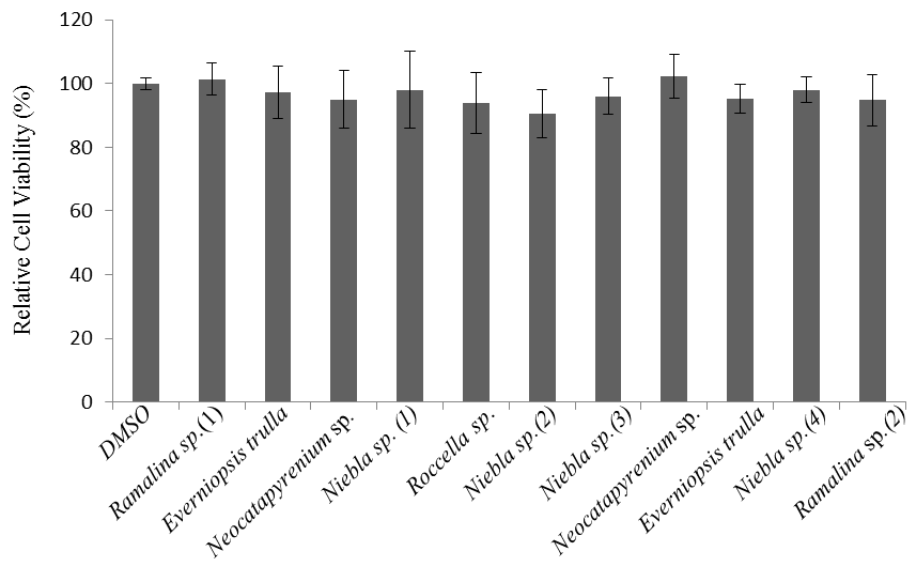


## **Supplementary Material**

**Figure S1.** Relative viability of NIH 3T3 cells treated with a 5  $\mu\text{g/ml}$  acetone extracts of lichens for 48 h by MTT assay.



