Supplementary Material

Compound analysis of Jing liqueur and Nrf2 activation by Jing liqueur, one of the most popular beverages in China

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List of Supporting Information

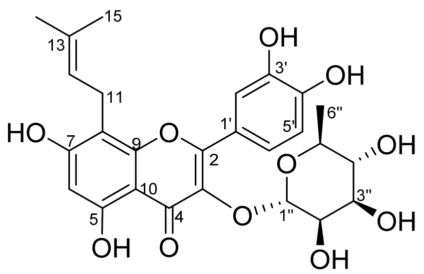


Figure S1. Structure of compound **7.**

Table S1 ^{1}H (400 MHz) and ^{13}C NMR (100 MHz) data of compound **7** in CD_3OD

position	^{13}C-NMR	^{1}H-NMR
2	155.2	
3	136.7	
4	177.2	
5	159.6	
6	97.9	6.28 s
7	162.4	
8	106.5	
9	159.5	
10	104.4	
11	21	3.50 m
12	122.3	5.22 m
13	131.5	
14	16.7	1.75 s
15	24.5	1.69 s
1'	123.1	
2'	115.7	7.39 d, 2.1 Hz
3'	148.5	
4'	147.7	
5'	114.8	6.94 d, 8.3 Hz
6'	121.4	7.34 dd, 2.1 8.3 Hz
1''	102.1	5.36 d, 2.2 Hz
2''	70.6	4.24 dd, 2.2 3.4 Hz
3''	70.7	3.78 dd, 3.4 9.4 Hz
4''	71,9	3.35 m
5''	70.5	3.44 m
6''	16.2	0.96 d, 6.1 Hz

Figure S2. HR-ESIMS spectrum of new compound **7.**

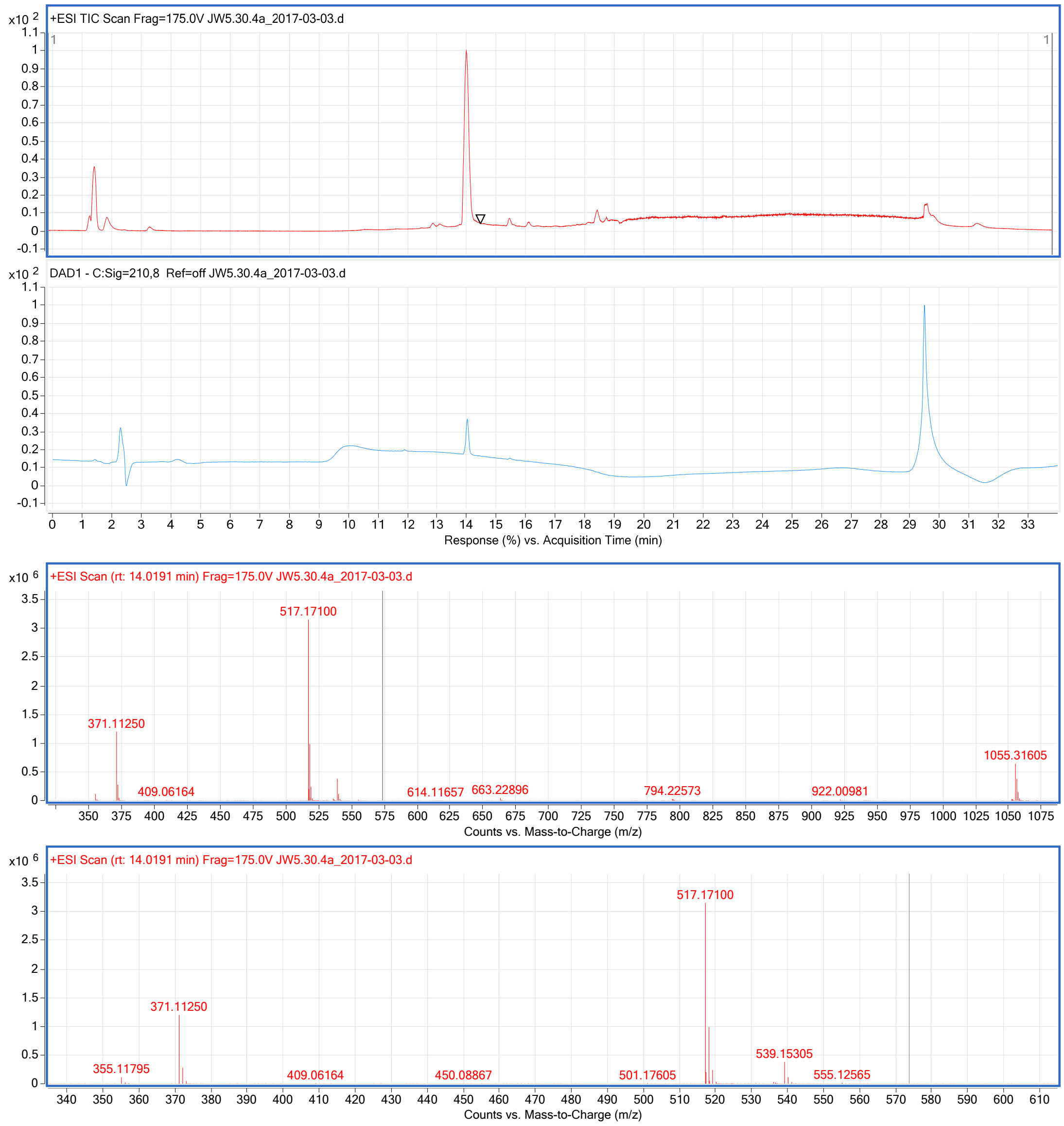


Figure S3. ^{1}H-NMR spectrum of new compound **7** (400 MHz, CD_3OD).

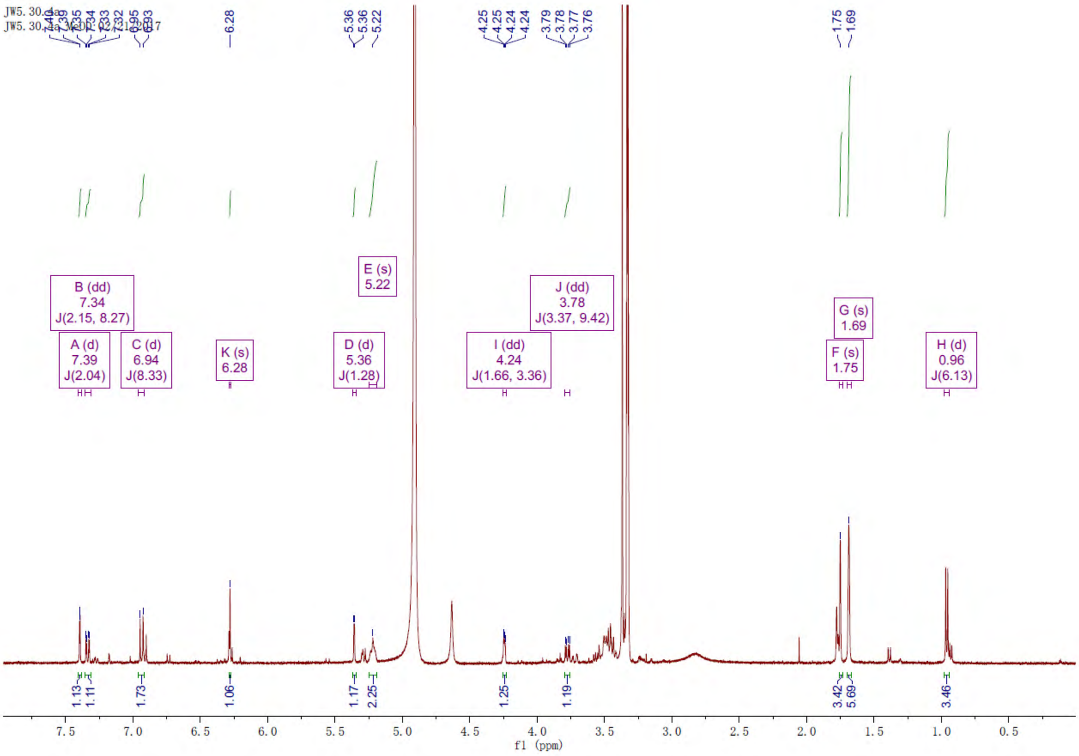


Figure S4. COSY spectrum of new compound **7** (400 MHz, CD_3OD).

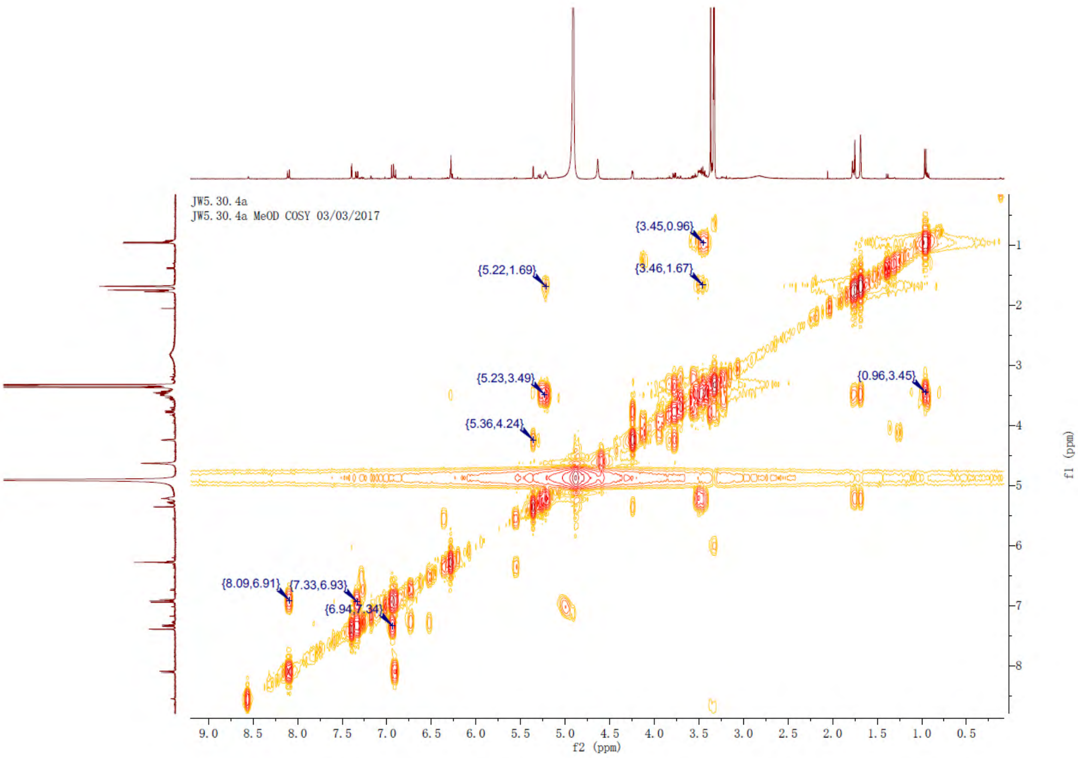


Figure S5. HSQC spectrum of new compound **7** (400 MHz, CD_3OD).

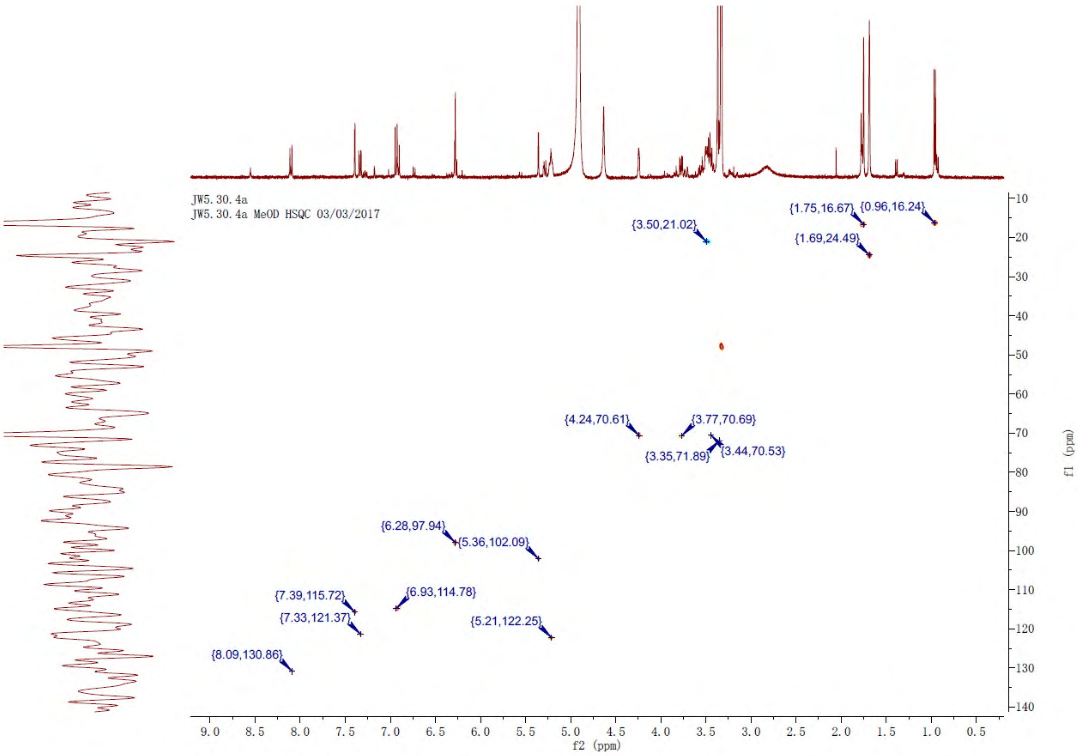


Figure S6. HMBC spectrum of compound **7** (400 MHz, CD_3OD).

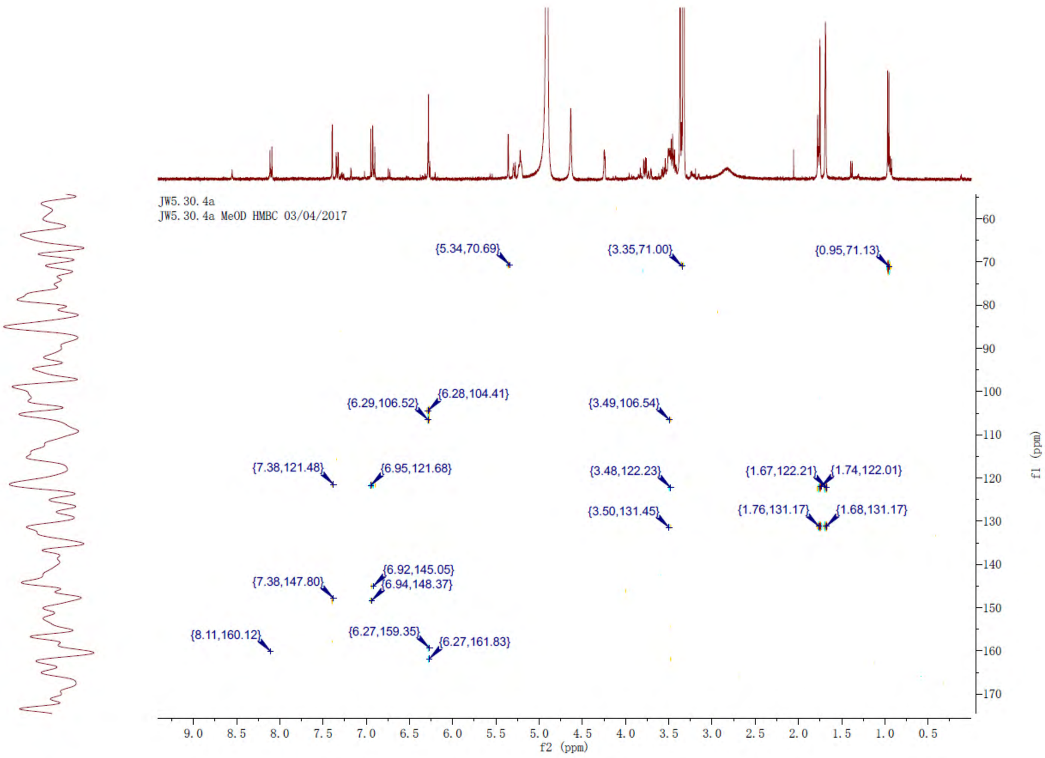


Figure S7. LC-MS spectrum of compound **1**.

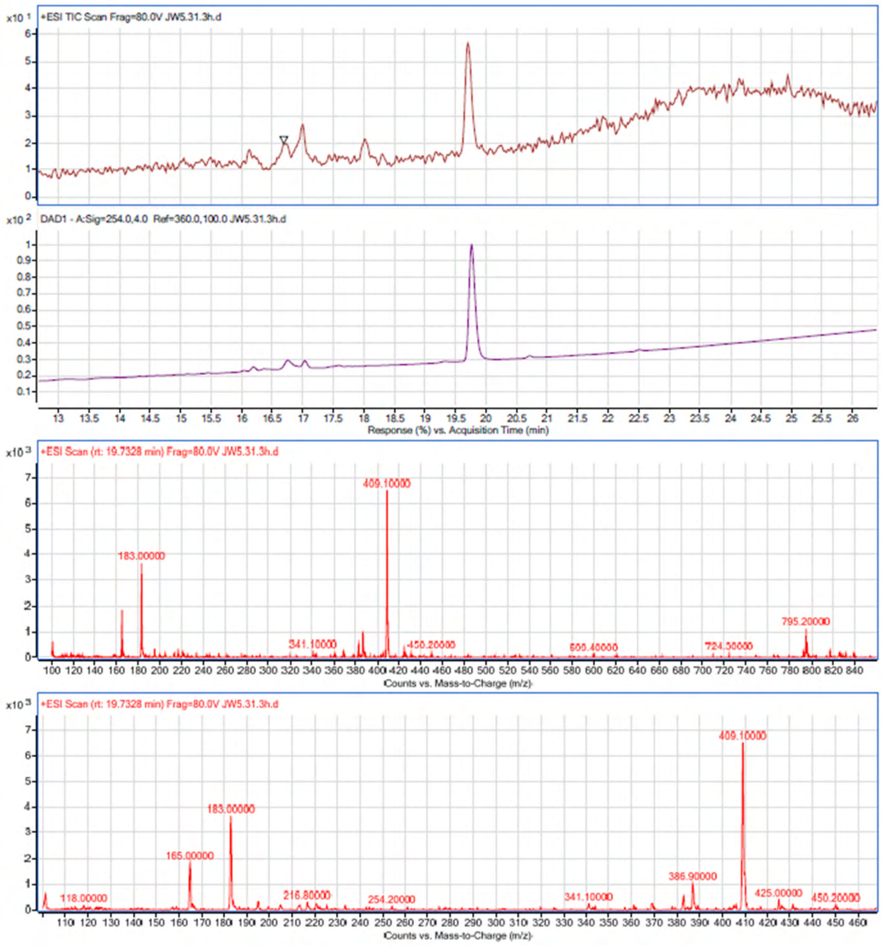


Figure S8. ^{1}H-NMR spectrum of compound **1**.

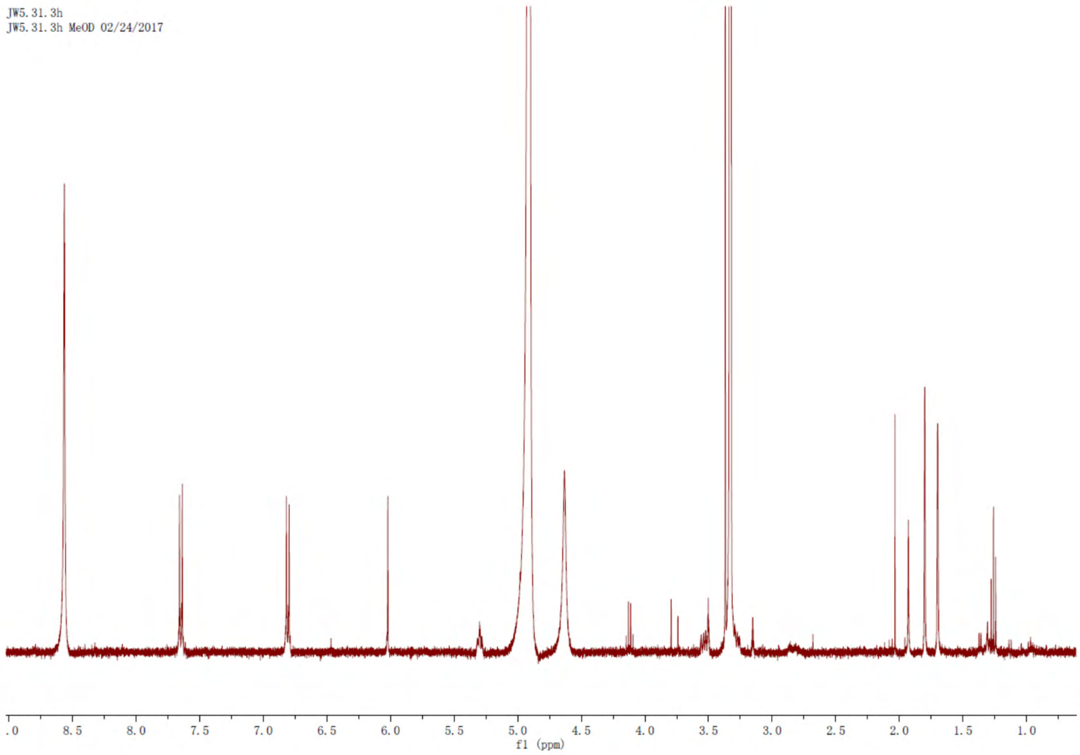


Figure S9. LC-MS spectrum of compound **2**.

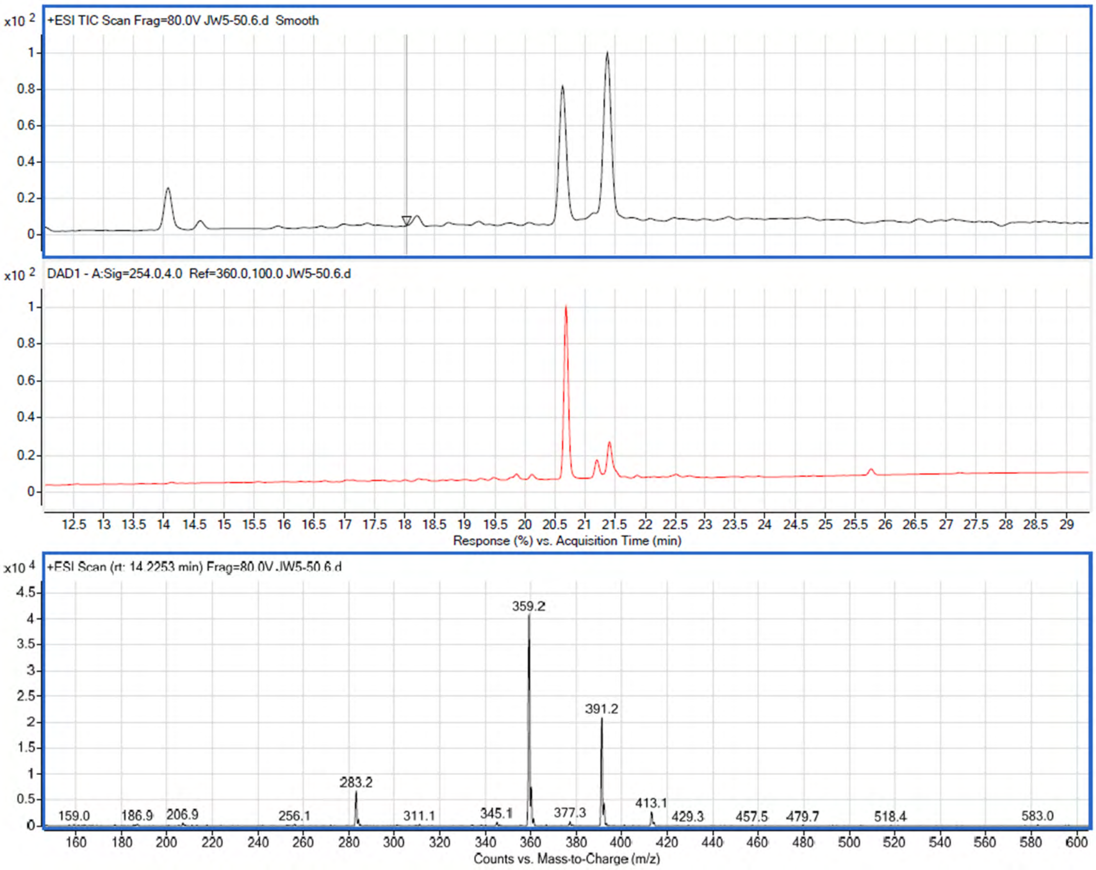


Figure S10. ^{1}H-NMR spectrum of compound **2**.

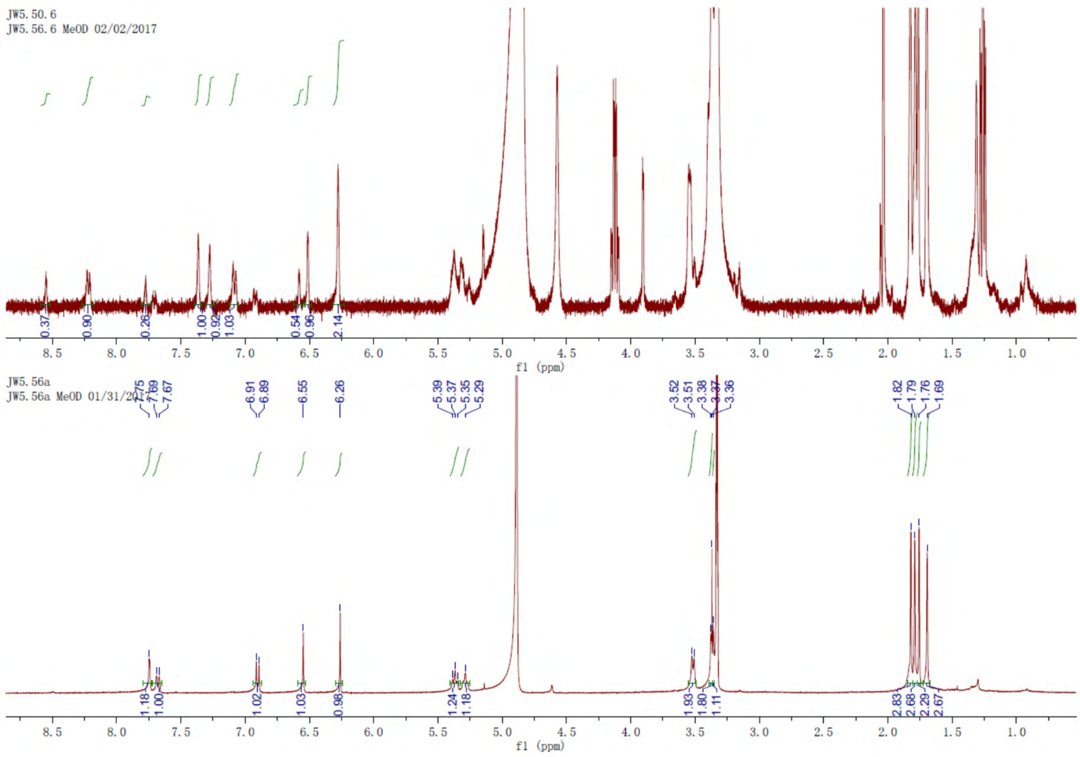


Figure S11. LC-MS spectrum of compound **3**.

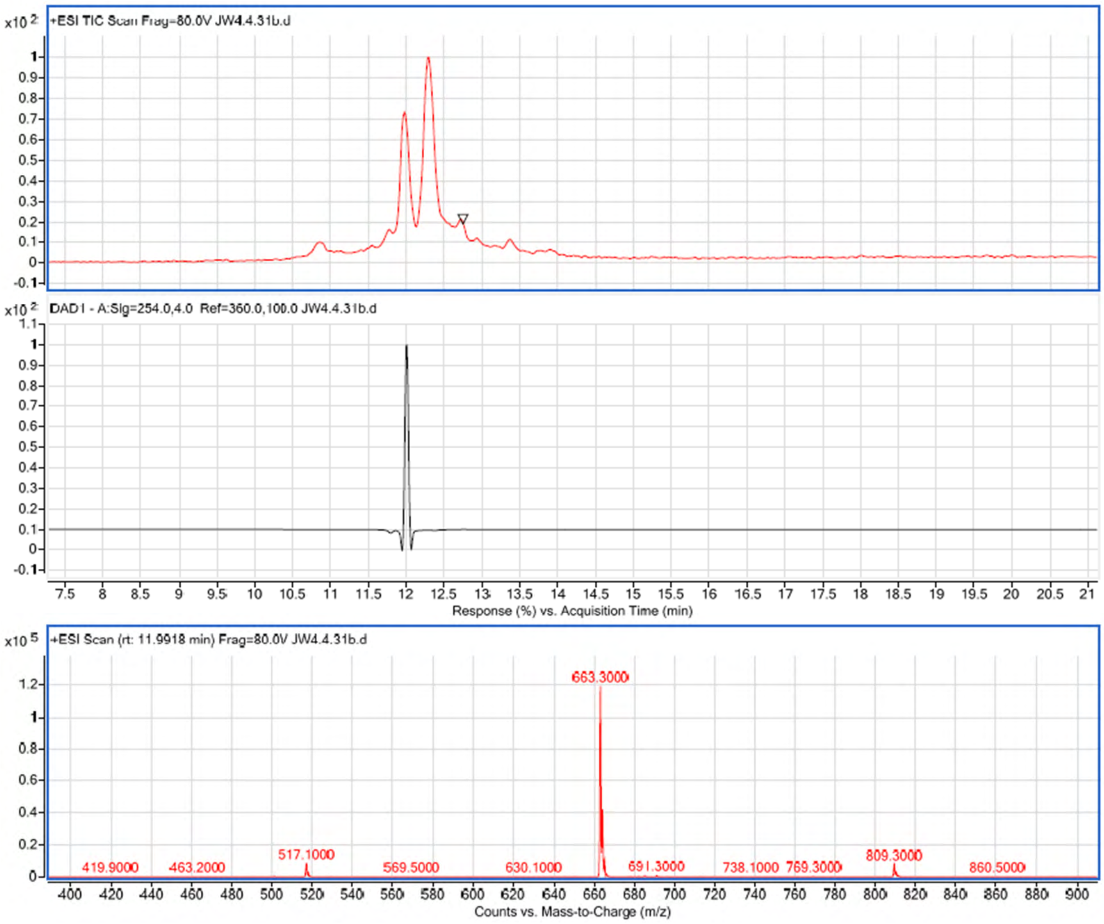


Figure S12. [1]H-NMR spectrum of compound **3**.

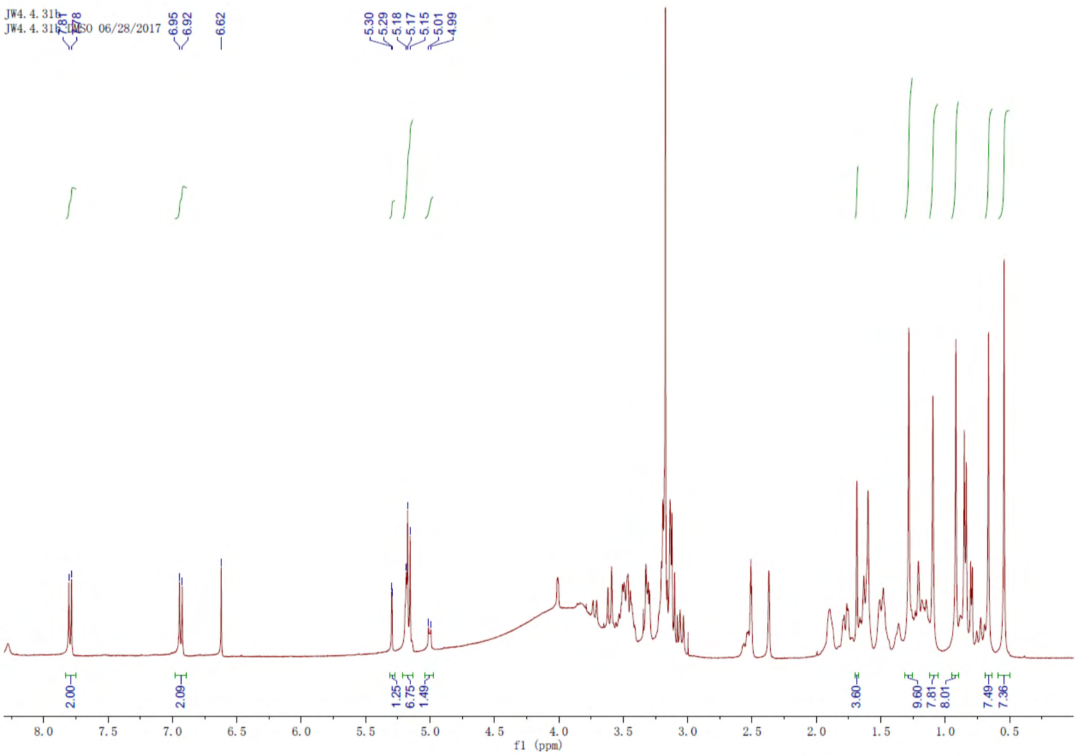


Figure S13. HSQC spectrum of compound **3**.

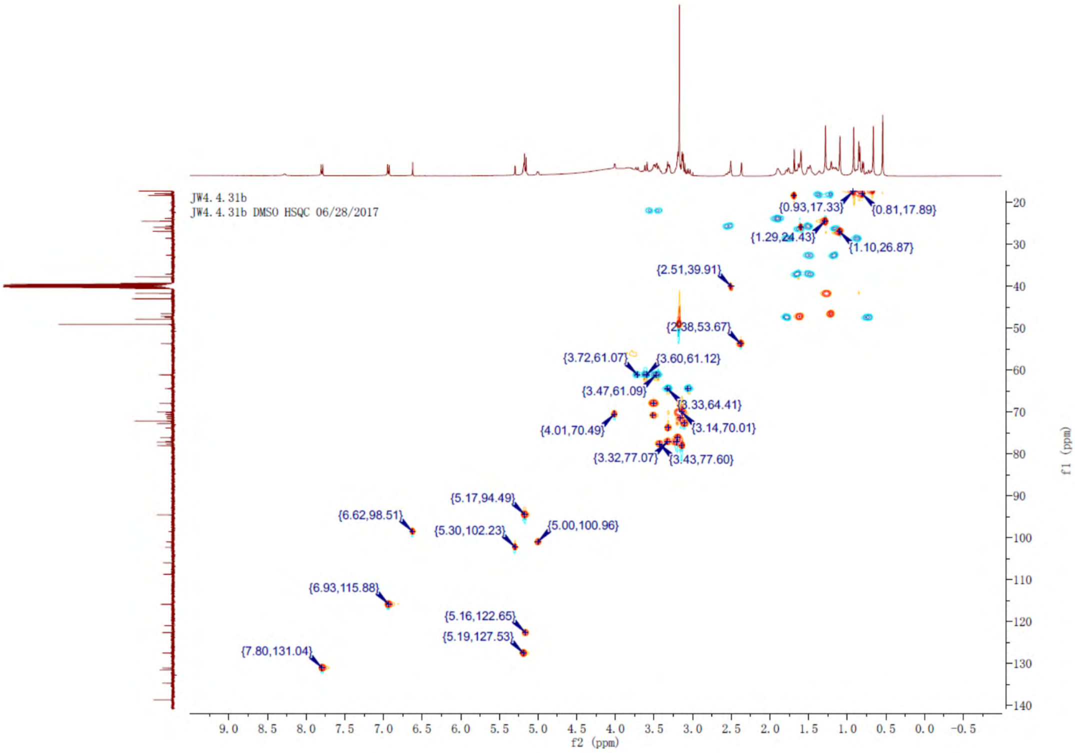


Figure S14. LC-MS spectrum of compound **4**.

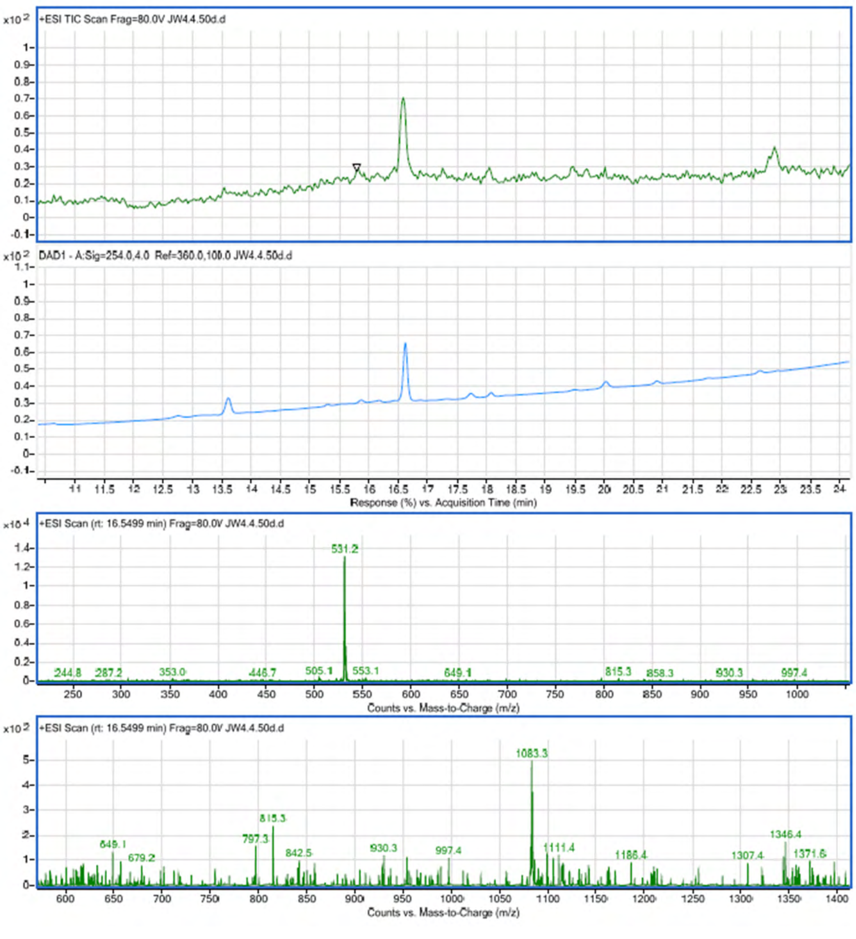


Figure S15. ^{1}H-NMR spectrum of compound **4**.

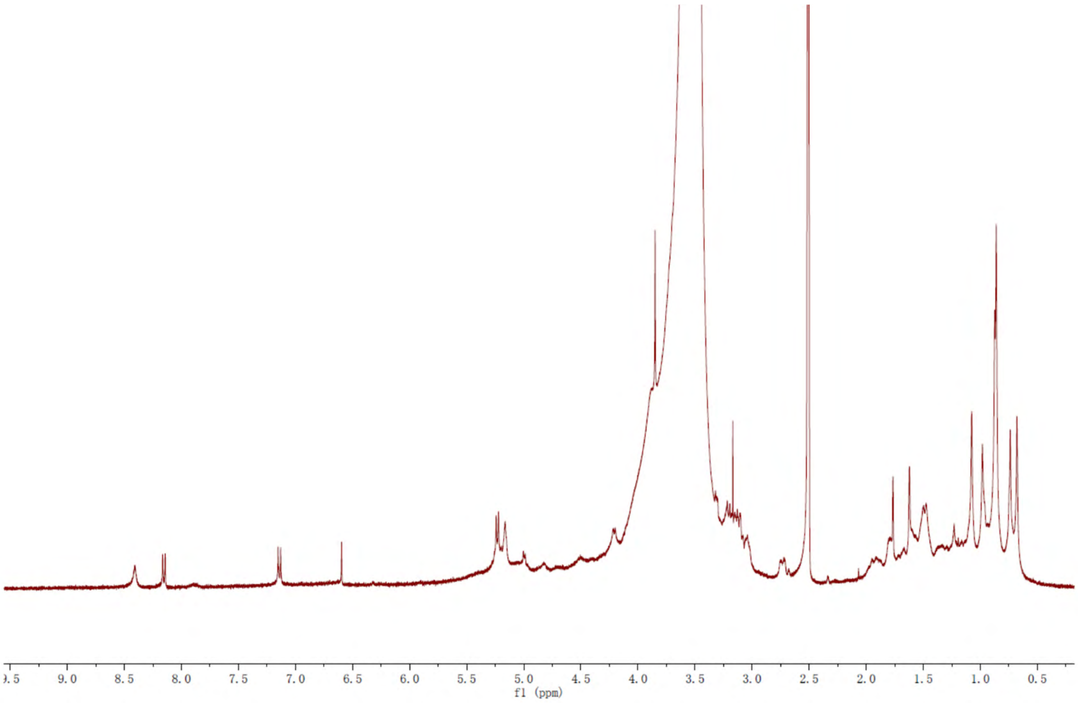


Figure S16. LC-MS spectrum of compound **5**.

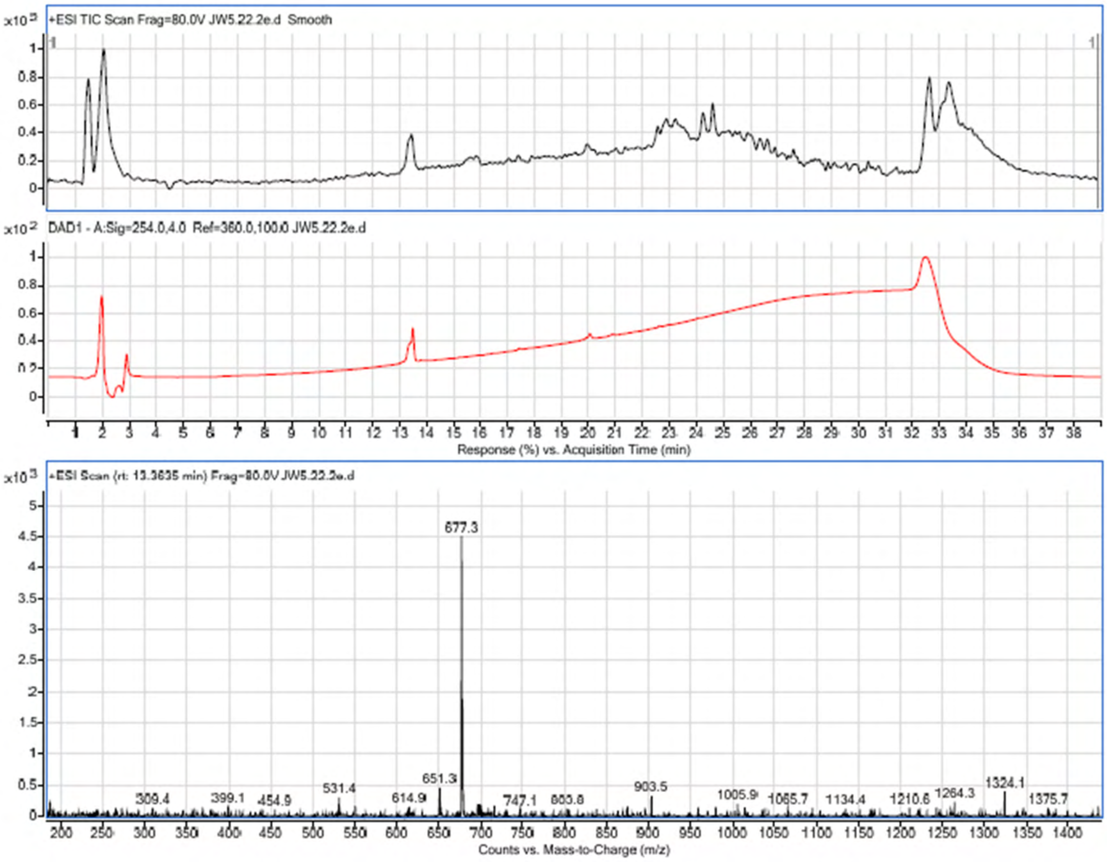


Figure S17. [1]H-NMR spectrum of compound **5**.

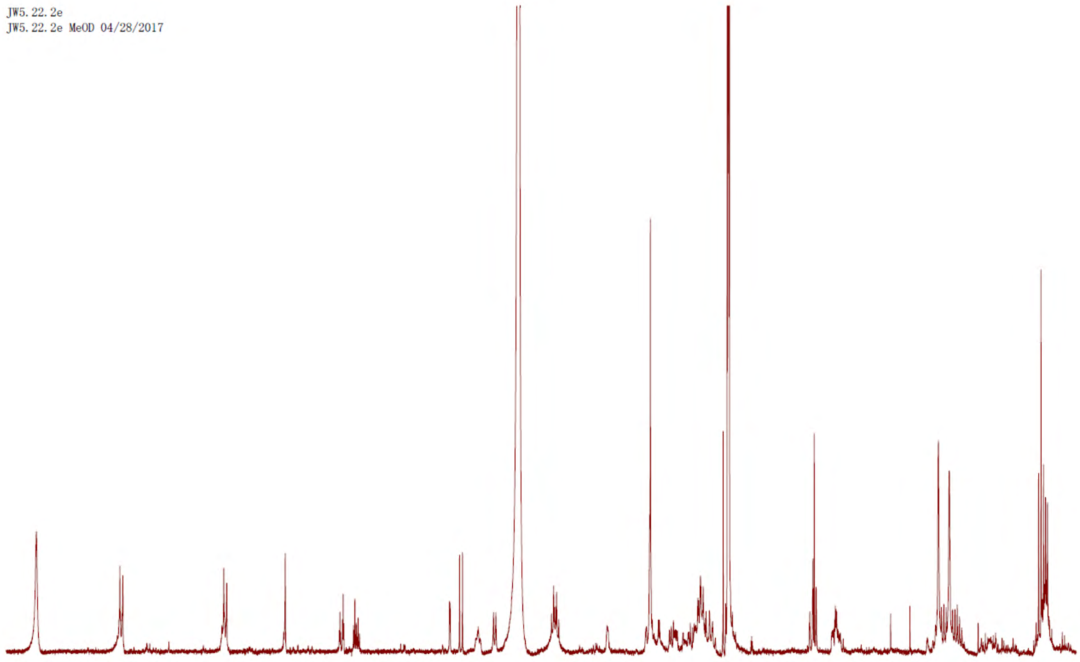


Figure S18. LC-MS spectrum of compound **6**.

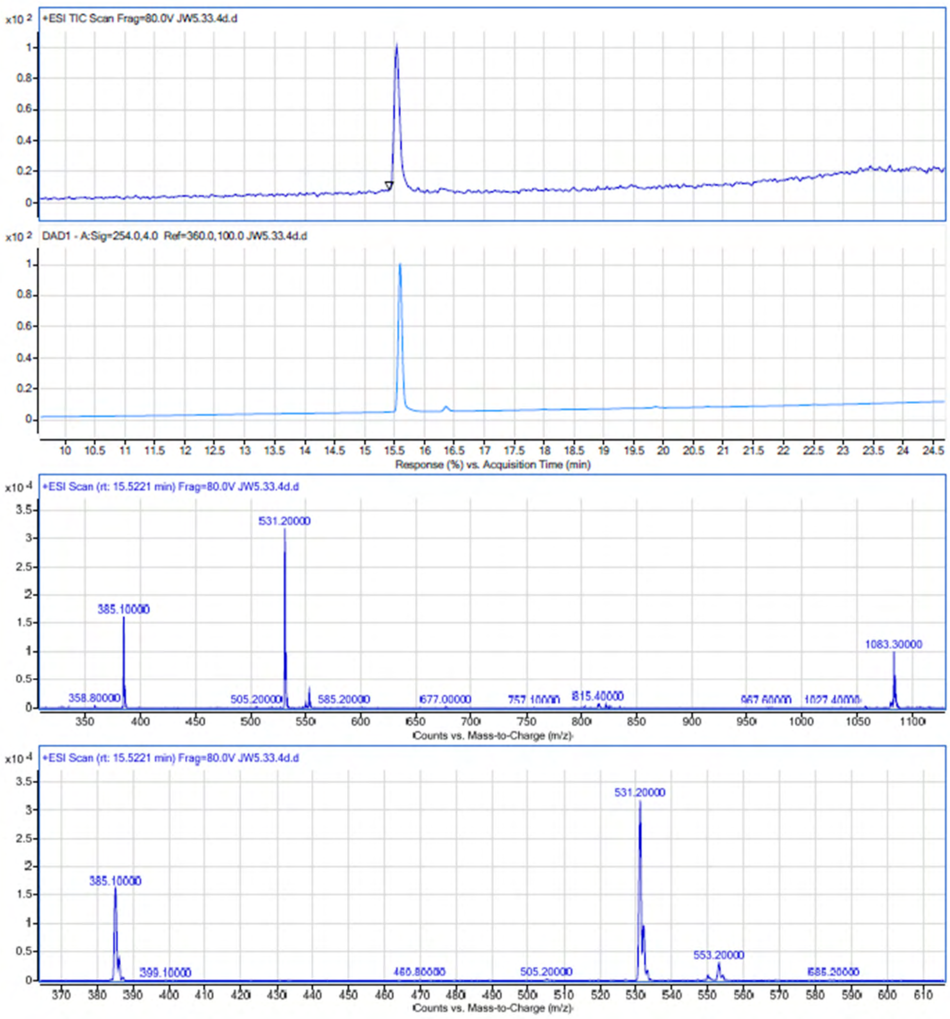


Figure S19. ^{1}H-NMR spectrum of compound **6**.

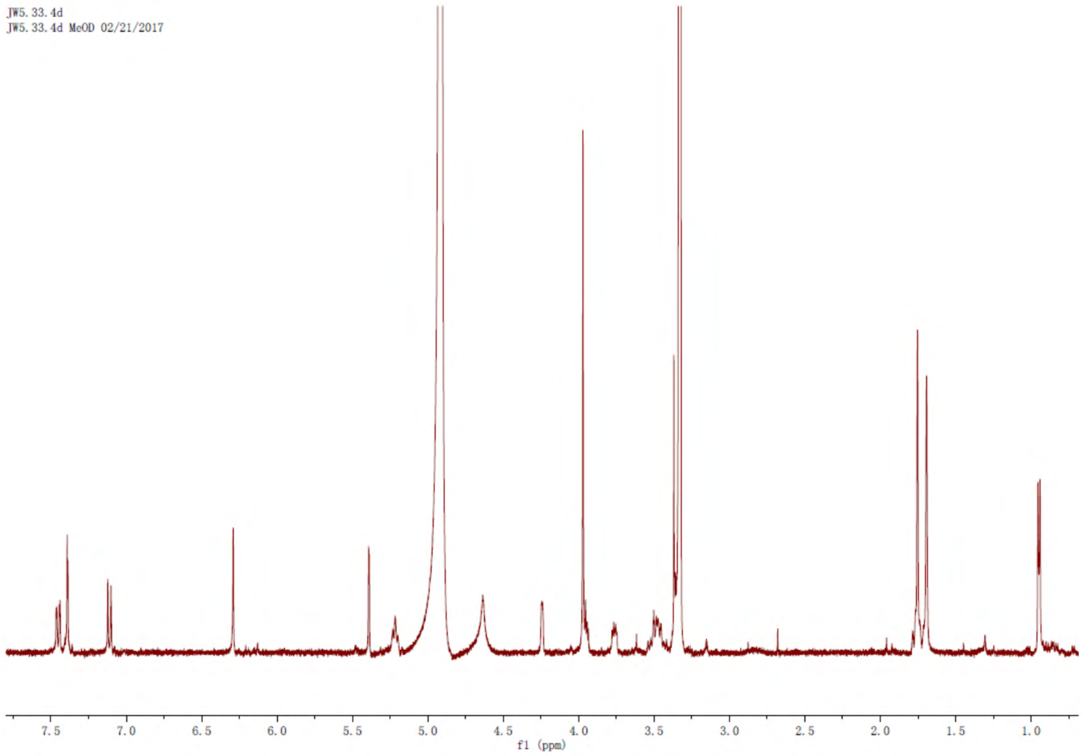


Figure S20. LC-MS spectrum of compound **8**.

