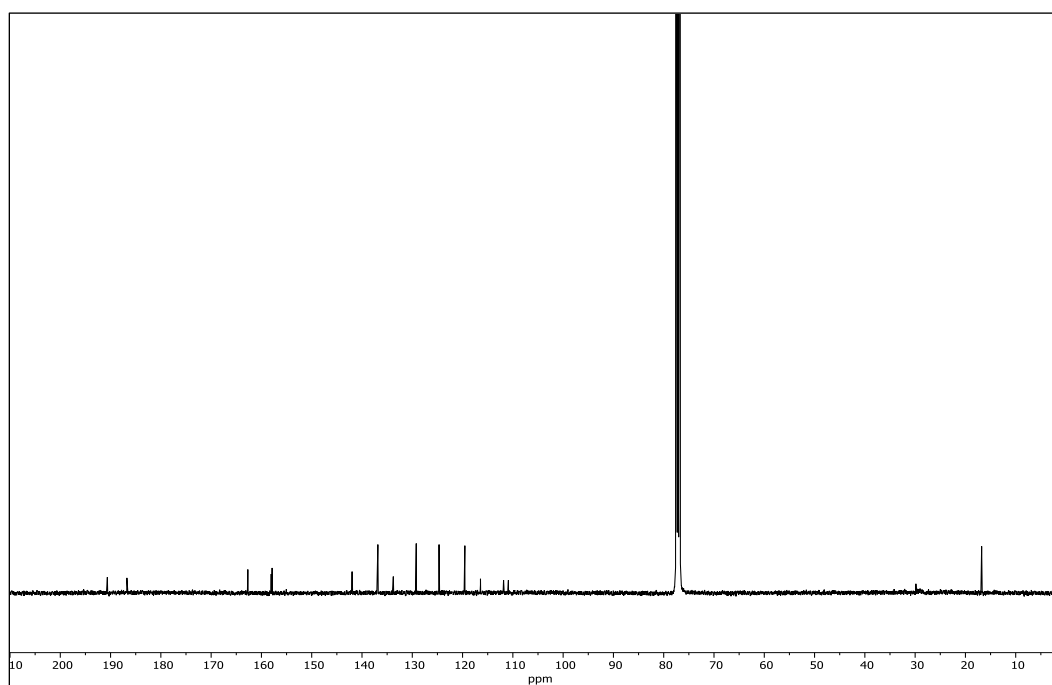
**Figure S45.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-Hydroxyemodin-1-methyl ether **11**



**Figure S46.** <sup>13</sup>C NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 2-Hydroxyemodin-1-methyl ether **11**



**Figure S47.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of Islandicin **12**



**Figure S48.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of Islandicin **12**