**Figure S2.** TLC results of lichen species

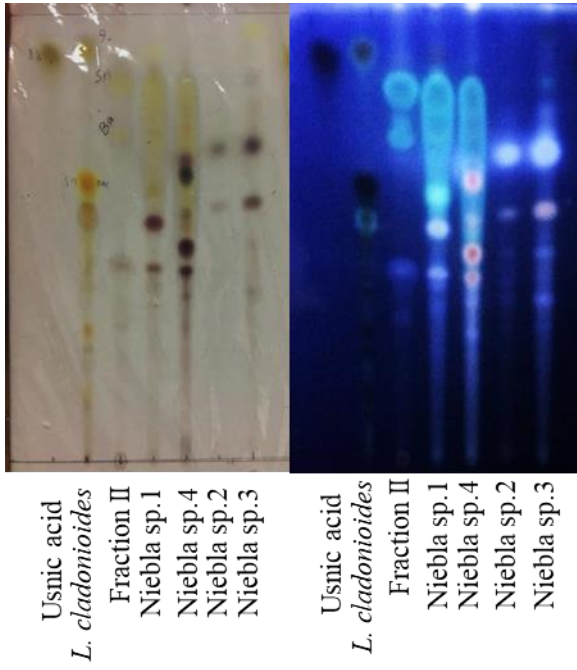


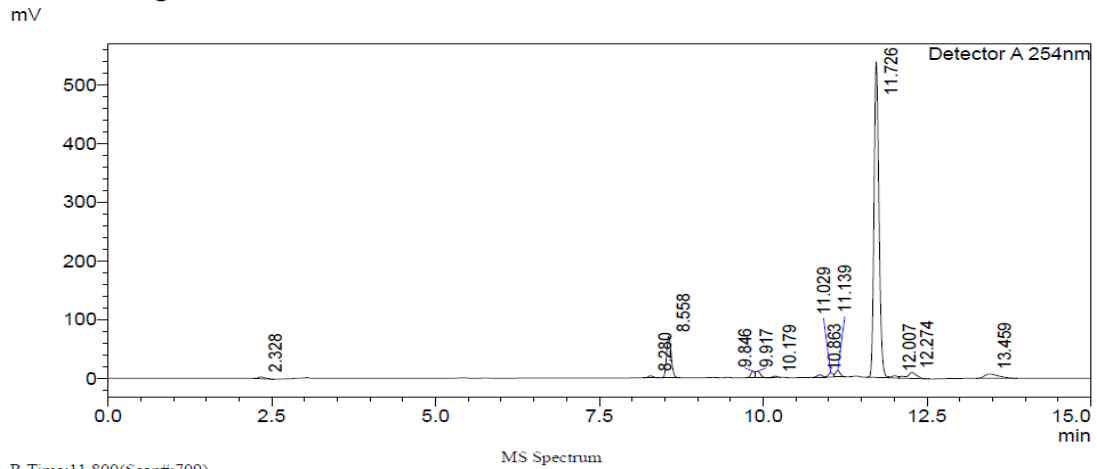
Figure S3. LC-MS spectrum of tumidulin

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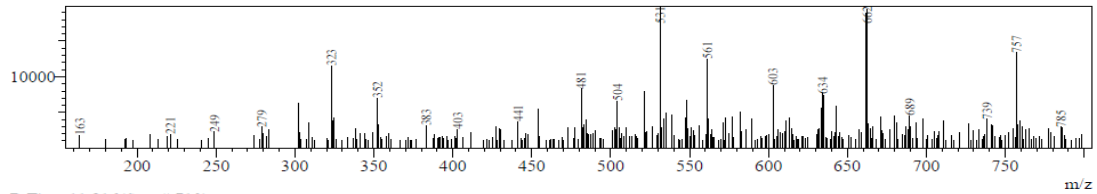
<Sample Information>

Sample Name : Unknown Sample00  
Sample ID : UNK-0004  
Data Filename : SB-FH-55 20180612.lcd  
Method Filename : 15min\_254nm(ACN 10 to 90).lcm  
Batch Filename : INJECTION(no shut down).lcb  
Vial # : 1-3  
Injection Volume : 10 uL  
Date Acquired : 2018-06-12 오후 3:16:58  
Date Processed : 2018-06-12 오후 3:32:00  
Sample Type : Unknown  
Acquired by : System Administrator  
Processed by : System Administrator