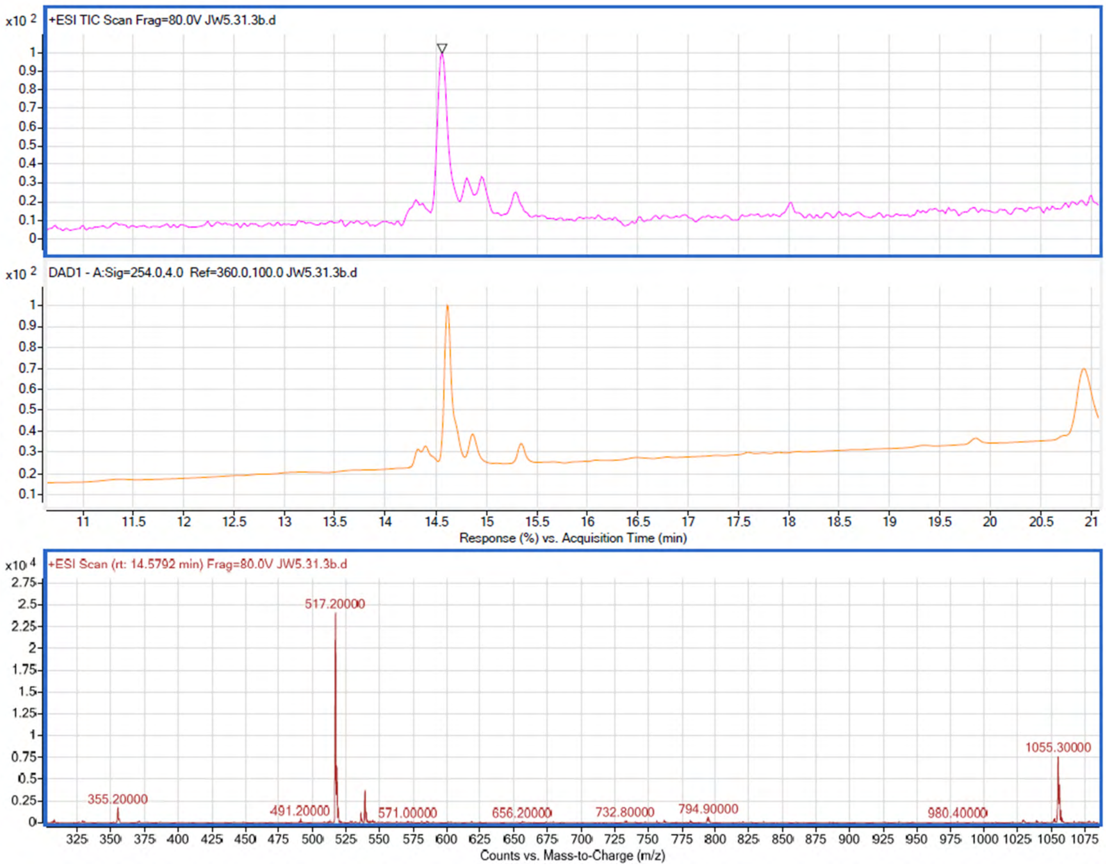


Figure S21. ^{1}H-NMR spectrum of compound **8**.

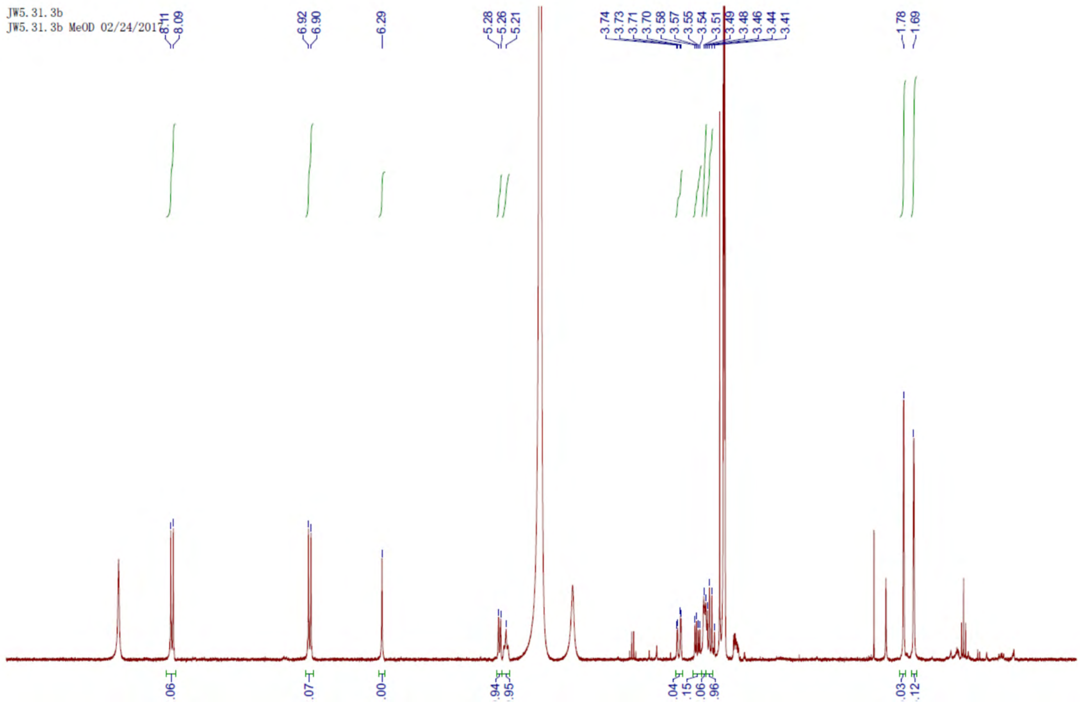


Figure S22. LC-MS spectrum of compound **9**.

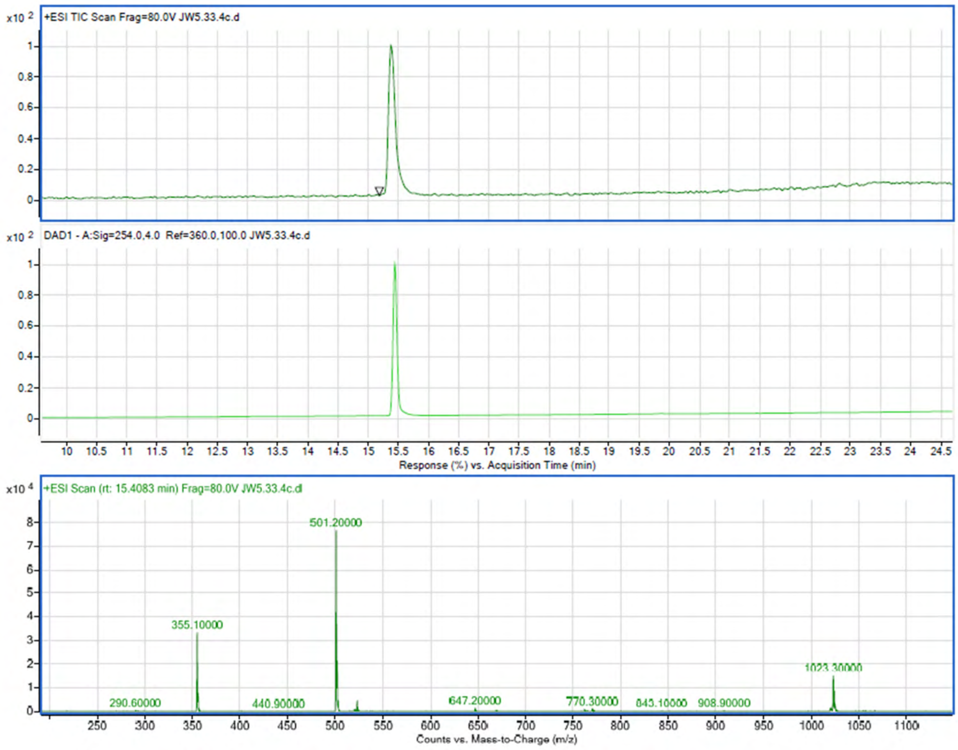


Figure S23. ^{1}H-NMR spectrum of compound **9**.

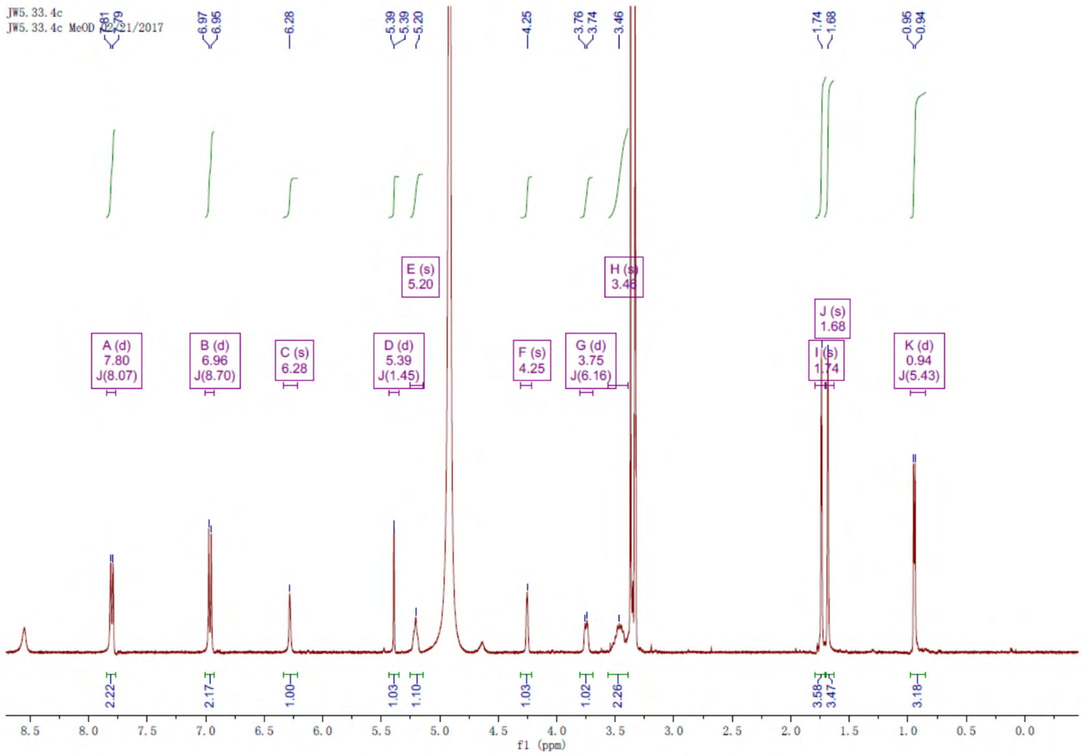


Figure S24. LC-MS spectrum of compound **10**.

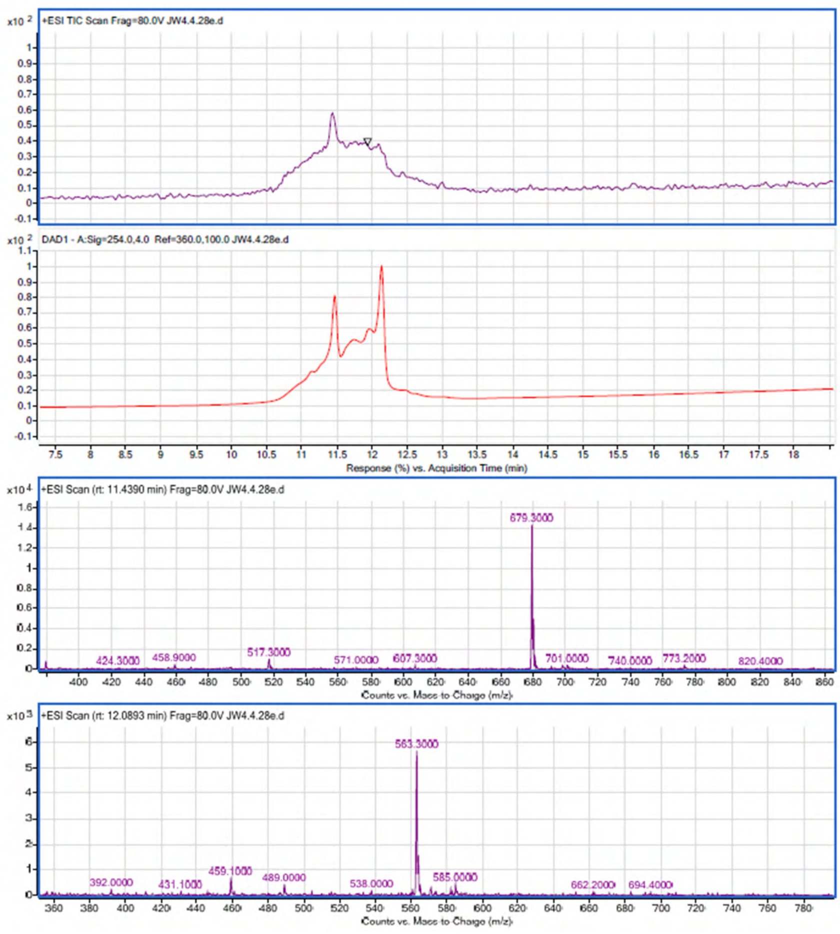


Figure S25. ^{1}H-NMR spectrum of compound **10**.

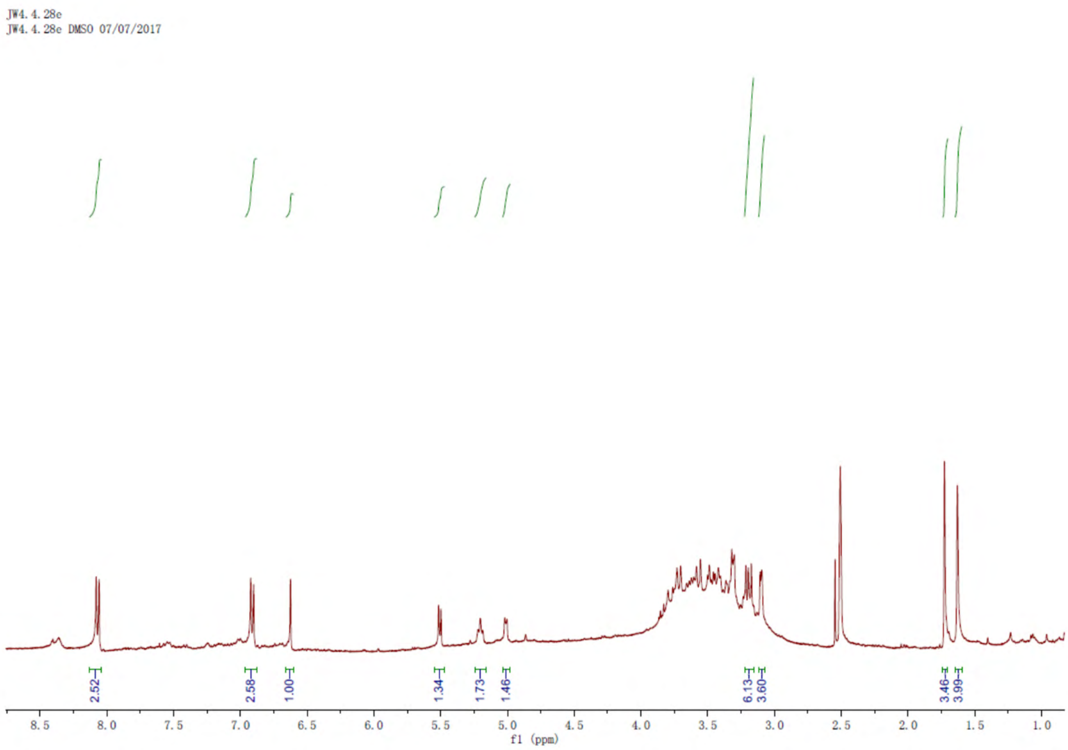


Figure S26. LC-MS spectrum of compound **11**.

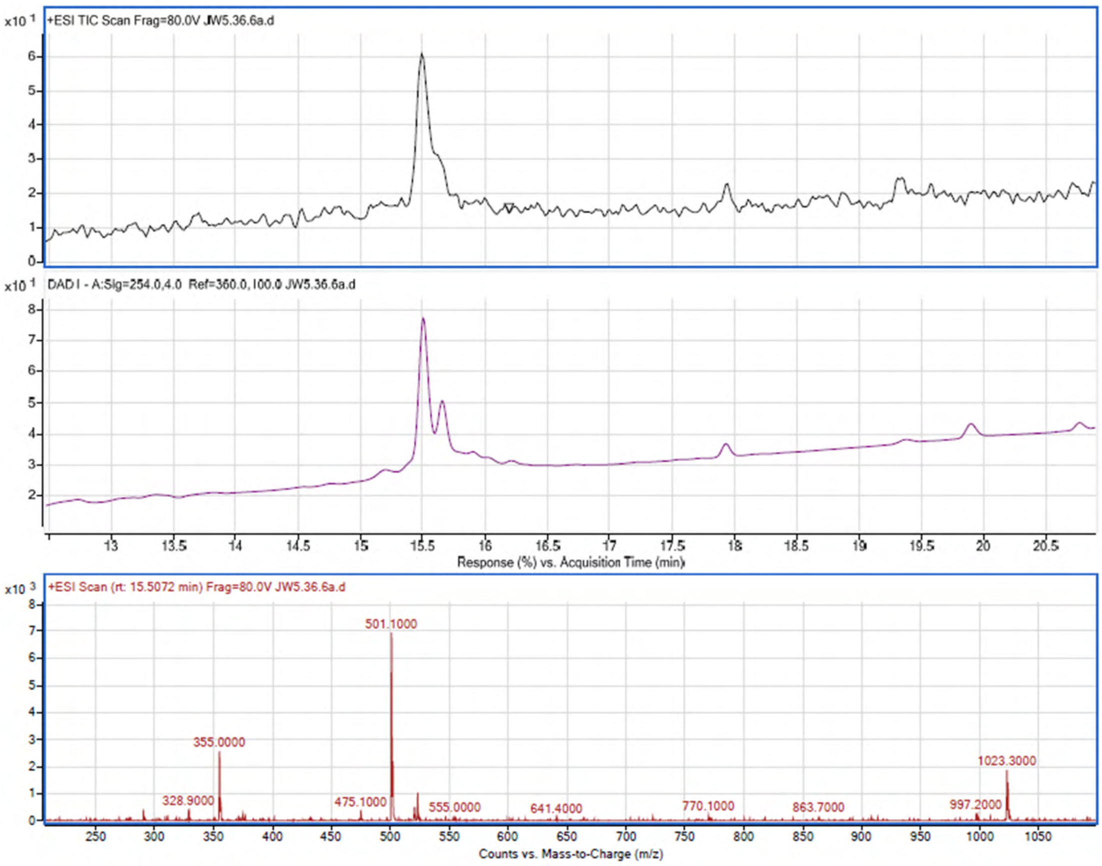


Figure S27. ¹H-NMR spectrum of compound **11**.

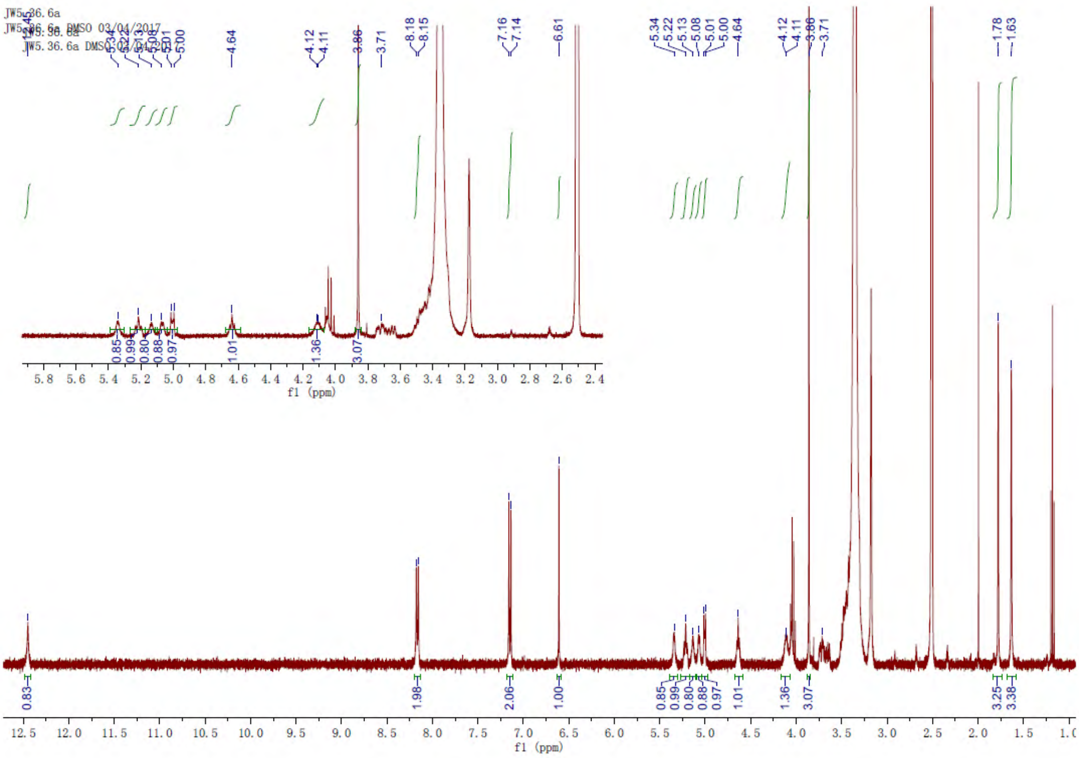


Figure S28. LC-MS spectrum of compound **12**.

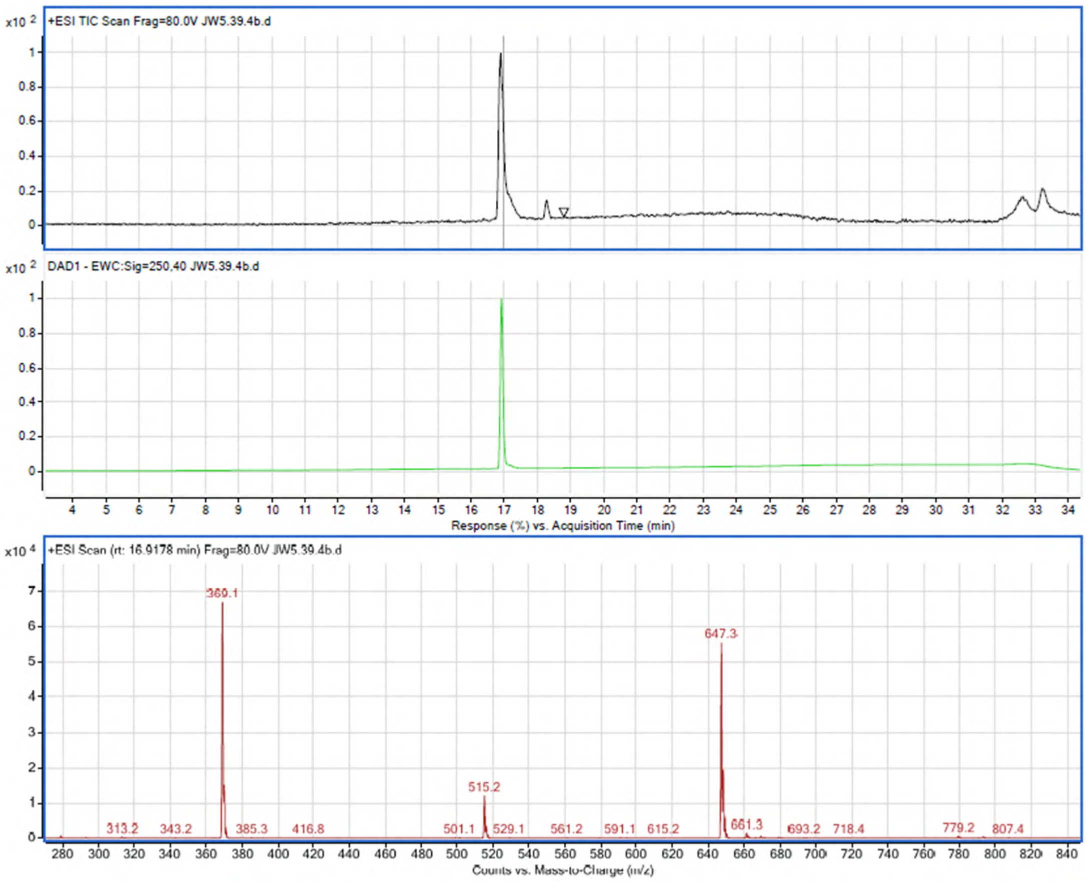


Figure S29. ^{1}H-NMR spectrum of compound **12**.

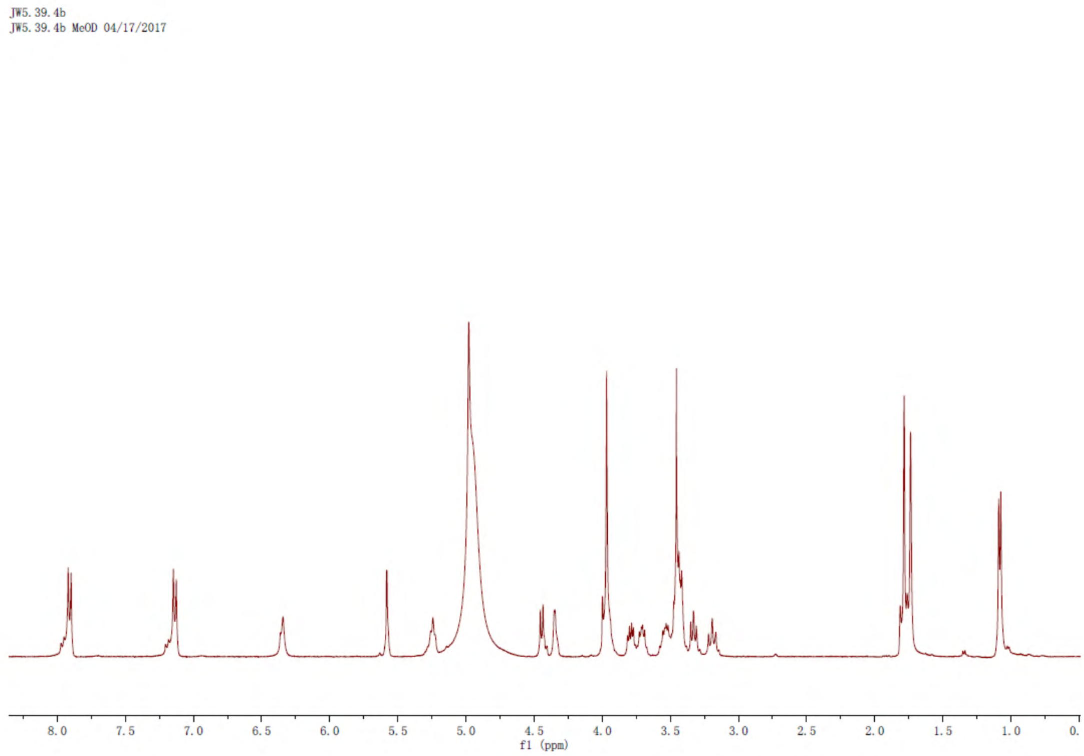


Figure S30. LC-MS spectrum of compound **13**.

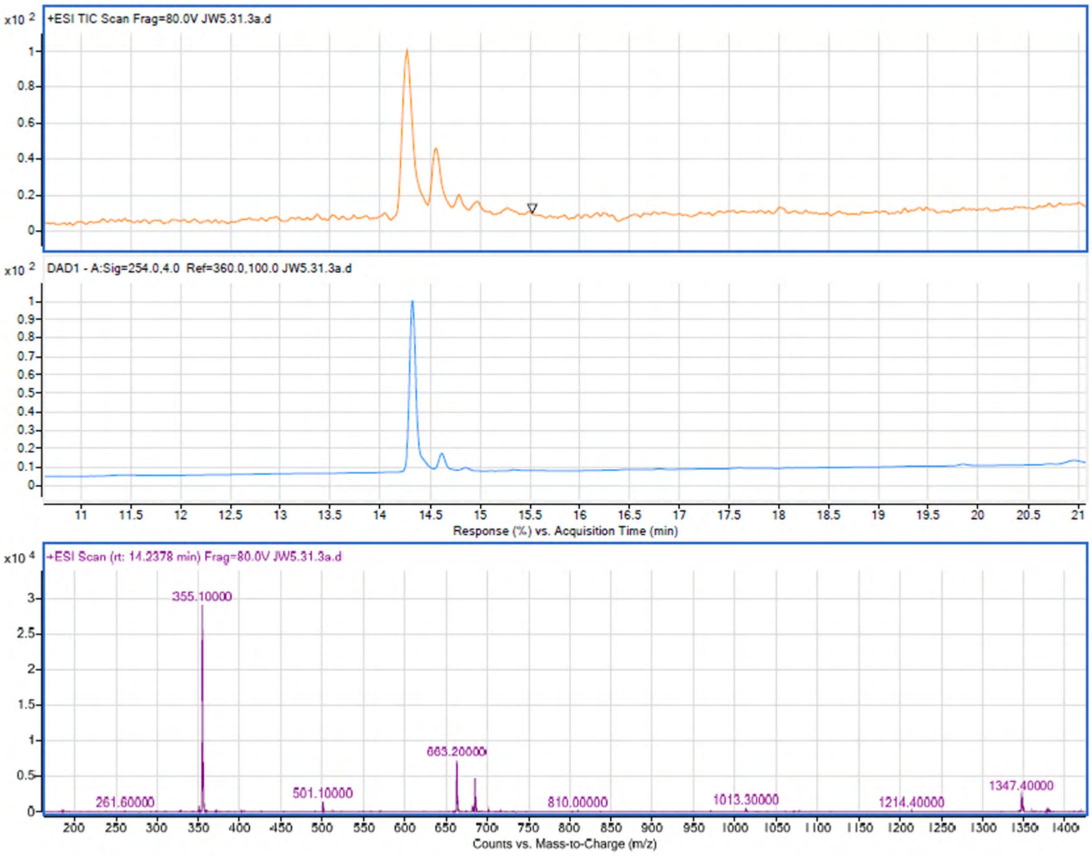


Figure S31. ^{1}H-NMR spectrum of compound **13**.

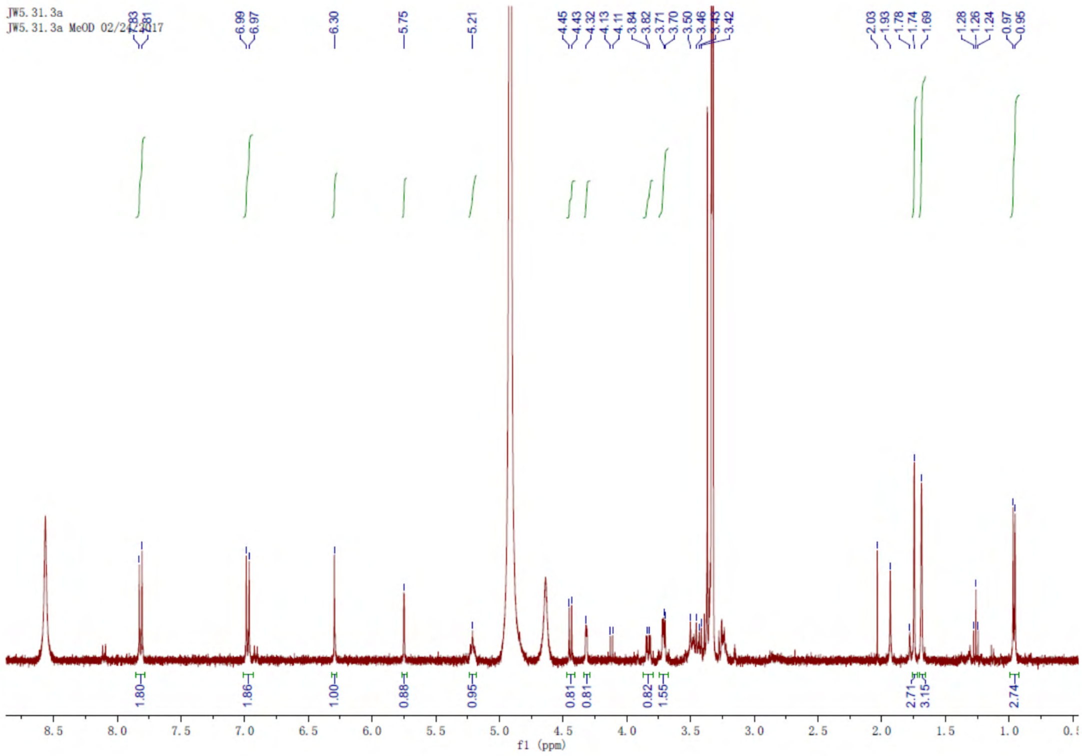


Figure S32. LC-MS spectrum of compound **14**.

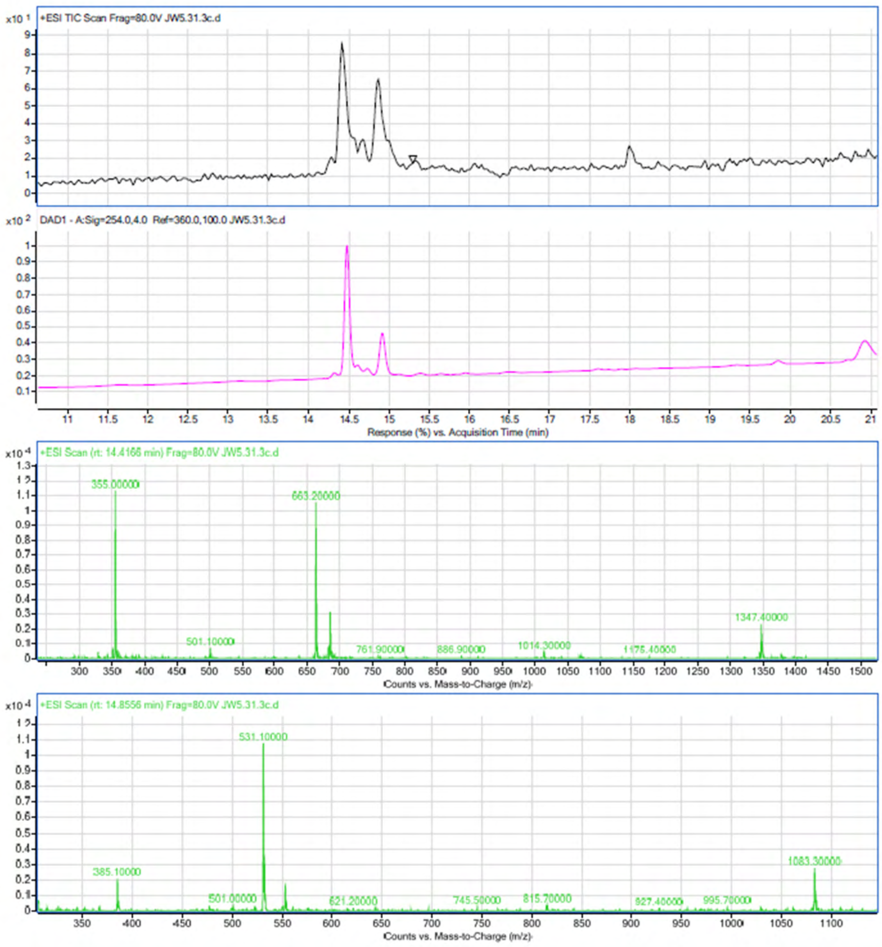


Figure S33. ^{1}H-NMR spectrum of compound **14**.

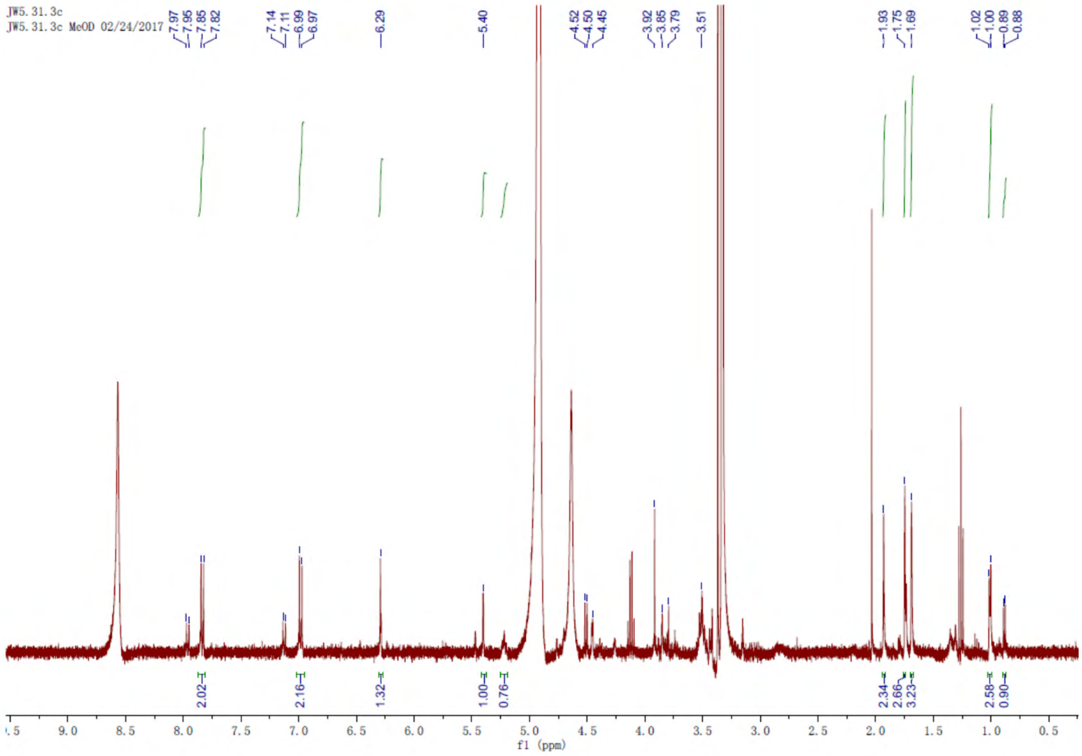


Figure S34. LC-MS spectrum of compound **15**.

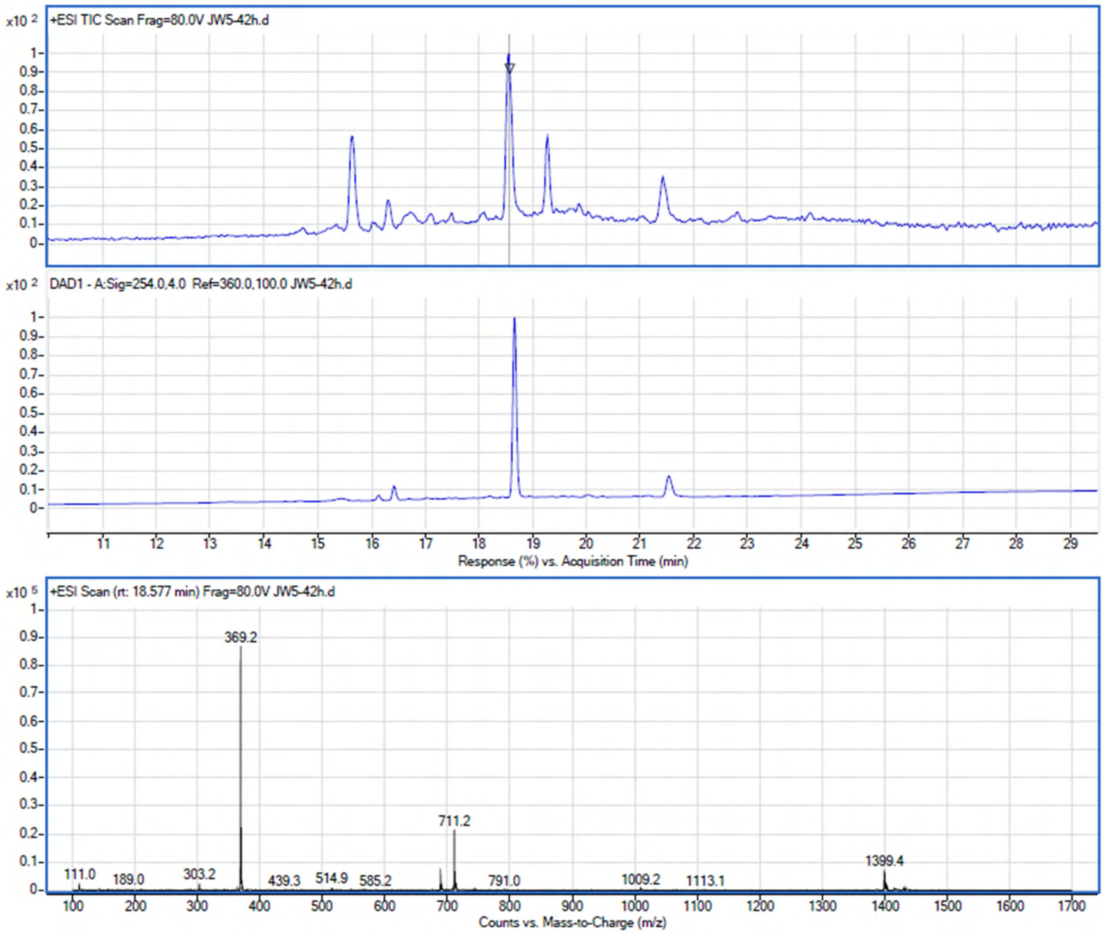


Figure S35. ^{1}H-NMR spectrum of compound **15**.

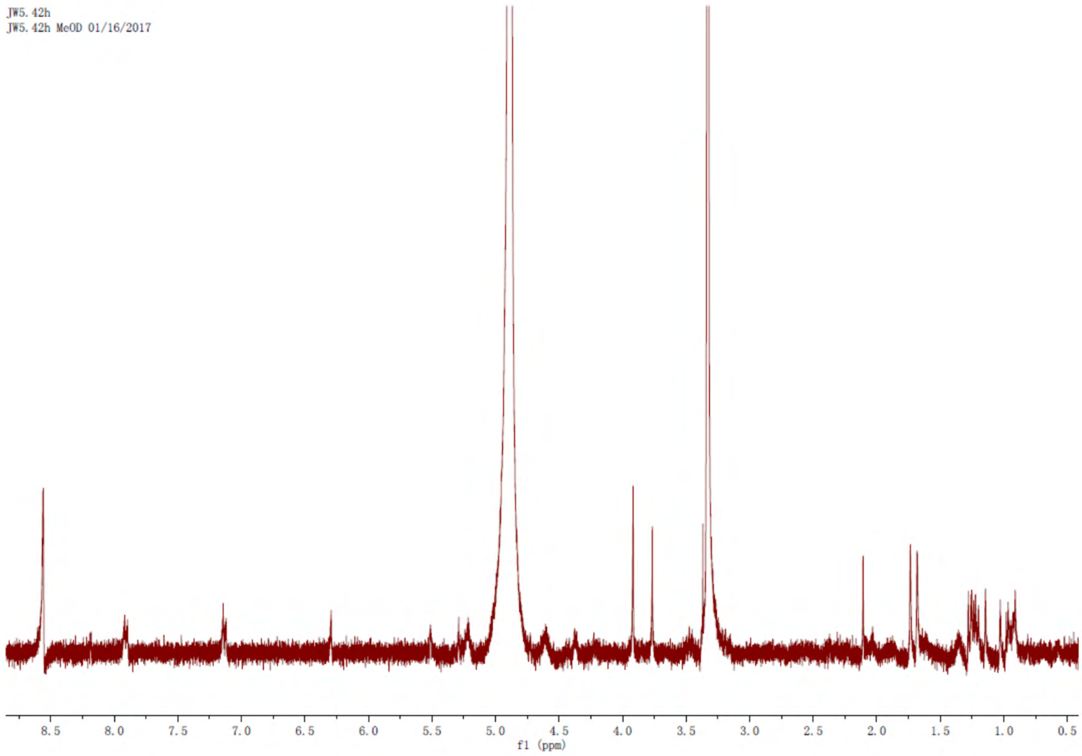


Figure S36. LC-MS spectrum of compound **16**.

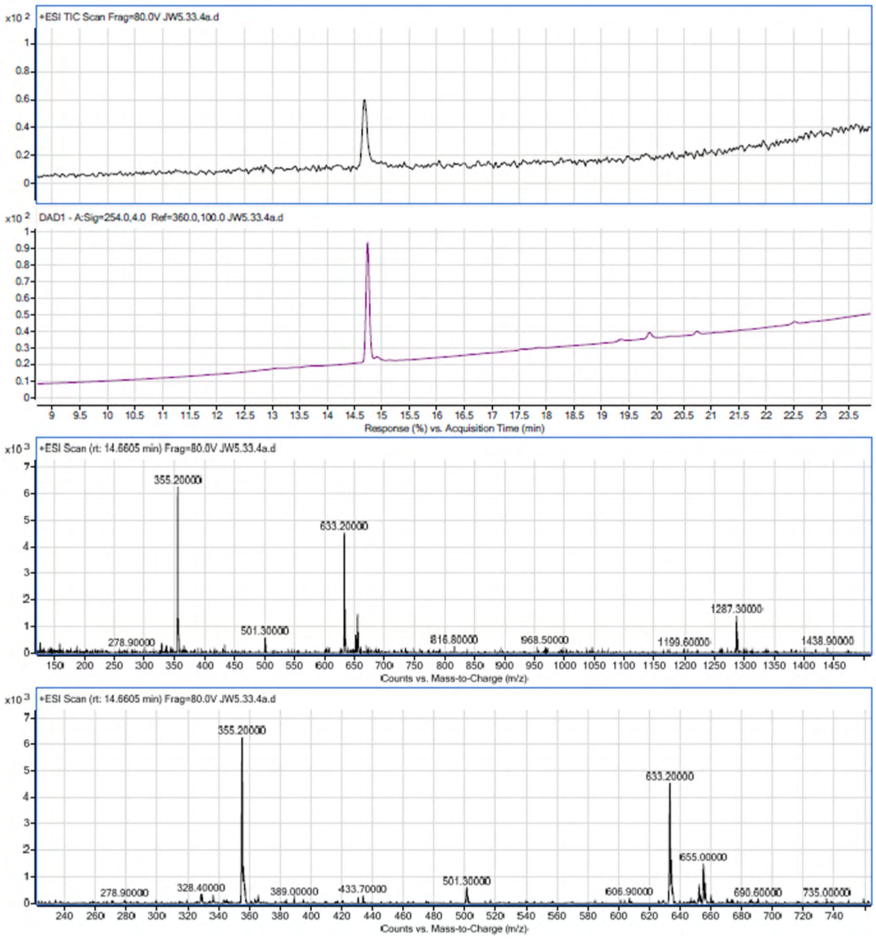


Figure S37. ^{1}H-NMR spectrum of compound **16**.

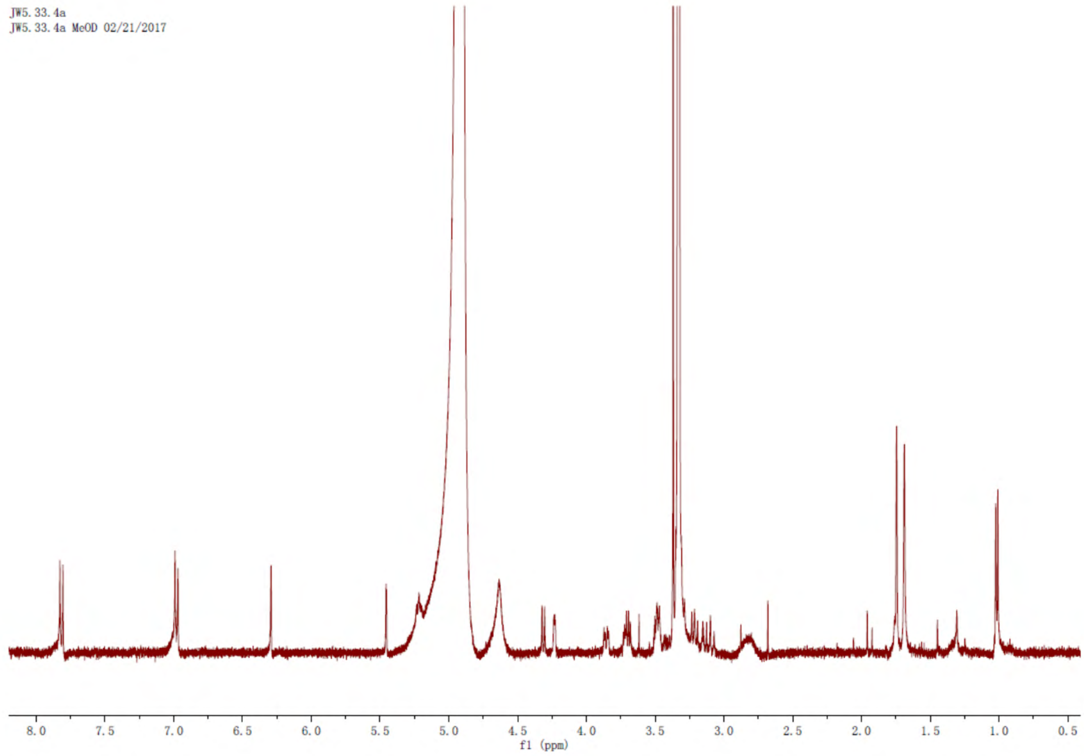


Figure S38. LC-MS spectrum of compound **17**.

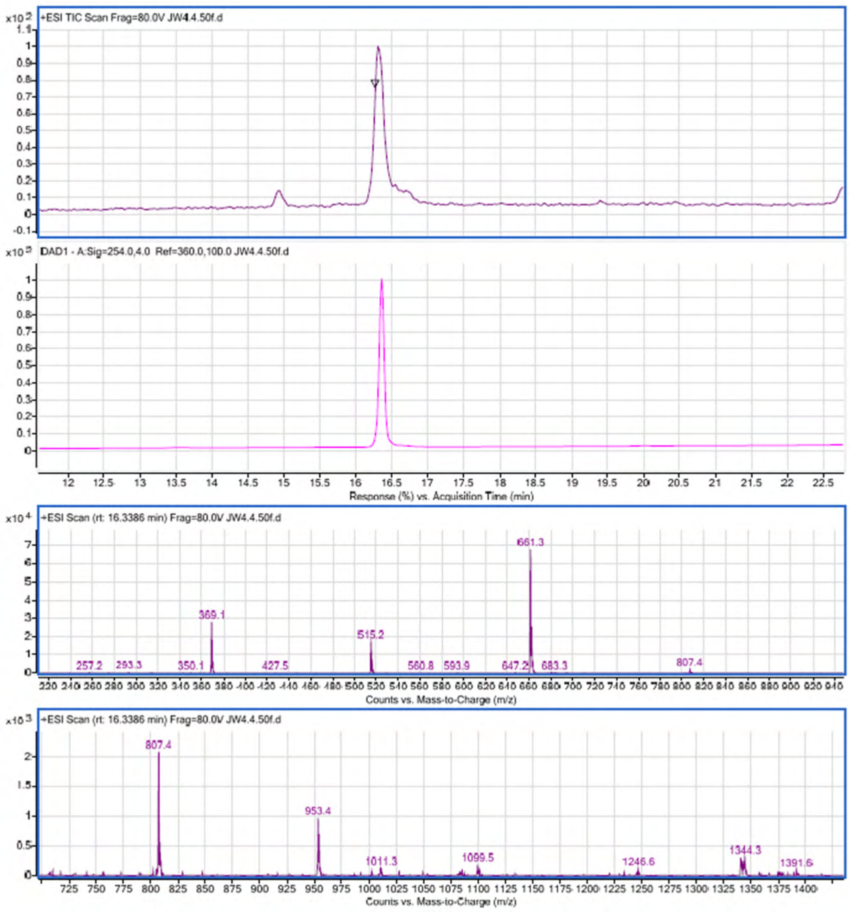


Figure S39. ^{1}H-NMR spectrum of compound **17**.

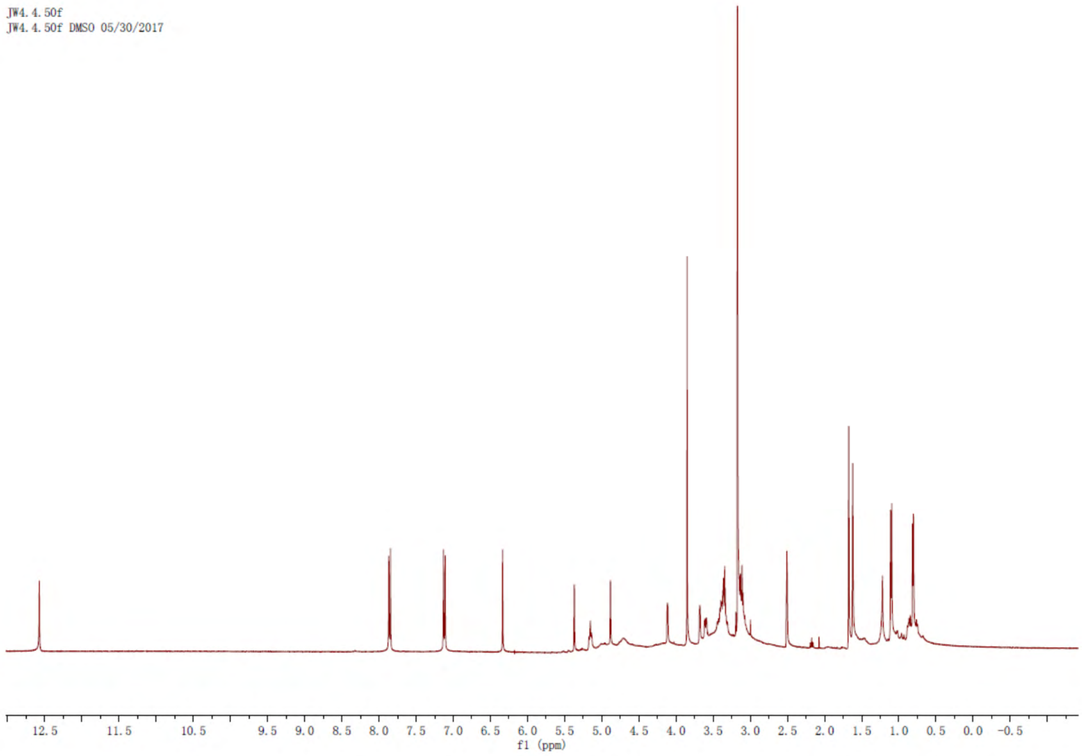


Figure S40. LC-MS spectrum of compound **18**.

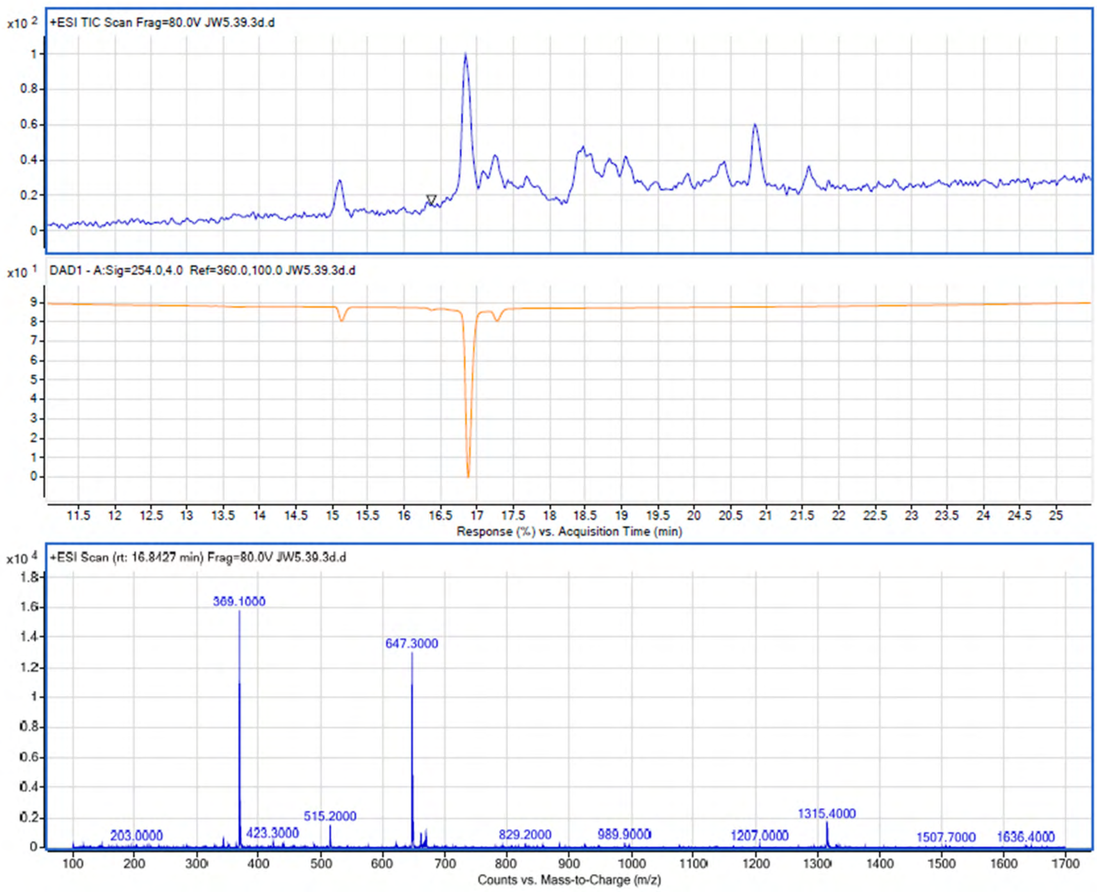


Figure S41. ^{1}H-NMR spectrum of compound **18**.

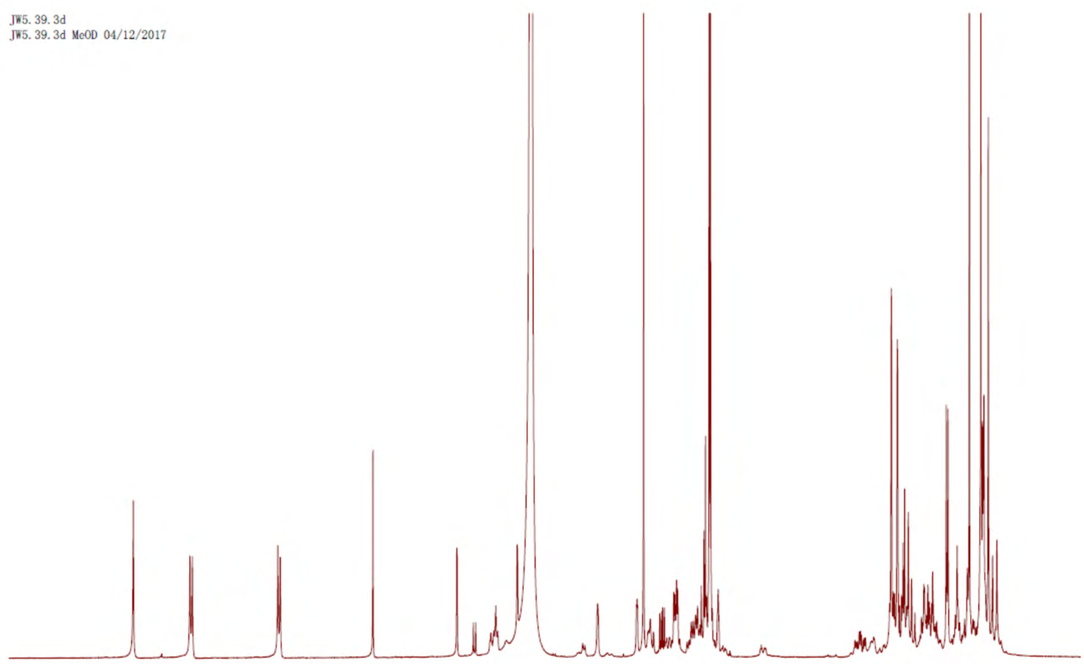


Figure S42. LC-MS spectrum of compound **19**.

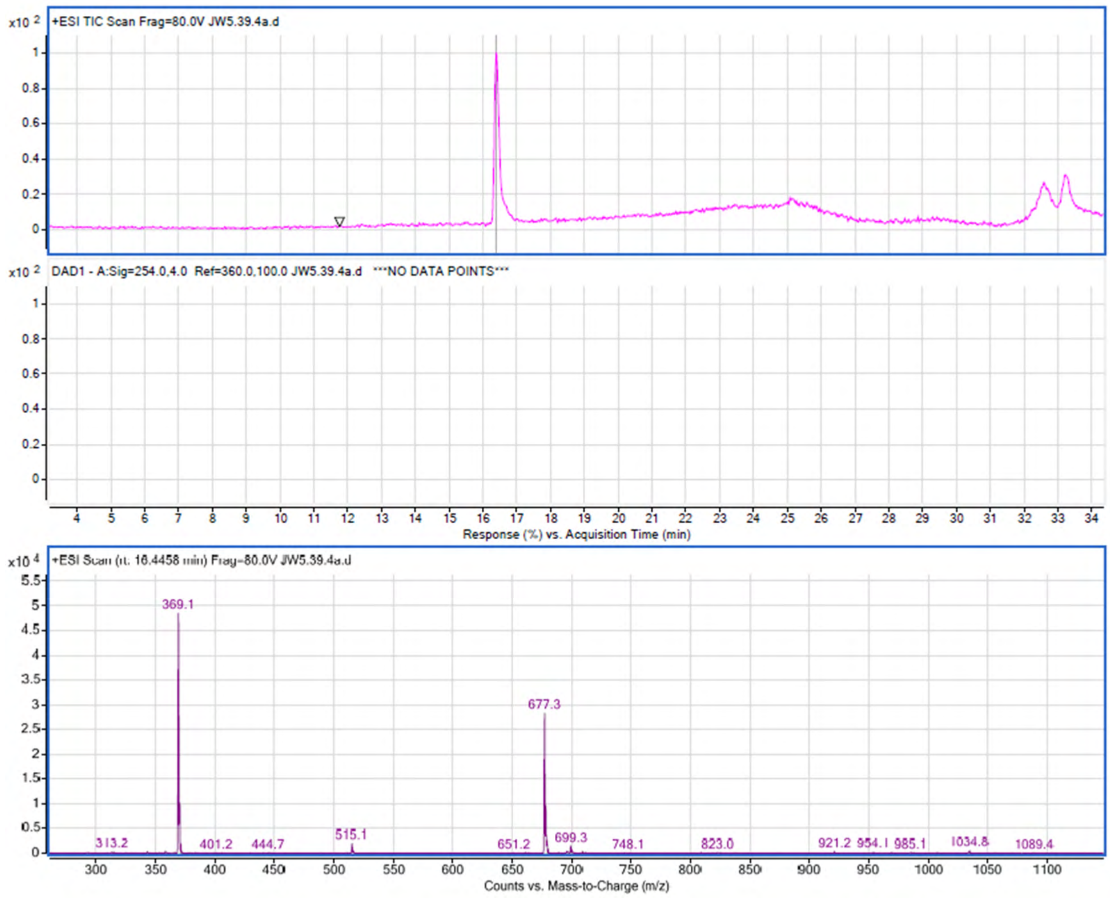


Figure S43. ^{1}H-NMR spectrum of compound **19**.

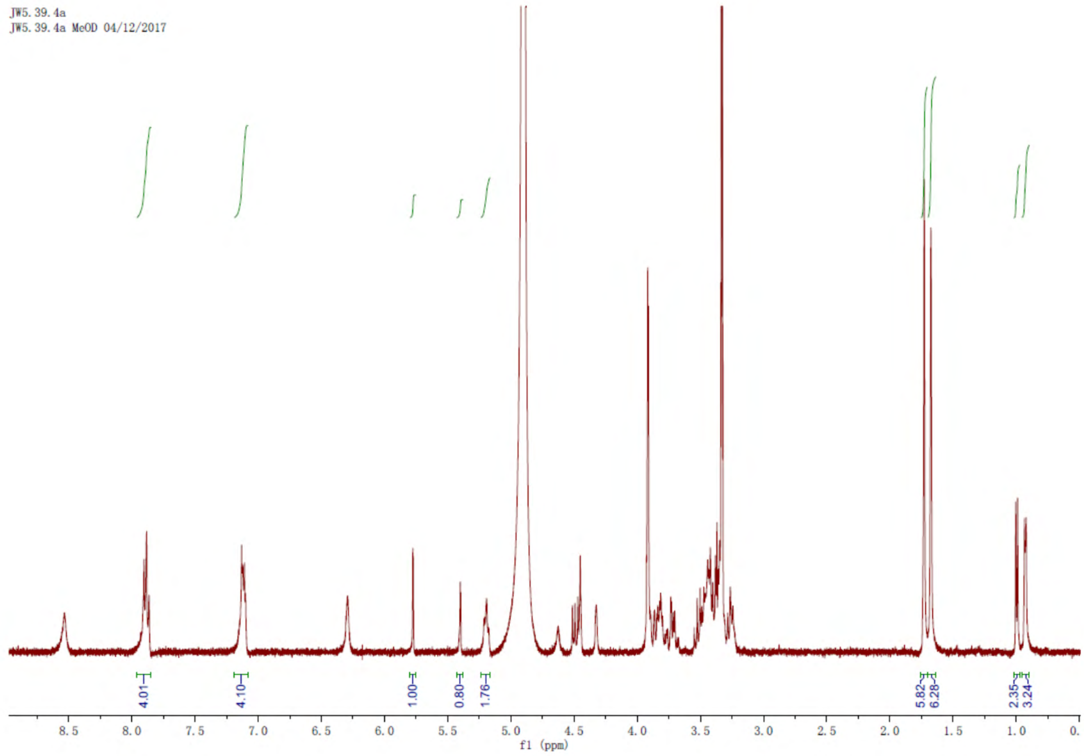


Figure S44. ^{1}H-NMR spectrum of compound **20**.

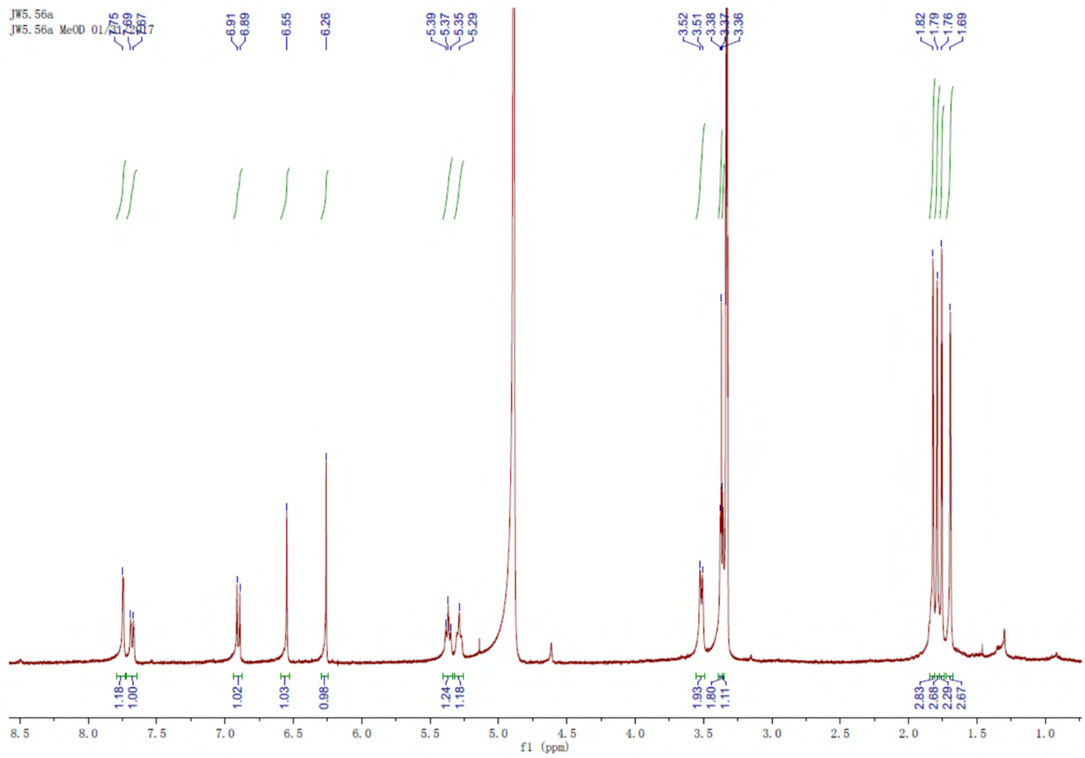


Figure S45. LC-MS spectrum of compound **21**.

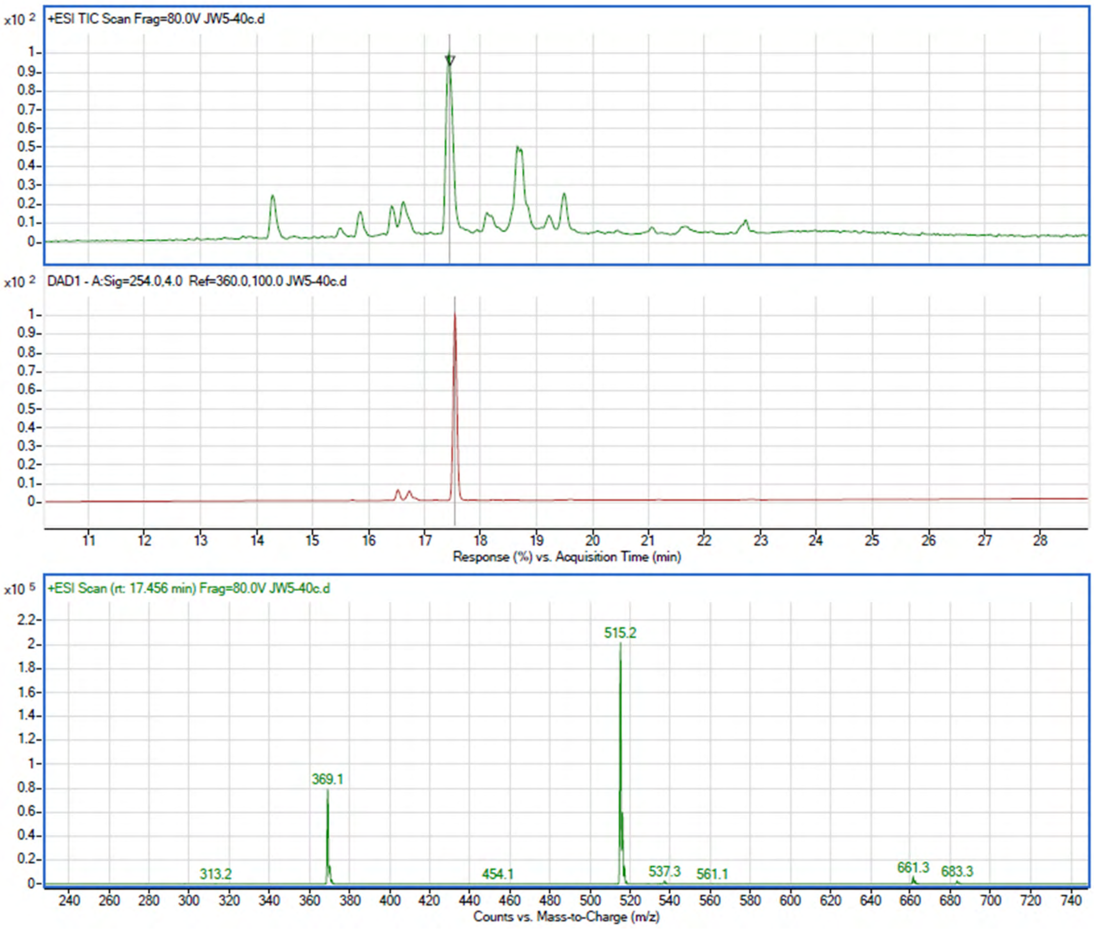


Figure S46. ^{1}H-NMR spectrum of compound **21**.

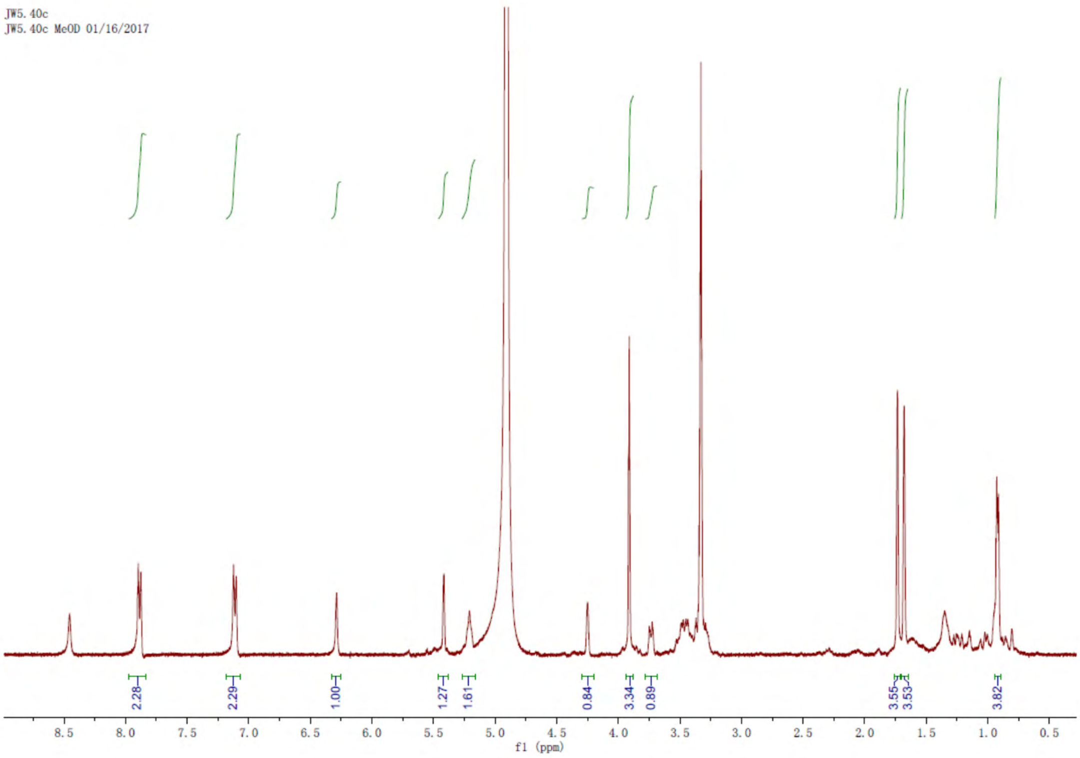


Figure S45. LC-MS spectrum of compound **22**.

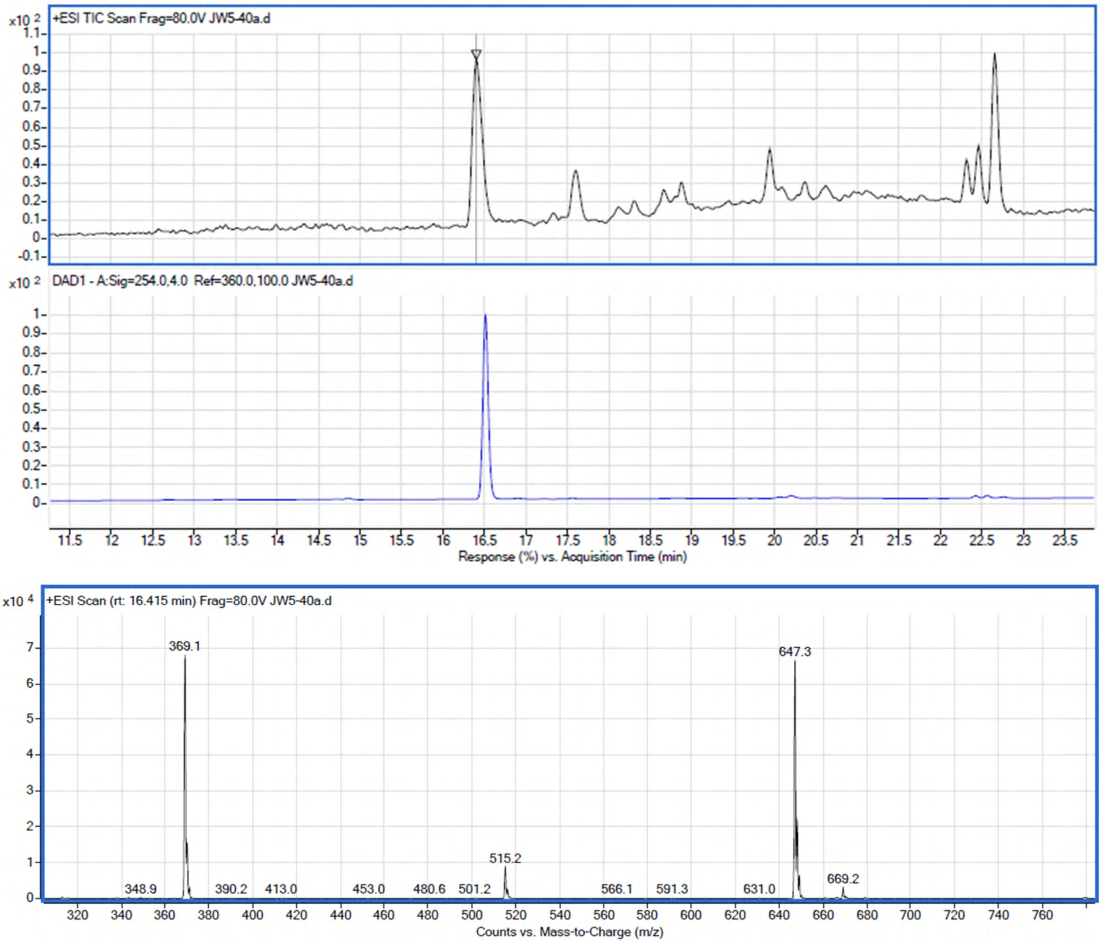


Figure S46. [1]H-NMR spectrum of compound **22**.

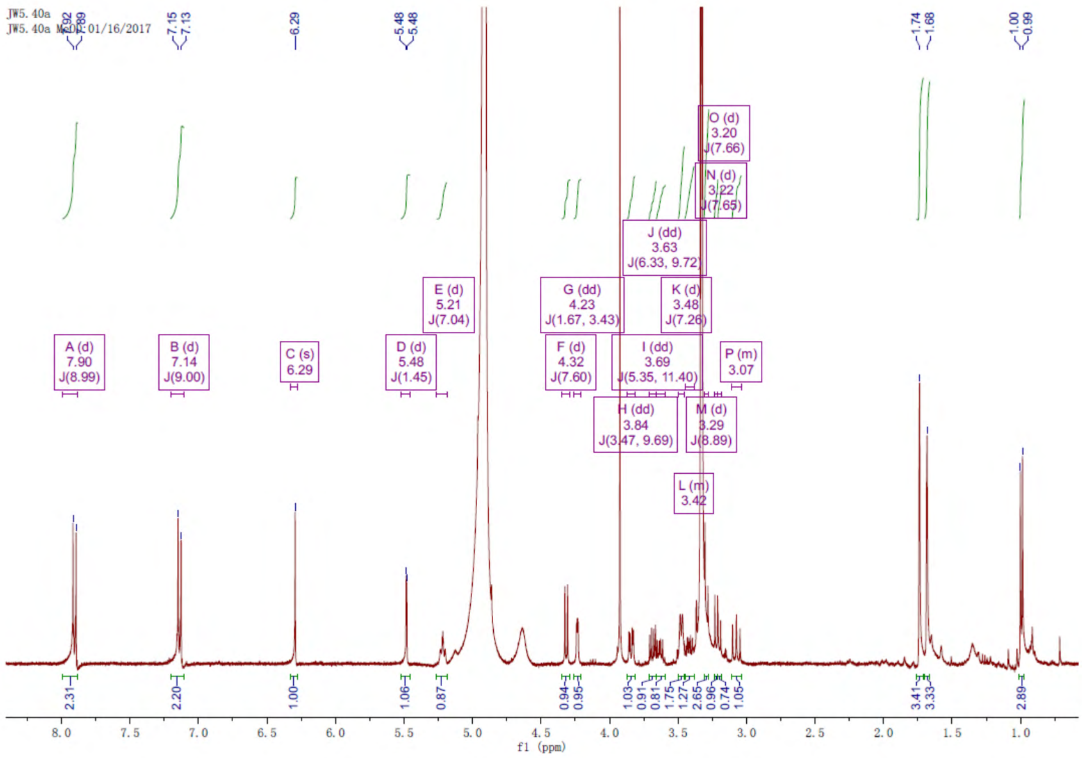


Figure S47. LC-MS spectrum of compound **23**.

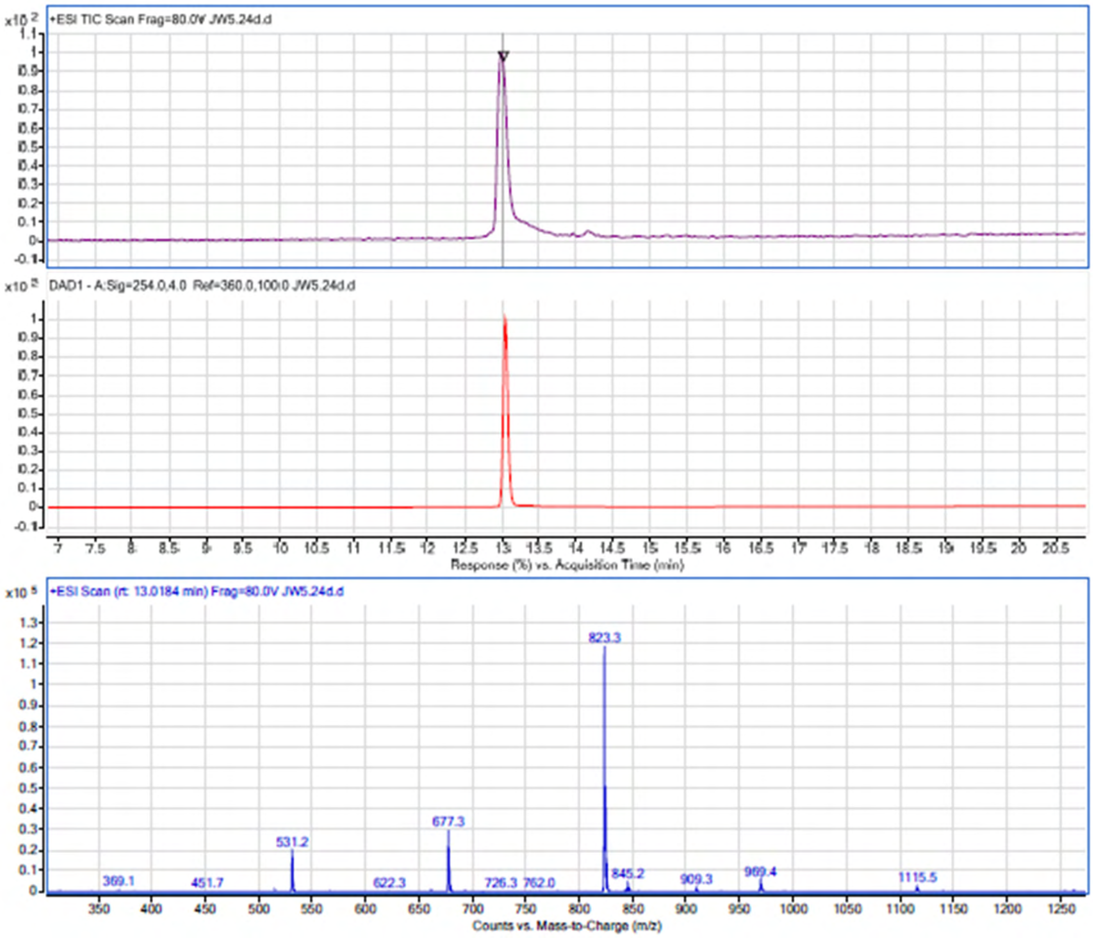


Figure S48. [1]H-NMR spectrum of compound **23**.

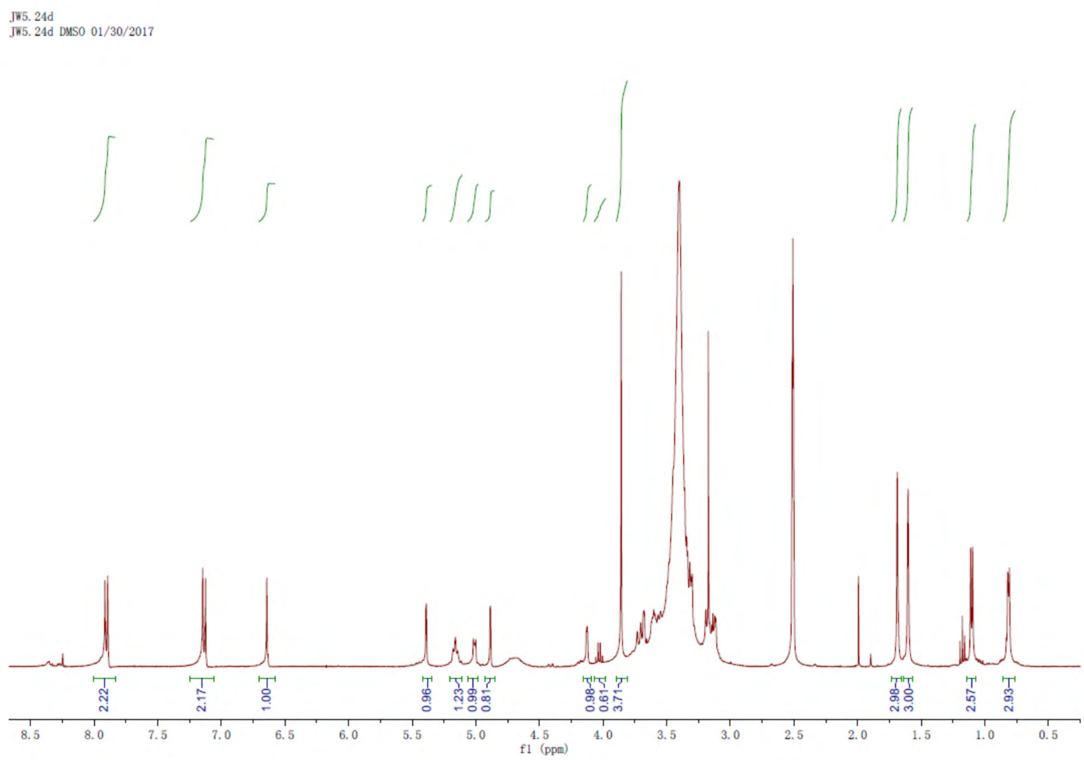


Figure S49. LC-MS spectrum of compound **24**.

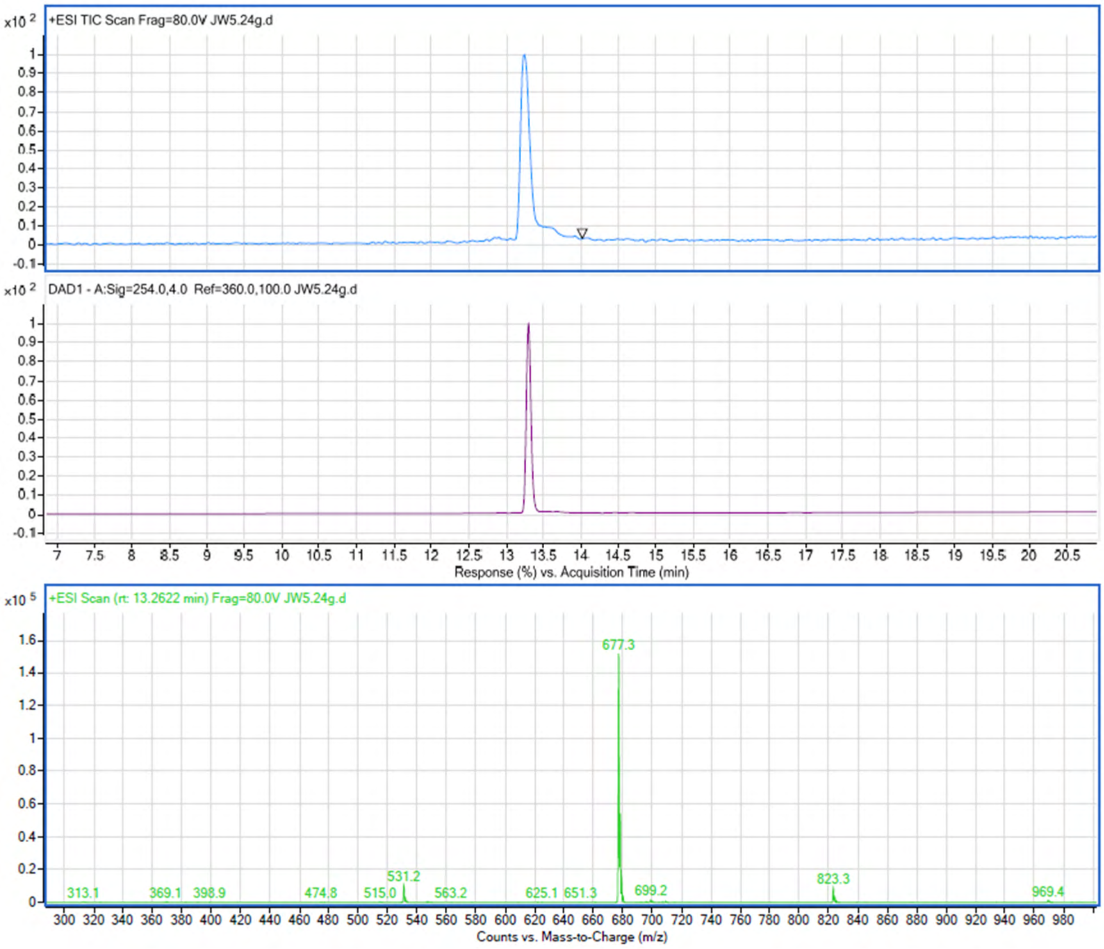


Figure S50. ^{1}H-NMR spectrum of compound **24**.

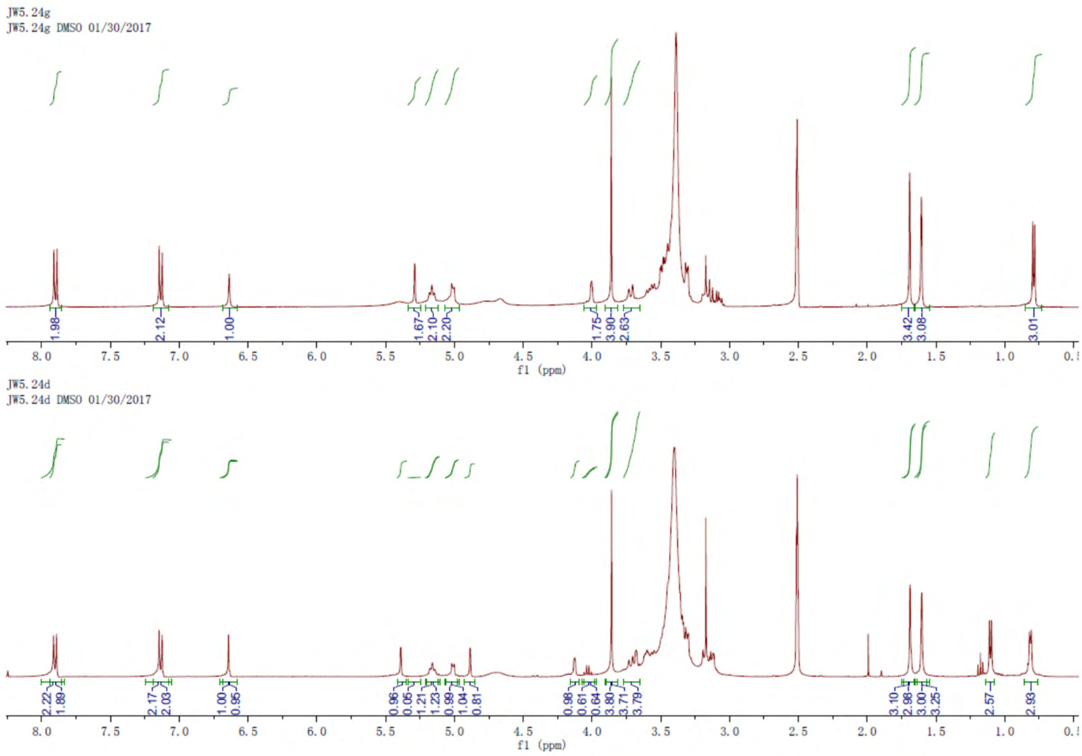


Figure S51. LC-MS spectrum of compound **25**.

Figure S52. ^{1}H-NMR spectrum of compound **25**.

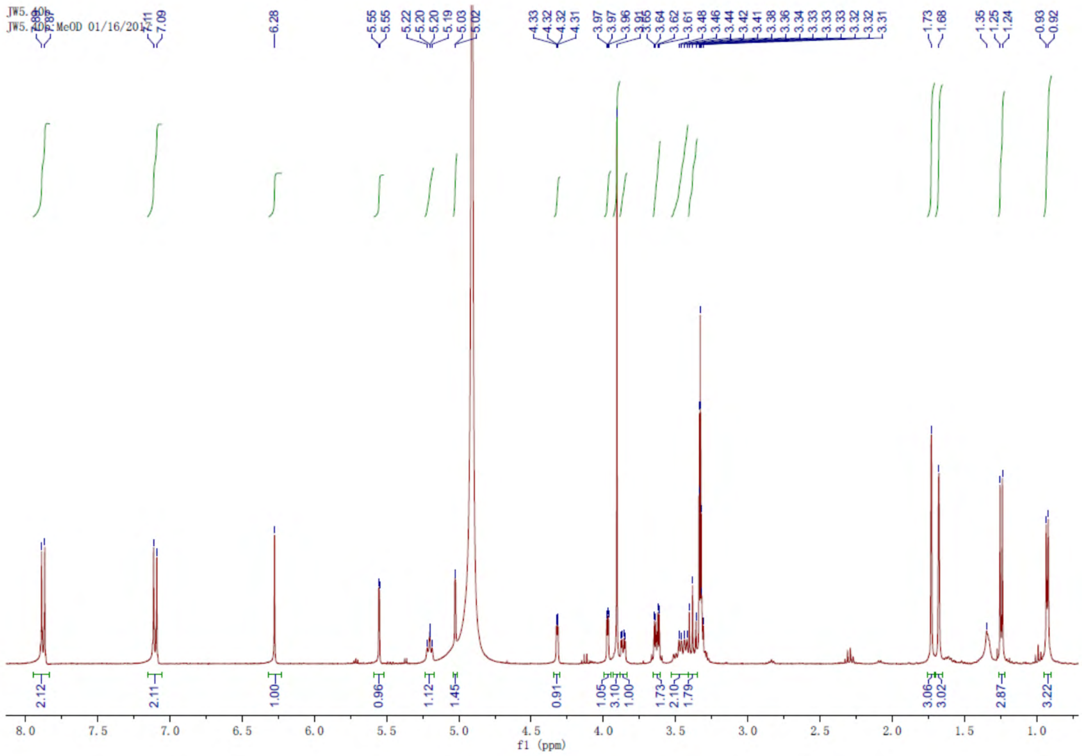


Figure S53. LC-MS spectrum of compound **26**.

Figure S54. ^{1}H-NMR spectrum of compound **26**.

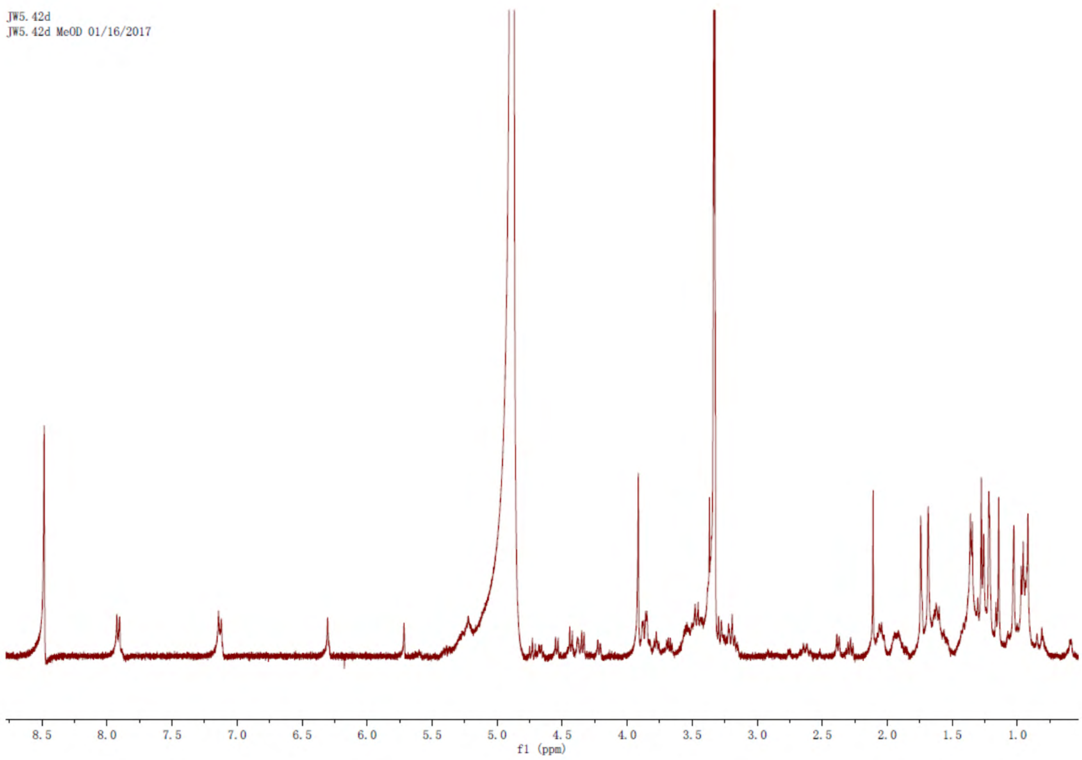


Figure S55. LC-MS spectrum of compound **27**.

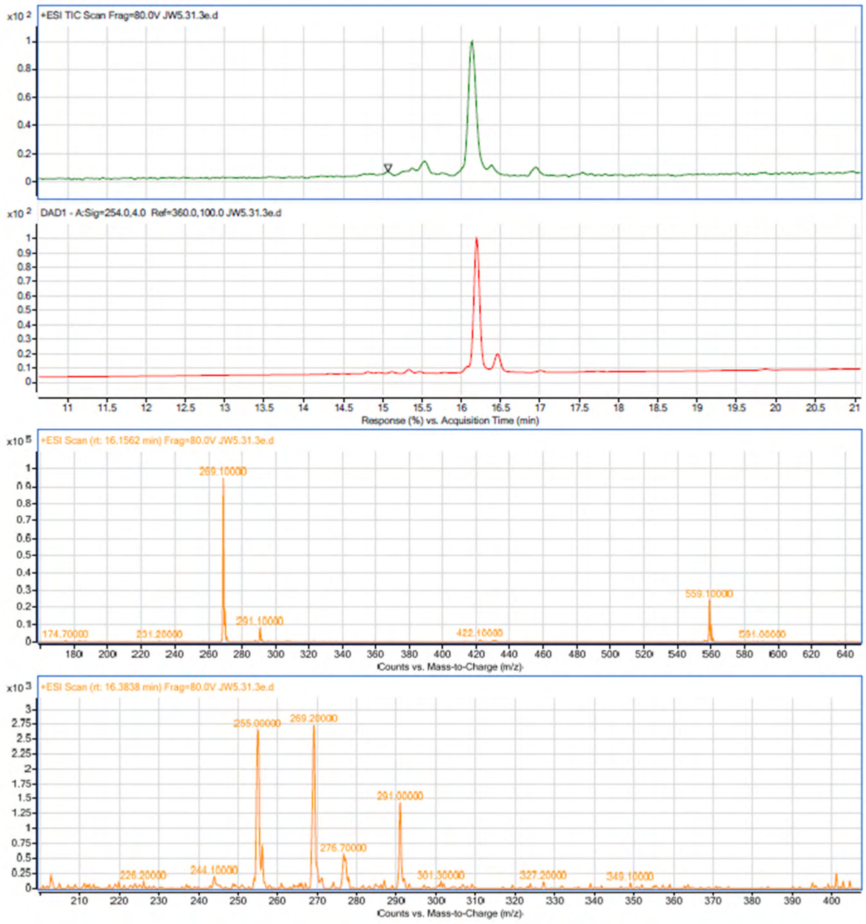


Figure S56. [1]H-NMR spectrum of compound **27**.

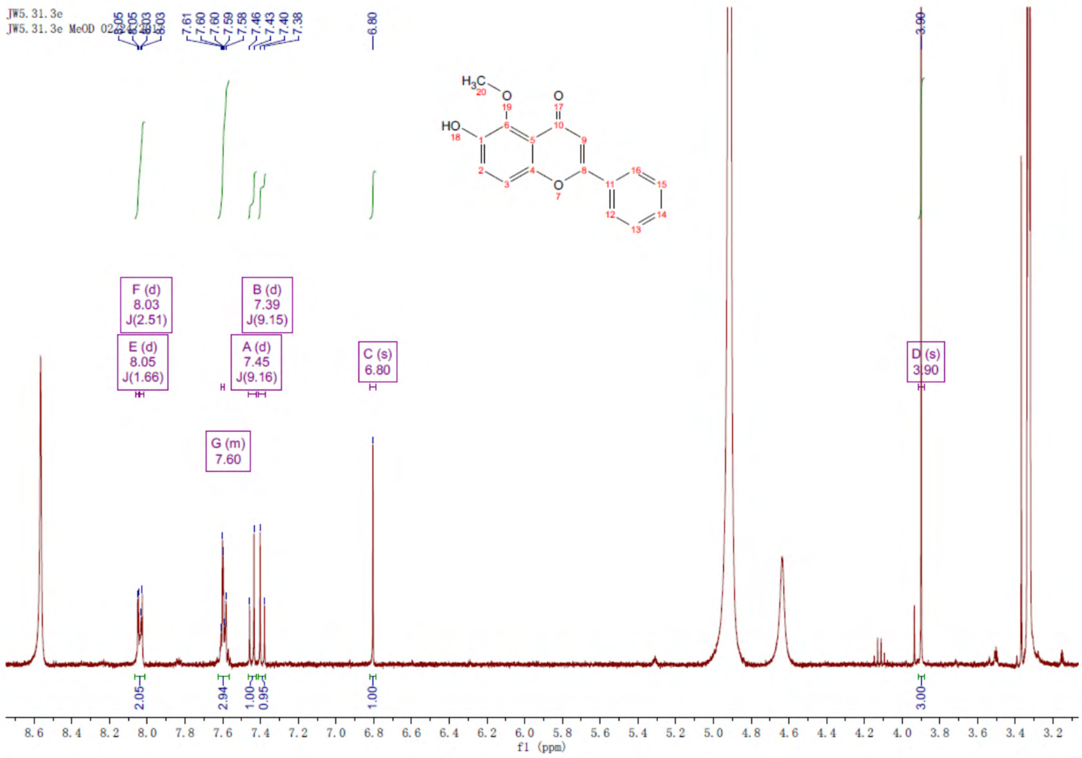


Figure S57. LC-MS spectrum of compound **28**.

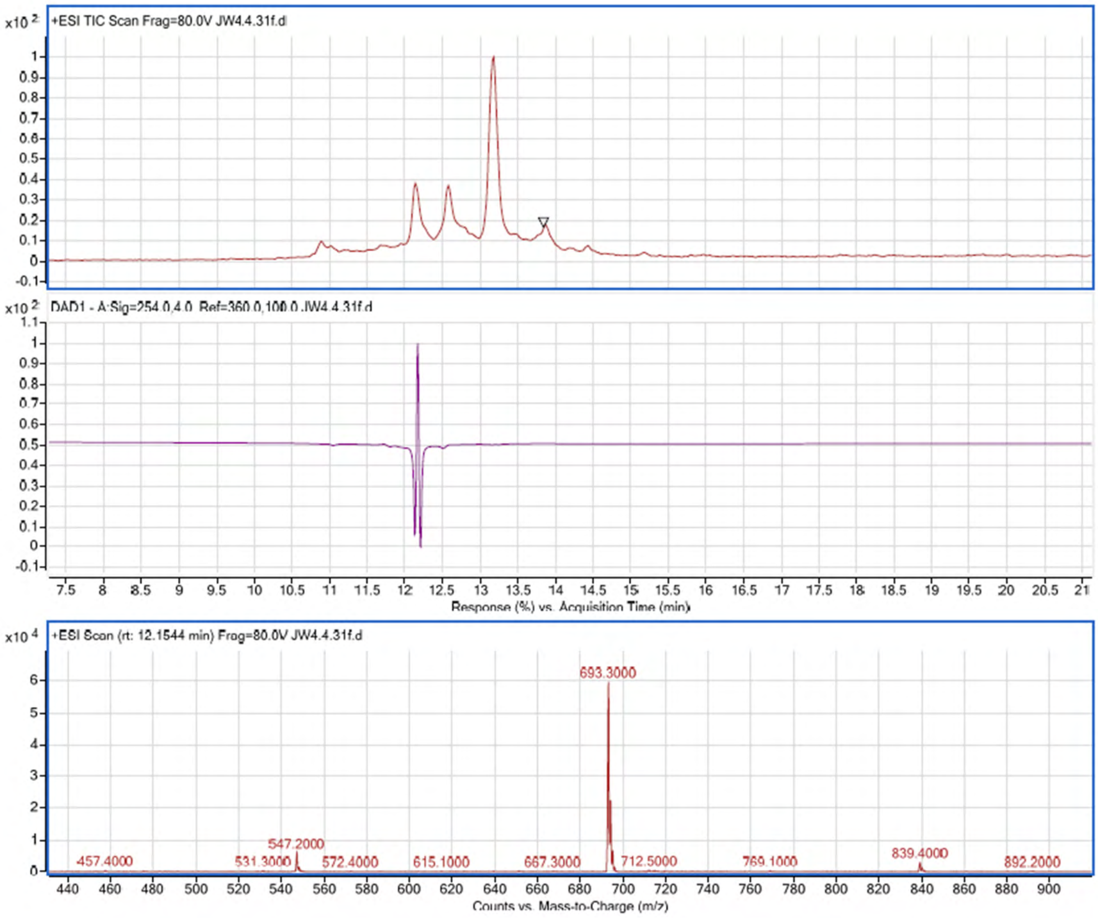


Figure S58. [1]H-NMR spectrum of compound **28**.