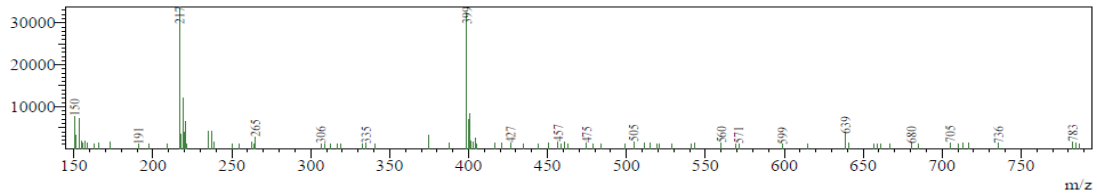
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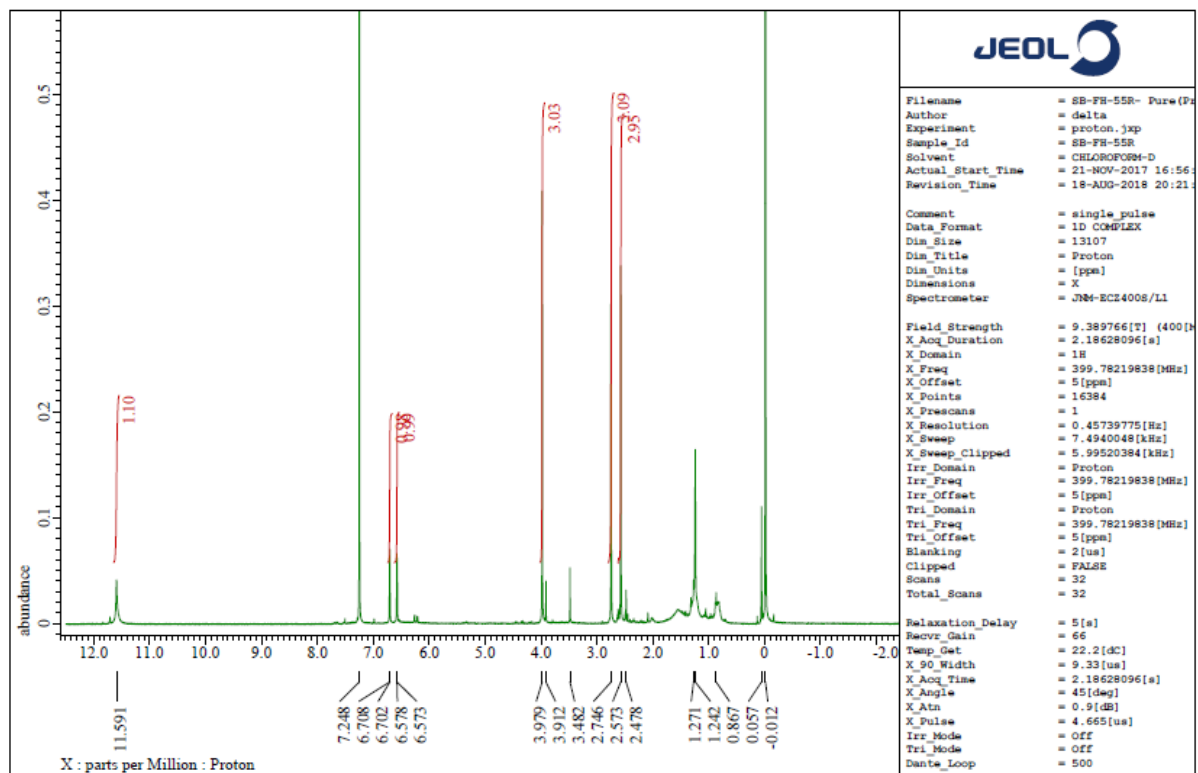
R Time: 11.800(Scan#:709)  
MassPeaks:298  