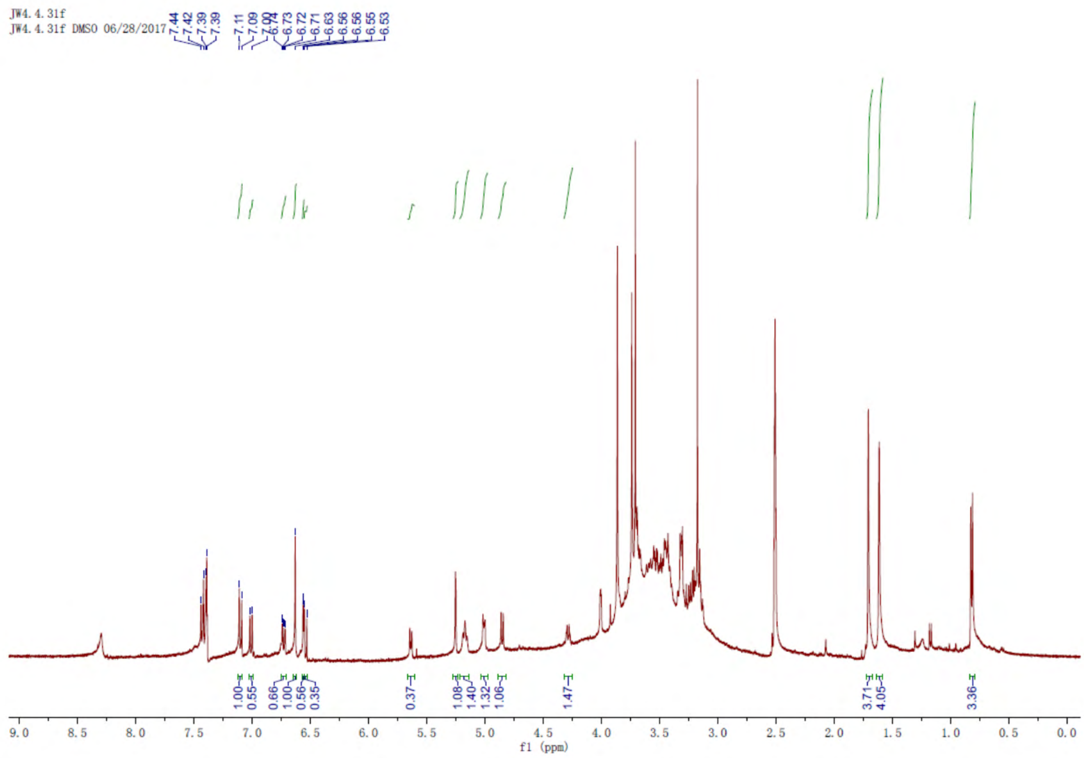


Figure S59. LC-MS spectrum of compound **29**.

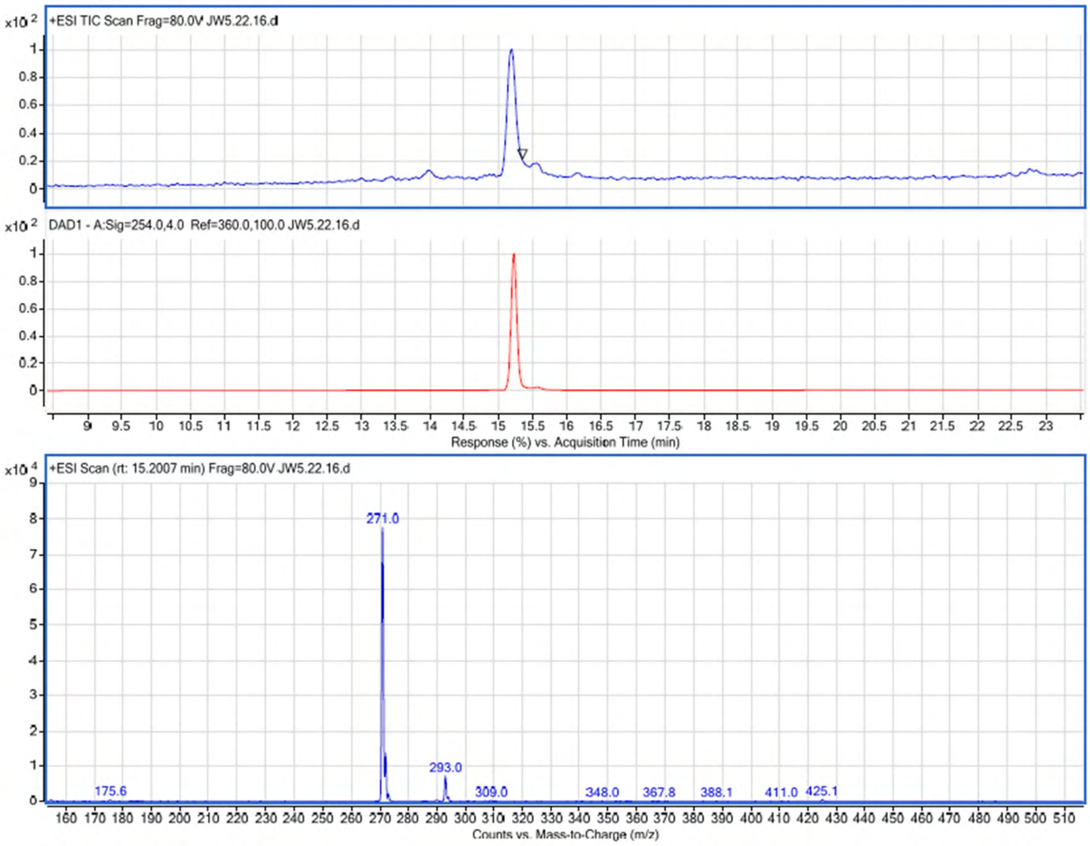


Figure S60. [1]H-NMR spectrum of compound **29**.

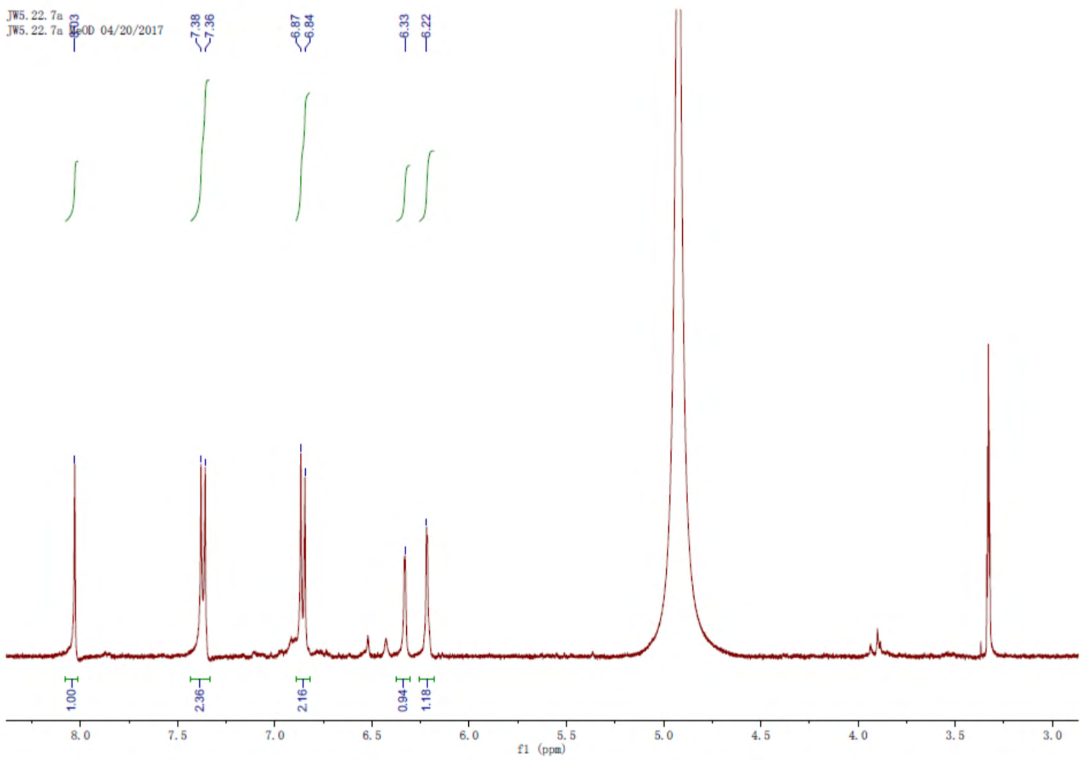


Figure S61. LC-MS spectrum of compound **30**.

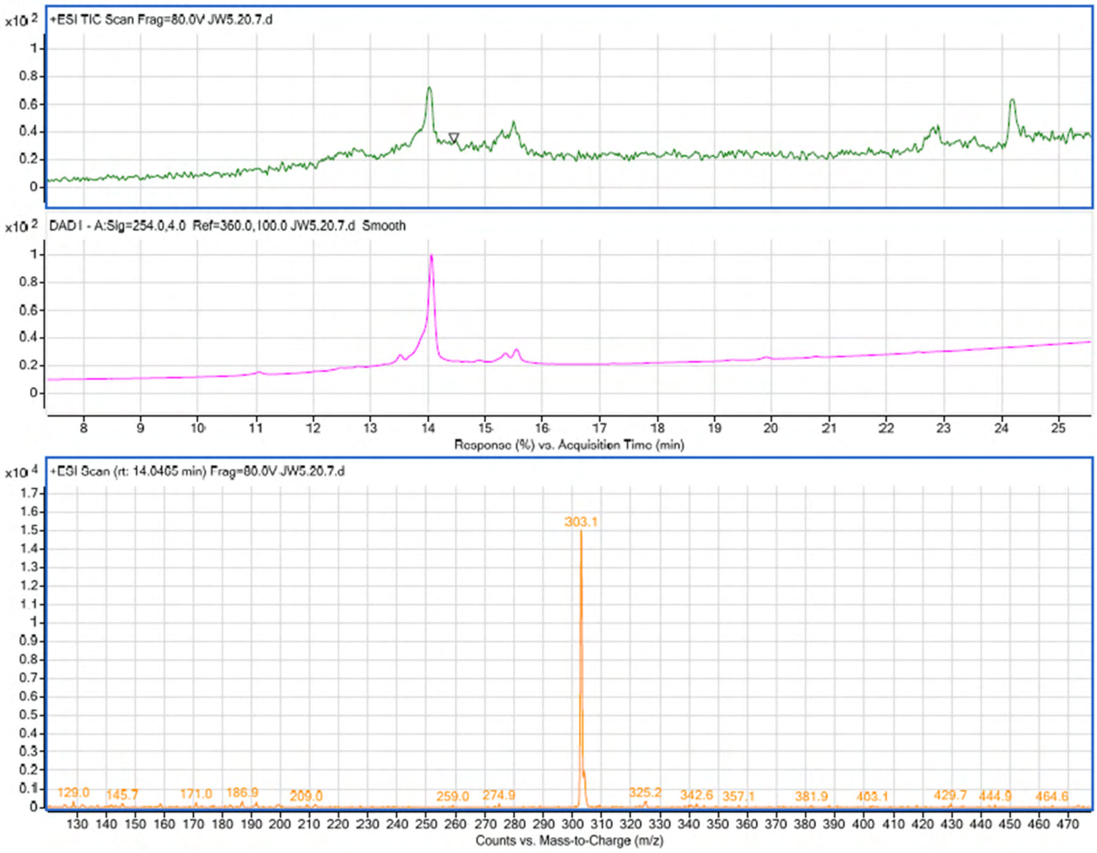


Figure S62. ^{1}H-NMR spectrum of compound **30**.

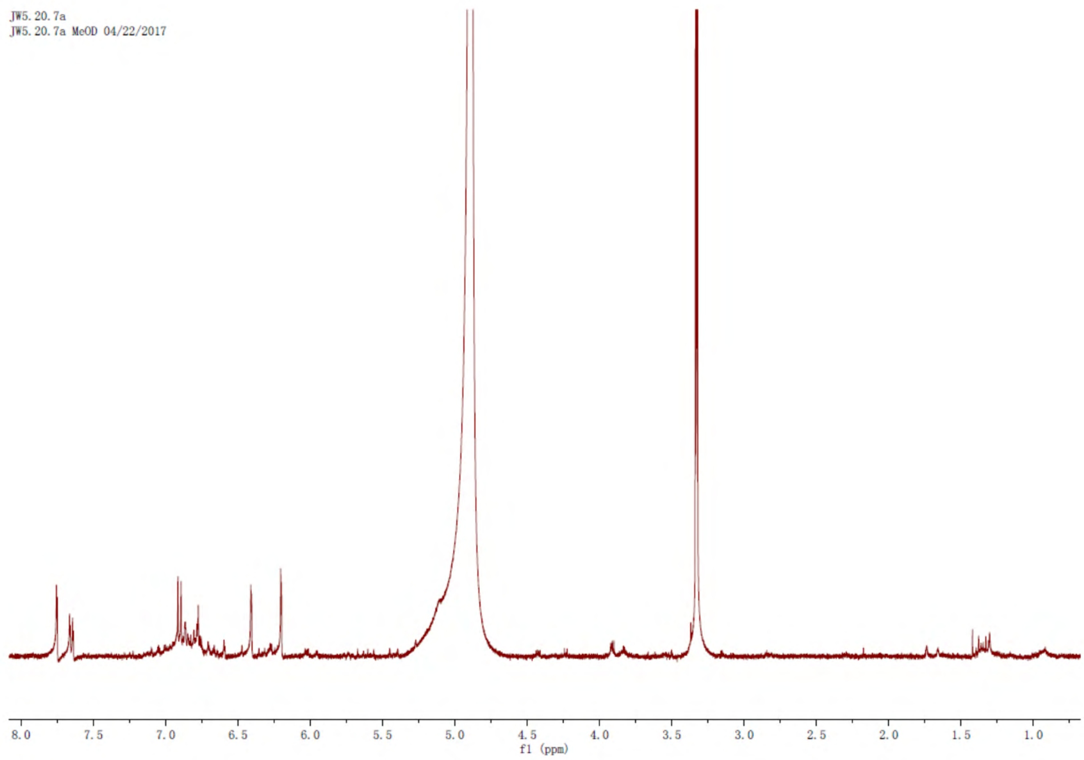


Figure S63. LC-MS spectrum of compound **31**.

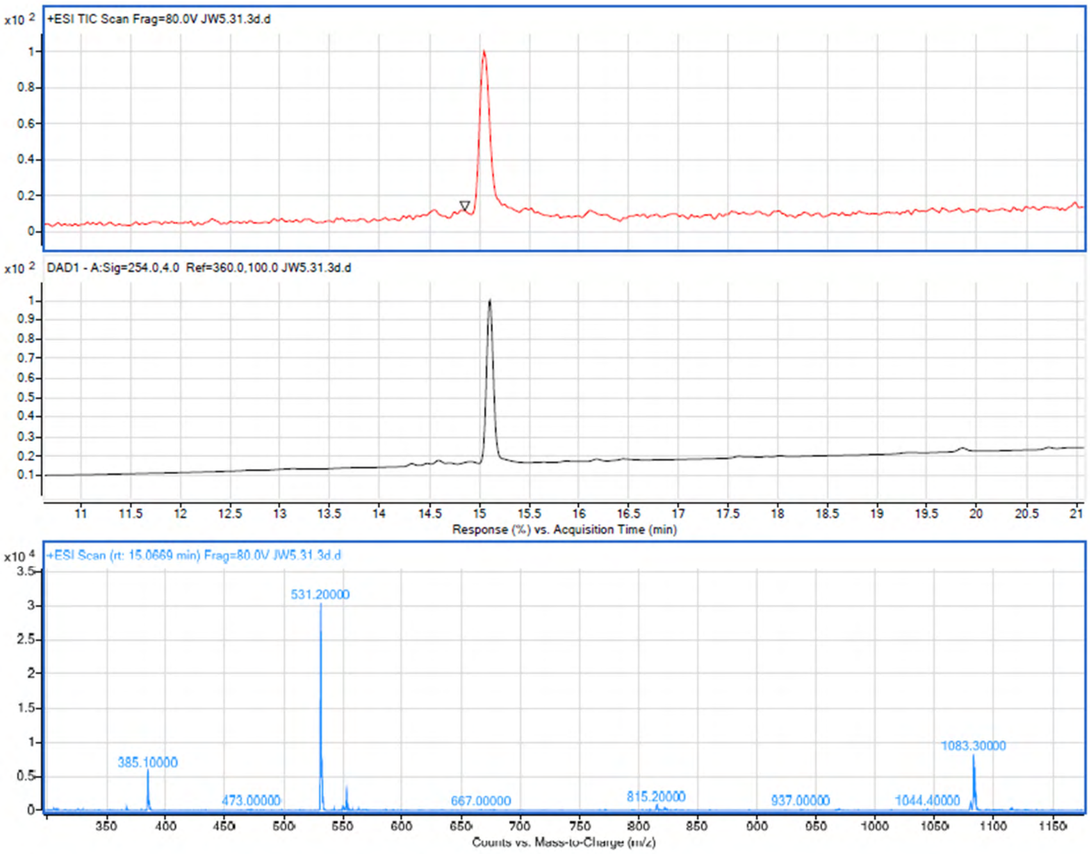


Figure S64. [1]H-NMR spectrum of compound **31**.

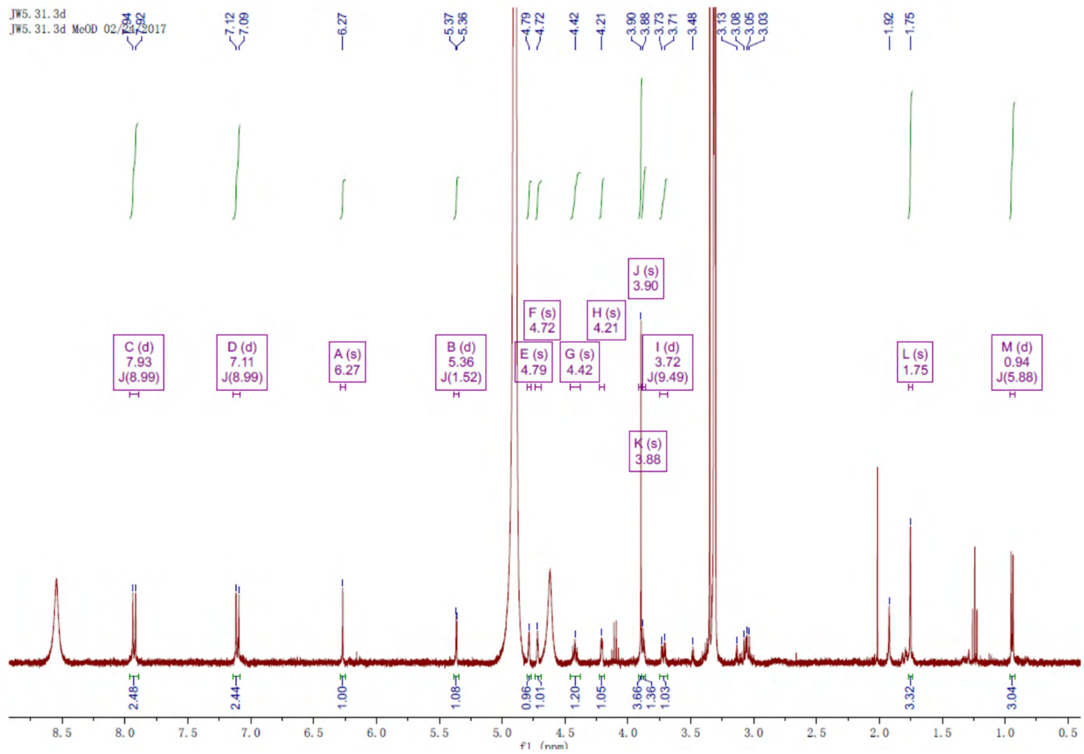


Figure S65. LC-MS spectrum of compound **32**.

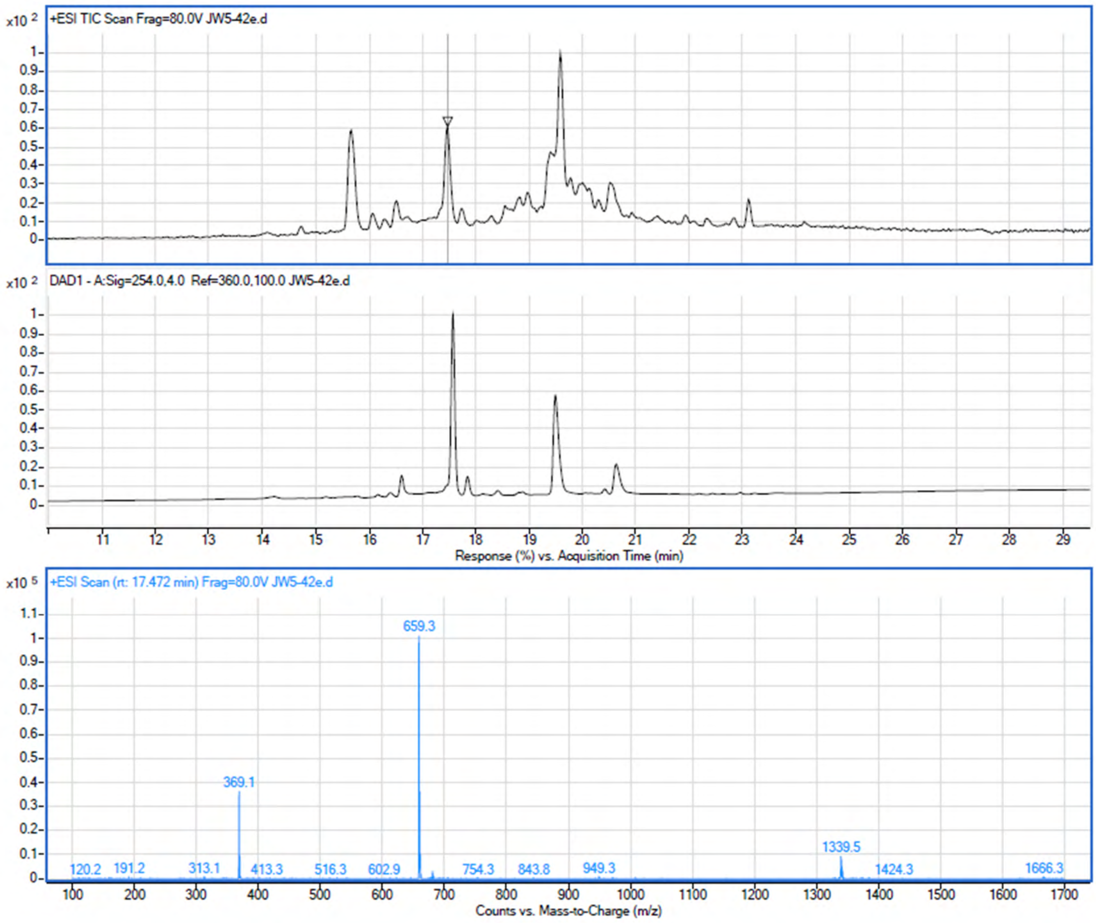


Figure S66. [1]H-NMR spectrum of compound **32**.

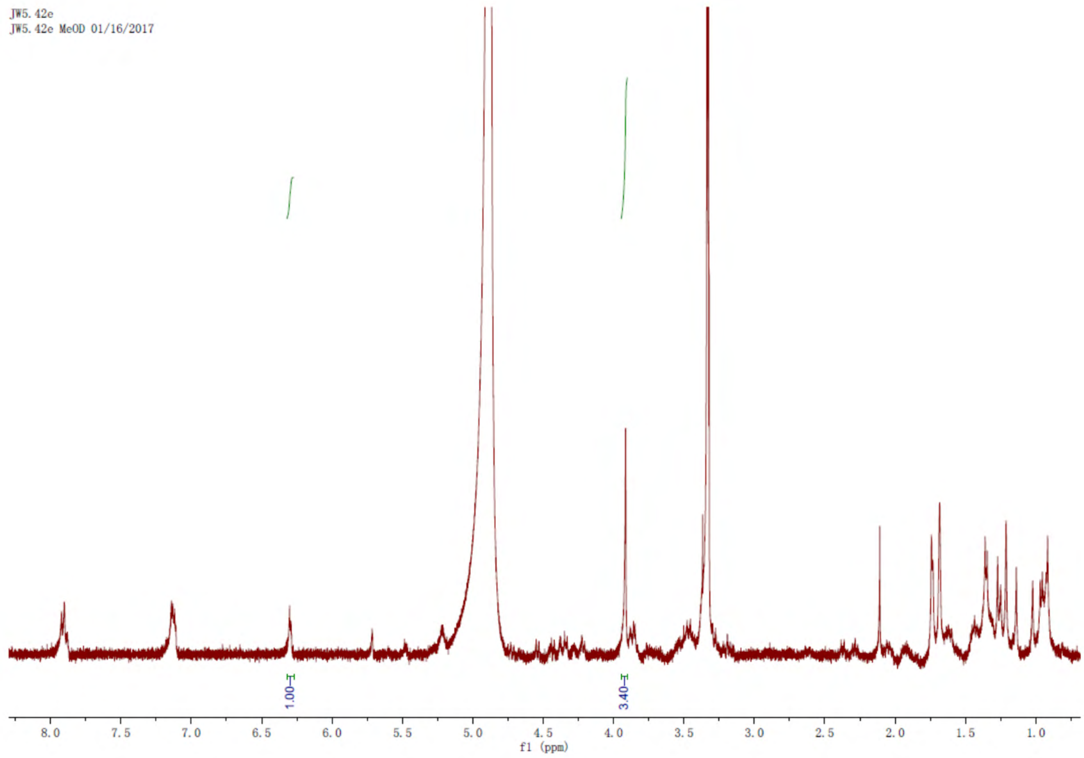


Figure S67. LC-MS spectrum of compound **33**.

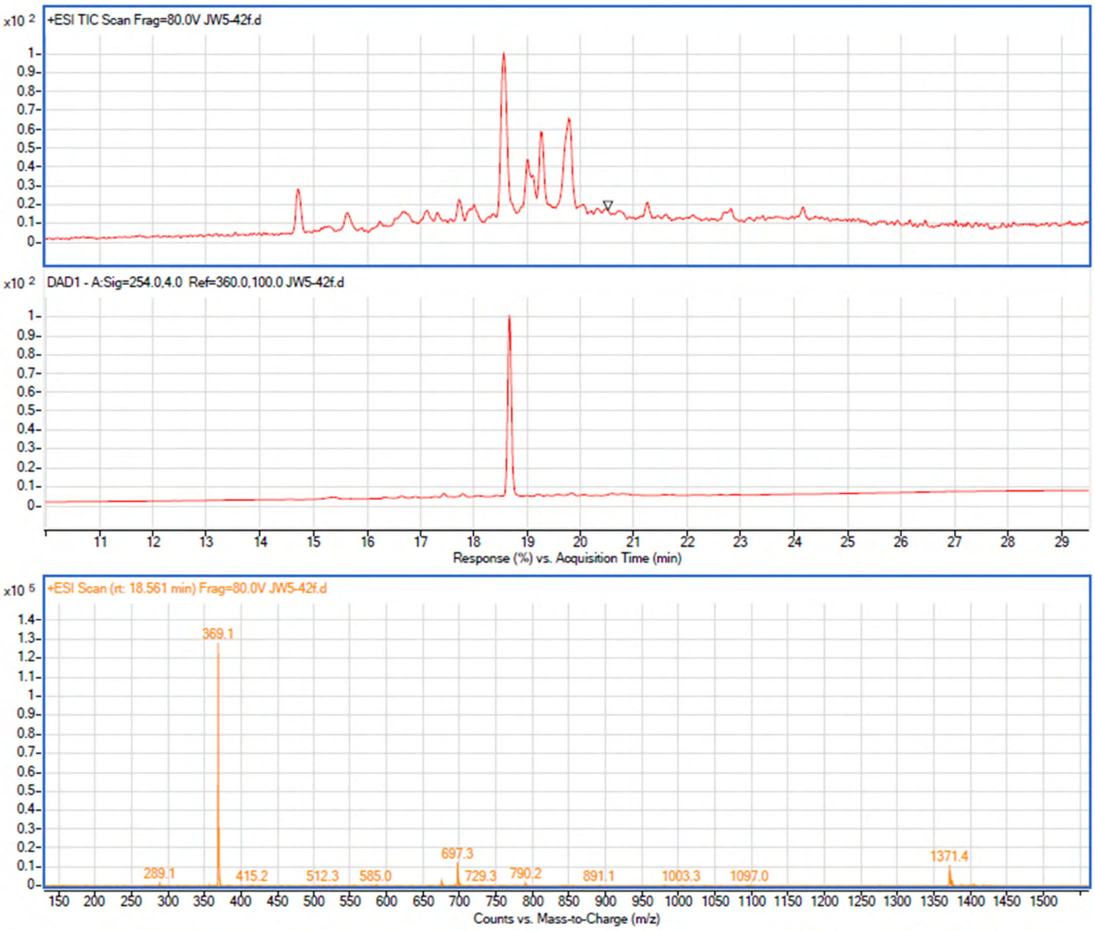


Figure S68. [1]H-NMR spectrum of compound **33**.

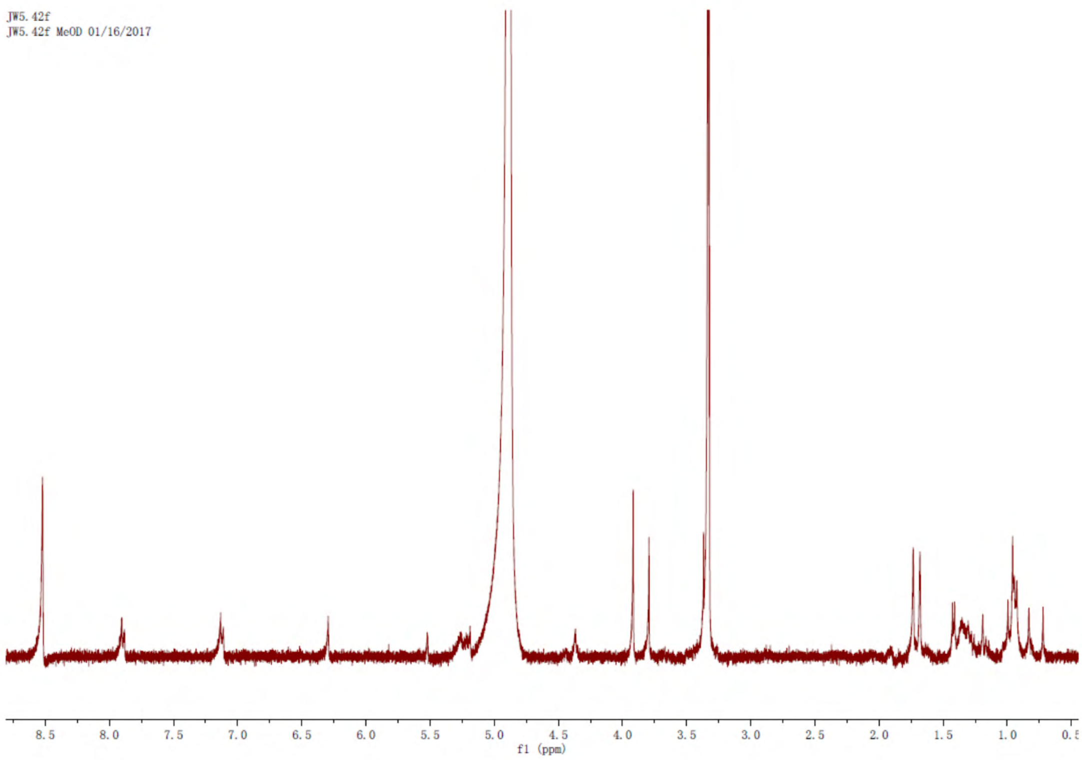


Figure S69. LC-MS spectrum of compound **34**.

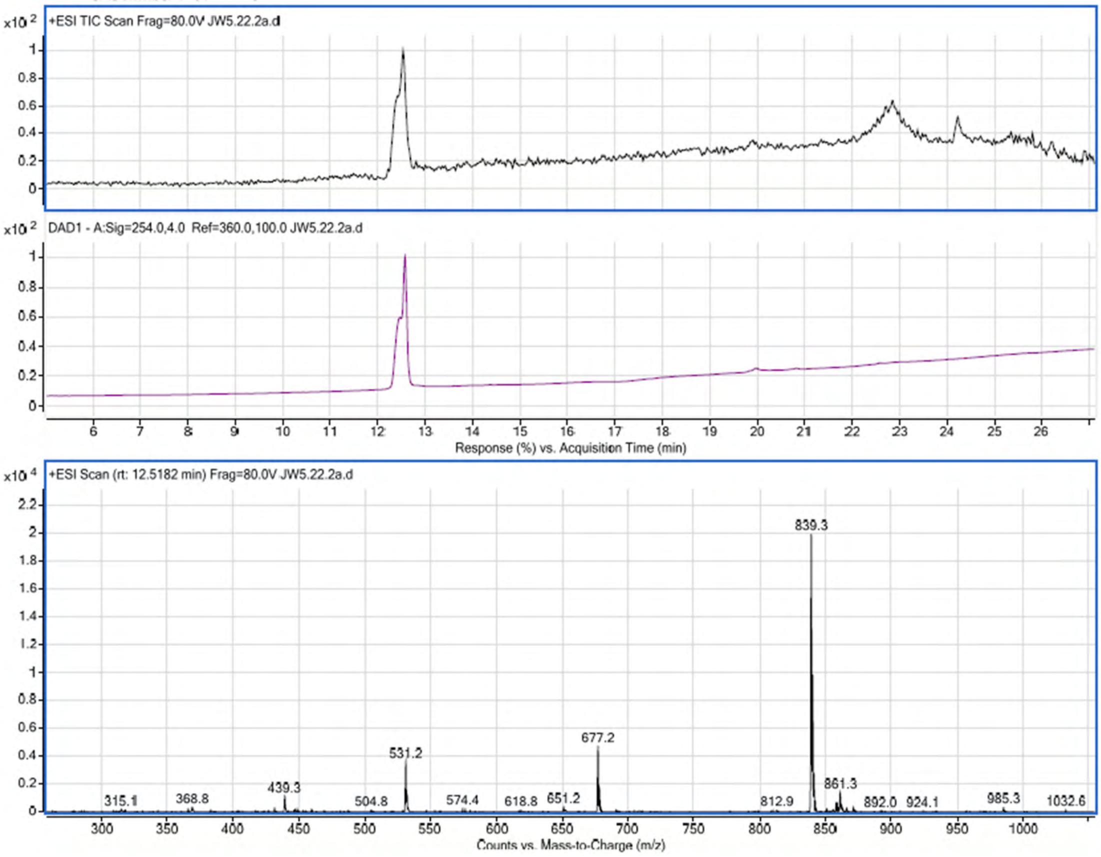


Figure S70. [1]H-NMR spectrum of compound **34**.

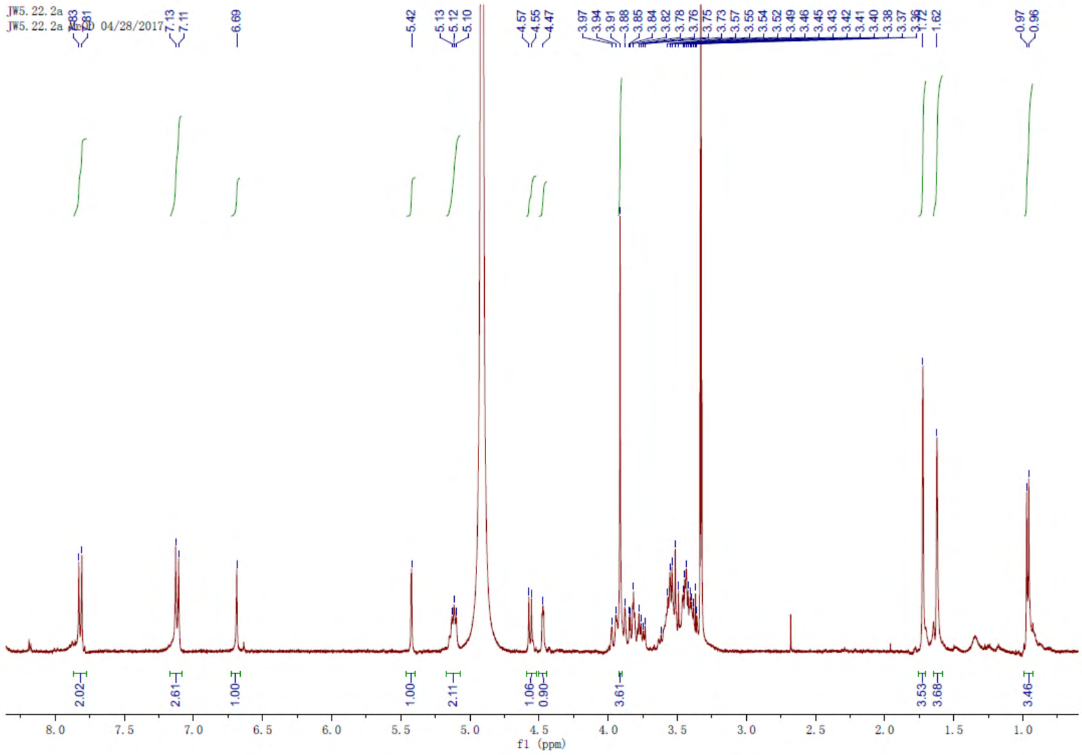


Figure S71. LC-MS spectrum of compound **35**.

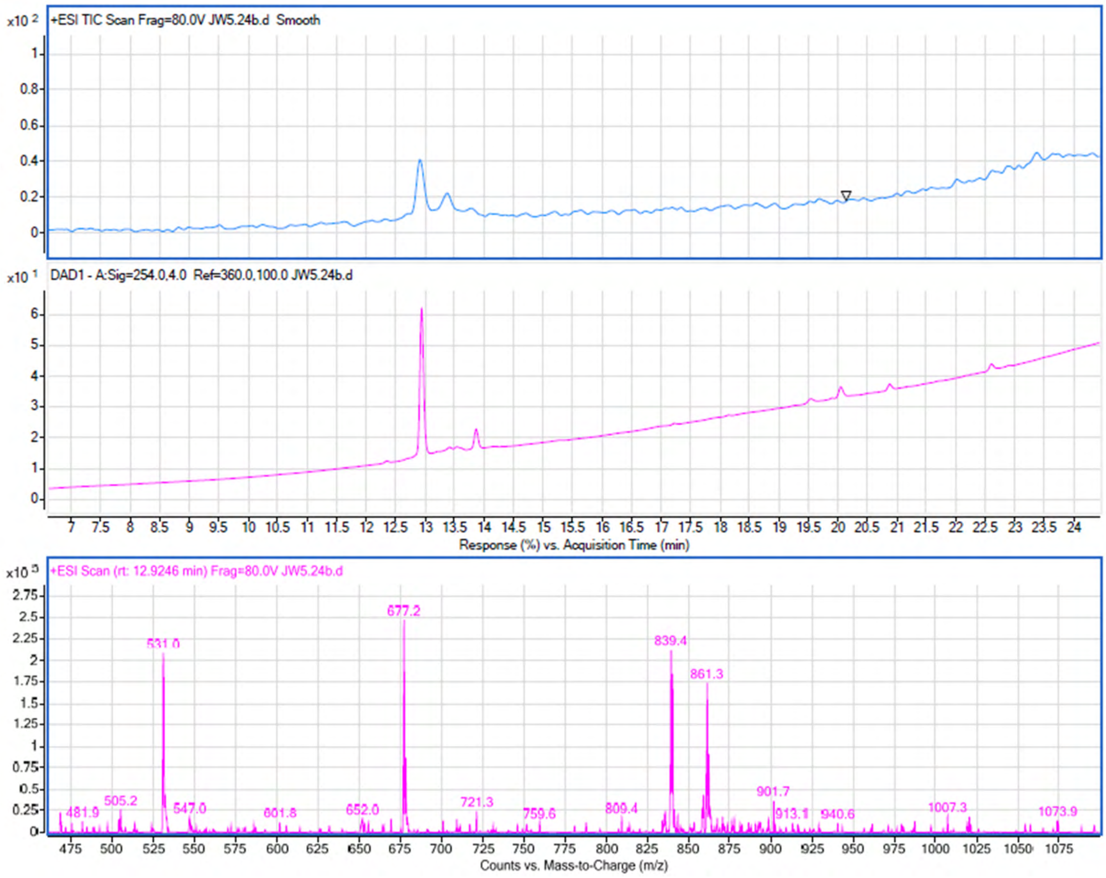


Figure S72. [1]H-NMR spectrum of compound **35**.

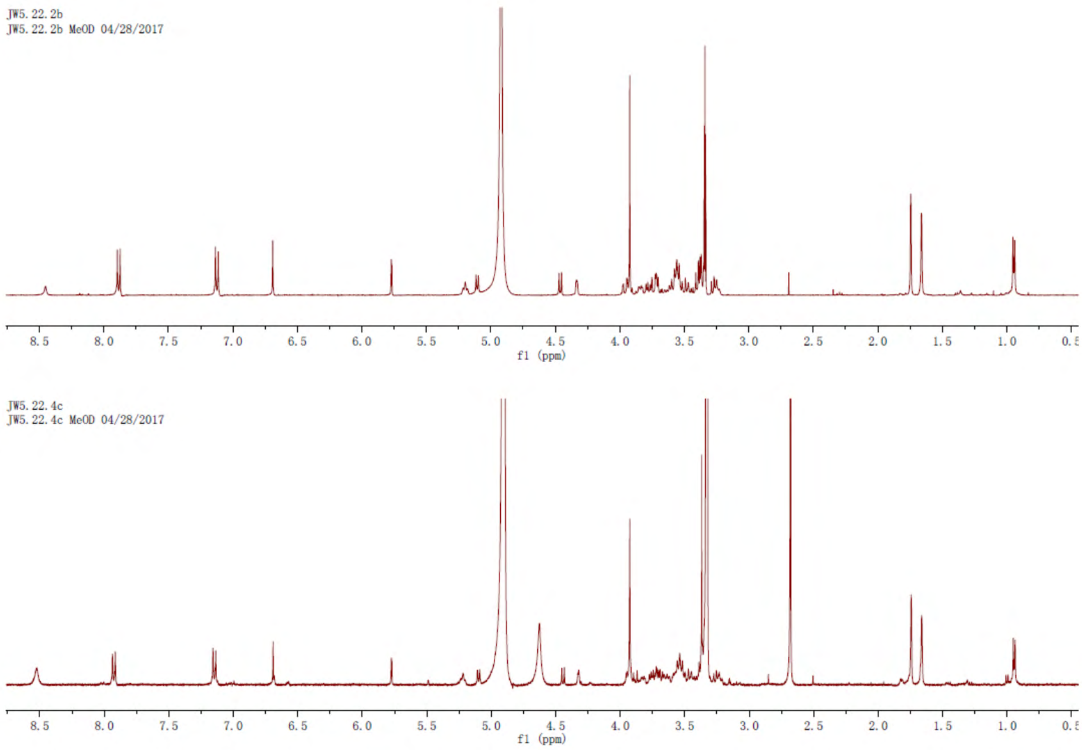


Figure S73. LC-MS spectrum of compound **36**.

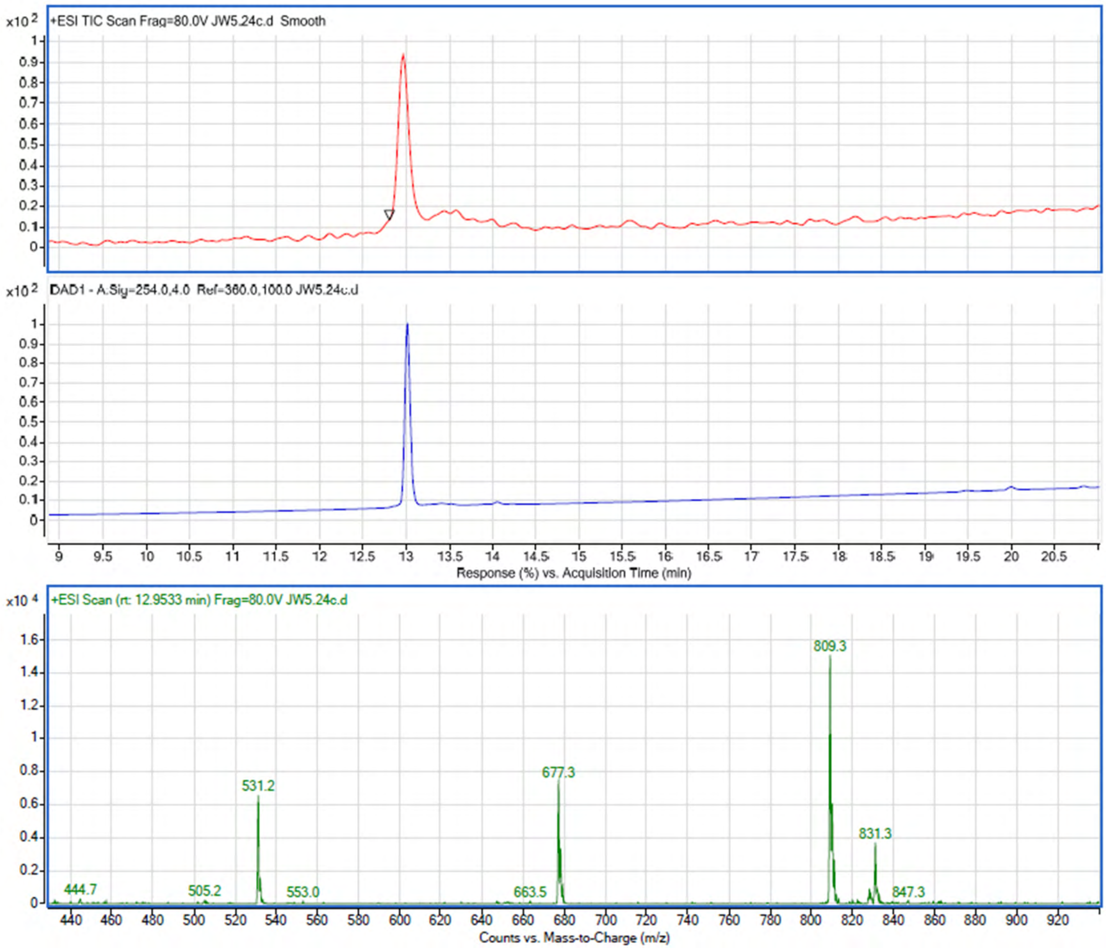


Figure S74. [1]H-NMR spectrum of compound **36**.

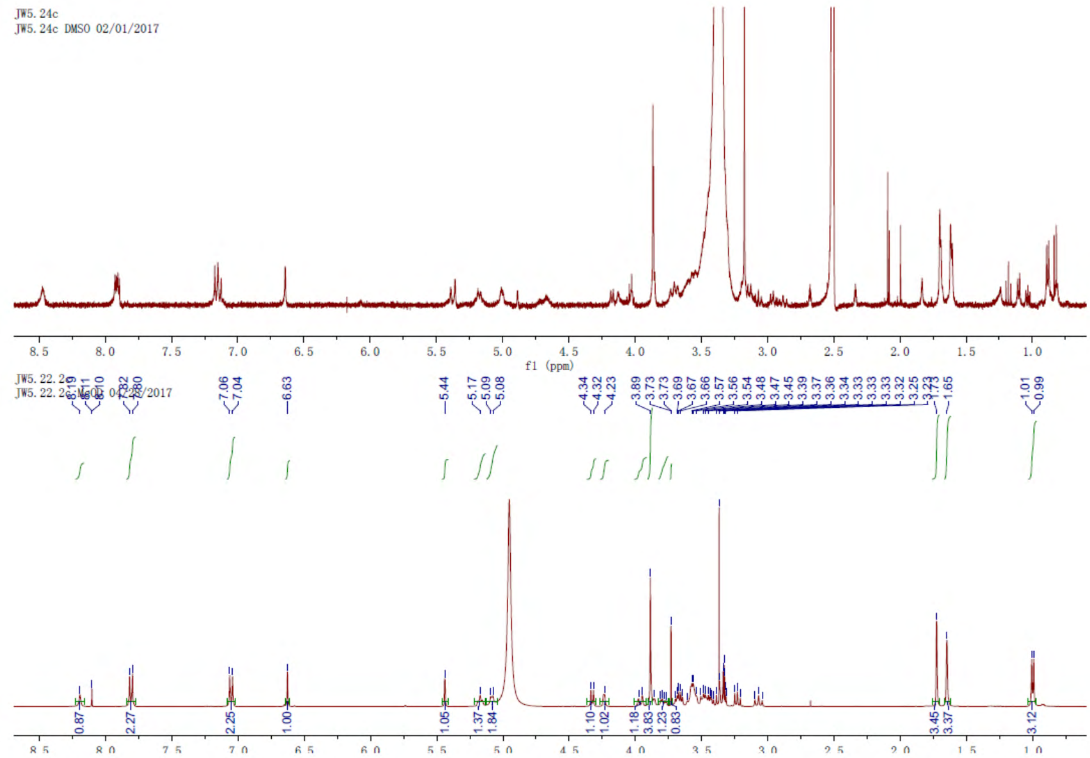


Figure S75. LC-MS spectrum of compound **37**.

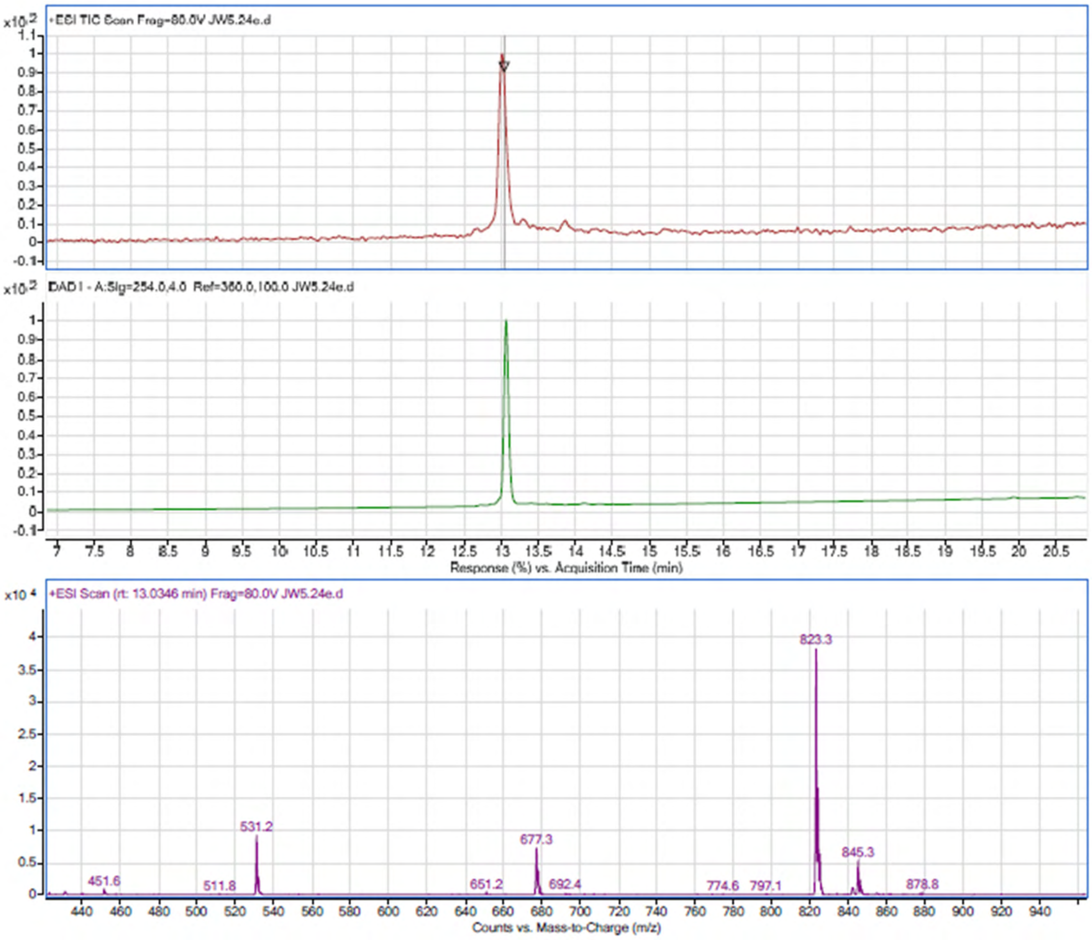


Figure S76. ^{1}H-NMR spectrum of compound **37**.

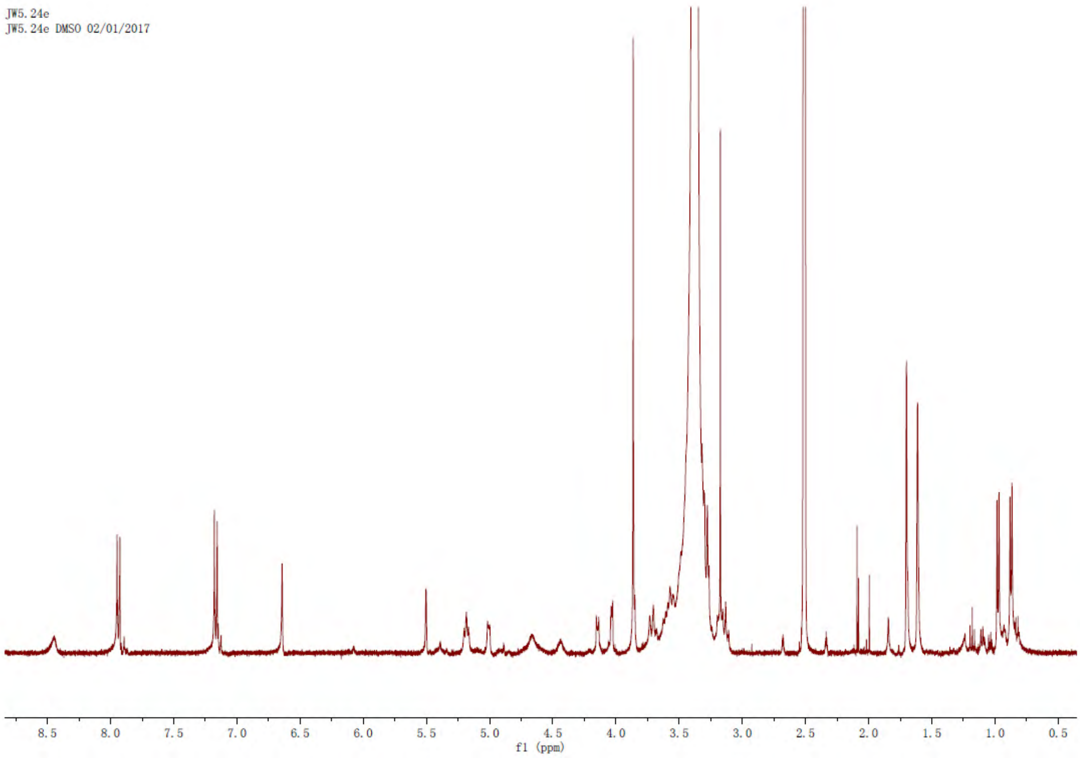


Figure S77. LC-MS spectrum of compound **38**.

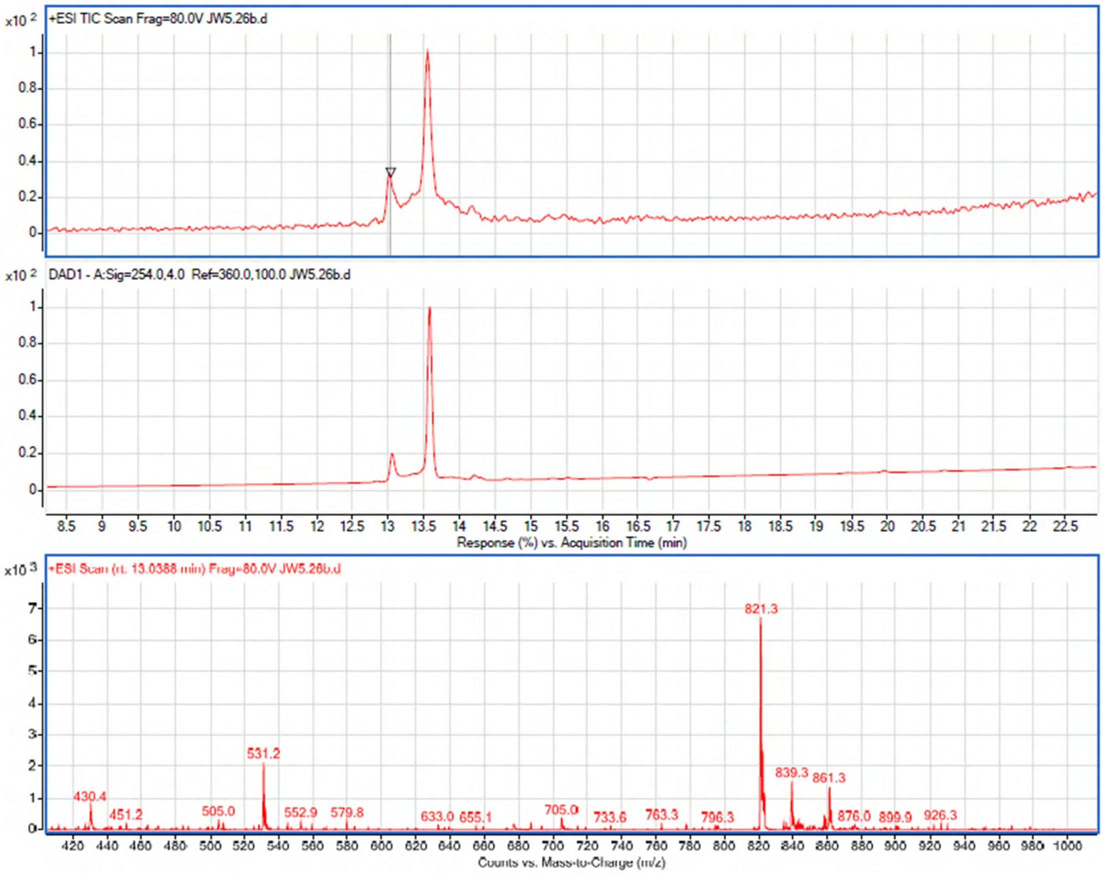


Figure S78. ^{1}H-NMR spectrum of compound **38**.

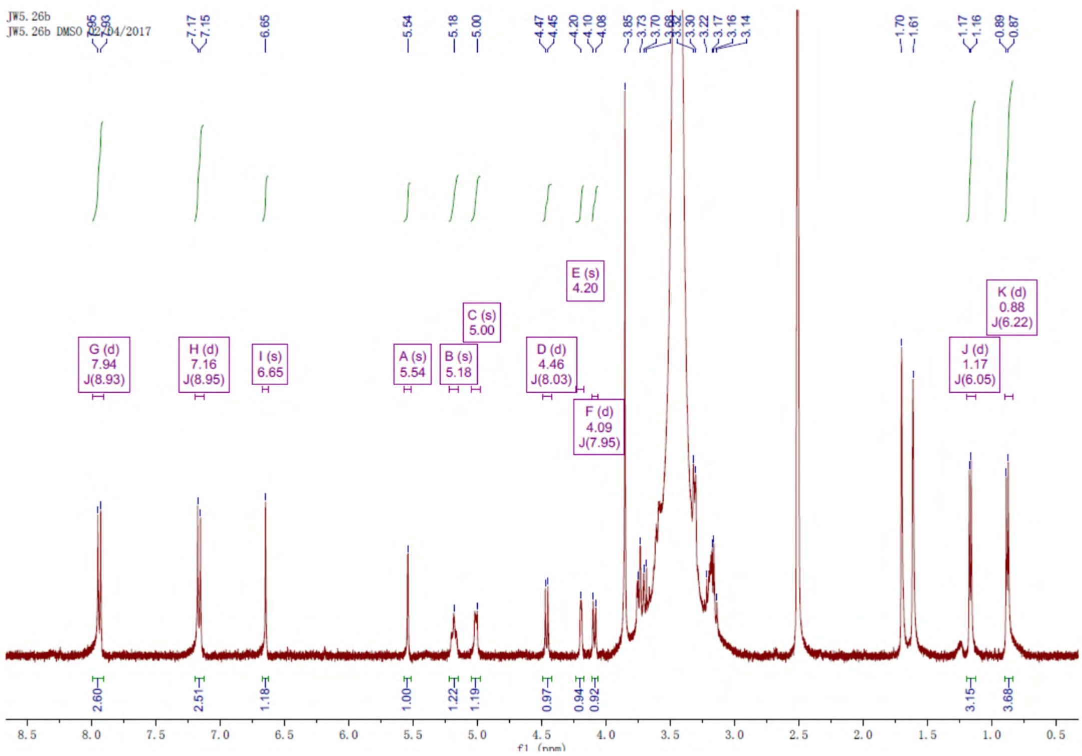


Figure S79. LC-MS spectrum of compound **39**.

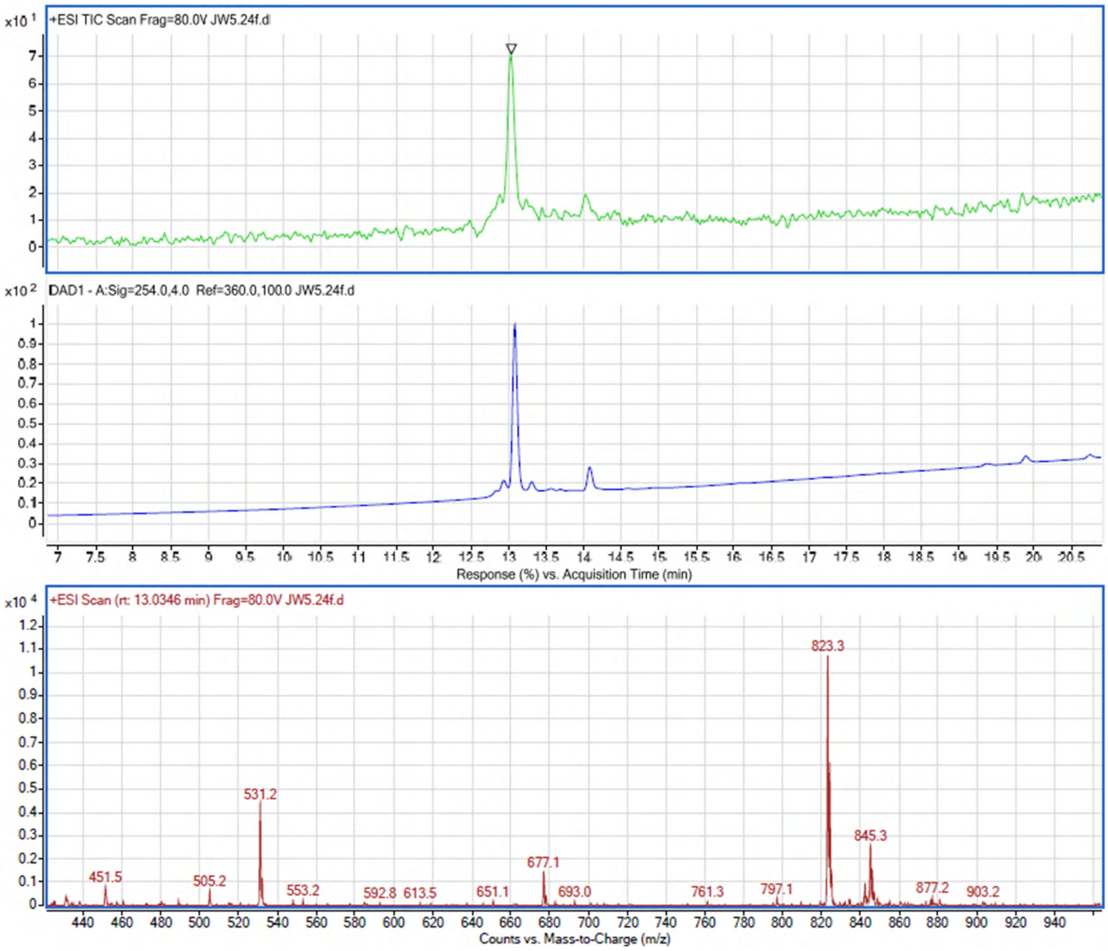


Figure S80. ^{1}H-NMR spectrum of compound **39**.

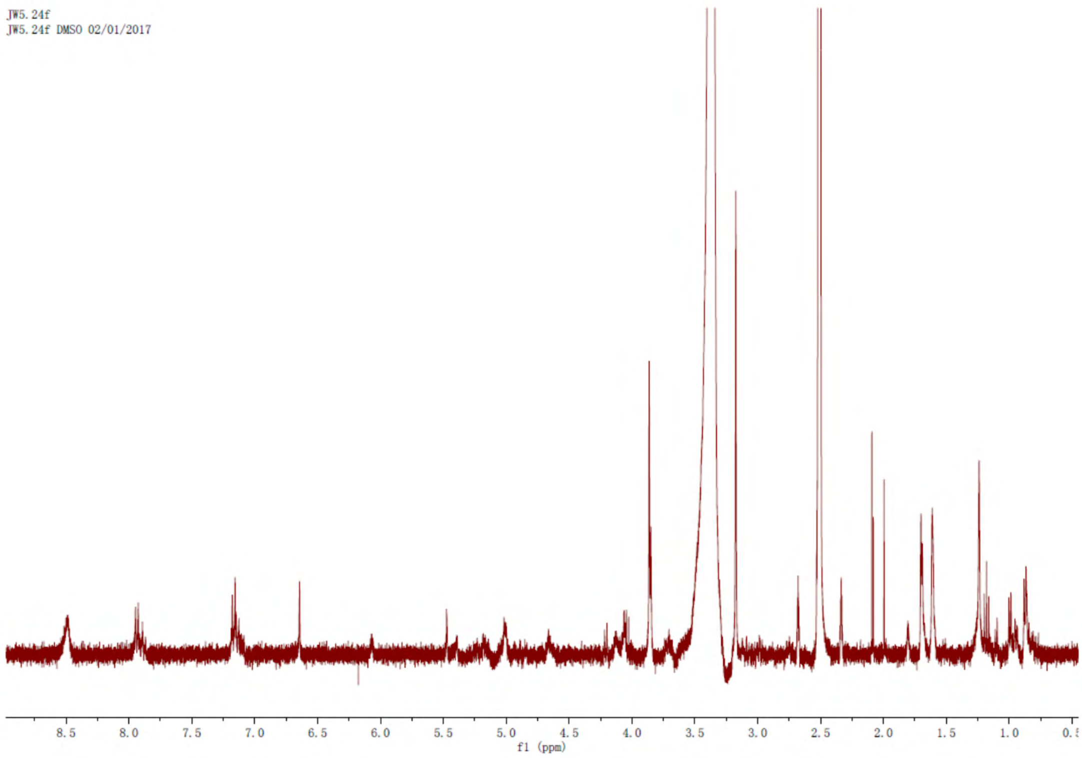


Figure S81. LC-MS spectrum of compound **40**.

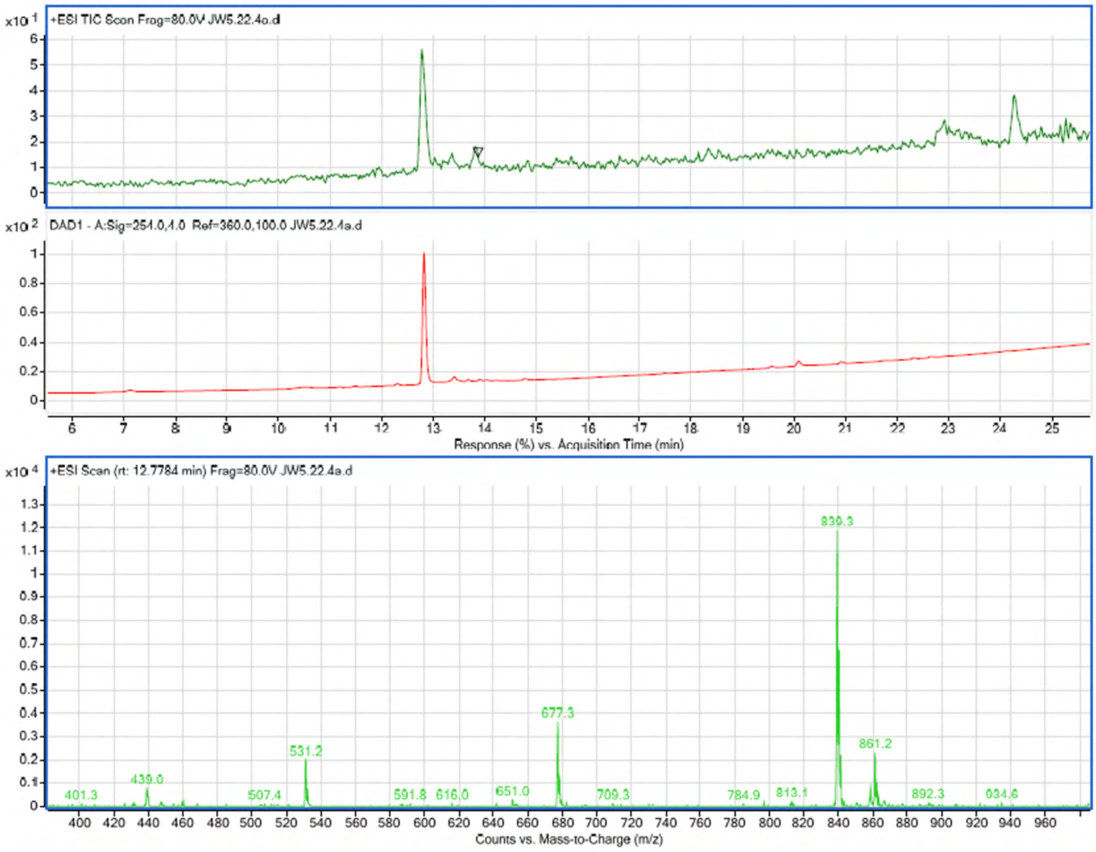


Figure S82. [1]H-NMR spectrum of compound **40**.

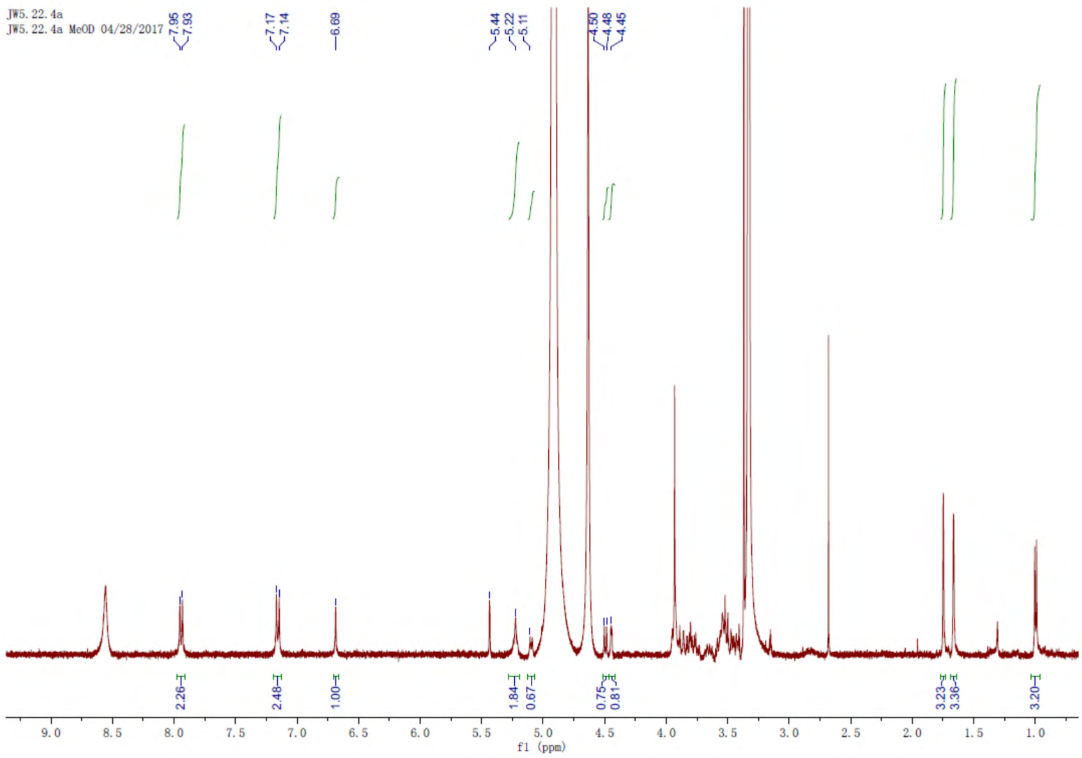


Figure S83. LC-MS spectrum of compound **41**.

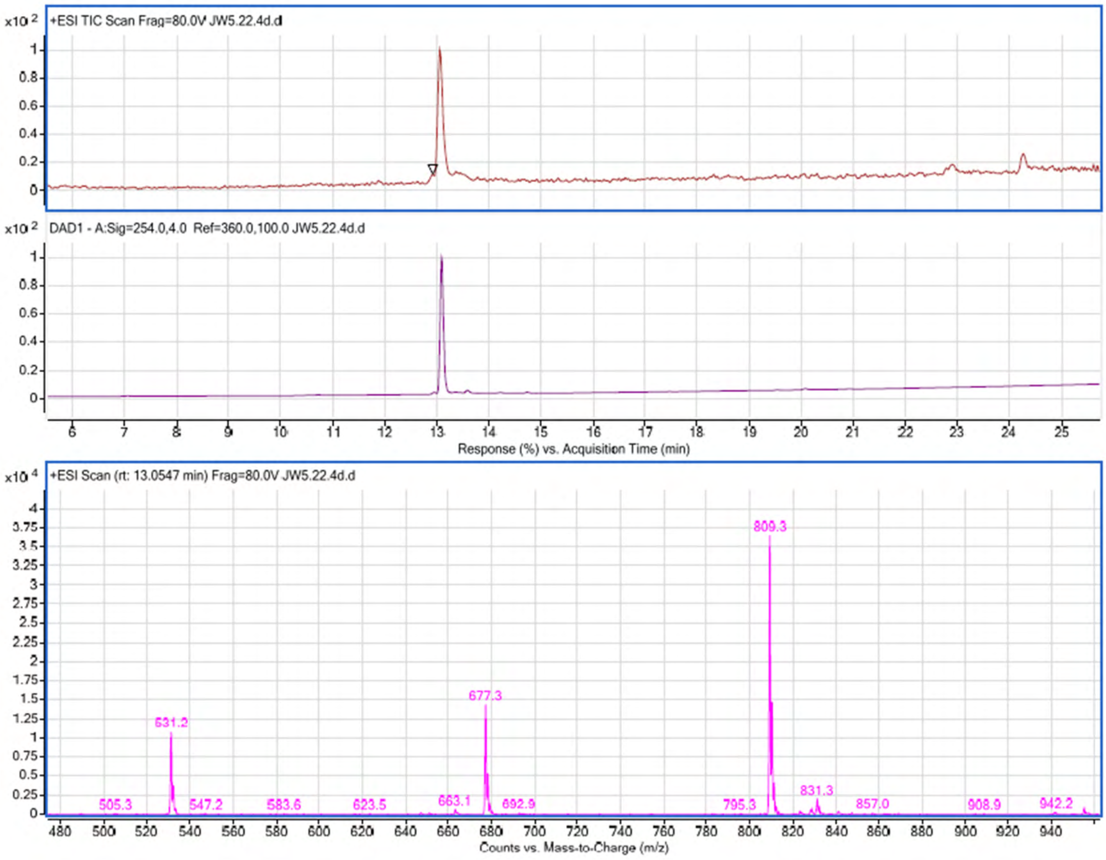


Figure S84. ^{1}H-NMR spectrum of compound **41**.

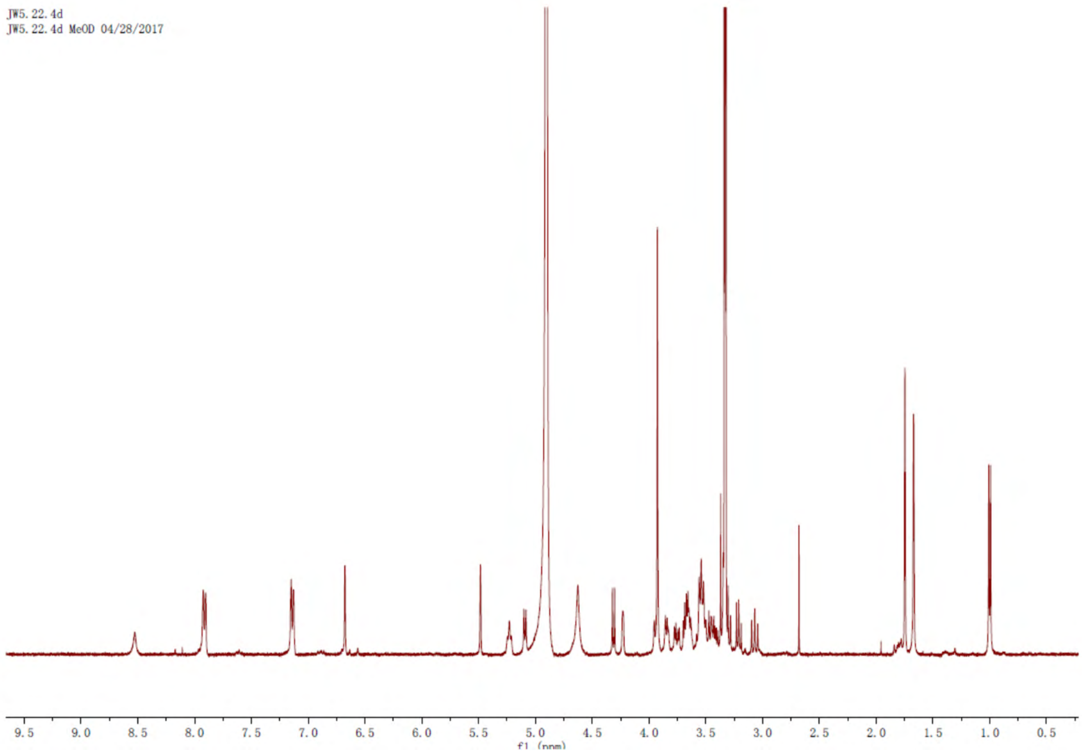


Figure S85. LC-MS spectrum of compound **42**.

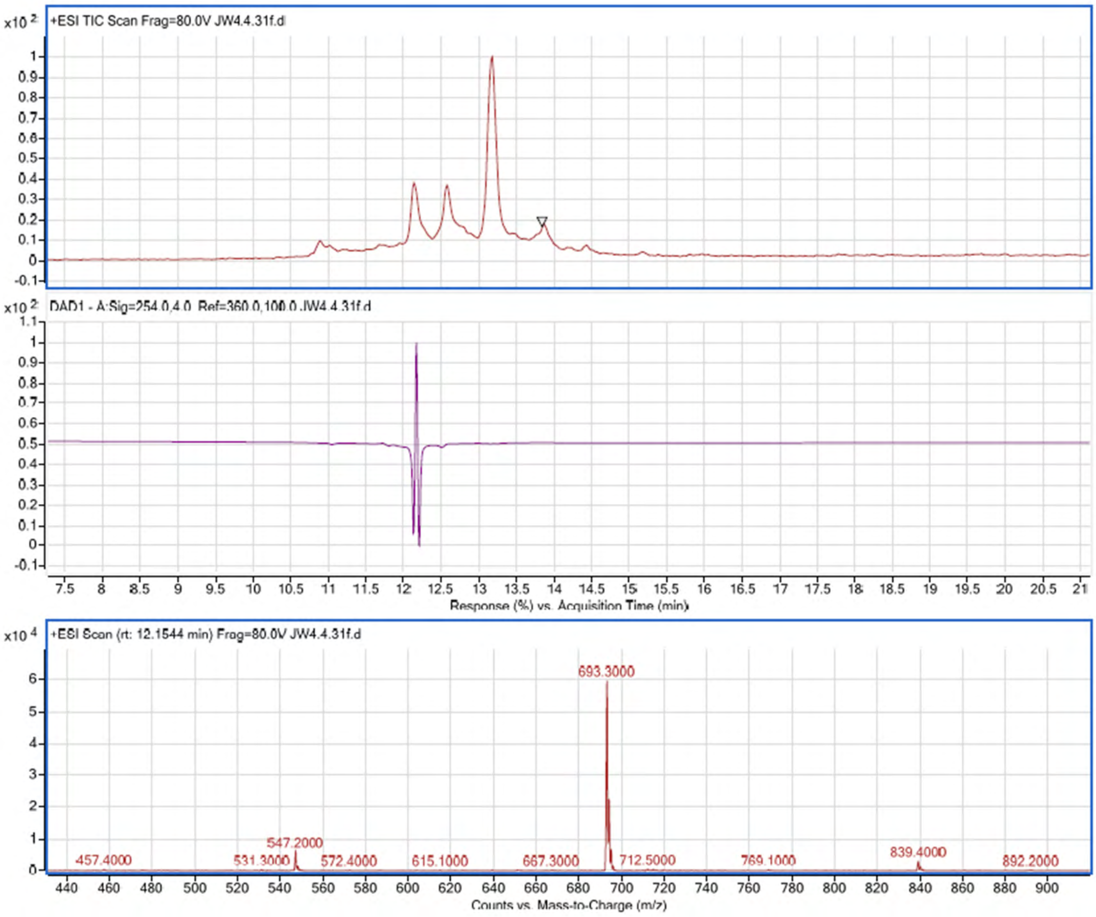


Figure S86. [1]H-NMR spectrum of compound **42**.

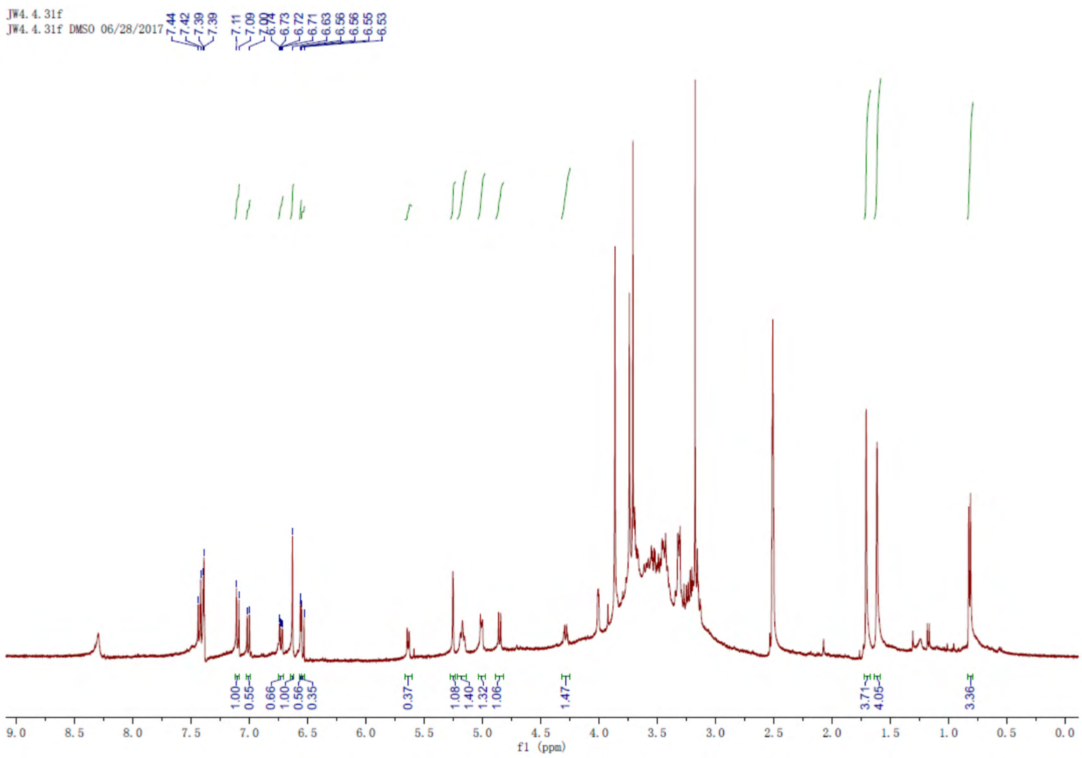


Figure S87. LC-MS spectrum of compound **43**.

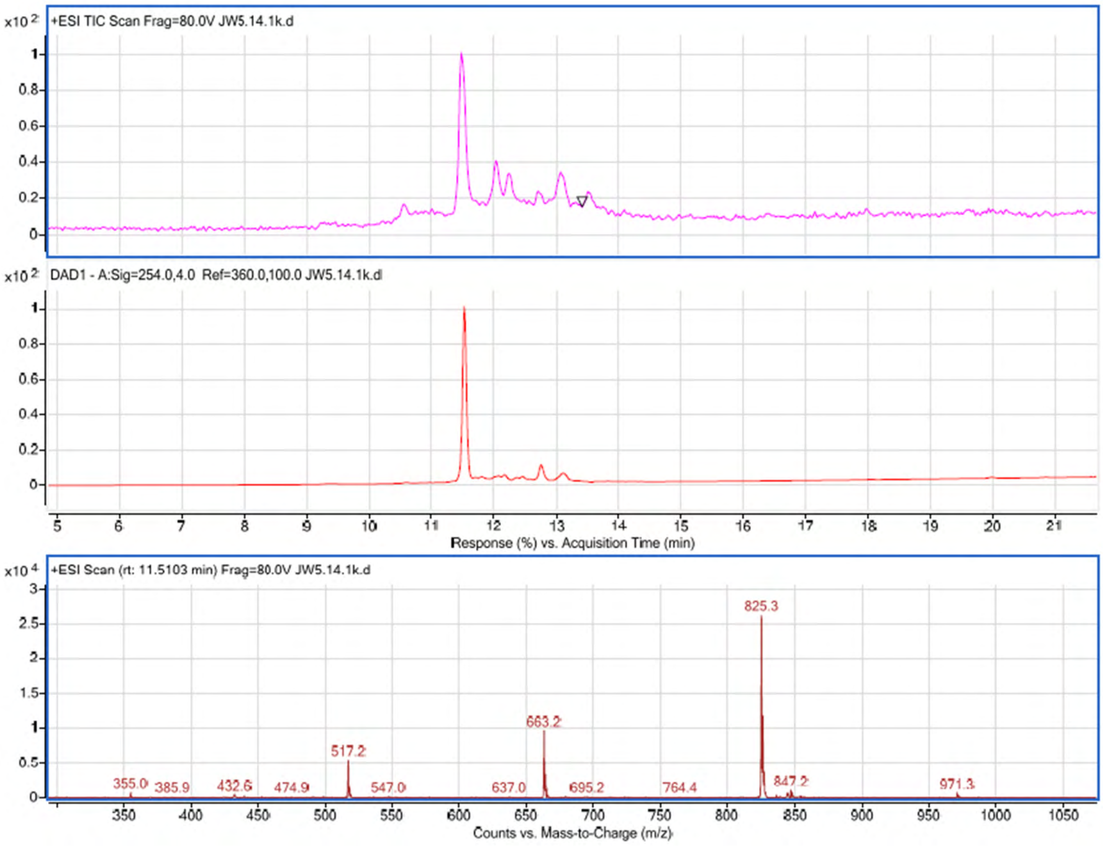


Figure S88. ^{1}H-NMR spectrum of compound **43**.

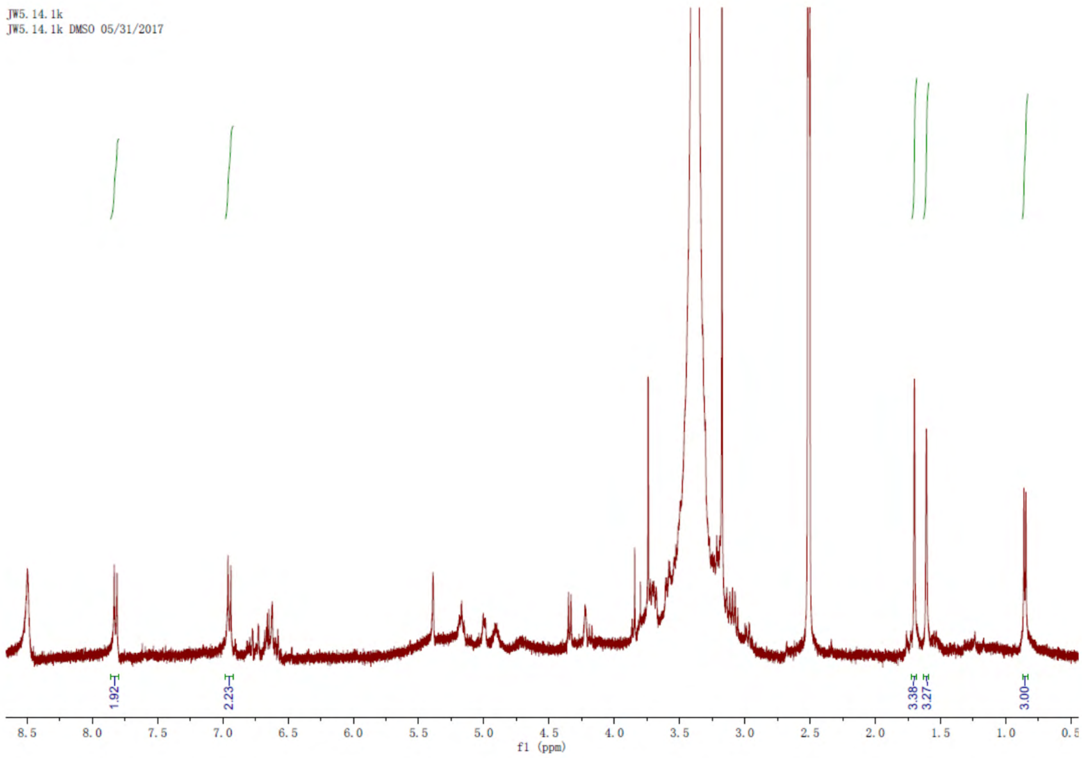


Figure S89. LC-MS spectrum of compound **44**.

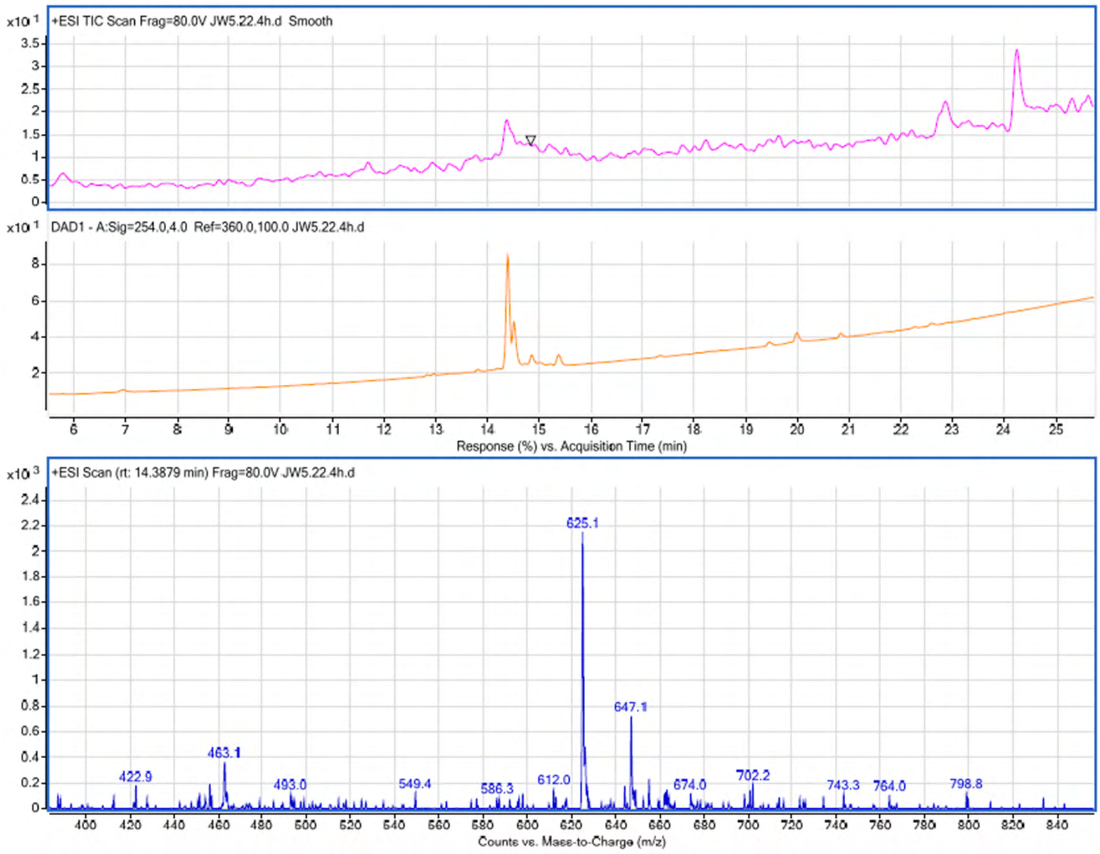


Figure S90. ^{1}H-NMR spectrum of compound **44**.

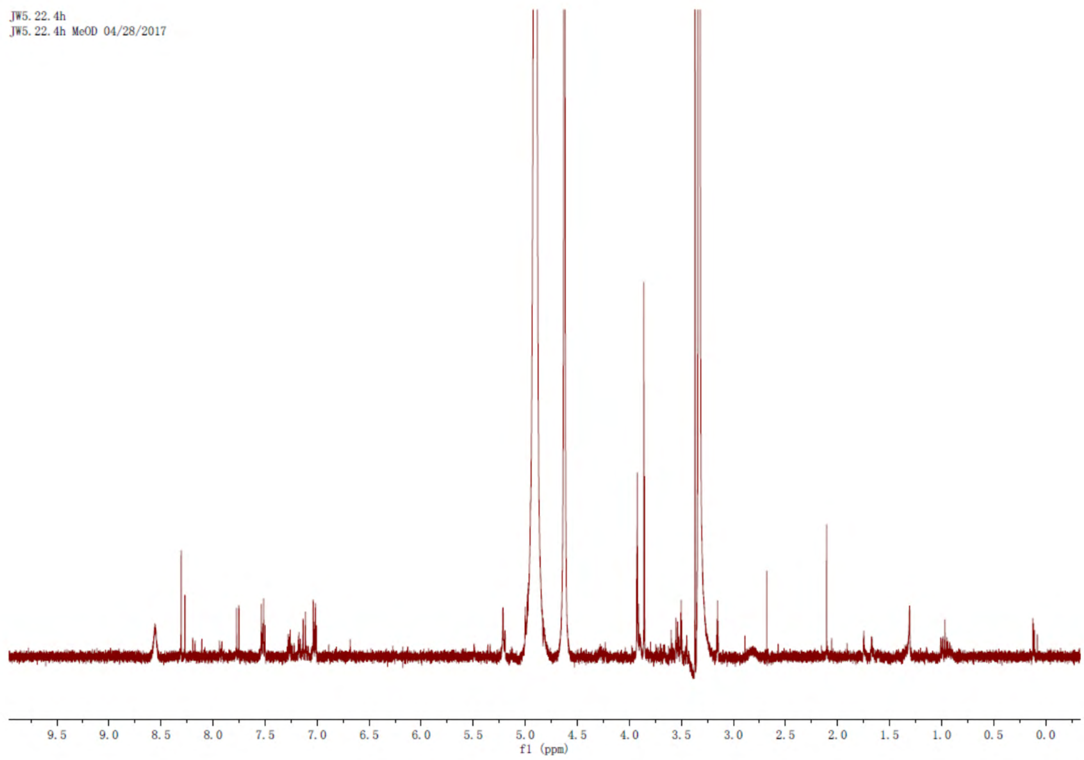


Figure S91. LC-MS spectrum of compound **45**.

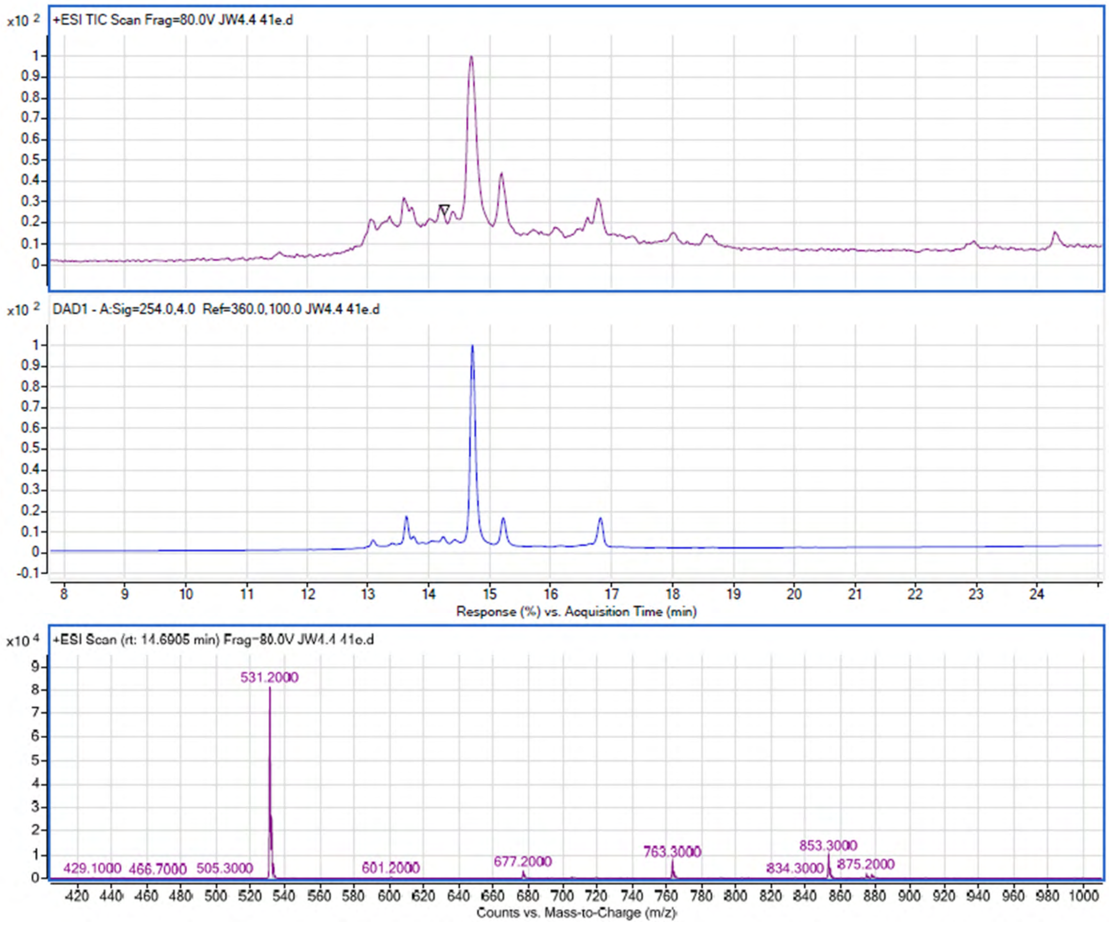


Figure S92. ^{1}H-NMR spectrum of compound **45**.

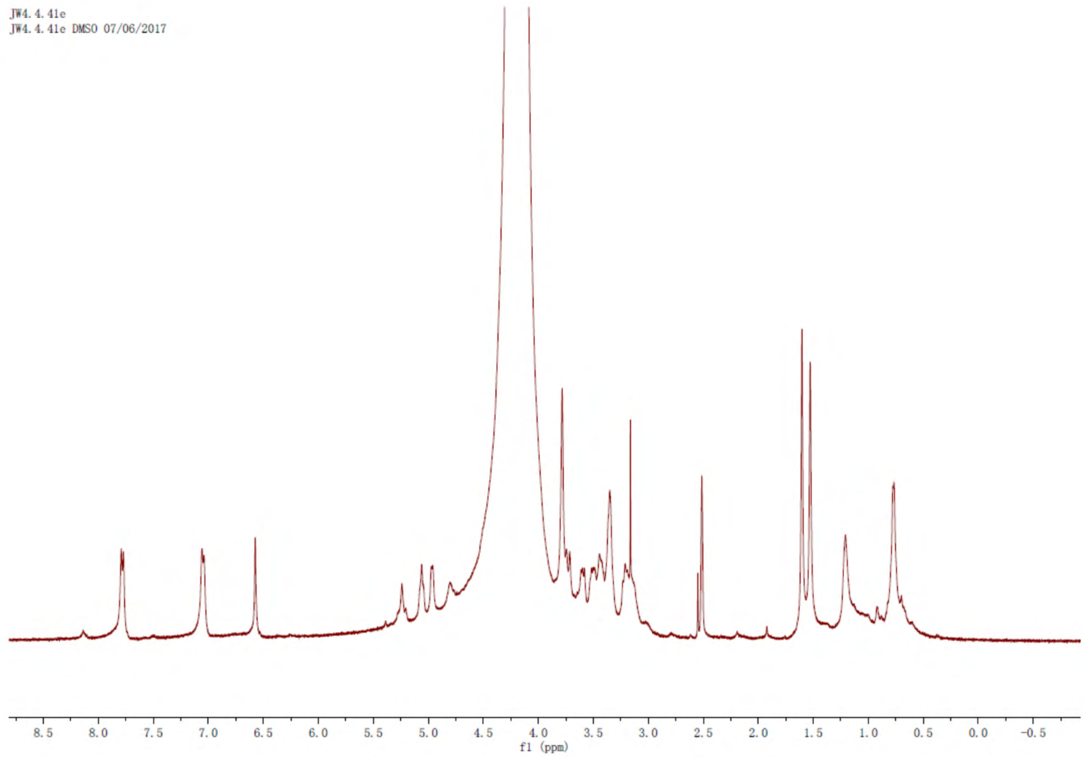


Figure S93. LC-MS spectrum of compound **46**.

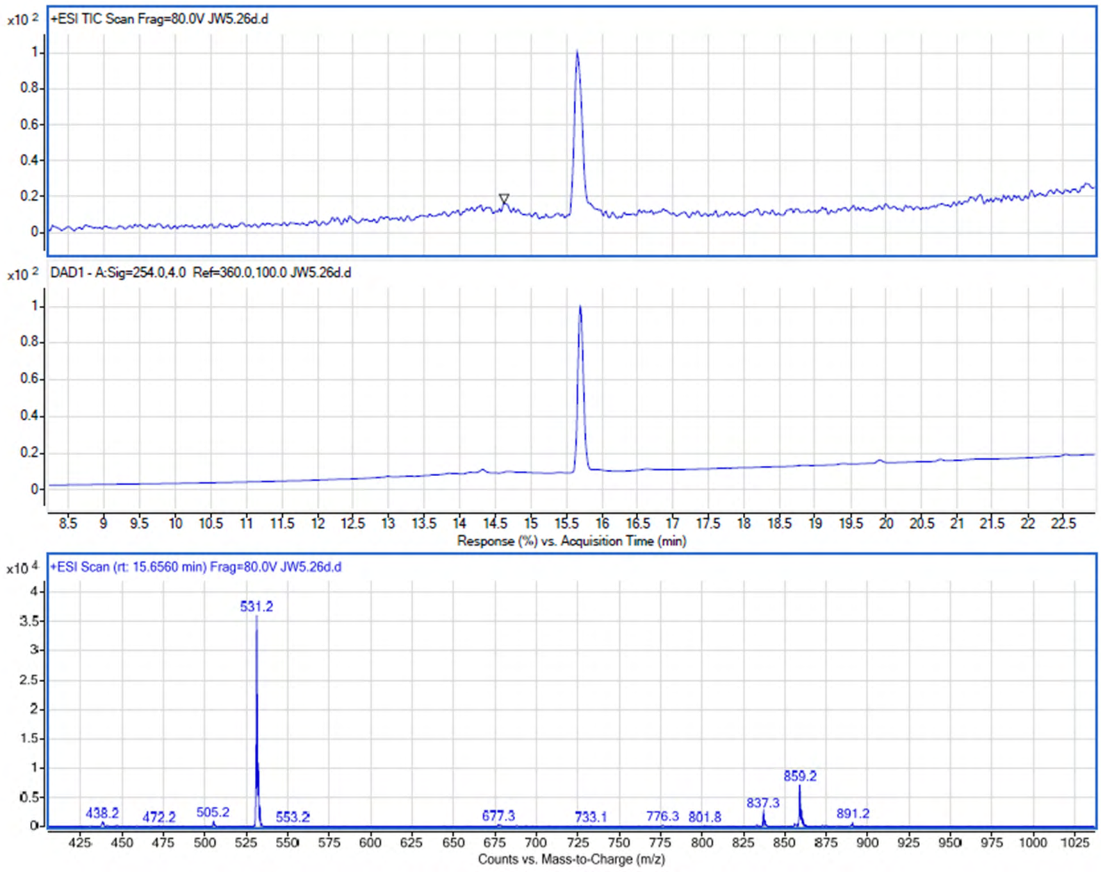


Figure S94. ^{1}H-NMR spectrum of compound **46**.

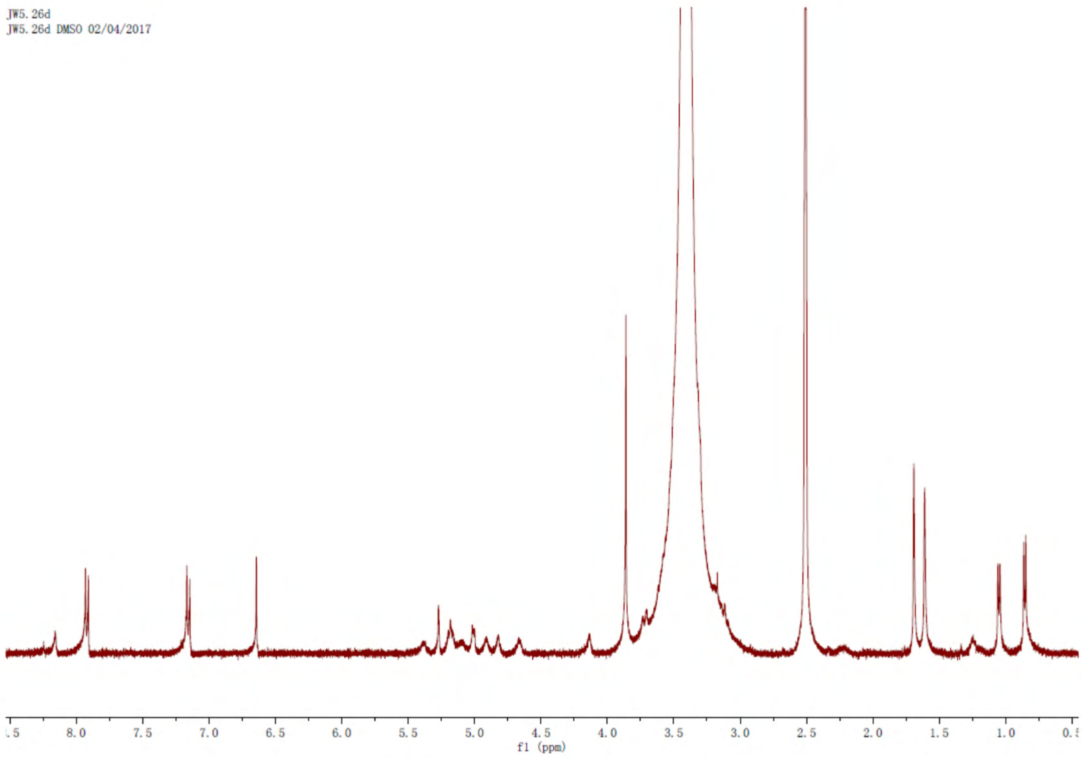


Figure S95. LC-MS spectrum of compound **47**.