Segment 1 - Event 1



R Time: 11.816(Scan#:710)  
MassPeaks:87  
Segment 1 - Event 2

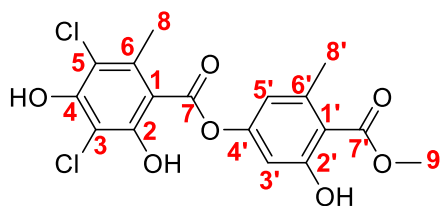
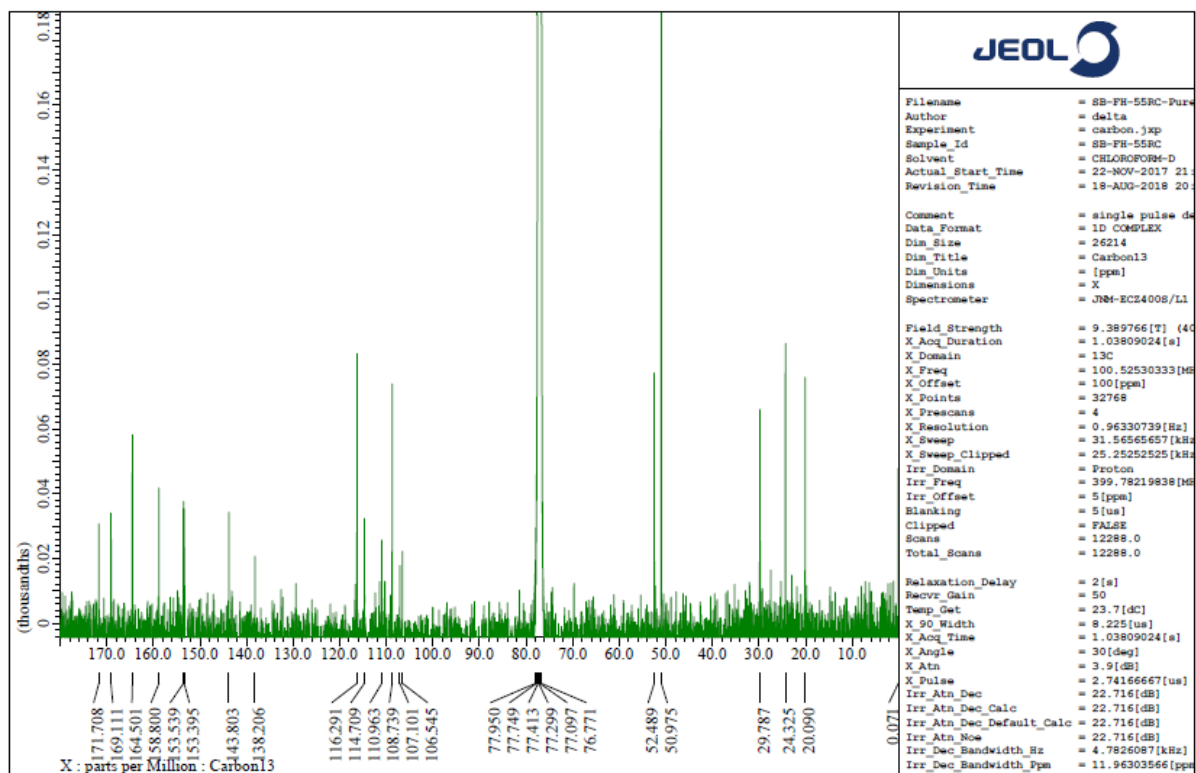


**Figure S4.**  $^1\text{H-NMR}$  spectrum of tumidulin



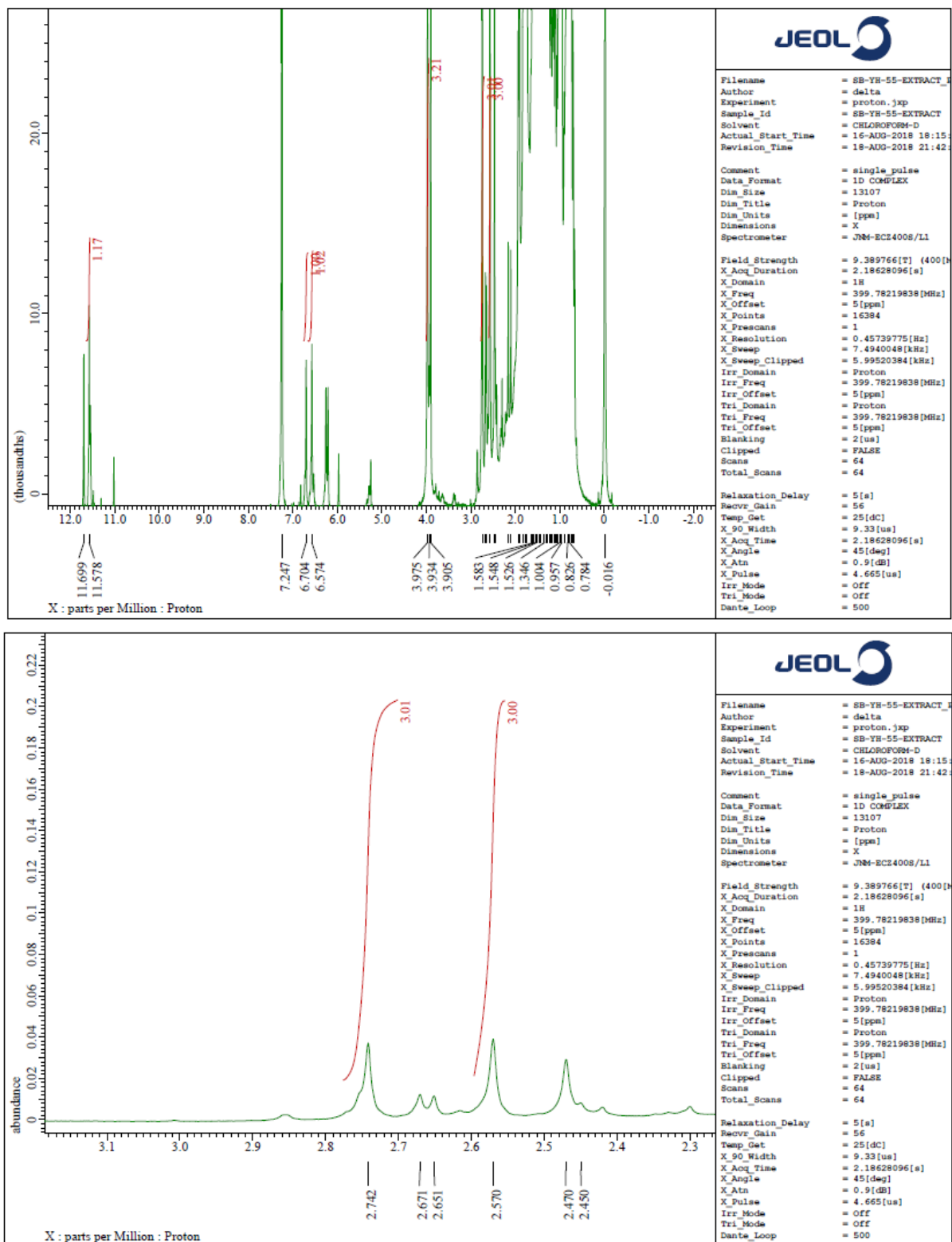
$^1\text{H-NMR}$ (400 MHz,  $\text{CDCl}_3$ ): 2.573(s, 3H), 2.746(s, 3H), 3.979(s, 3H), 6.573(s, 1H), 6.702(s, 1H), 11.591(s, OH)