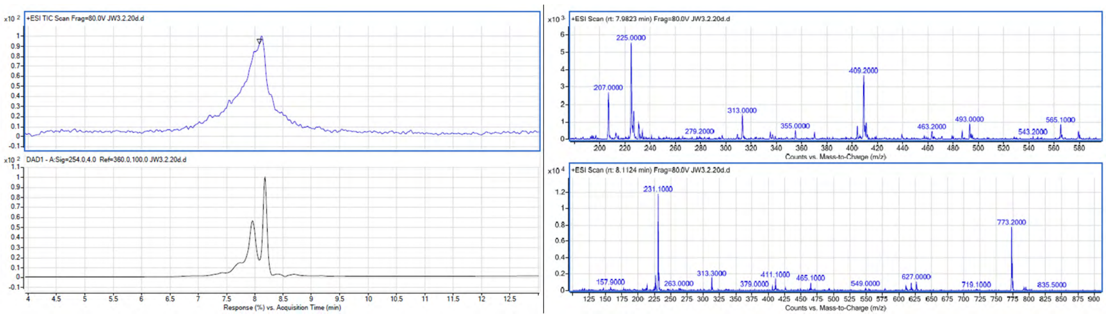


Figure S96. [1]H-NMR spectrum of compound **47**.

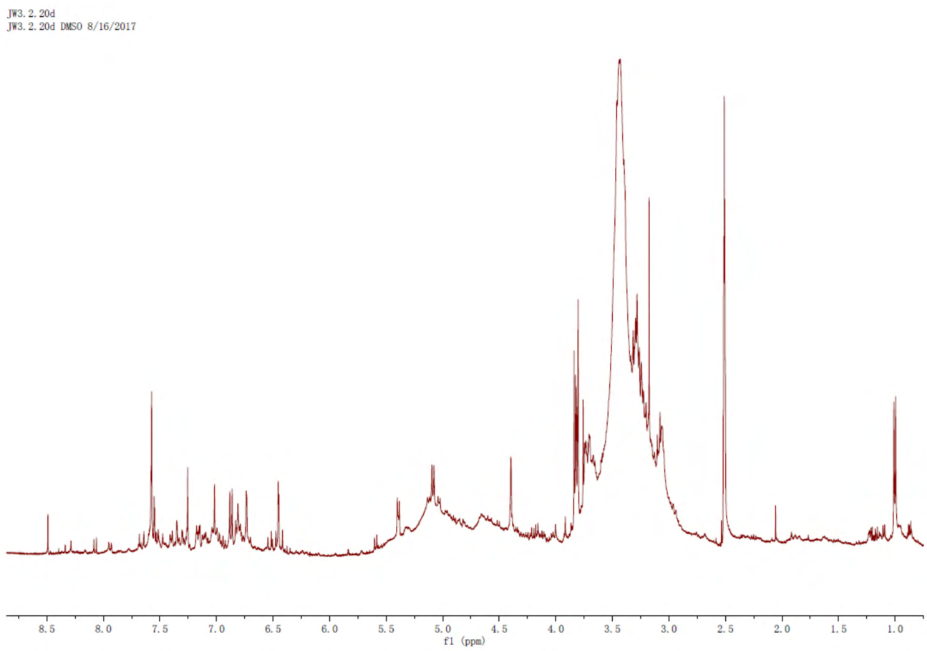


Figure S97. LC-MS spectrum of compound **48**.

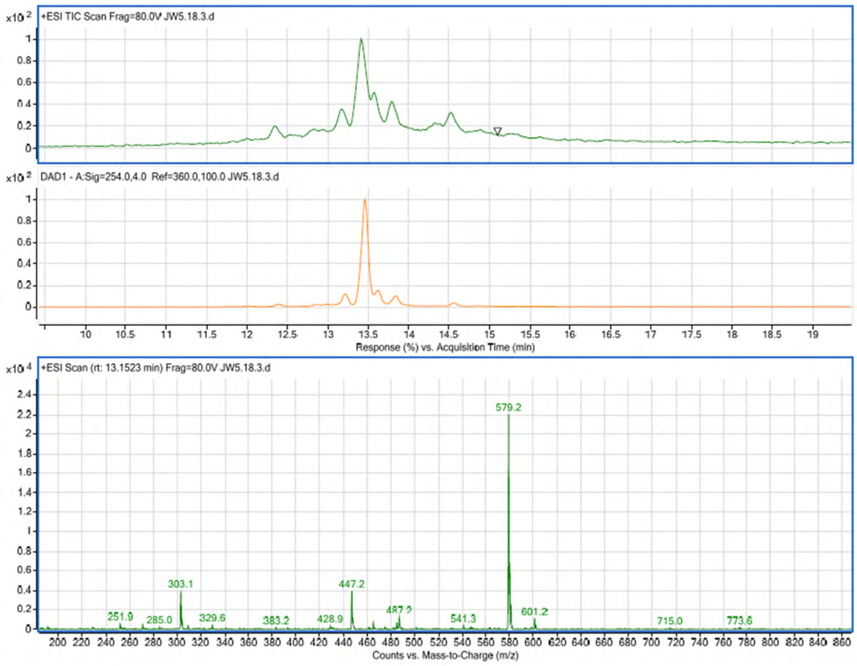


Figure S98. ^{1}H-NMR spectrum of compound **48**.

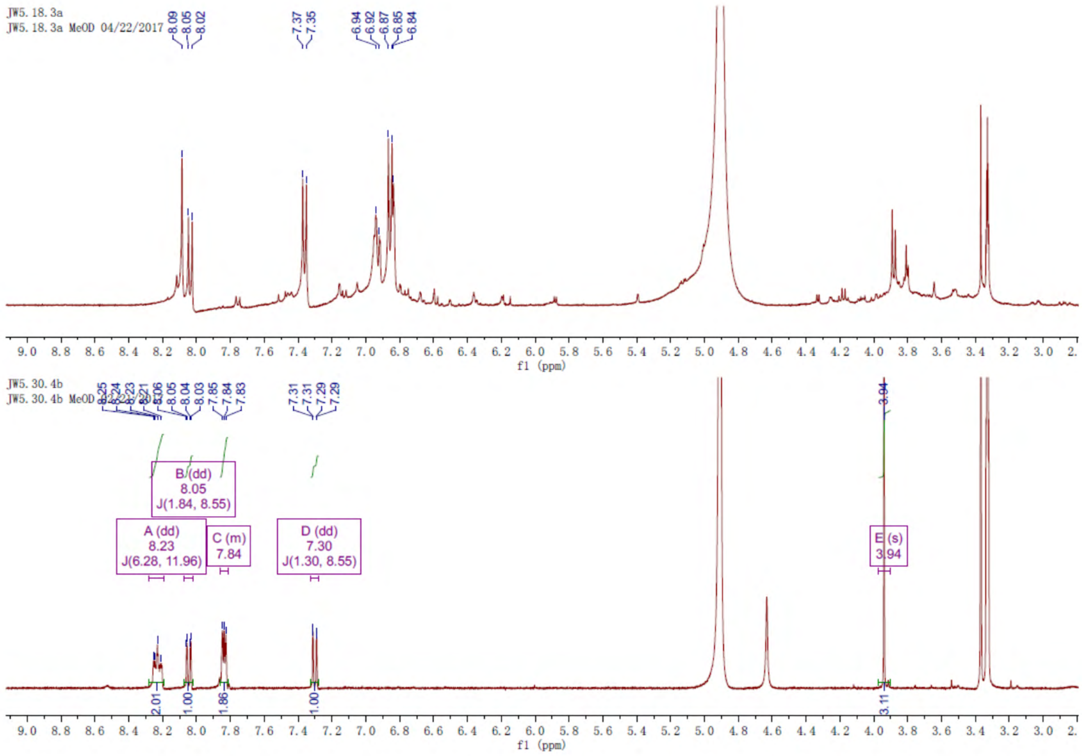


Figure S99. LC-MS spectrum of compound **49**.

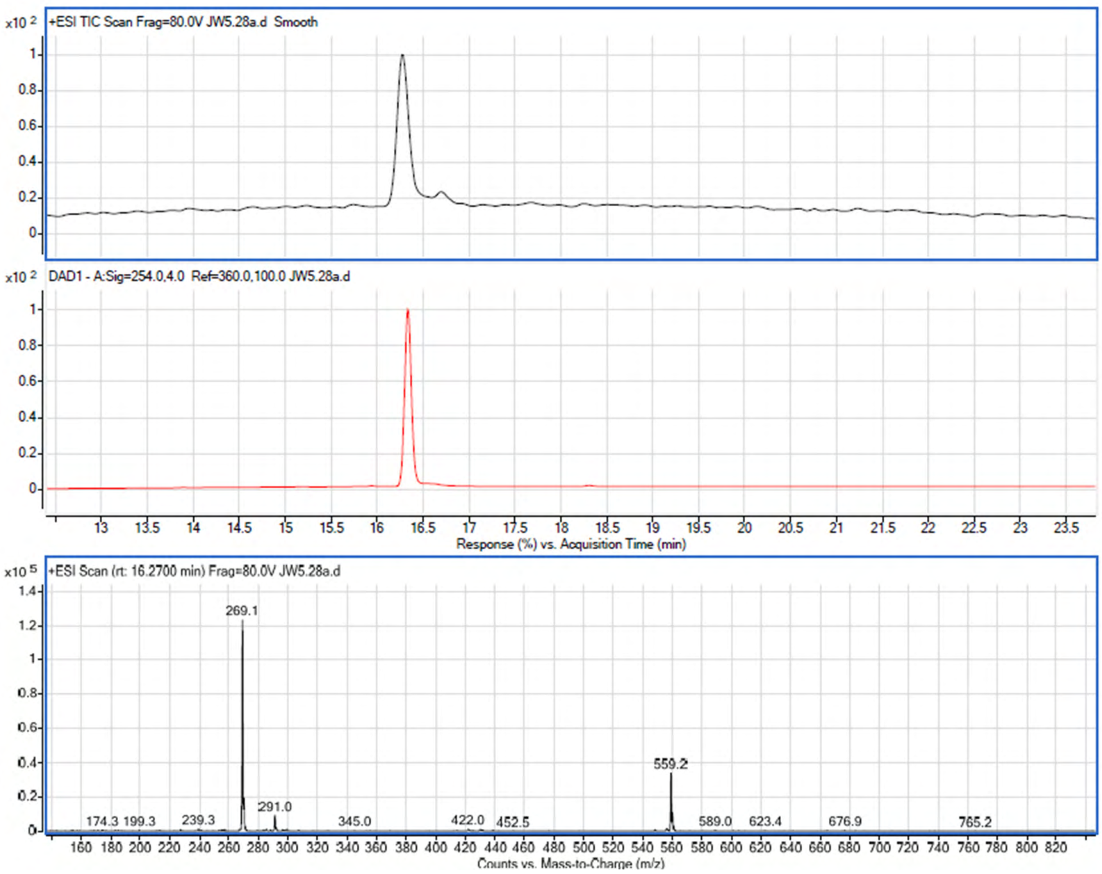


Figure S100. ^{1}H-NMR spectrum of compound **49**.

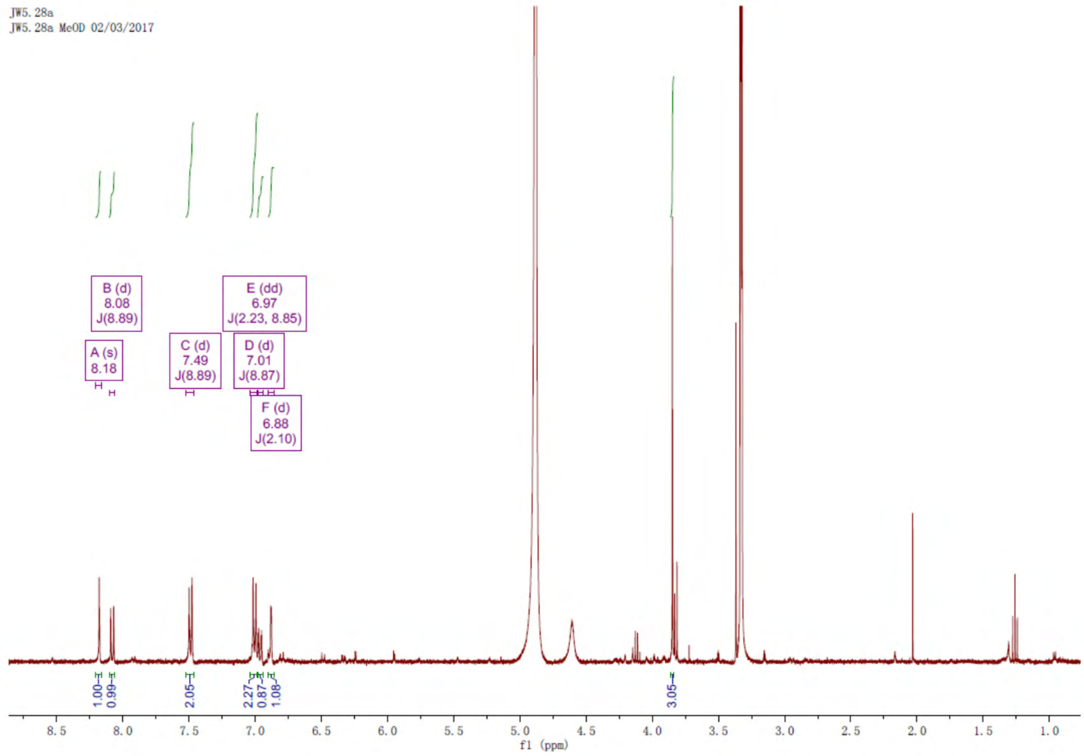


Figure S101. LC-MS spectrum of compound **50**.

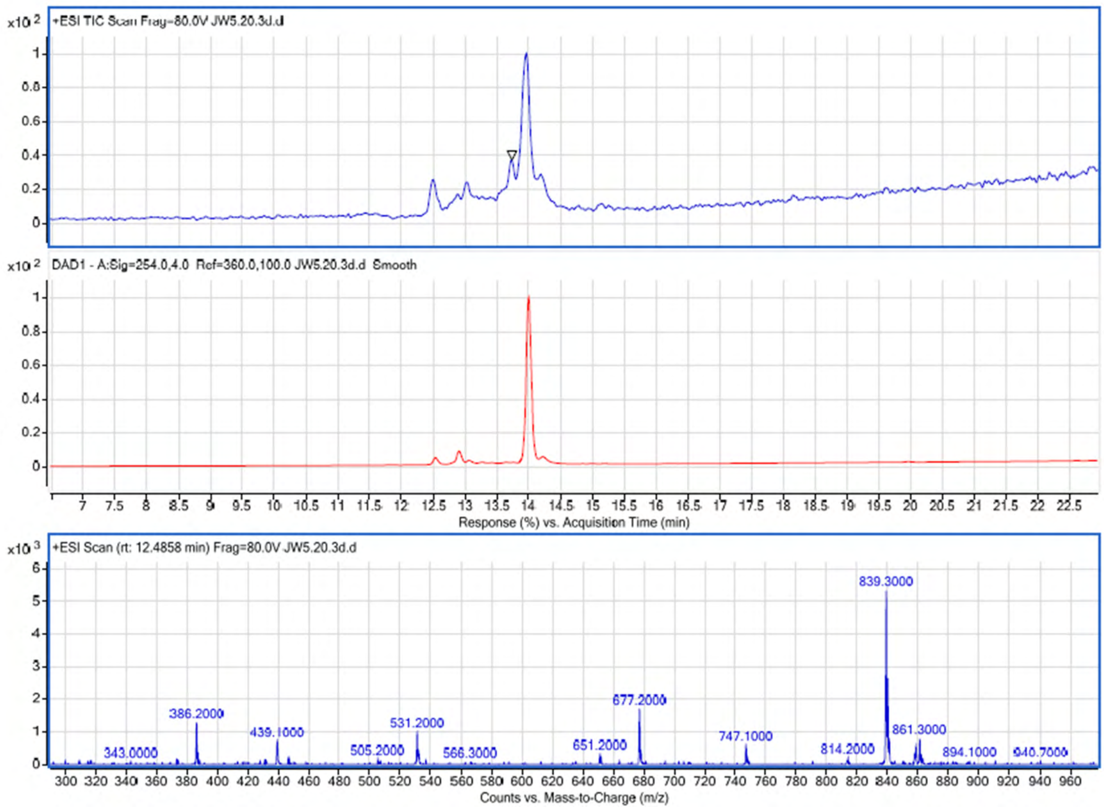


Figure S102. ^{1}H-NMR spectrum of compound **50**.

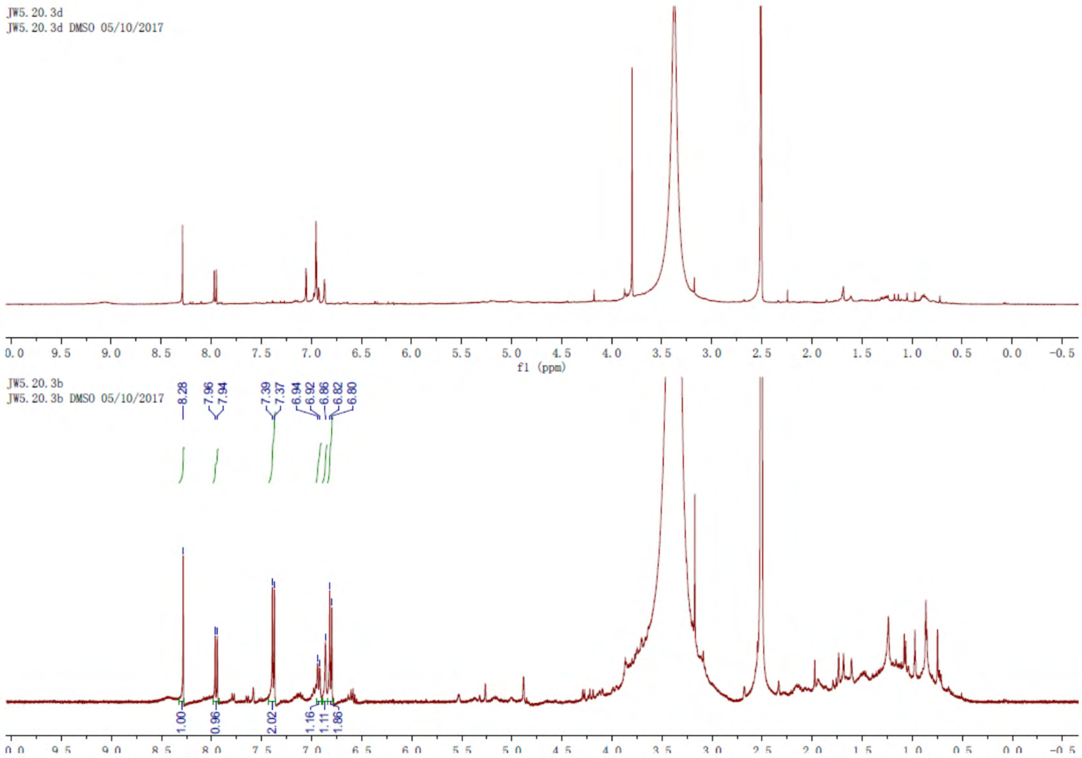


Figure S103. LC-MS spectrum of compound **51**.

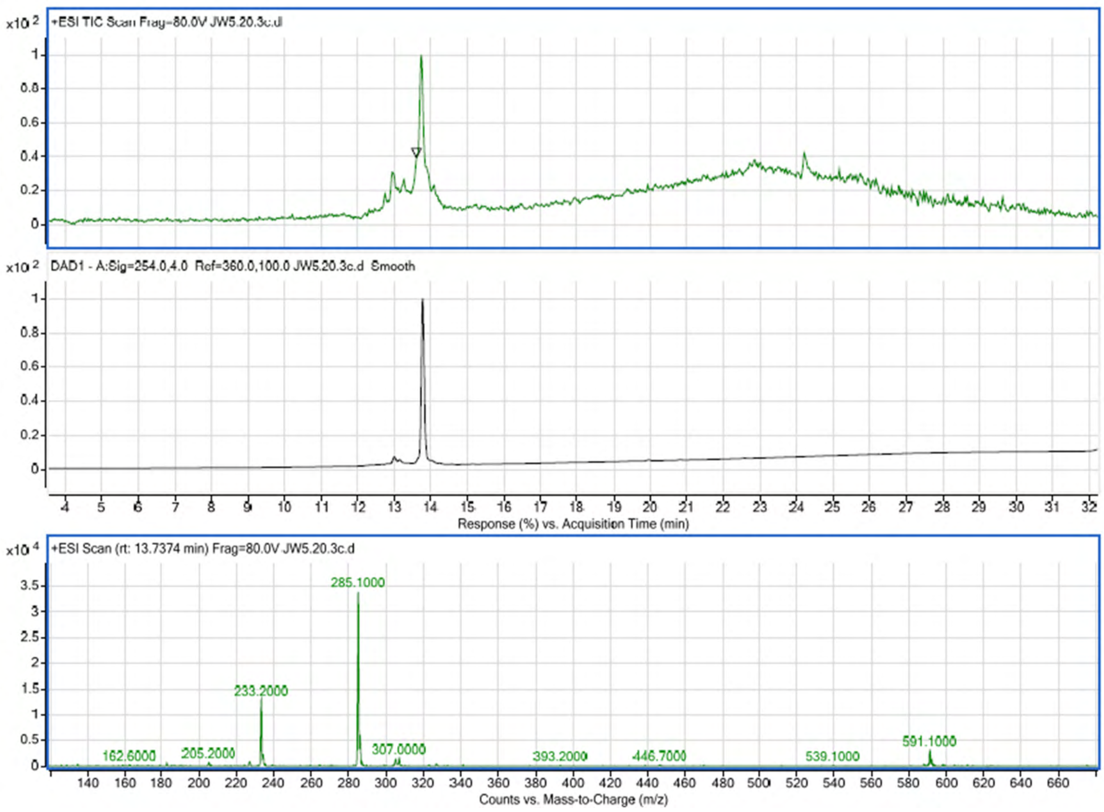


Figure S104. ^{1}H-NMR spectrum of compound **51**.

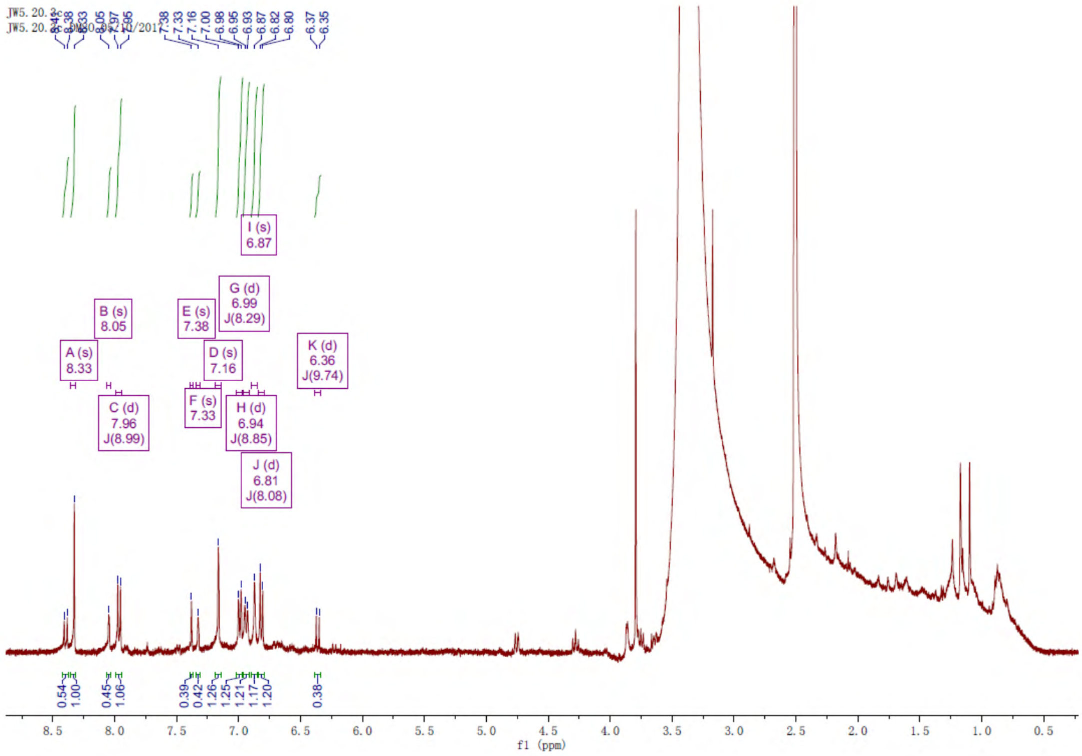


Figure S105. LC-MS spectrum of compound **52**.

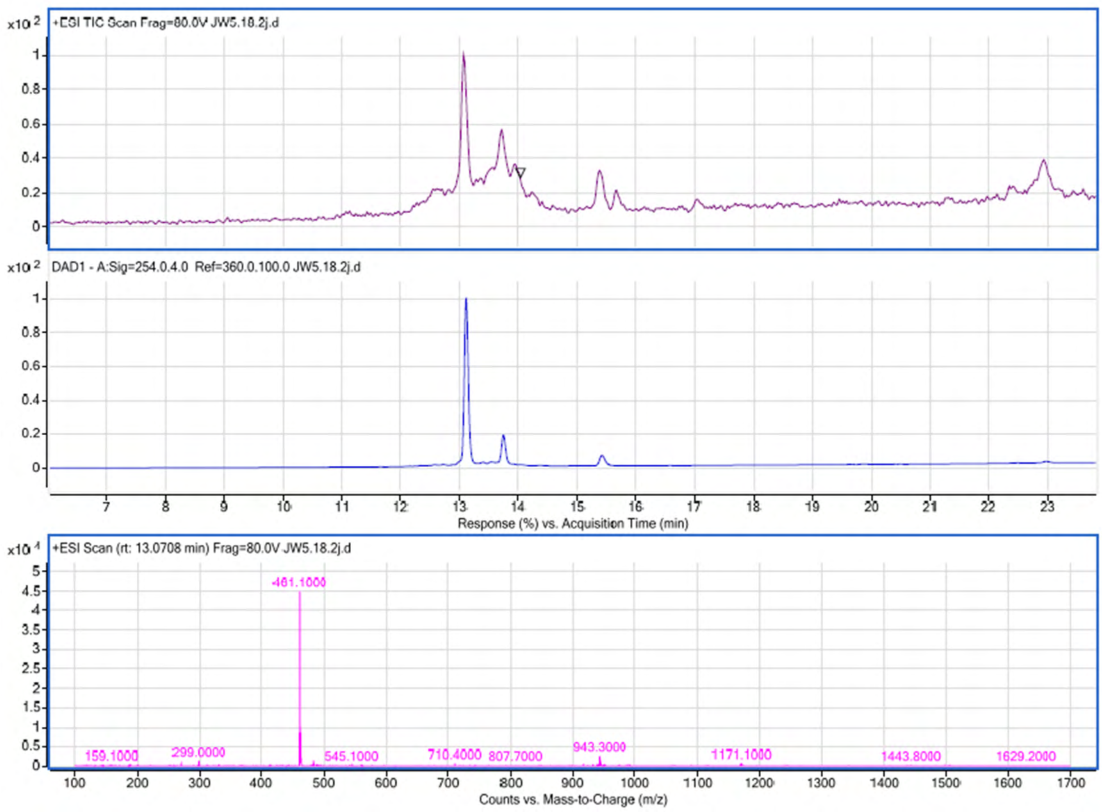


Figure S106. ^{1}H-NMR spectrum of compound **52**.

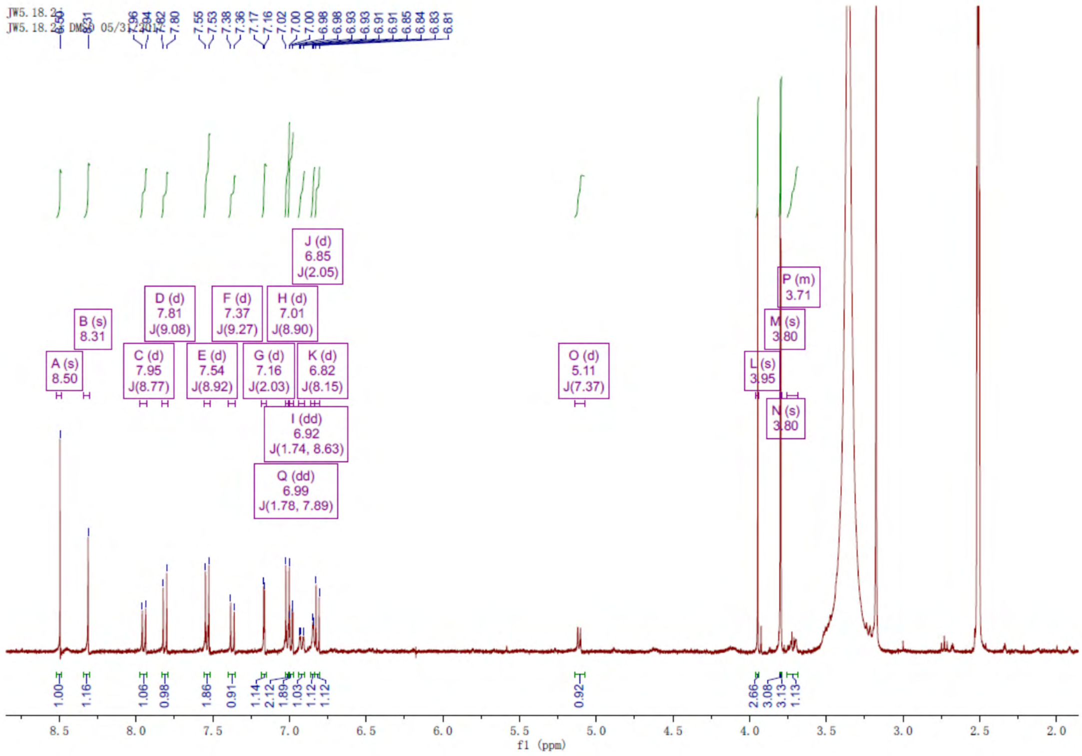


Figure S107. LC-MS spectrum of compound **53**.

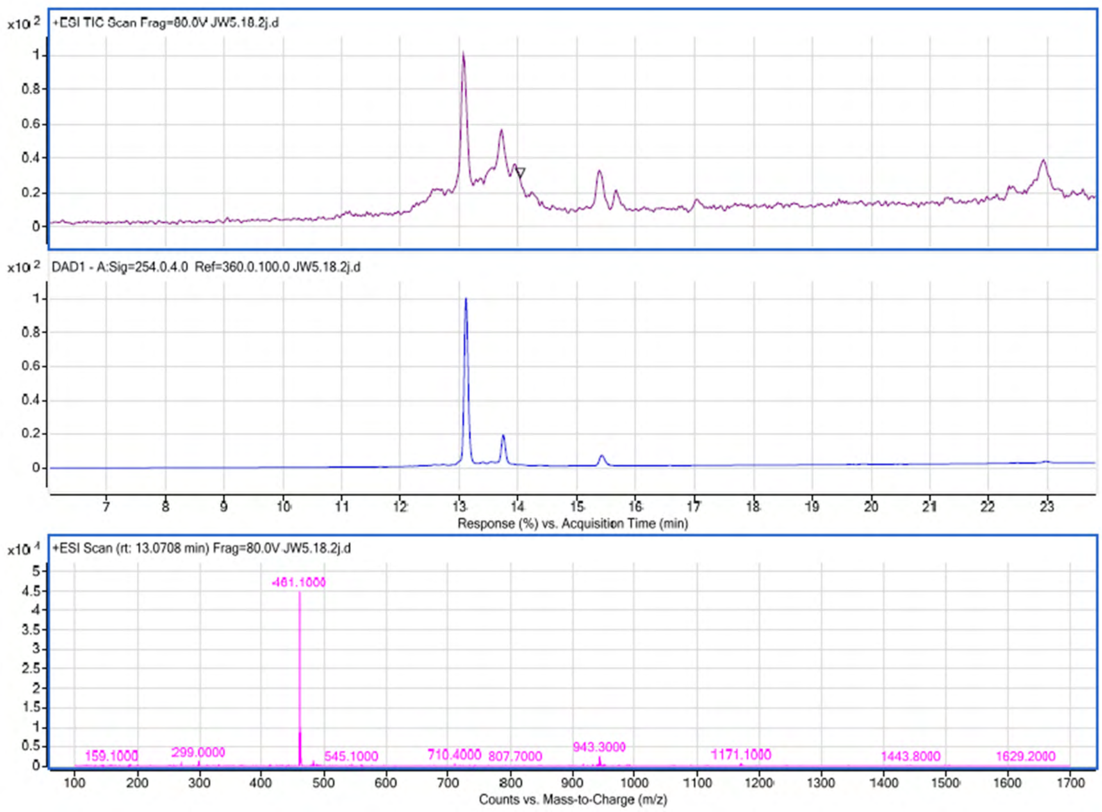


Figure S108. ^{1}H-NMR spectrum of compound **53**.

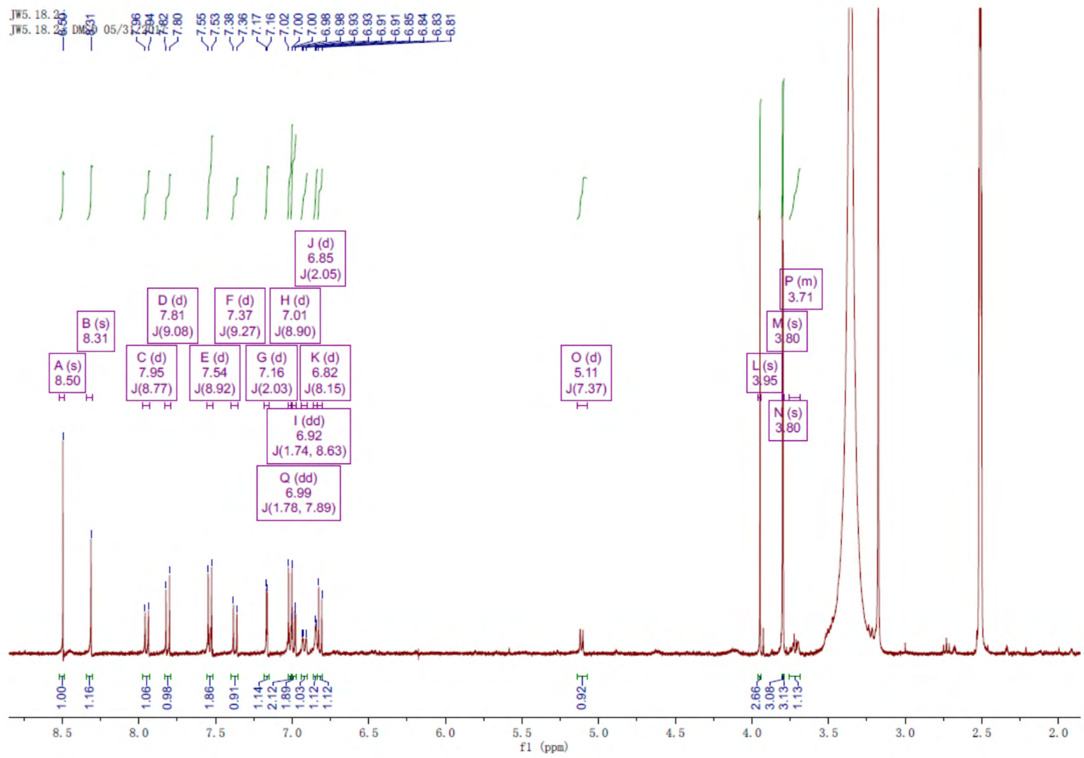


Figure S109. LC-MS spectrum of compound **54**.

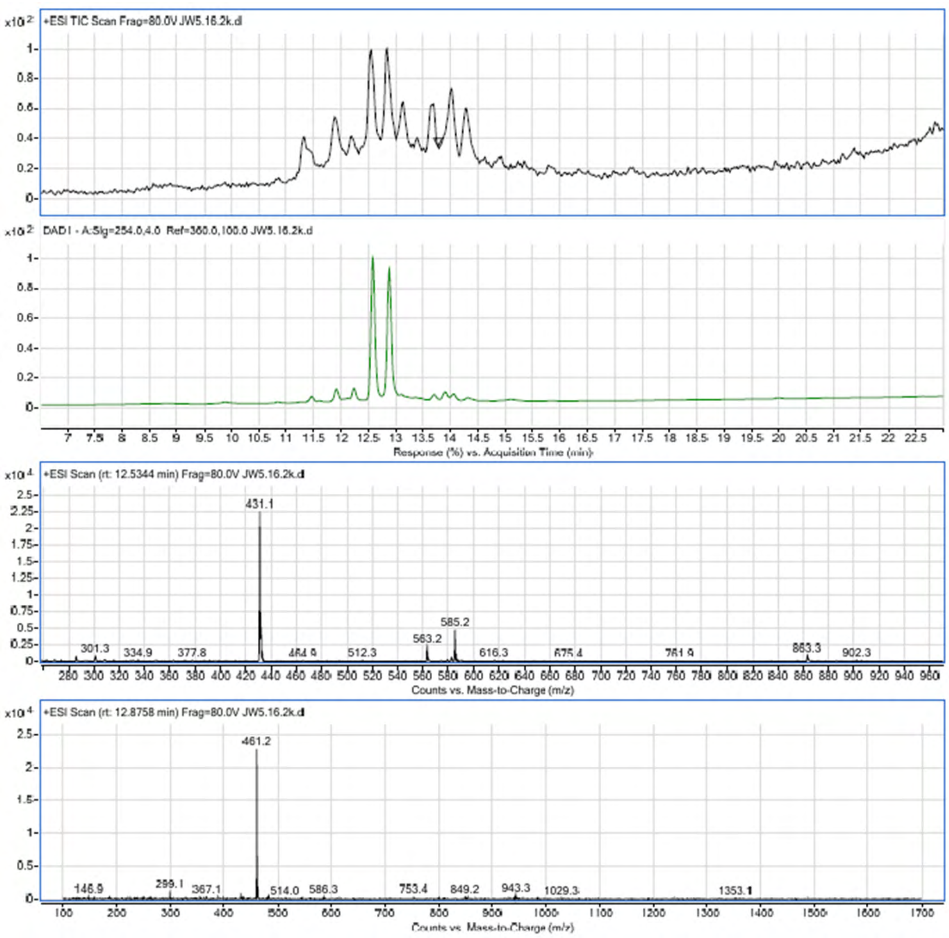


Figure S110. ^{1}H-NMR spectrum of compound **54**.

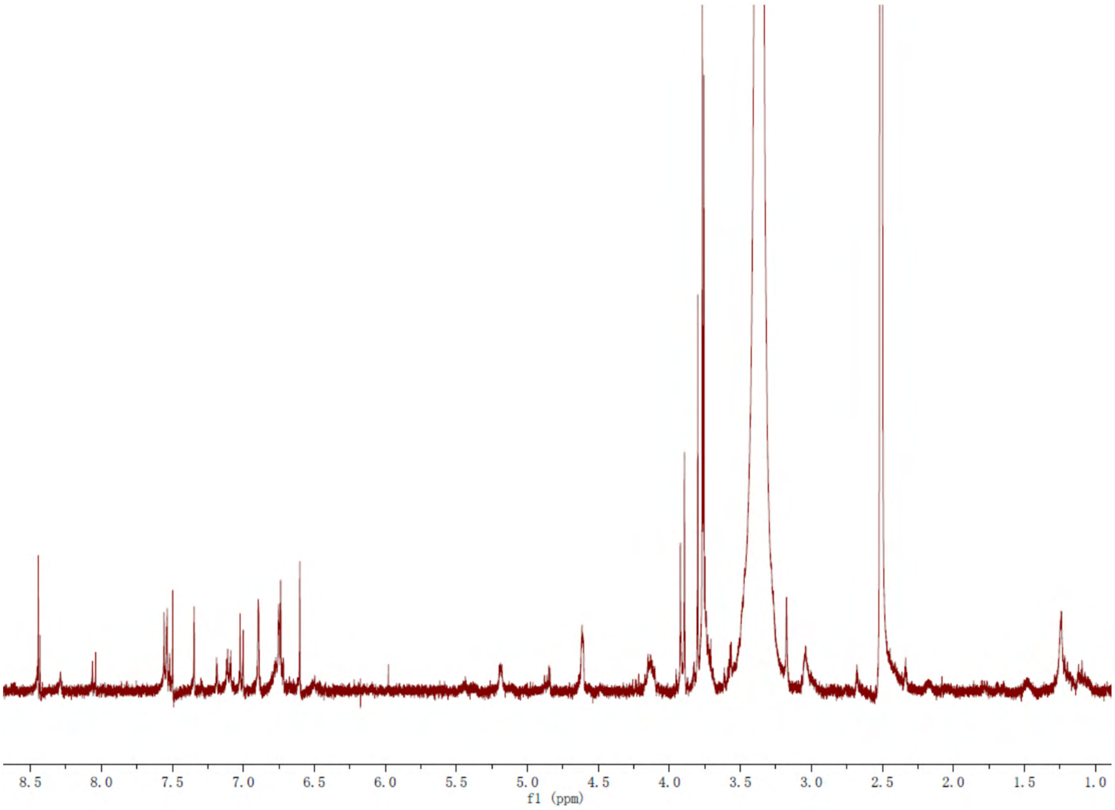


Figure S111. LC-MS spectrum of compound **55**.

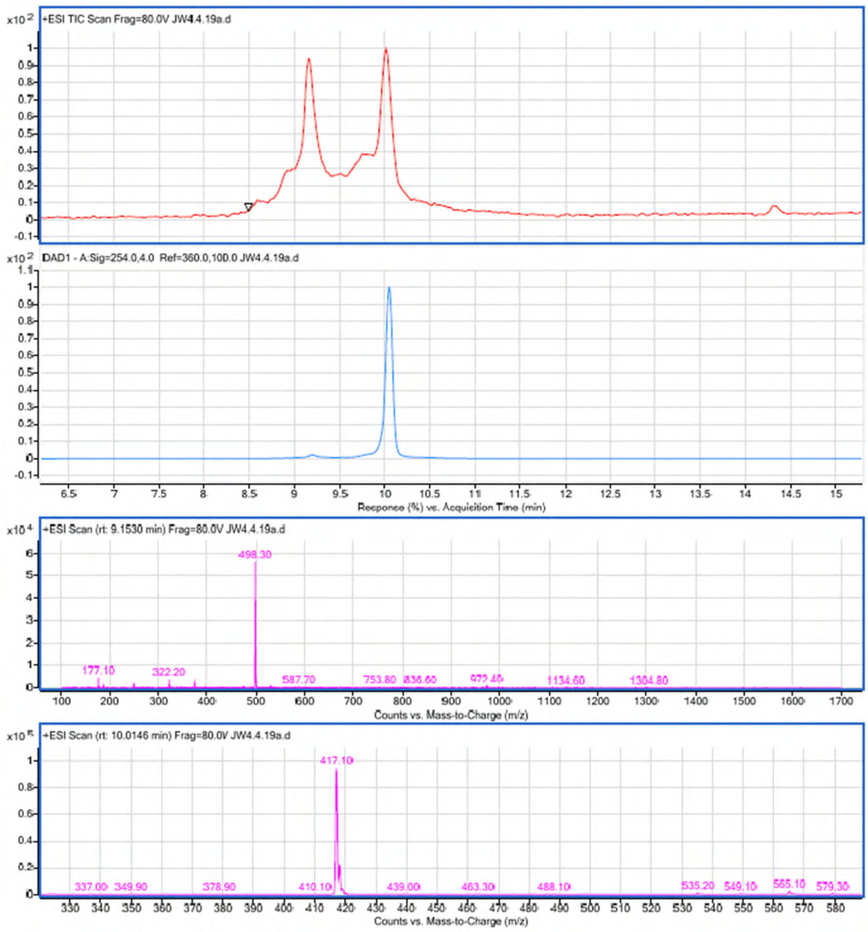


Figure S112. ^{1}H-NMR spectrum of compound **55**.

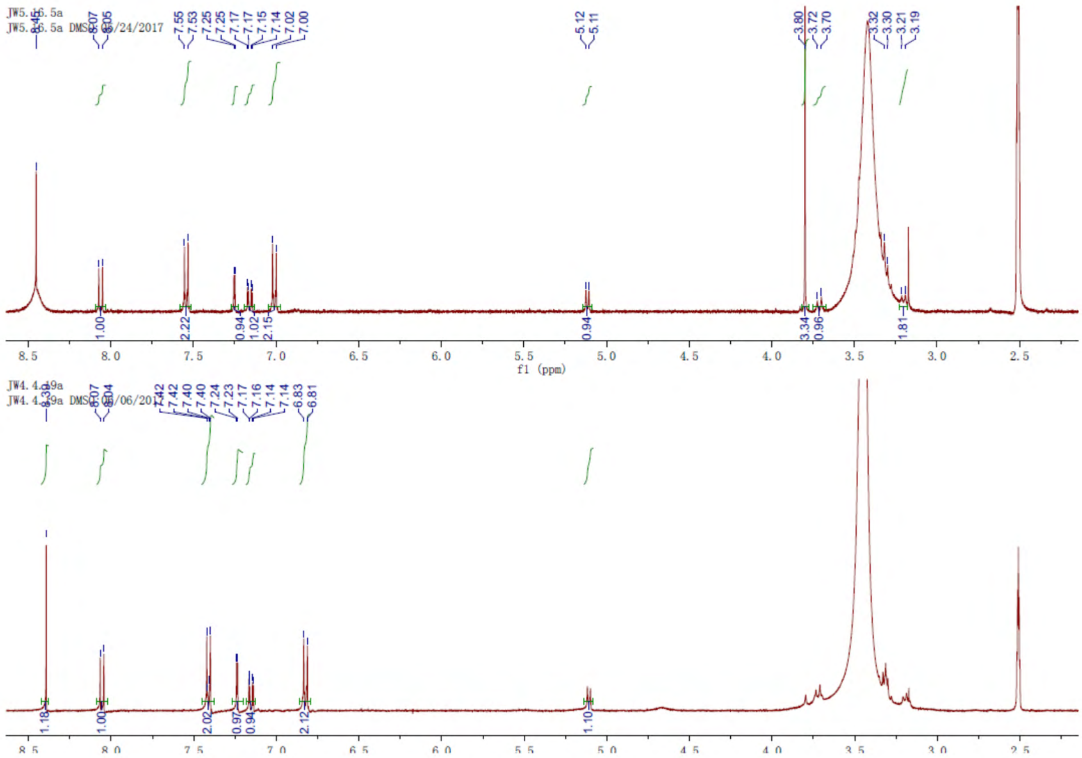


Figure S113. LC-MS spectrum of compound **56**.

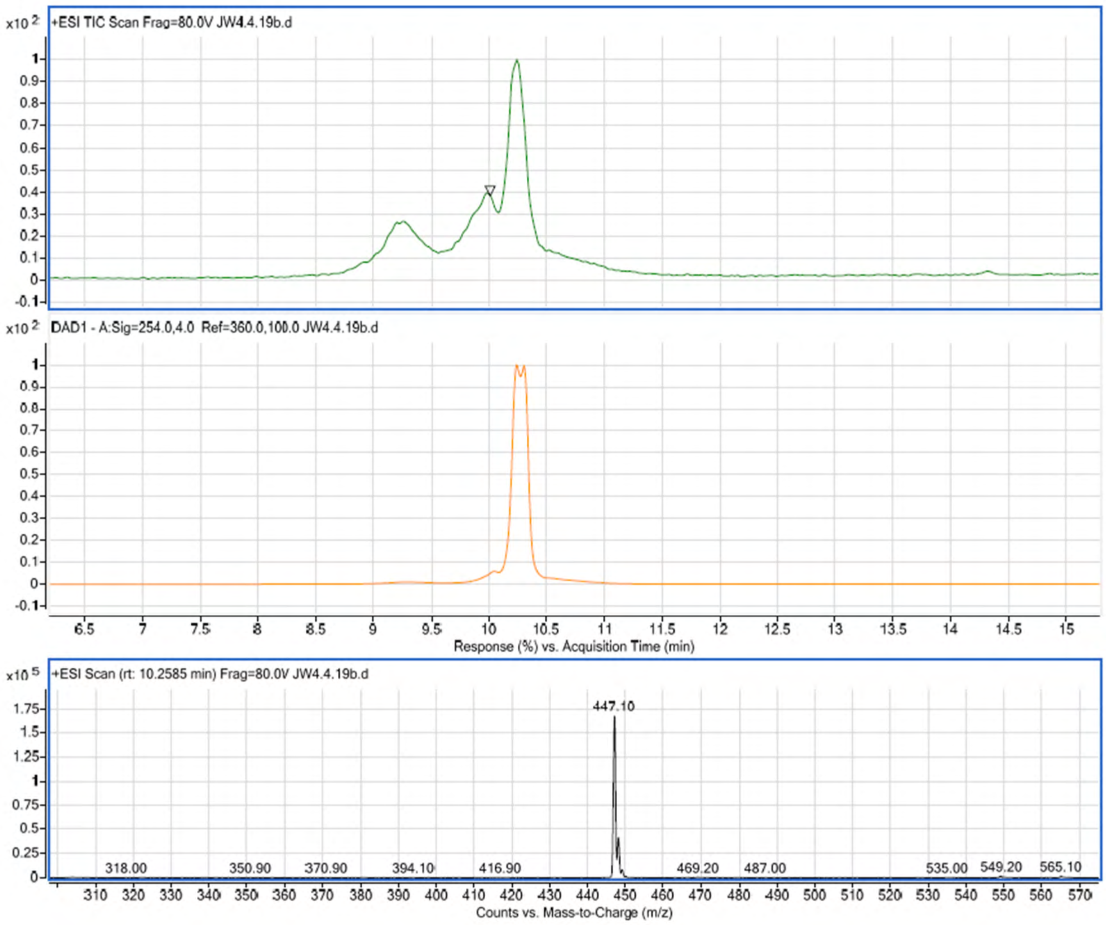


Figure S114. ^{1}H-NMR spectrum of compound **56**.

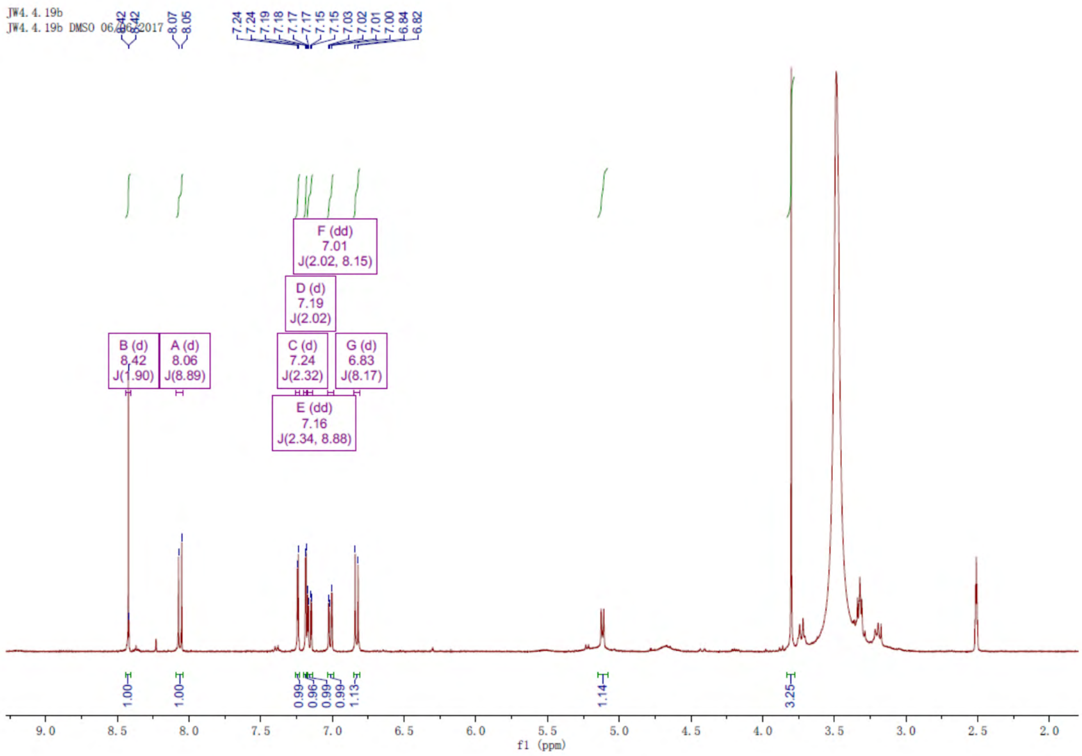


Figure S115. LC-MS spectrum of compound **57**.