Figure S5.  $^{13}\text{C}$ -NMR spectrum of tumidulin.



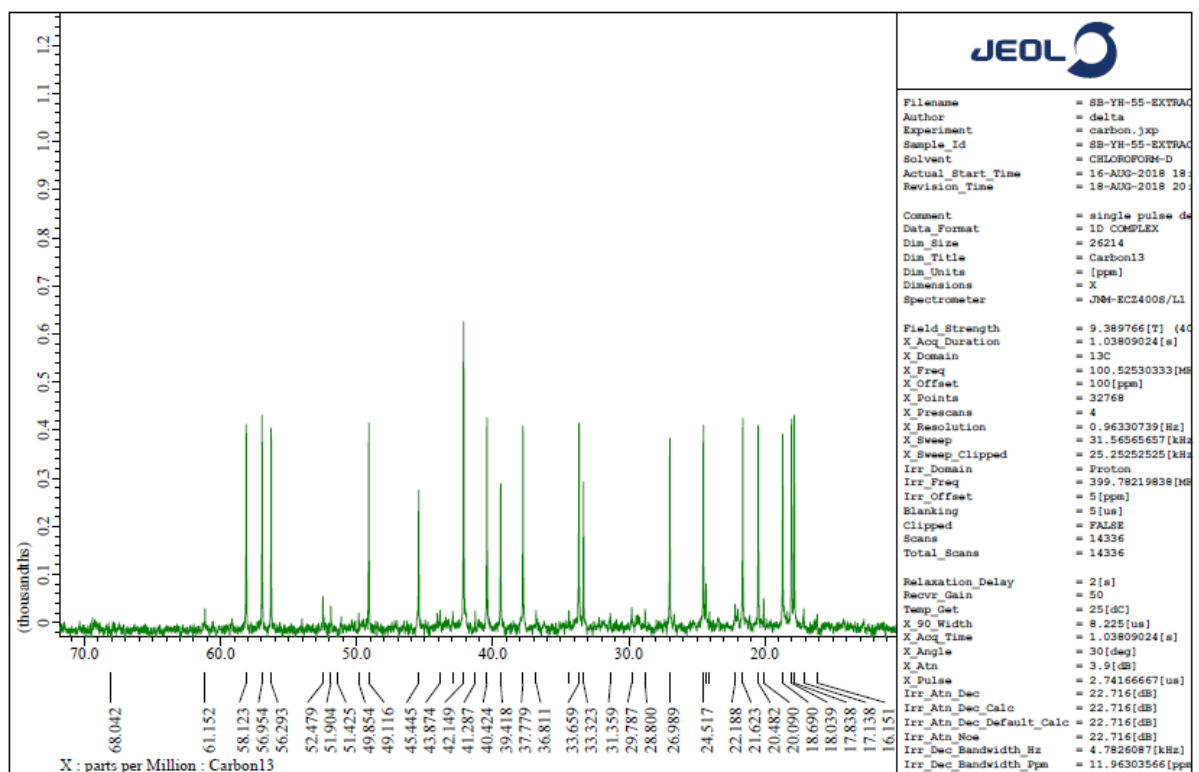
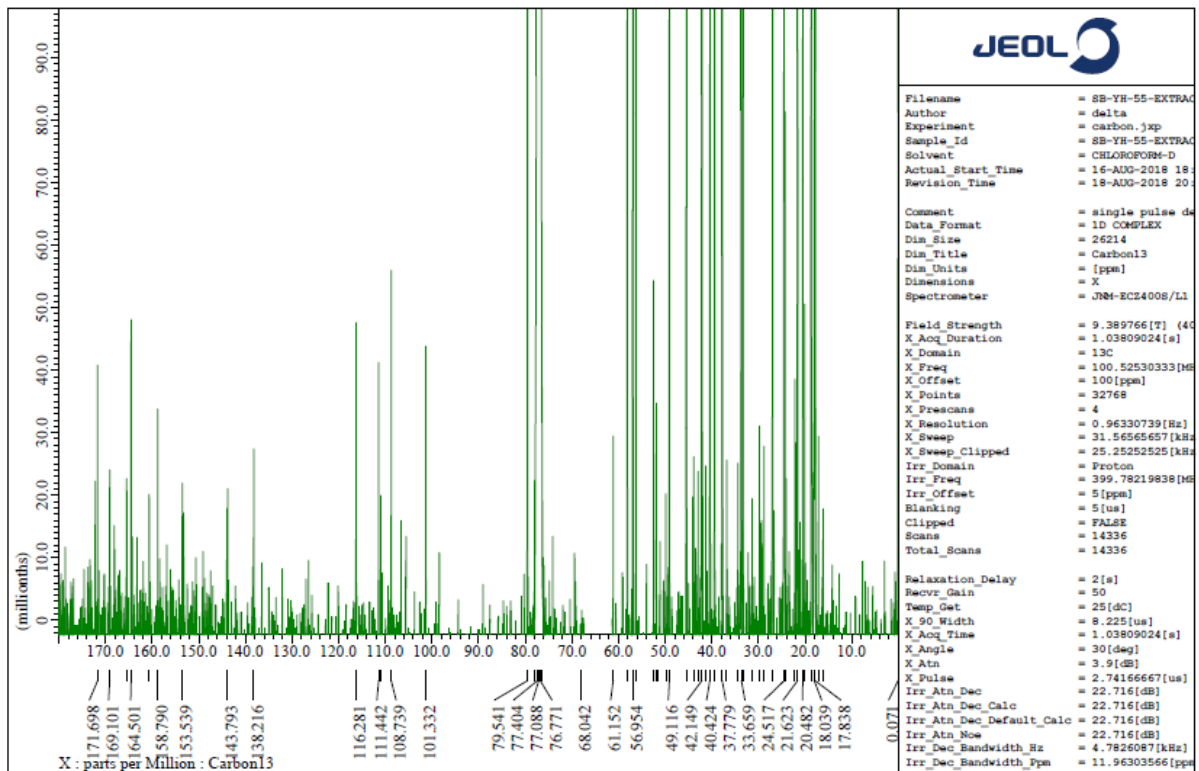
$^{13}\text{C}$ -NMR(400 MHz,  $\text{CDCl}_3$ ): C-1:110.963, C-2: 158.800, C-3: 107.101, C-4: 153.539, C-5: 116.291, C-6: 138.206, C-7: 169.111, C-8: 20.090, C-9: 52.489, C-1': 108.739, C-2': 164.501, C-3': 106.545, C-4': 153.395, C-5': 114.709, C-6': 143.803, C-7': 171.708, C-8': 24.325

Figure S6.  $^1\text{H-NMR}$  spectrum of an acetone extract of *Niebla* sp. (1).