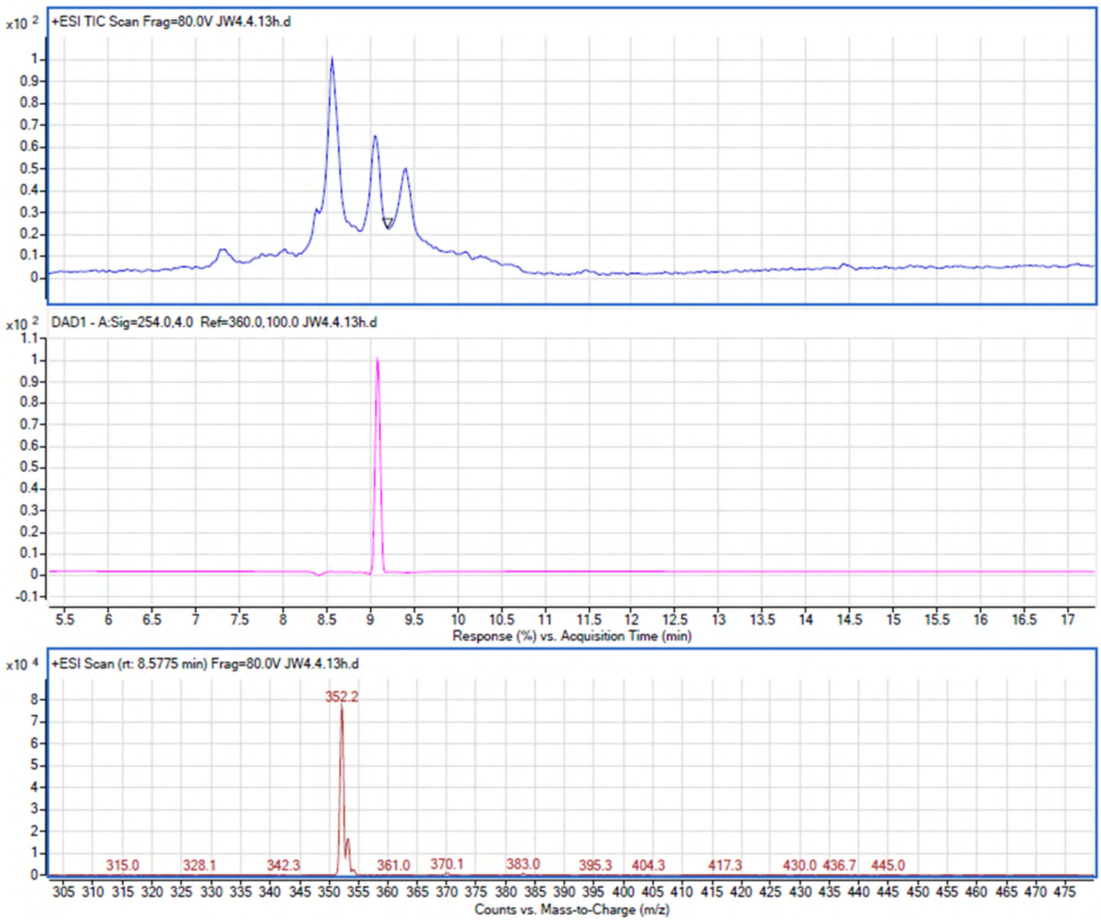


Figure S116. ^{1}H-NMR spectrum of compound **57**.

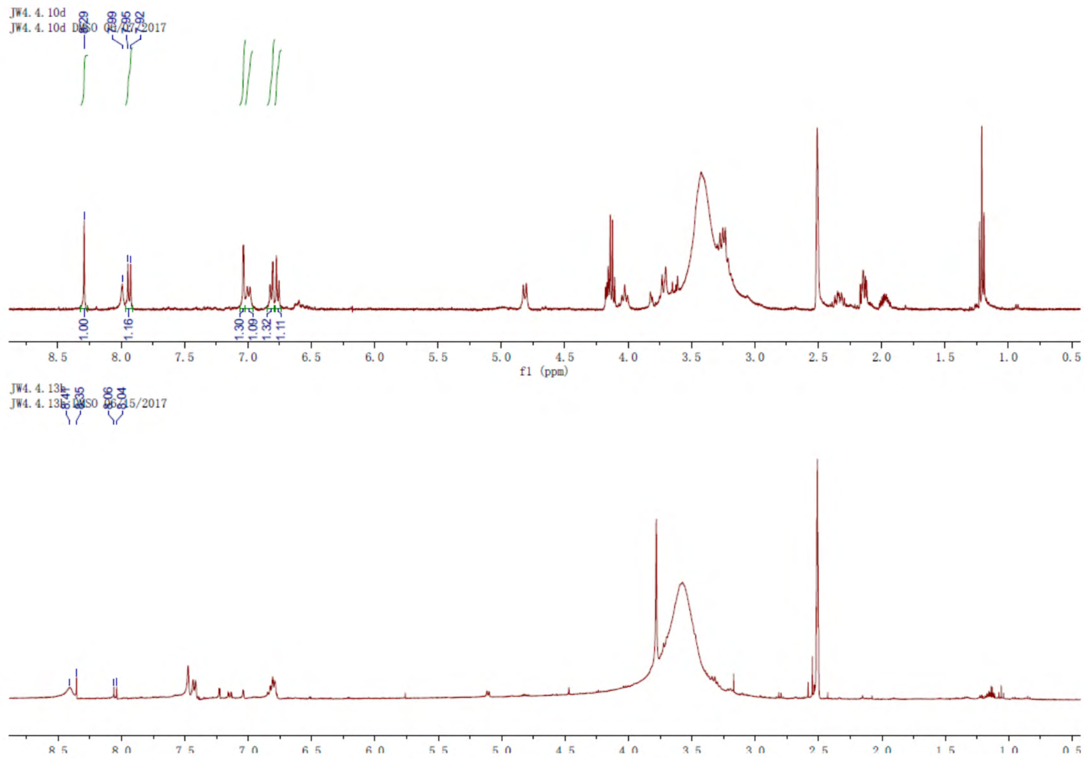


Figure S117. LC-MS spectrum of compound **58**.

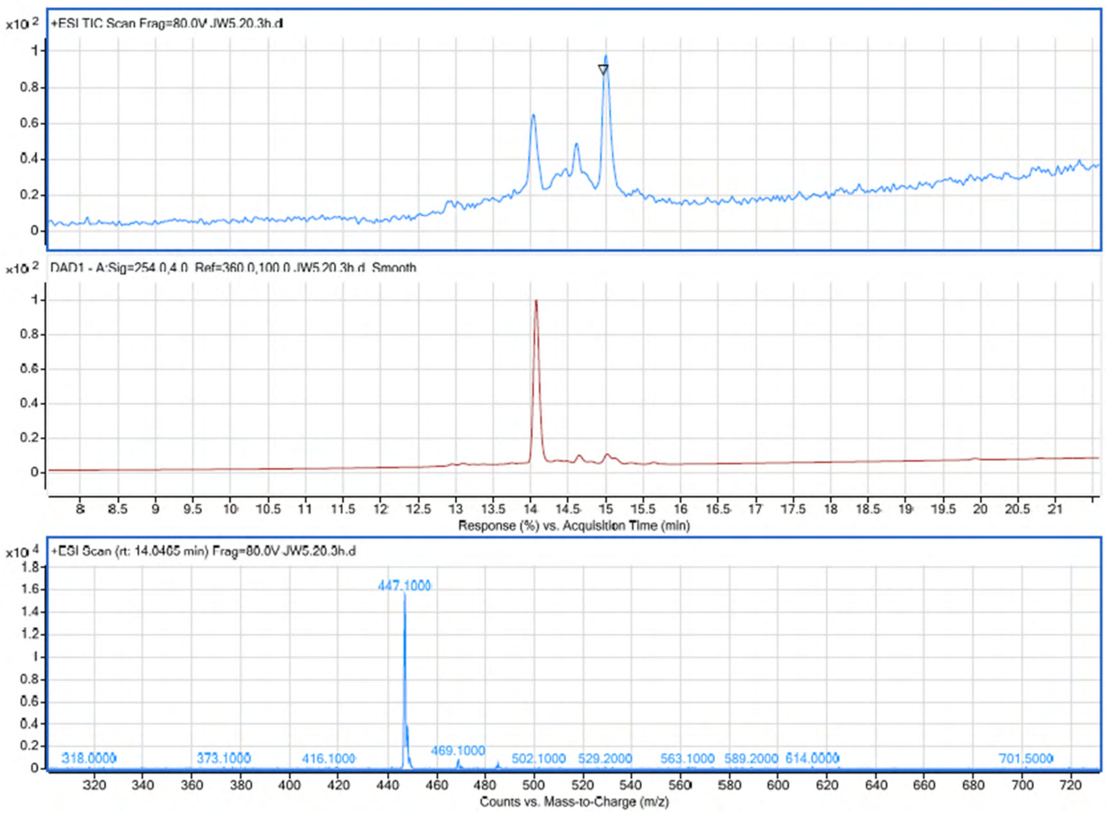


Figure S118. ^{1}H-NMR spectrum of compound **58**.

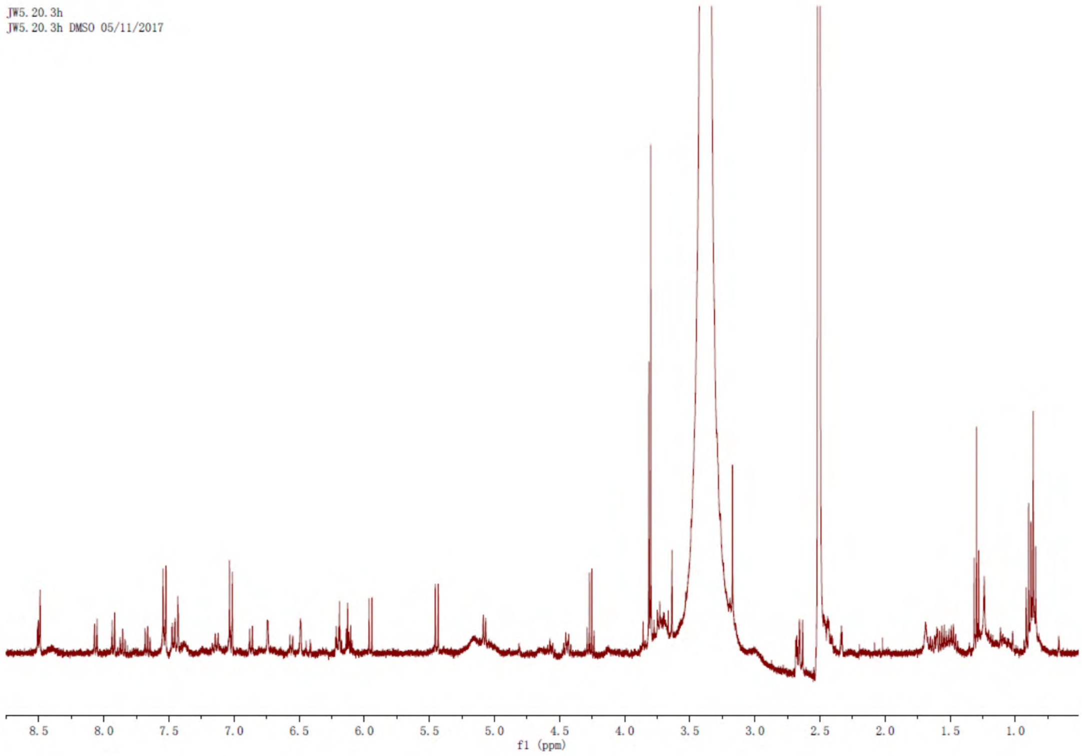


Figure S119. LC-MS spectrum of compound **59**.

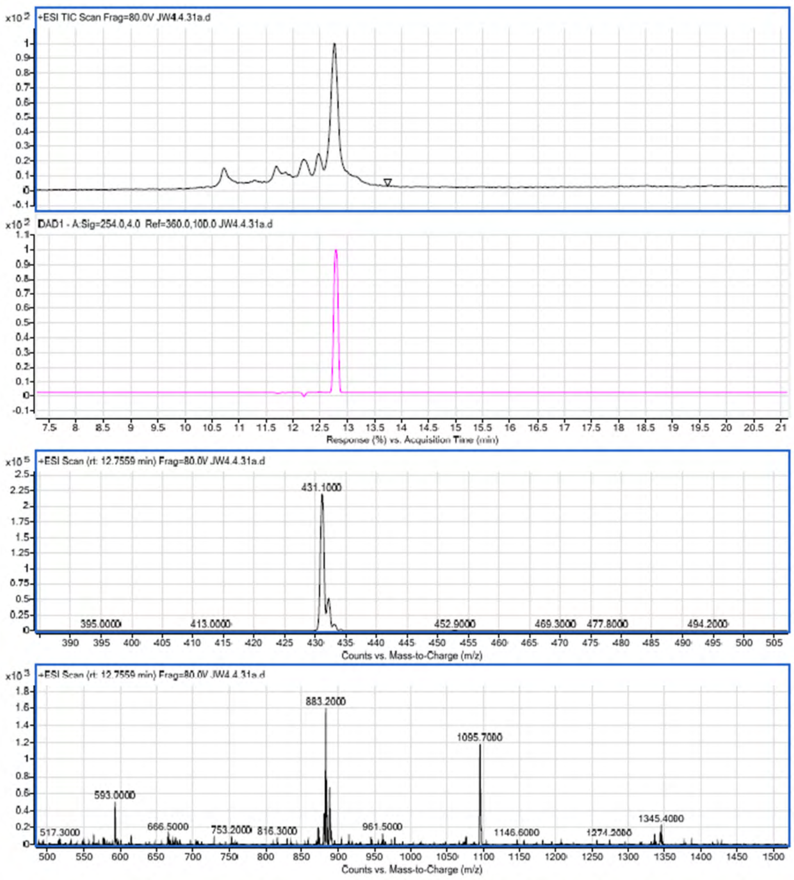


Figure S120. [1]H-NMR spectrum of compound **59**.

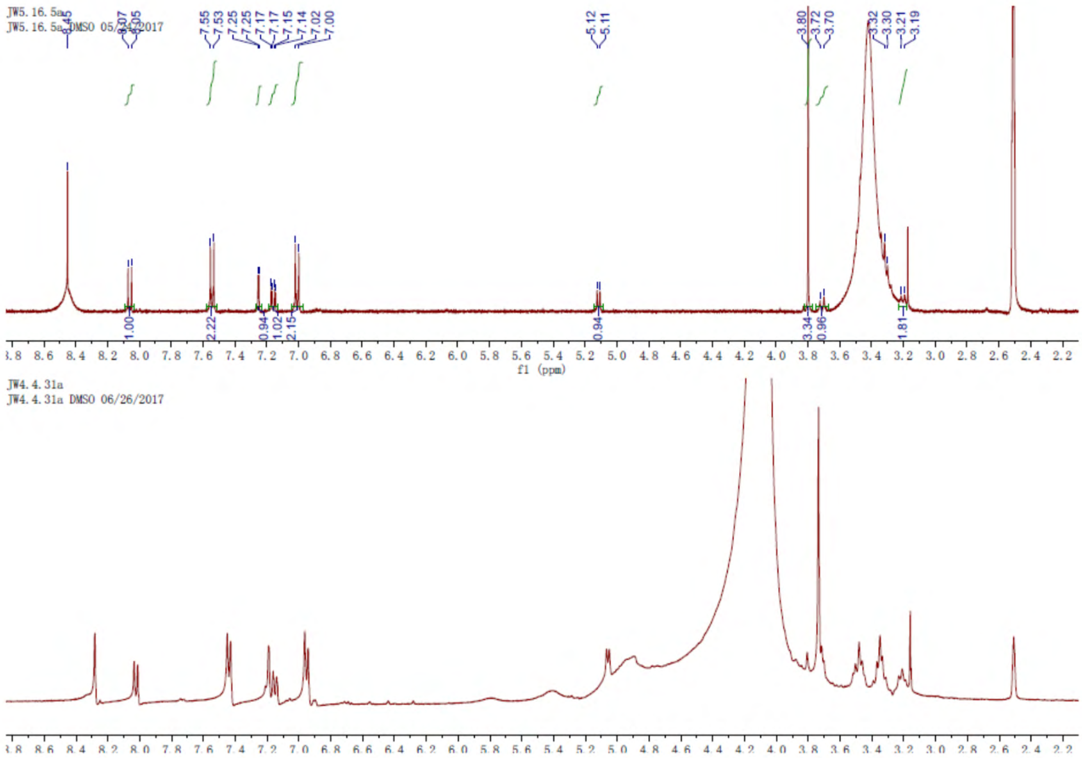


Figure S121. LC-MS spectrum of compound **60**.

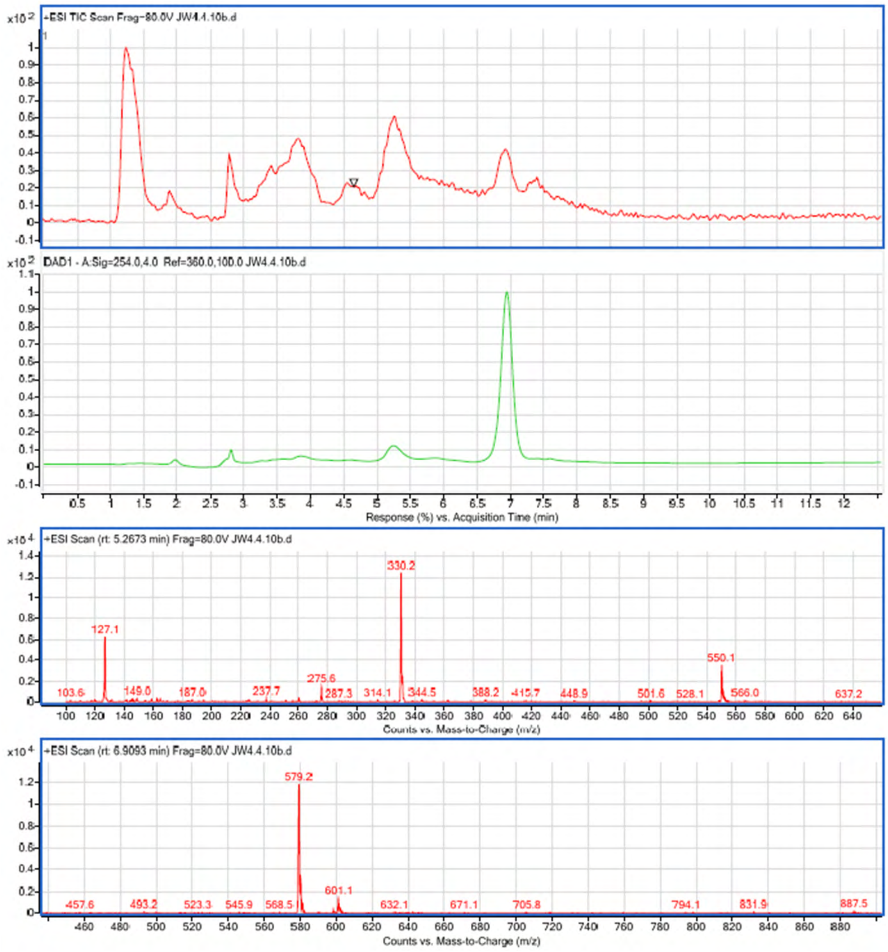


Figure S122. ¹H-NMR spectrum of compound **60**.

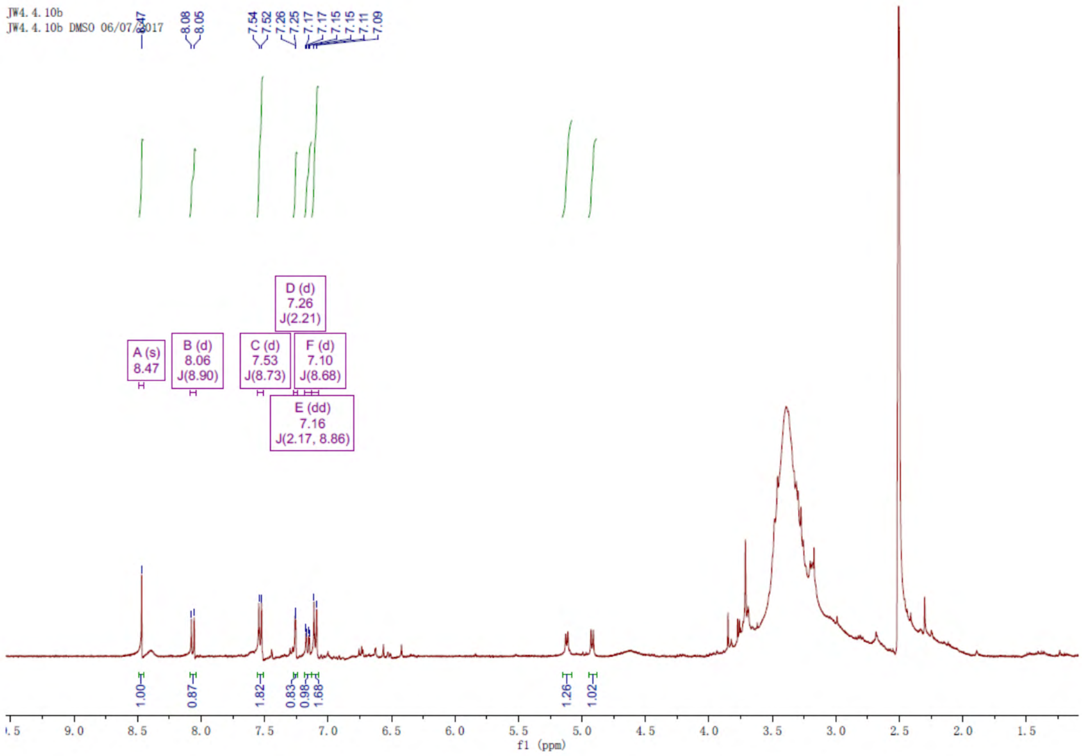


Figure S123. LC-MS spectrum of compound **61**.

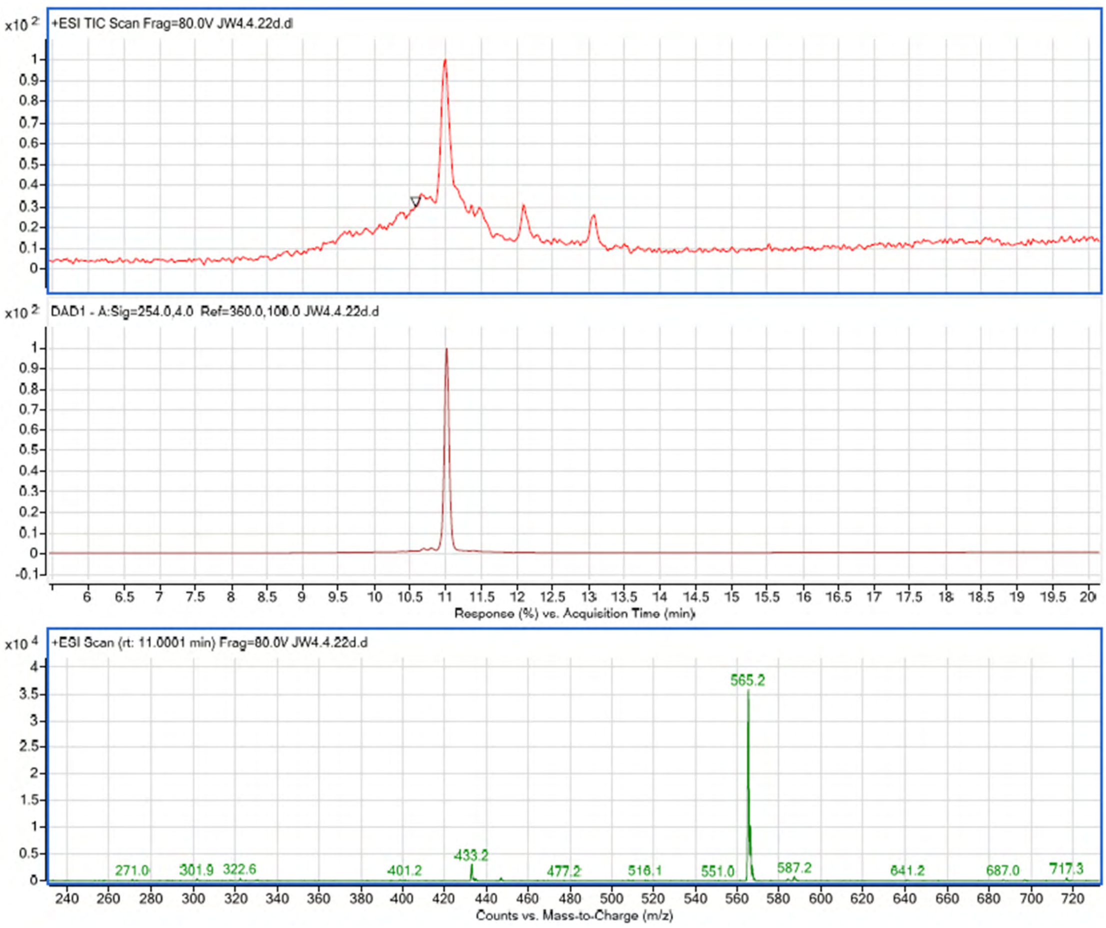


Figure S124. ^{1}H-NMR spectrum of compound **61**.

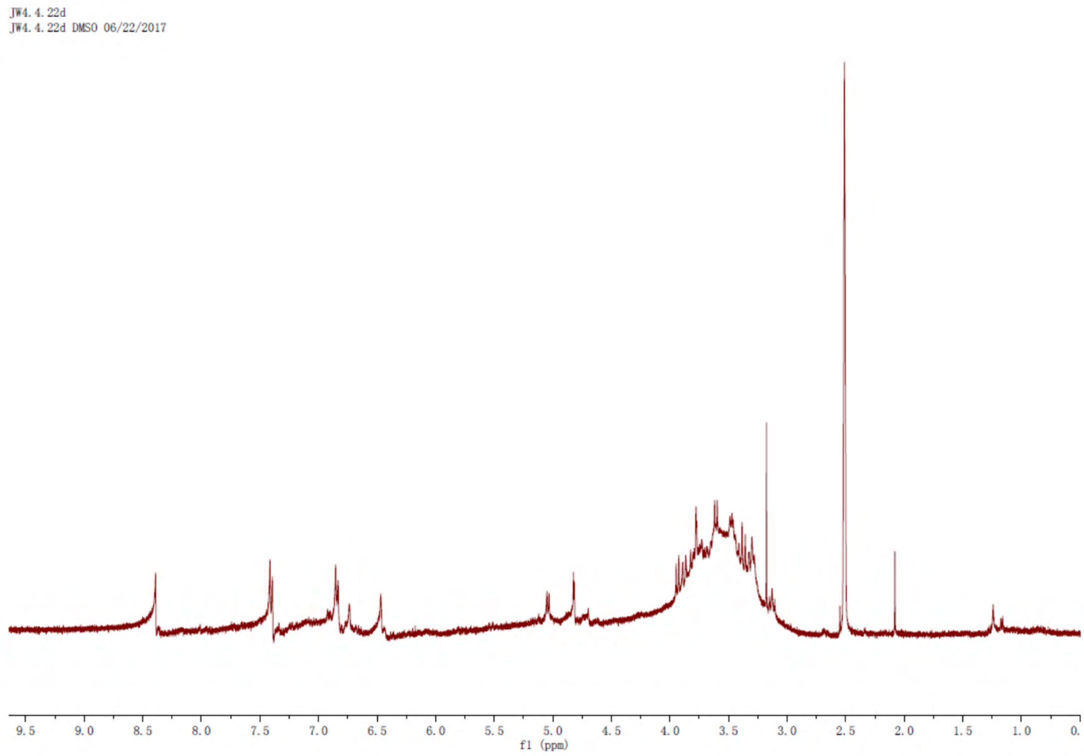


Figure S125. LC-MS spectrum of compound **62**.

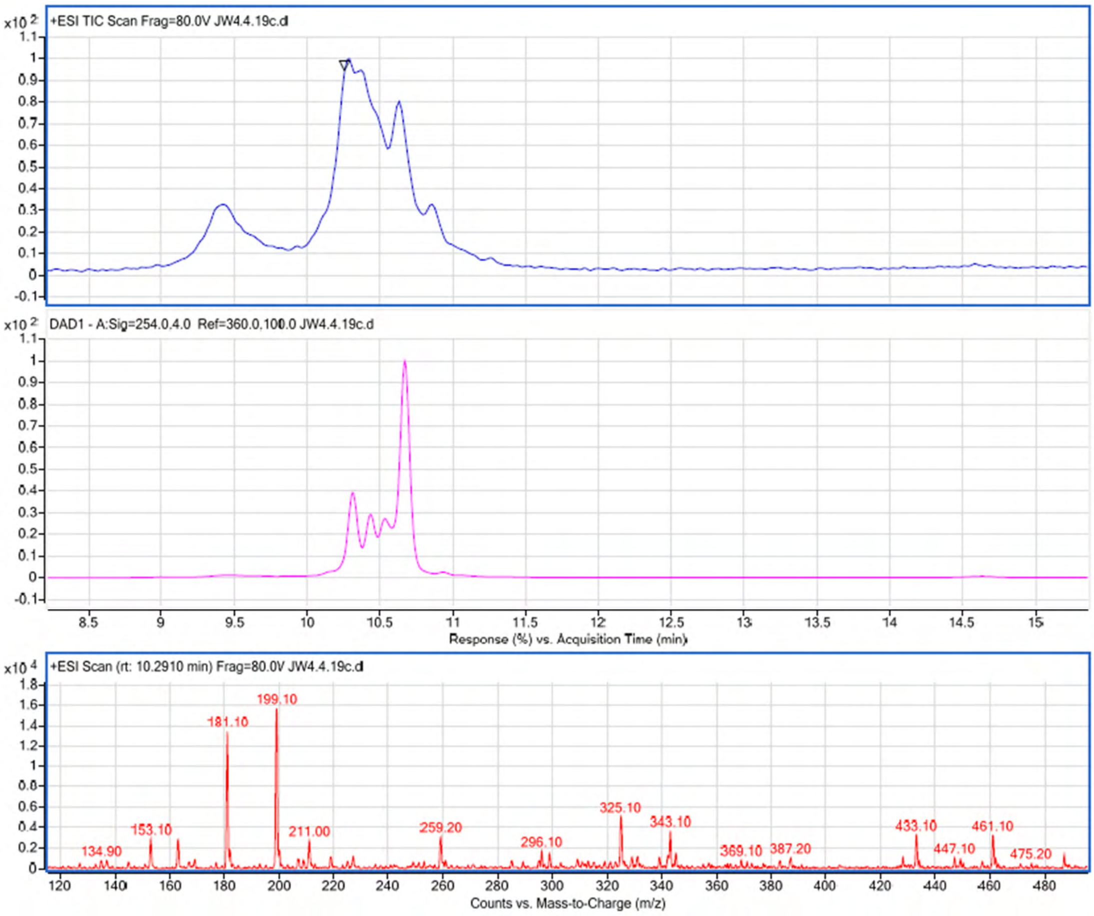


Figure S126. ^{1}H-NMR spectrum of compound **62**.

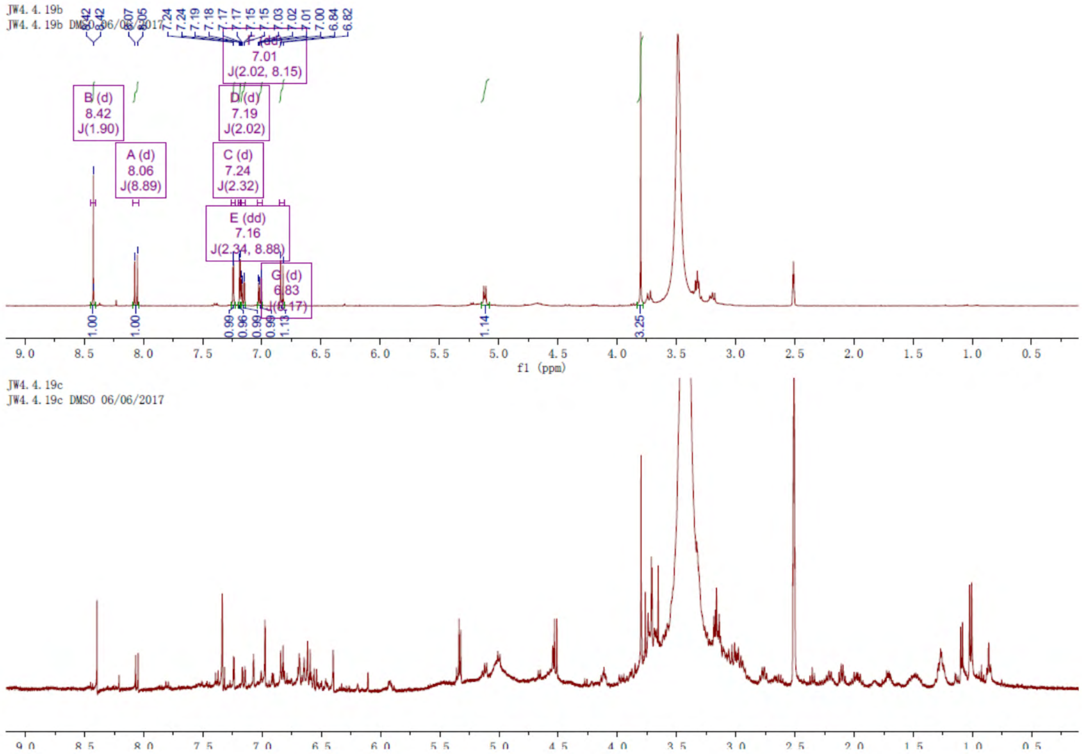


Figure S127. LC-MS spectrum of compound **63**.

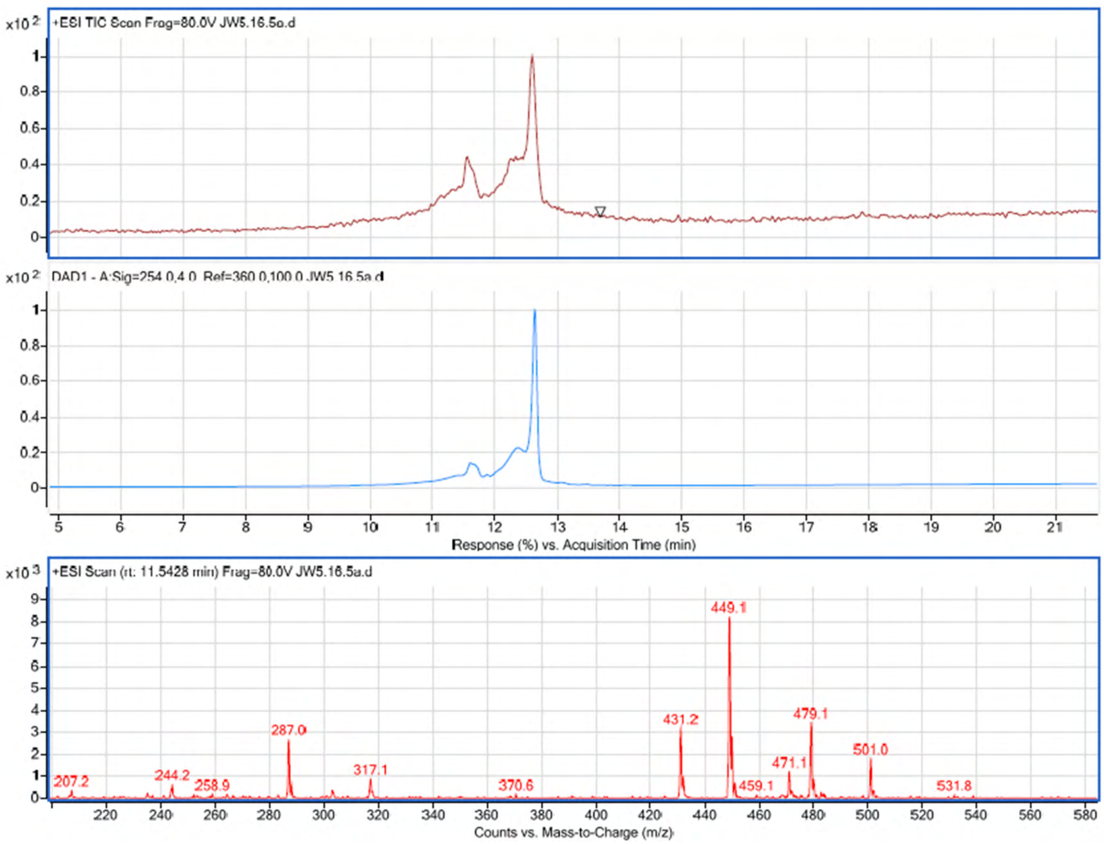


Figure S128. ^{1}H-NMR spectrum of compound **63**.

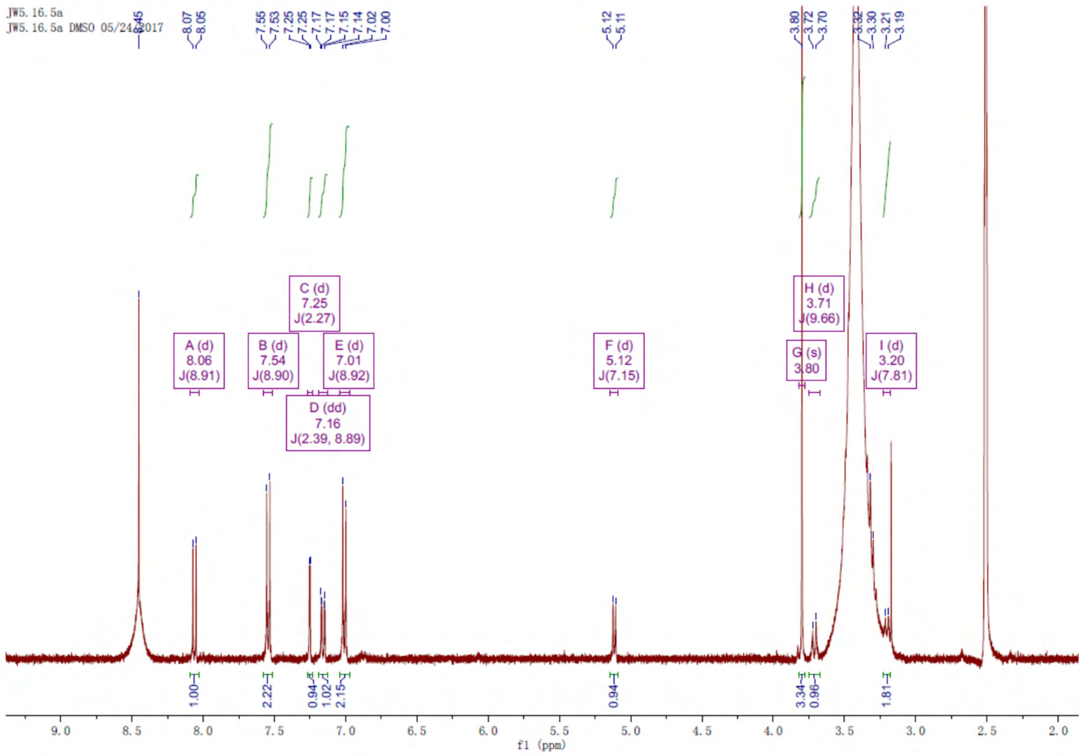


Figure S129. LC-MS spectrum of compound **64**.

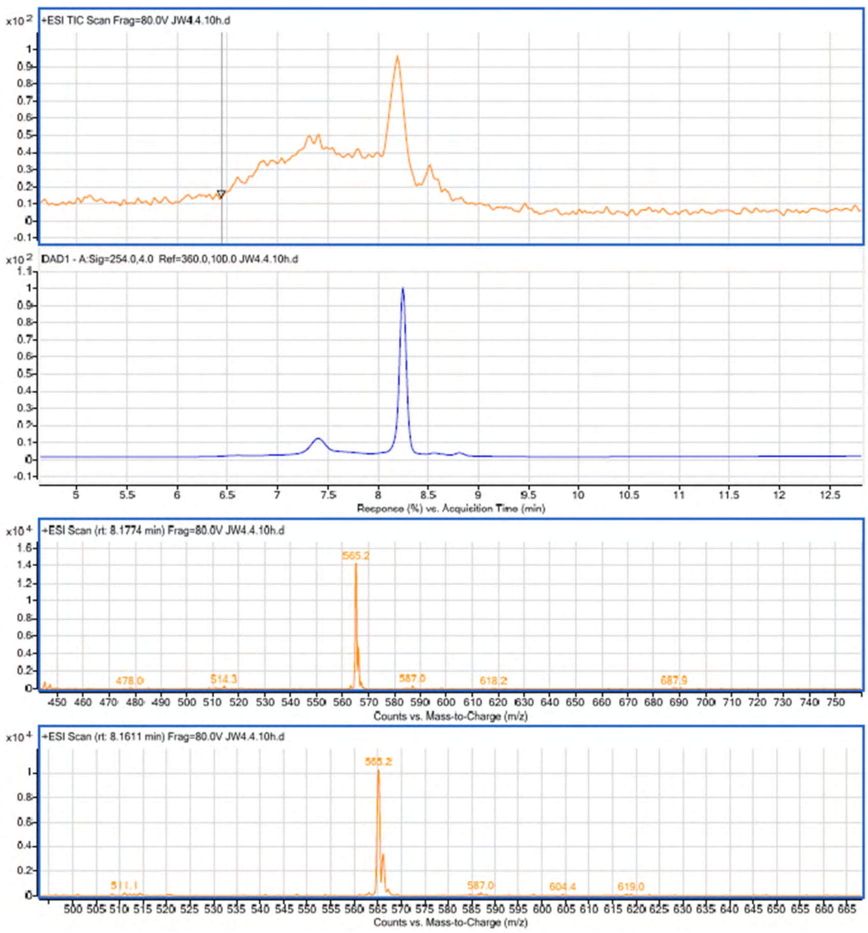


Figure S130. ^{1}H-NMR spectrum of compound **64**.

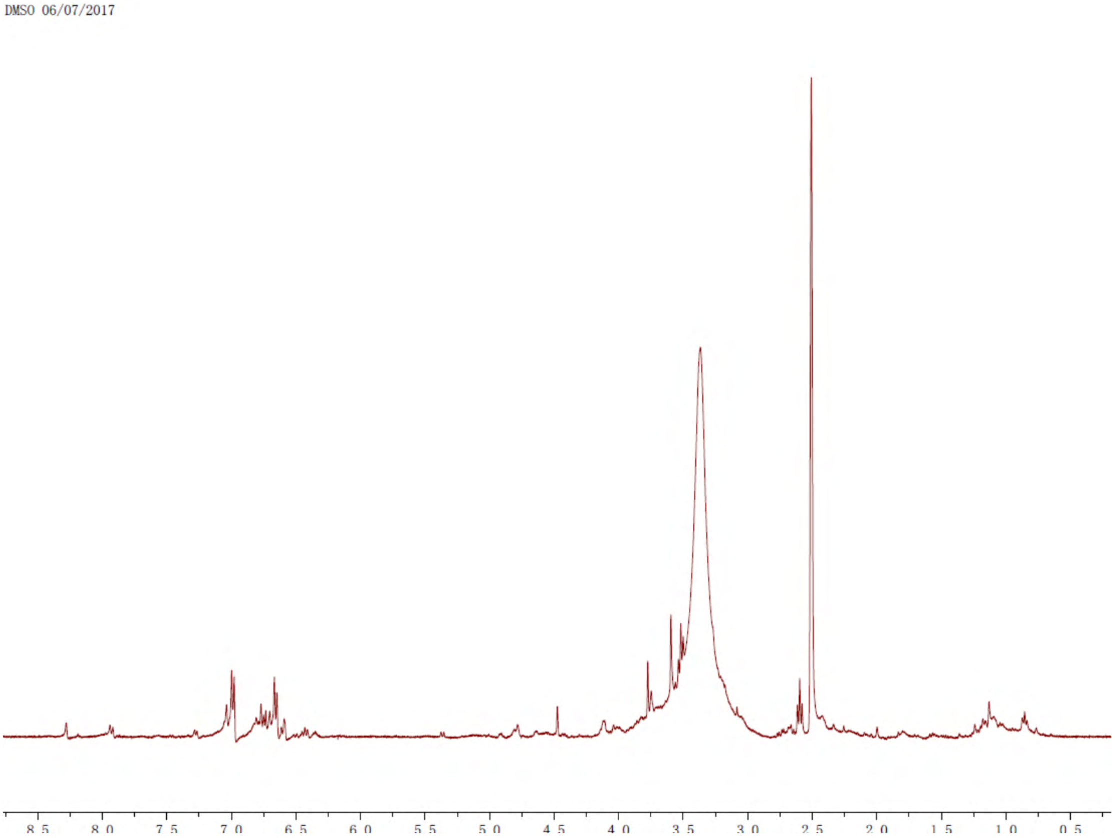


Figure S131. LC-MS spectrum of compound **65**.

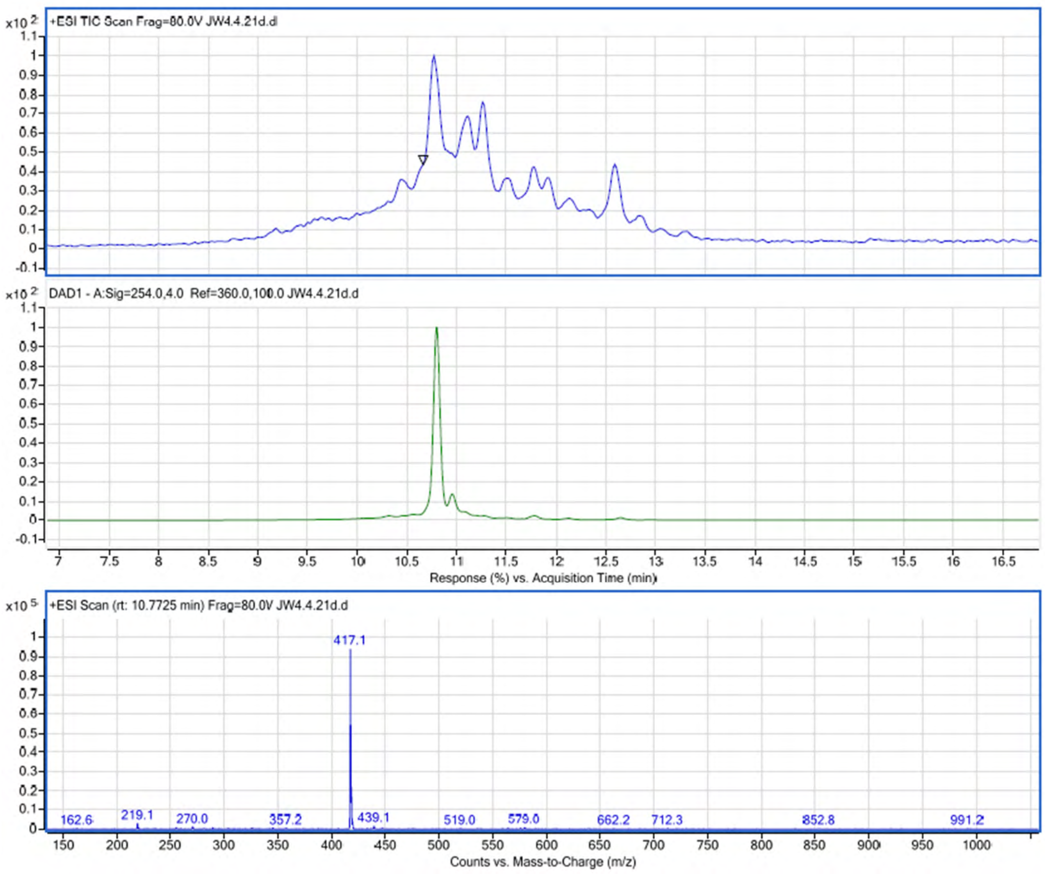


Figure S132. ^{1}H-NMR spectrum of compound **65**.

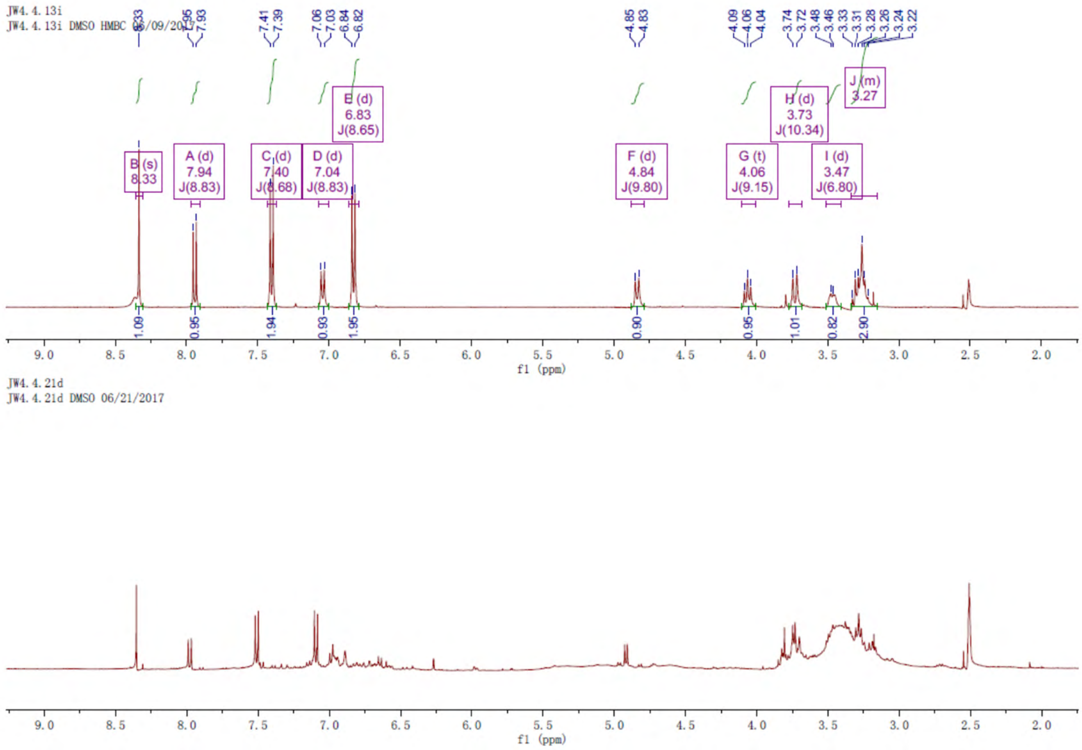


Figure S133. LC-MS spectrum of compound **66**.

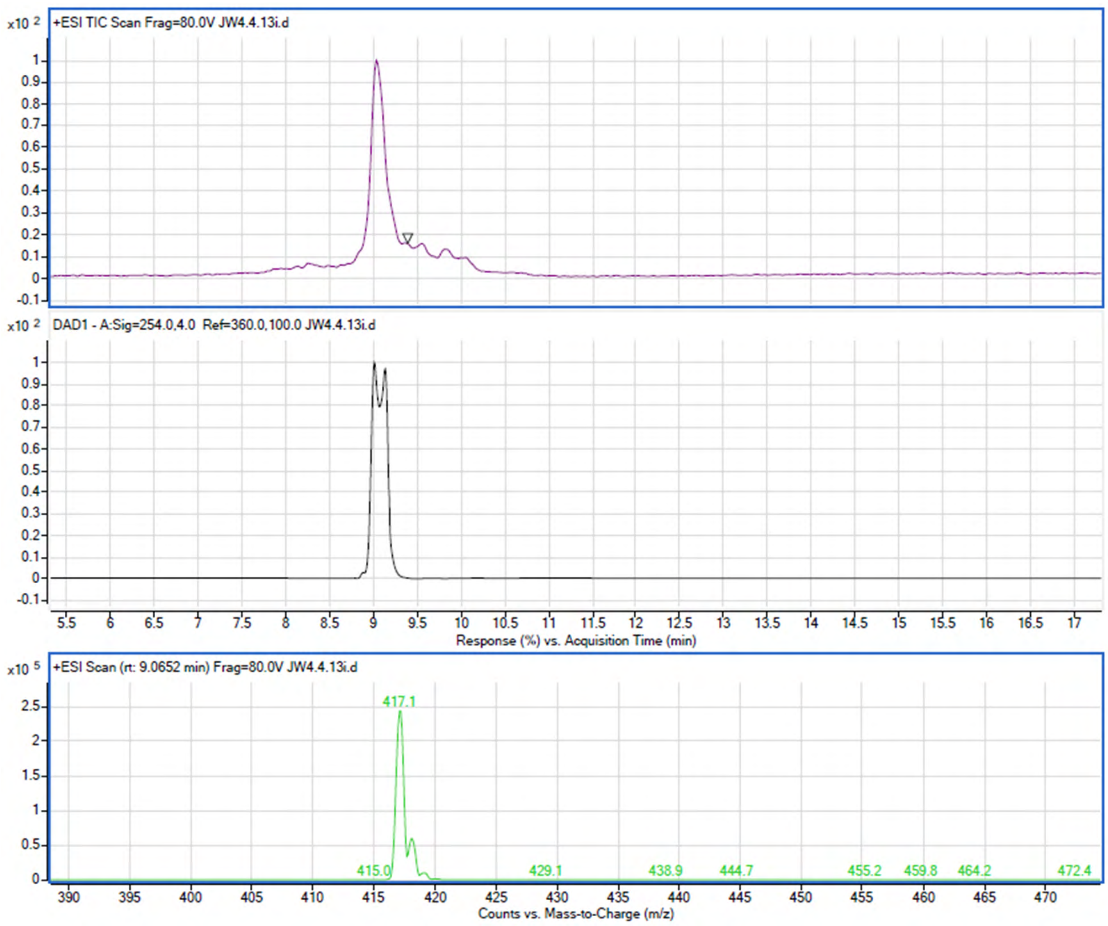


Figure S134. ^{1}H-NMR spectrum of compound **66**.