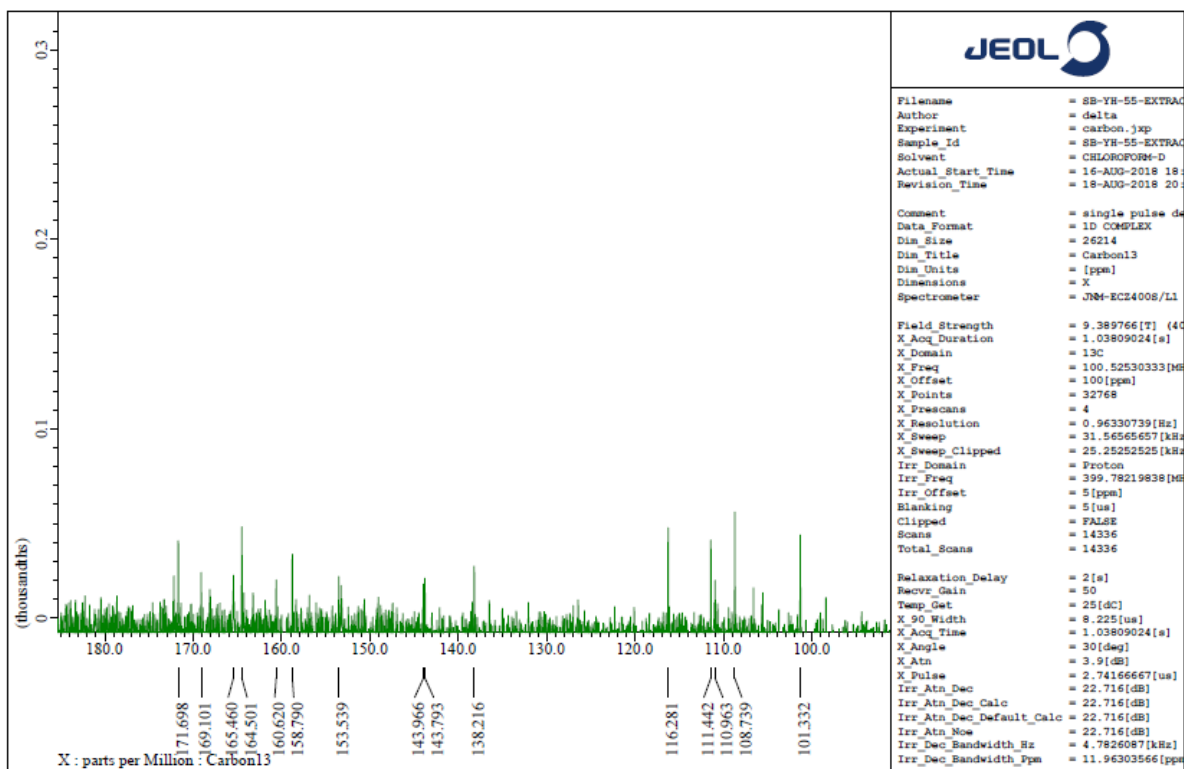


$^1\text{H-NMR}$ (400 MHz,  $\text{CDCl}_3$ ): 2.570(s, 3H), 2.742s, 3H), 3.975(s, 3H), 6.574(s, 1H), 6.704(s, 1H), 11.578(s, OH)

Figure S7.  $^{13}\text{C}$  -NMR spectrum of an acetone extract of *Niebla* sp. (1).







<sup>13</sup>C-NMR(400 MHz, CDCl<sub>3</sub>): C-1:110.963, C-2: 158.790, C-3: 101.332, C-4: 153.539, C-5: 116.281, C-6: 138.216, C-7: 169.101, C-8: 20.482, C-9: 52.479, C-1': 108.739, C-2': 164.501, C-3': 106.526, C-4': 153.347, C-5': 111.441, C-6': 143.793, C-7': 171.608, C-8': 24.316

**Figure S8.** Relative viability of CRC cells treated with a 5  $\mu$ g/ml acetone extracts of sp. (1) and 12.5  $\mu$ M tumidulin for 48 h by MTT assay.