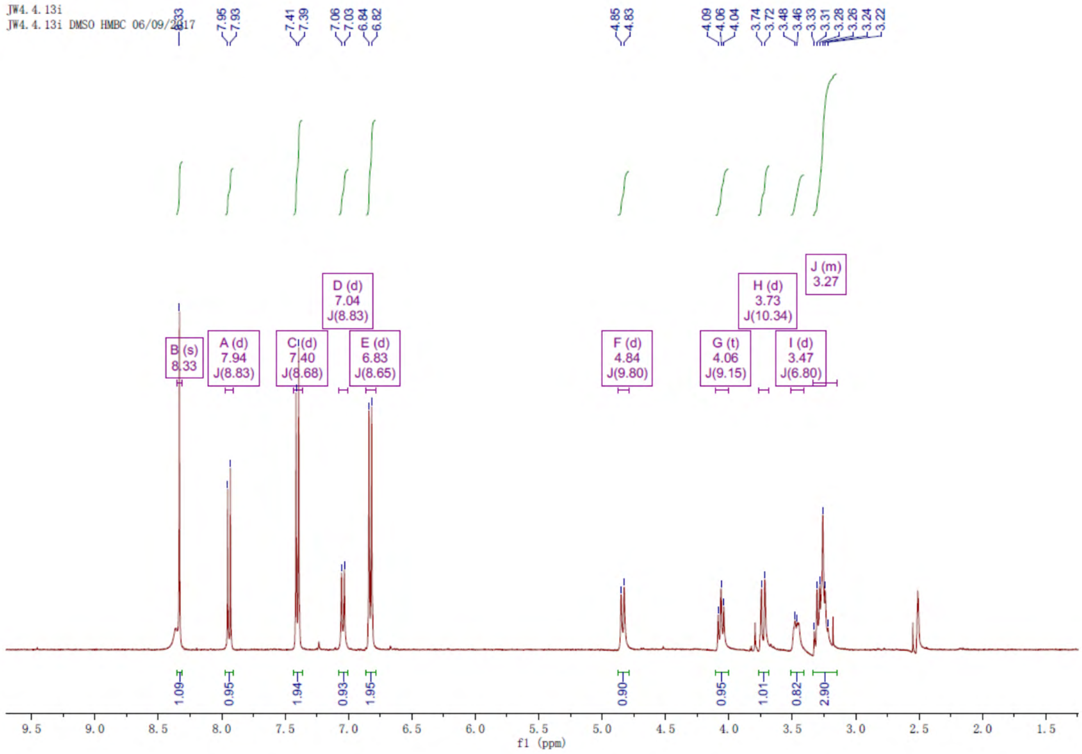


Figure S135. LC-MS spectrum of compound **67**.

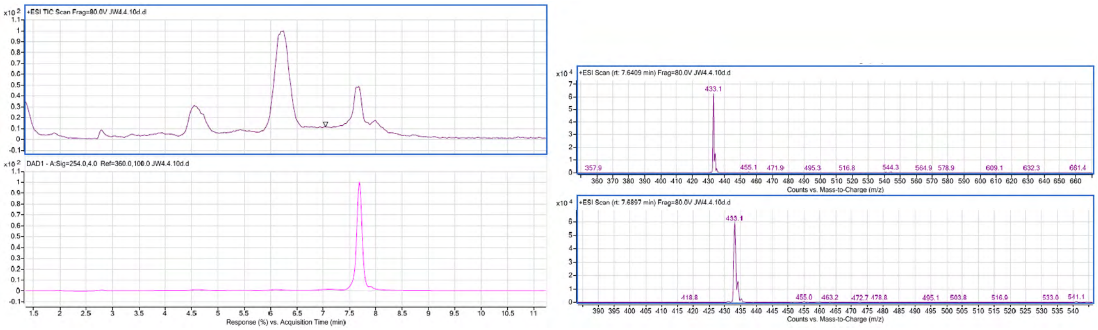


Figure S136. ^{1}H-NMR spectrum of compound **67**.

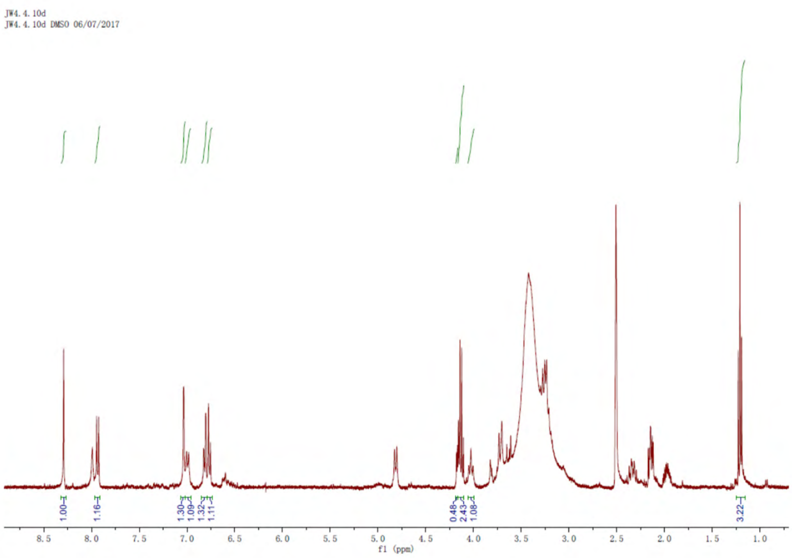


Figure S137. LC-MS spectrum of compound **68**.

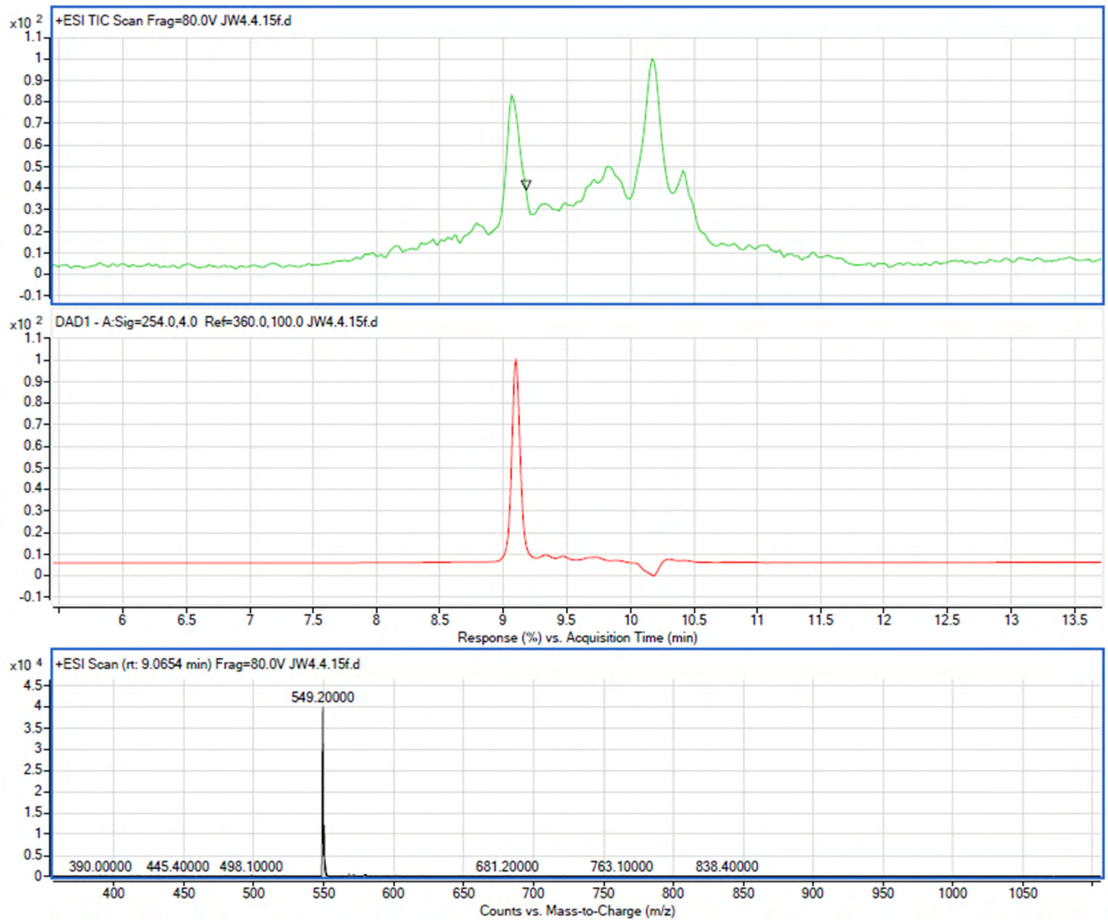


Figure S138. ^{1}H-NMR spectrum of compound **68**.

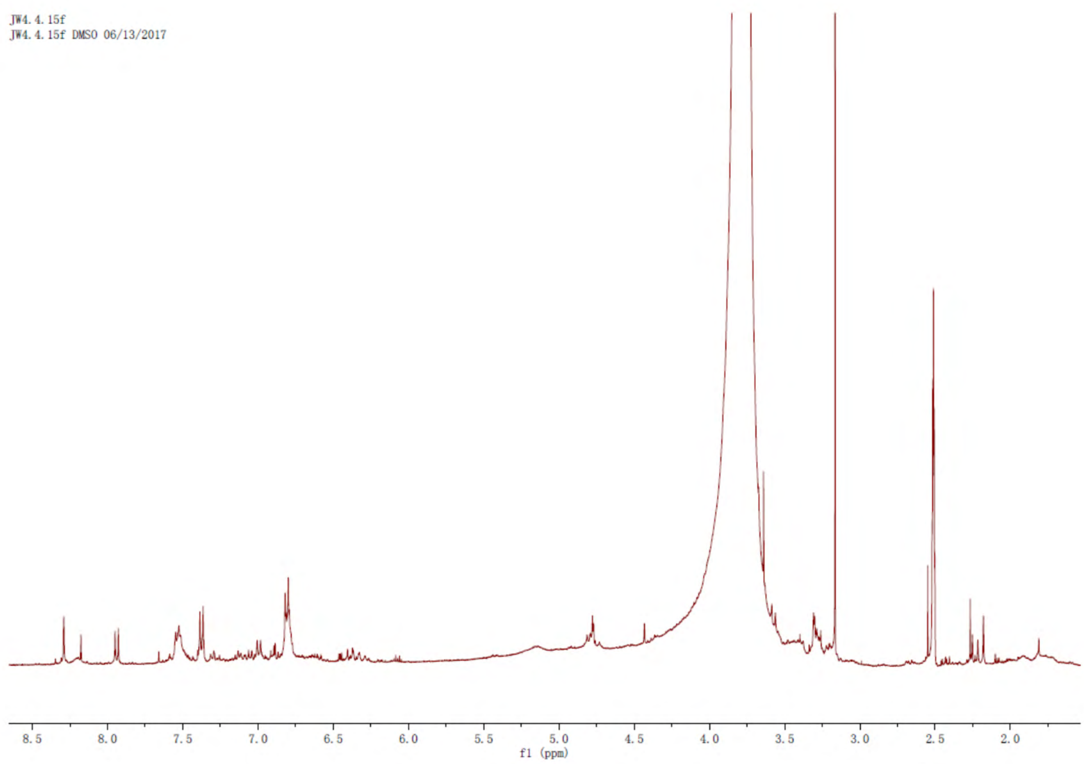


Figure S139. LC-MS spectrum of compound **69**.

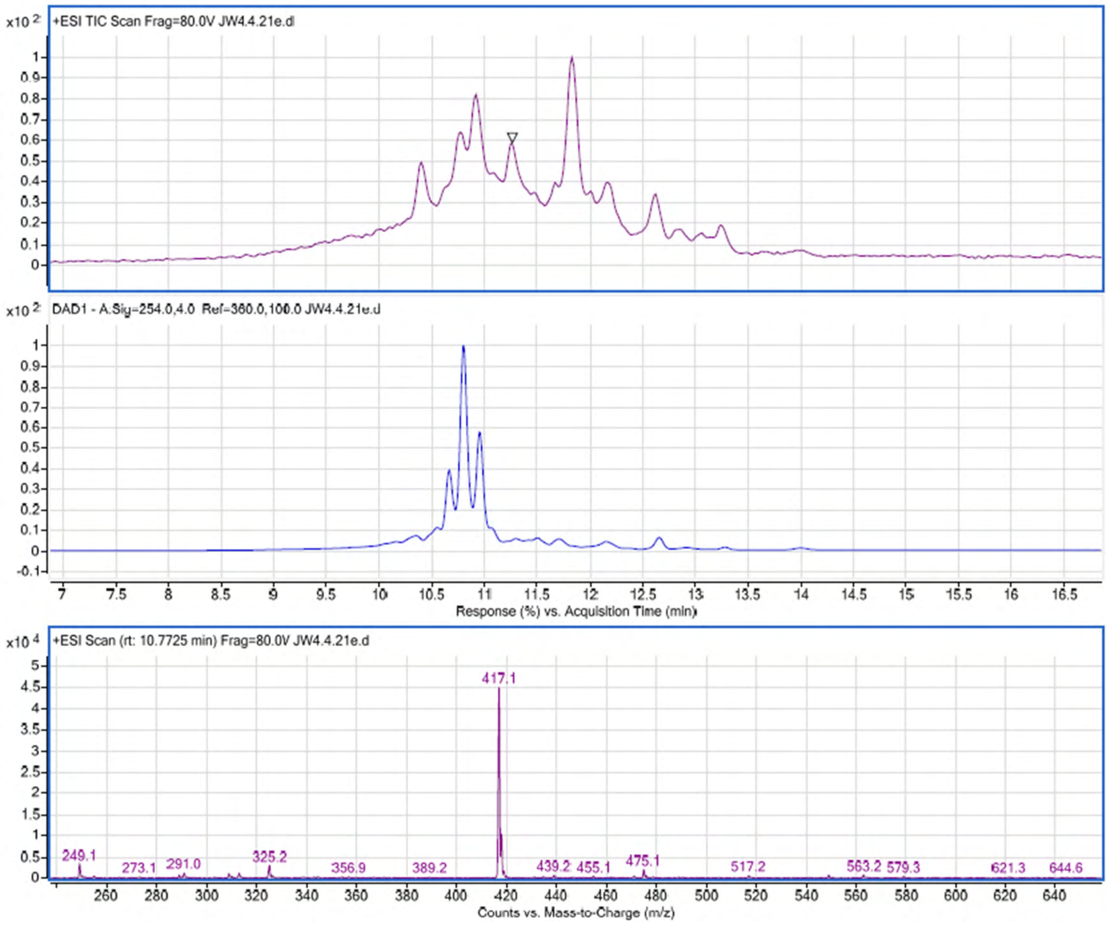


Figure S140. ^{1}H-NMR spectrum of compound **69**.

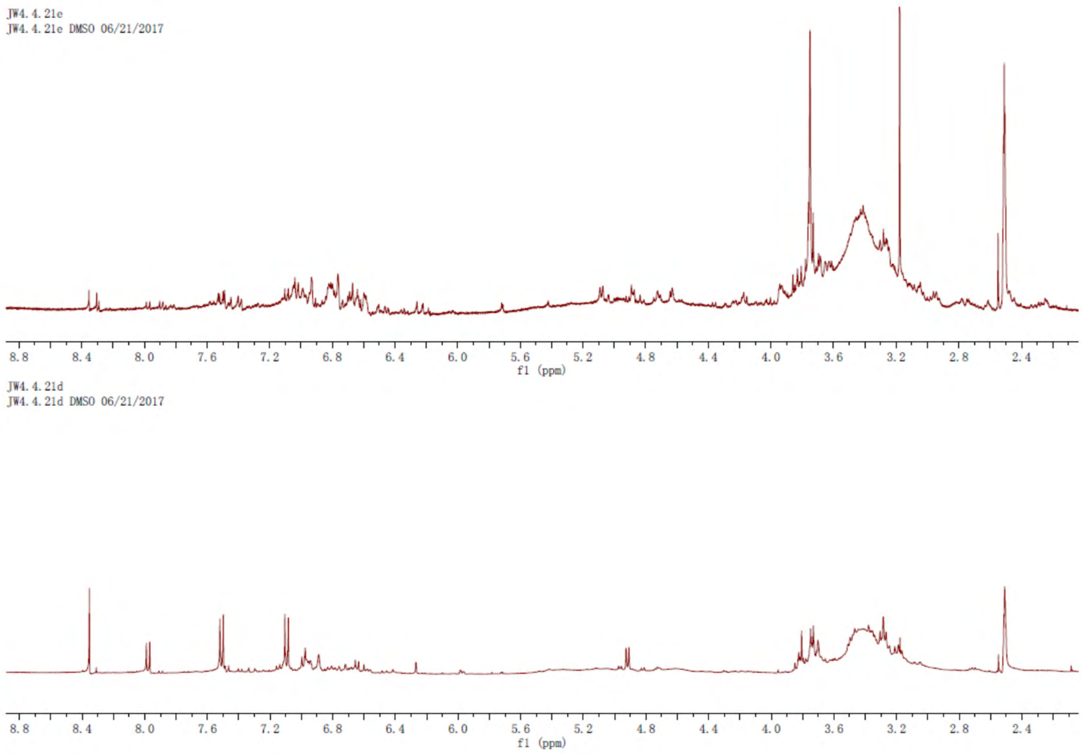


Figure S141. LC-MS spectrum of compound **70**.

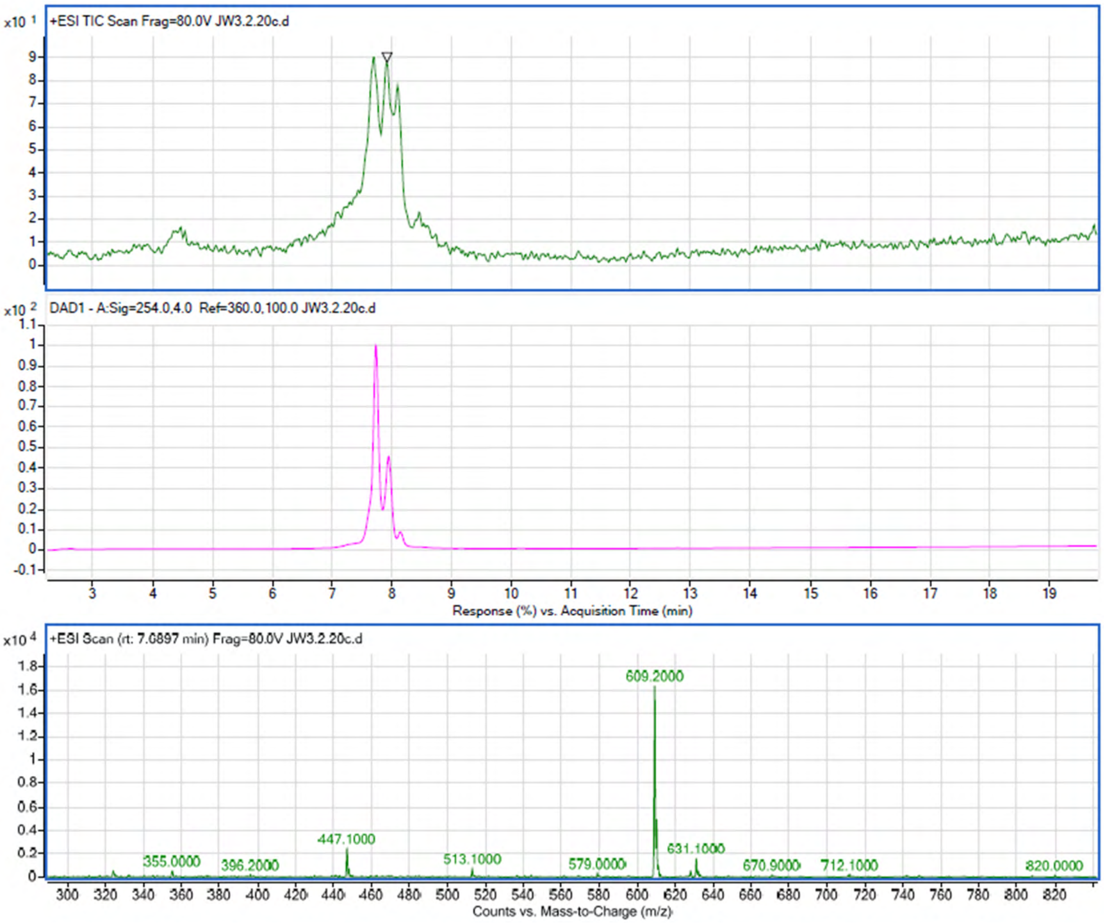


Figure S142. [1]H-NMR spectrum of compound **70**.

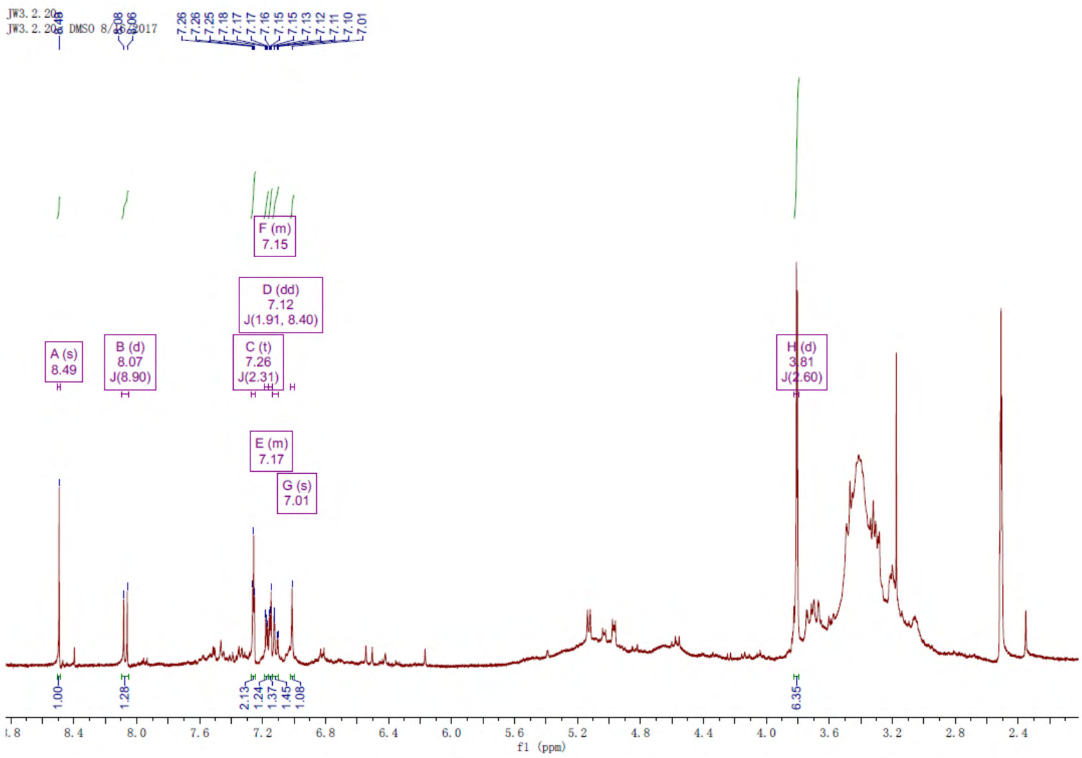


Figure S143. LC-MS spectrum of compound **71**.

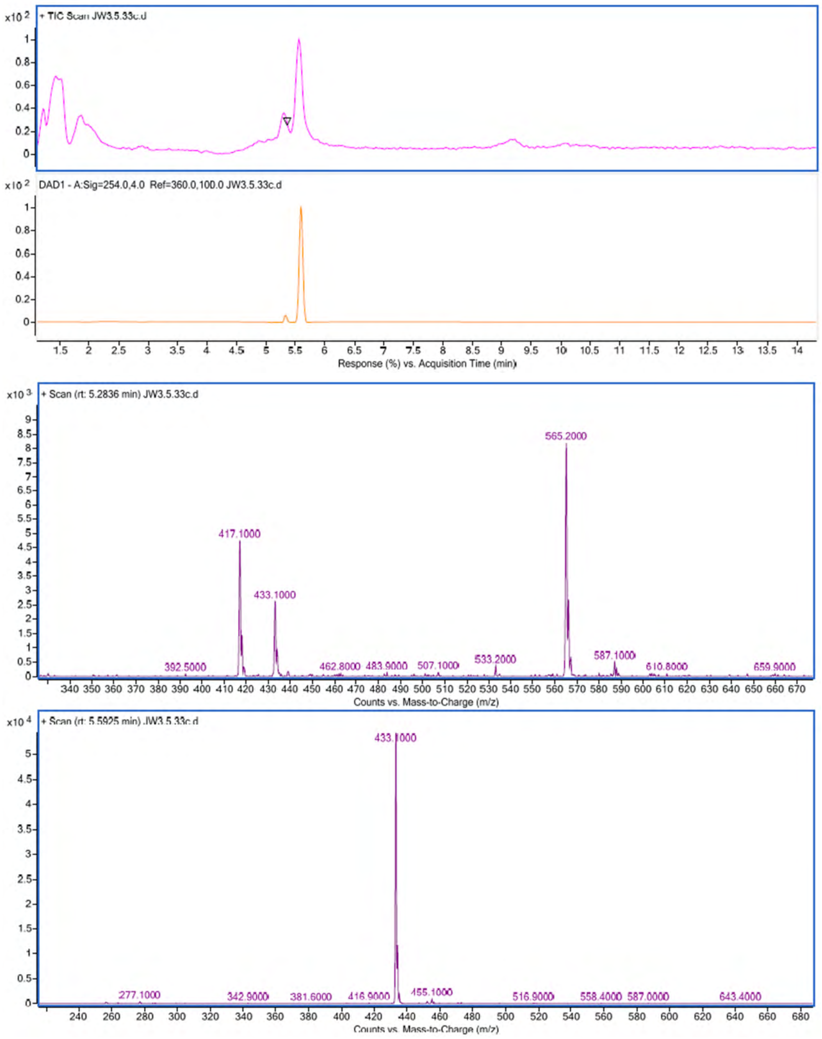


Figure S144. ^{1}H-NMR spectrum of compound **71**.

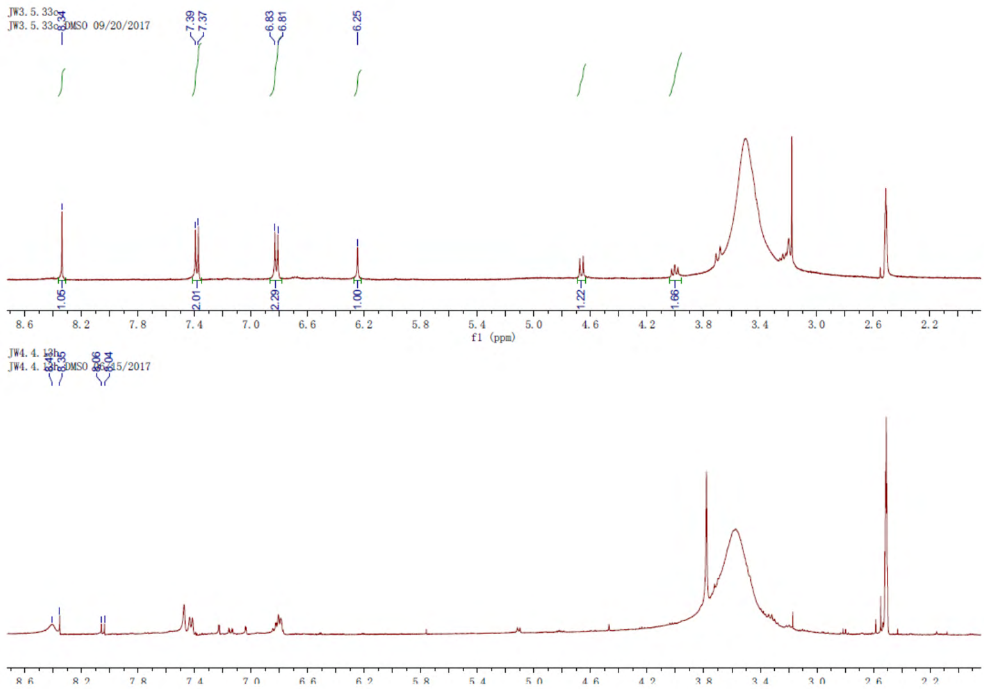


Figure S145. LC-MS spectrum of compound **72**.

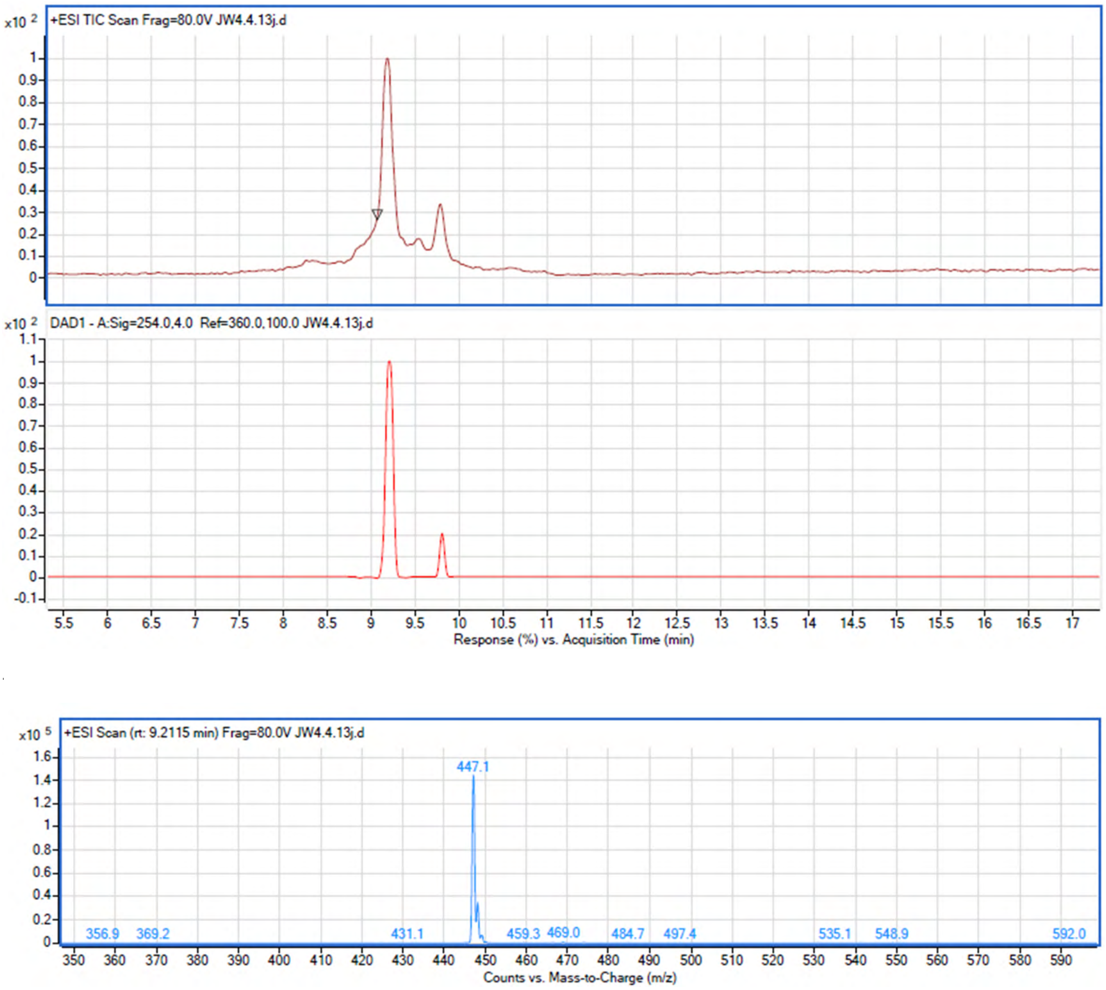


Figure S146. ^{1}H-NMR spectrum of compound **72**.

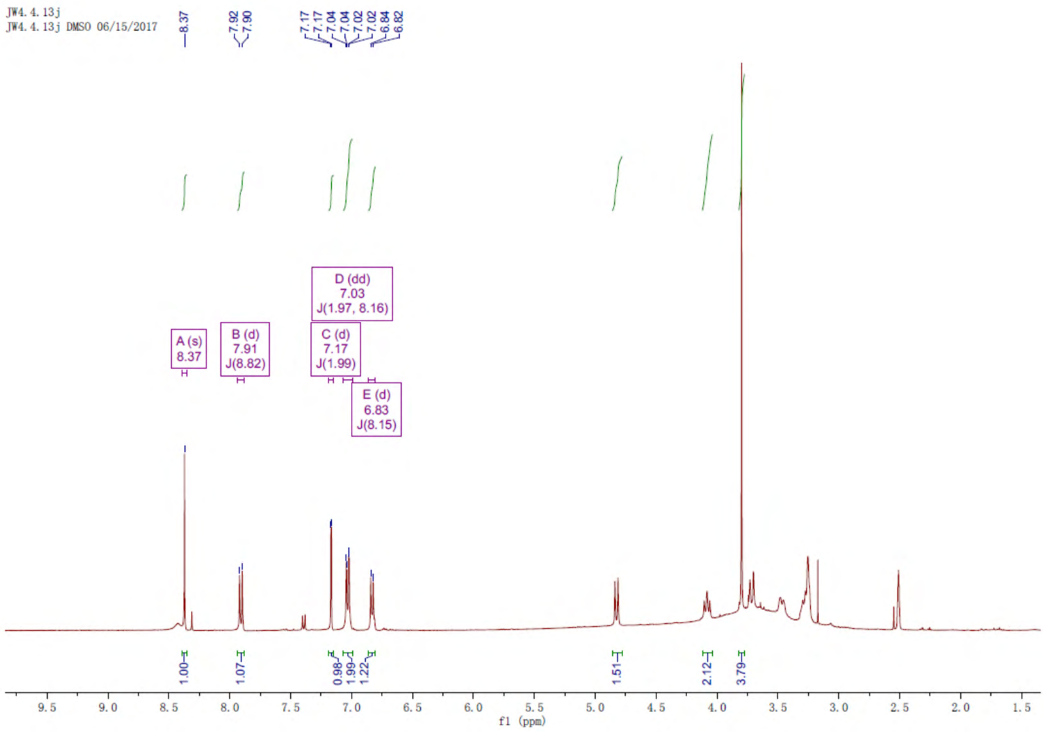


Figure S147. LC-MS spectrum of compound **73**.

Figure S148. ^{1}H-NMR spectrum of compound **73**.

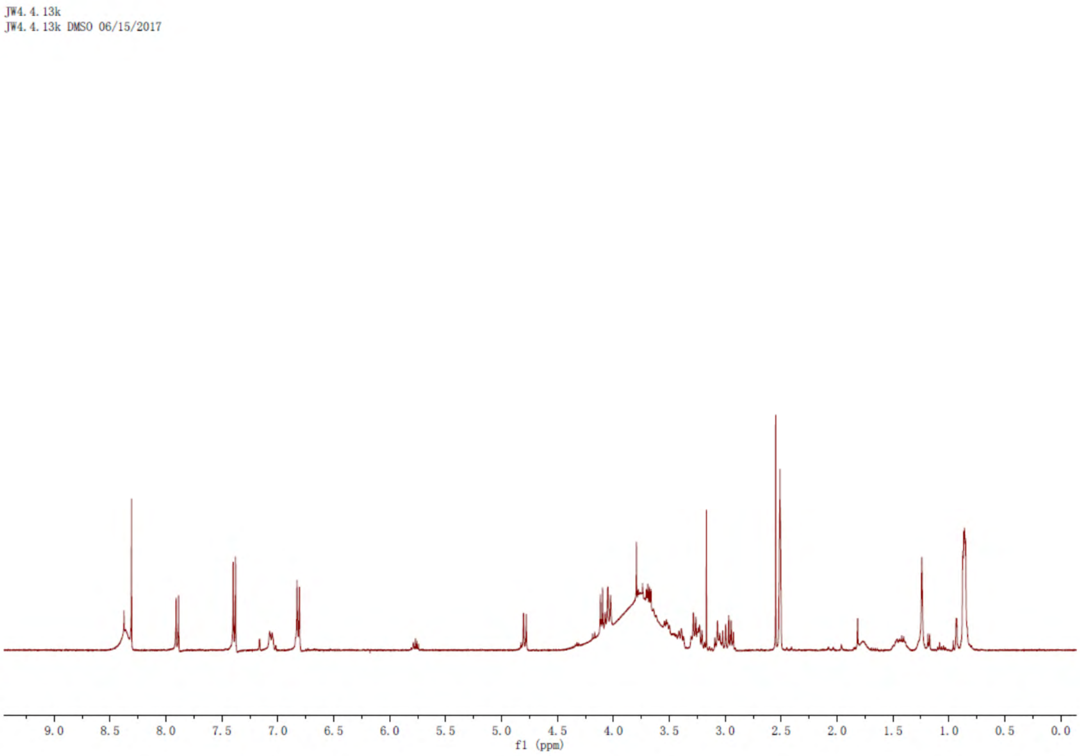


Figure S149. LC-MS spectrum of compound **74**.

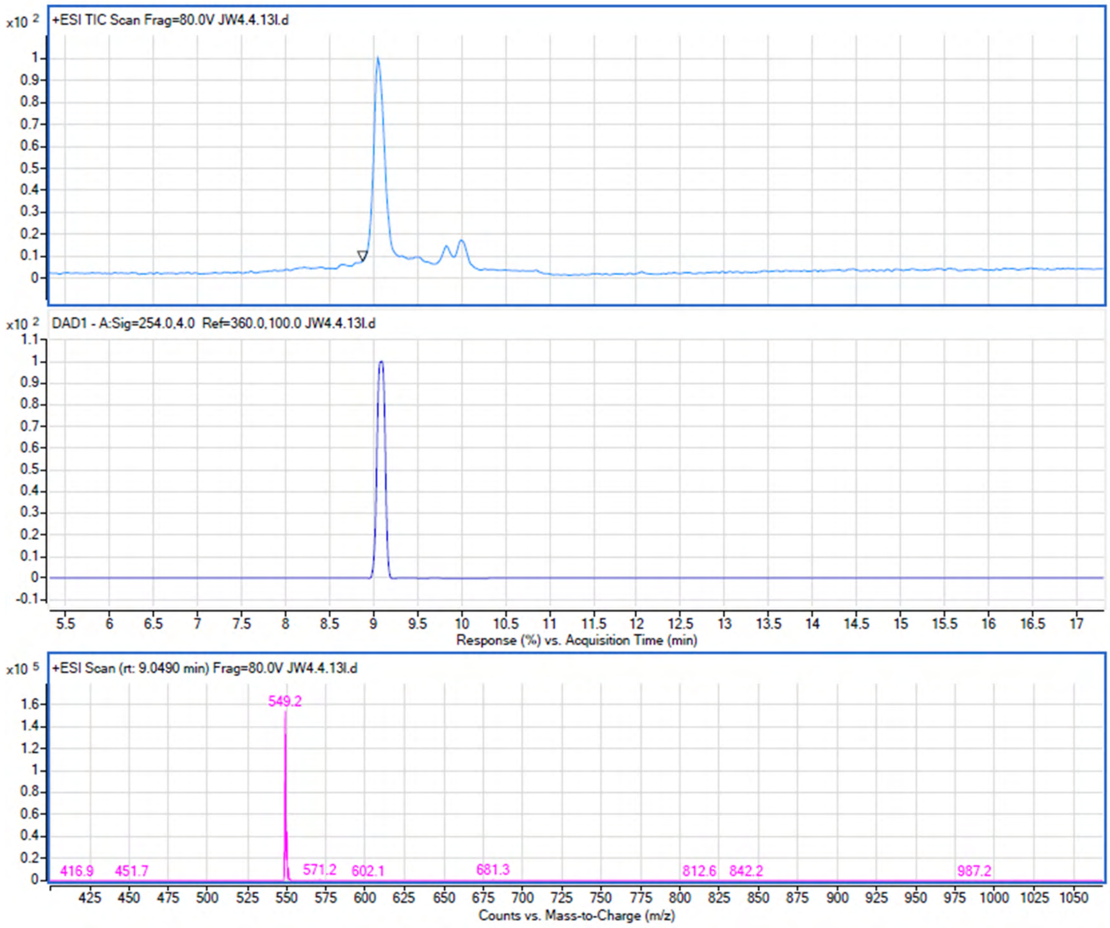


Figure S150. [1]H-NMR spectrum of compound **74**.

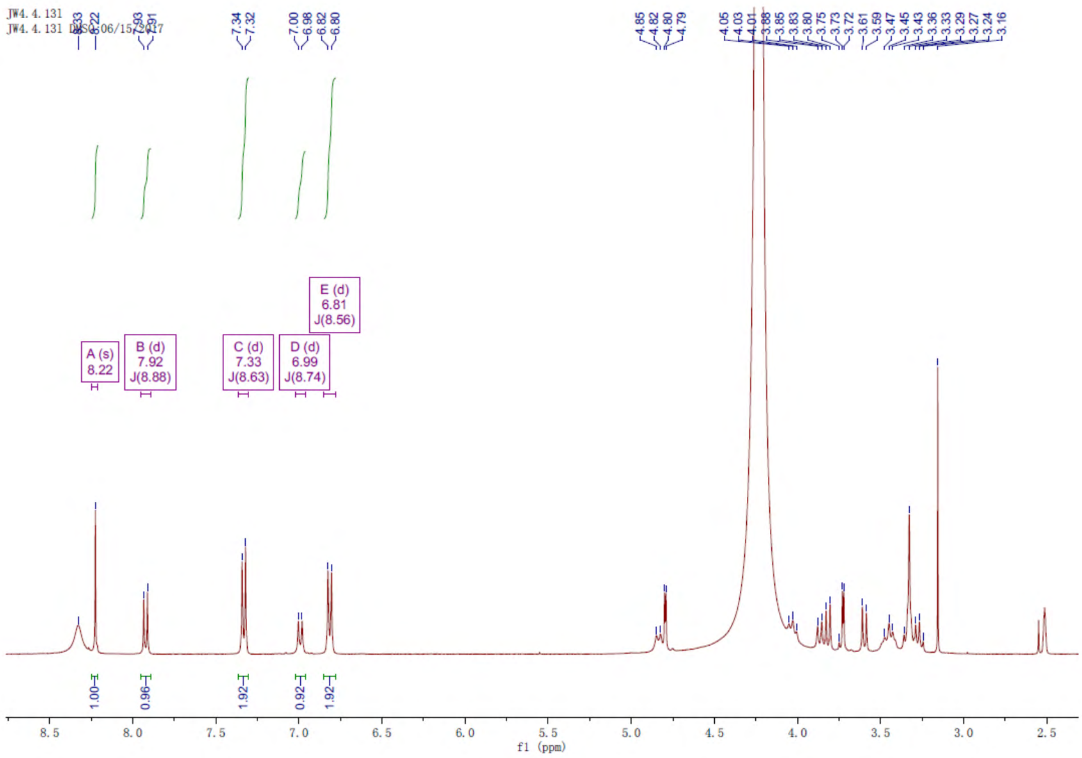
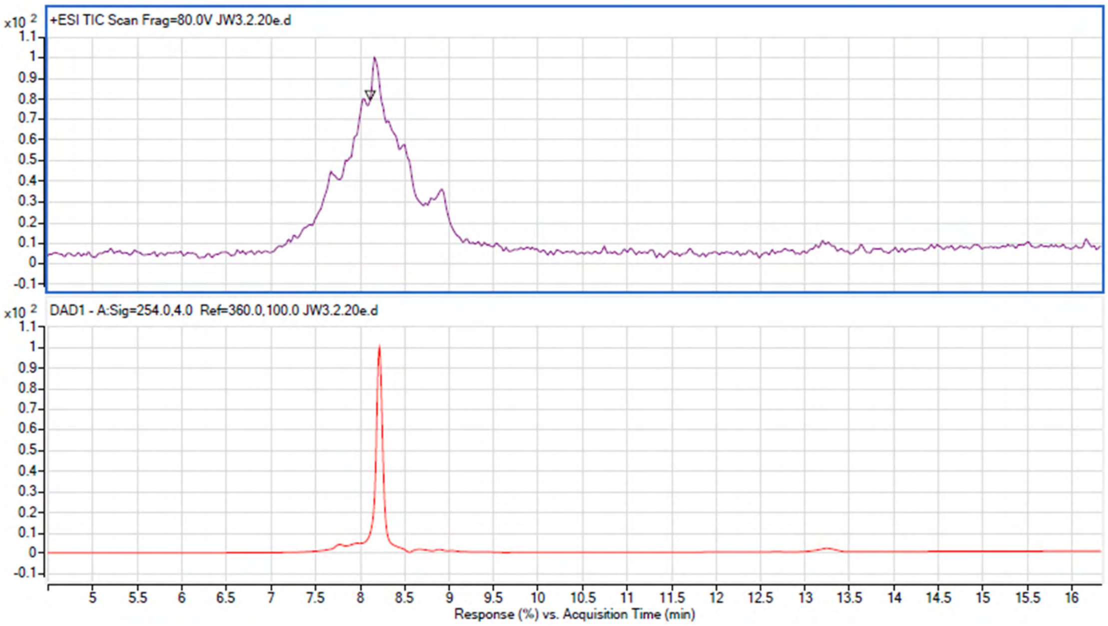


Figure S151. LC-MS spectrum of compound **75**.



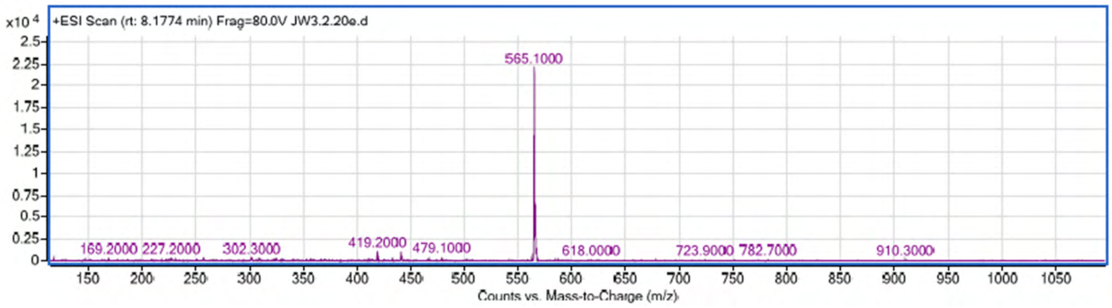


Figure S120. ^{1}H-NMR spectrum of compound **75**.

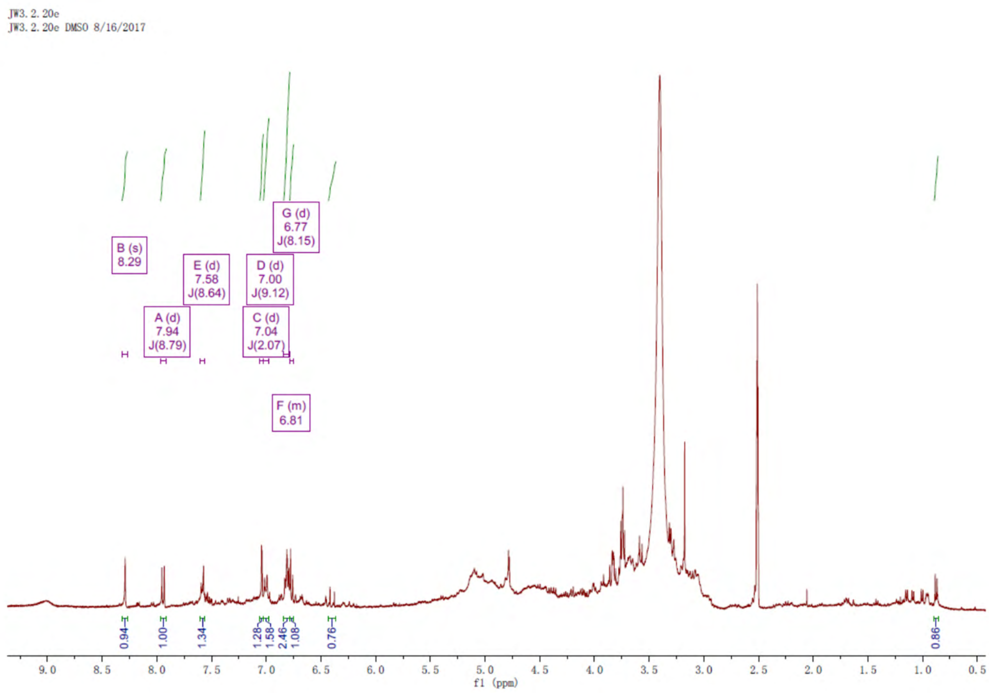


Figure S121. LC-MS spectrum of compound **76**.

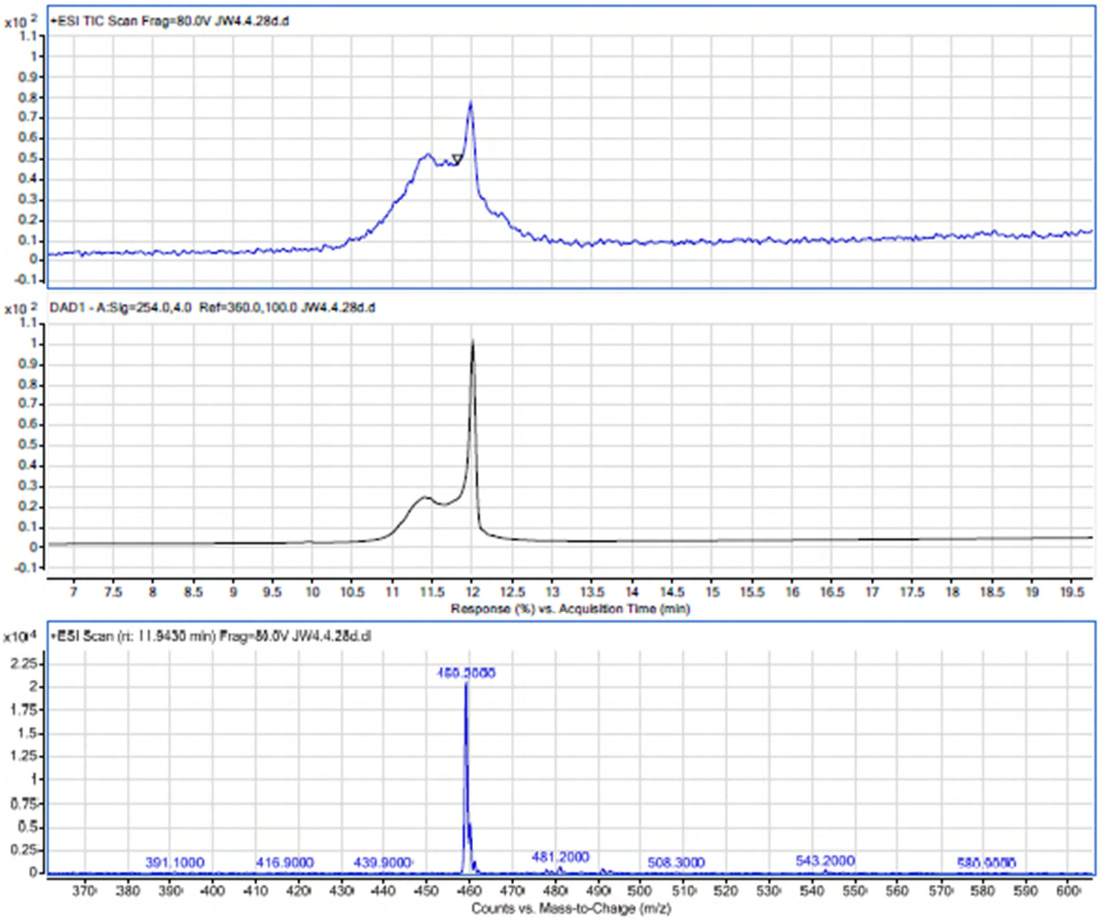


Figure S122. [1]H-NMR spectrum of compound **76**.

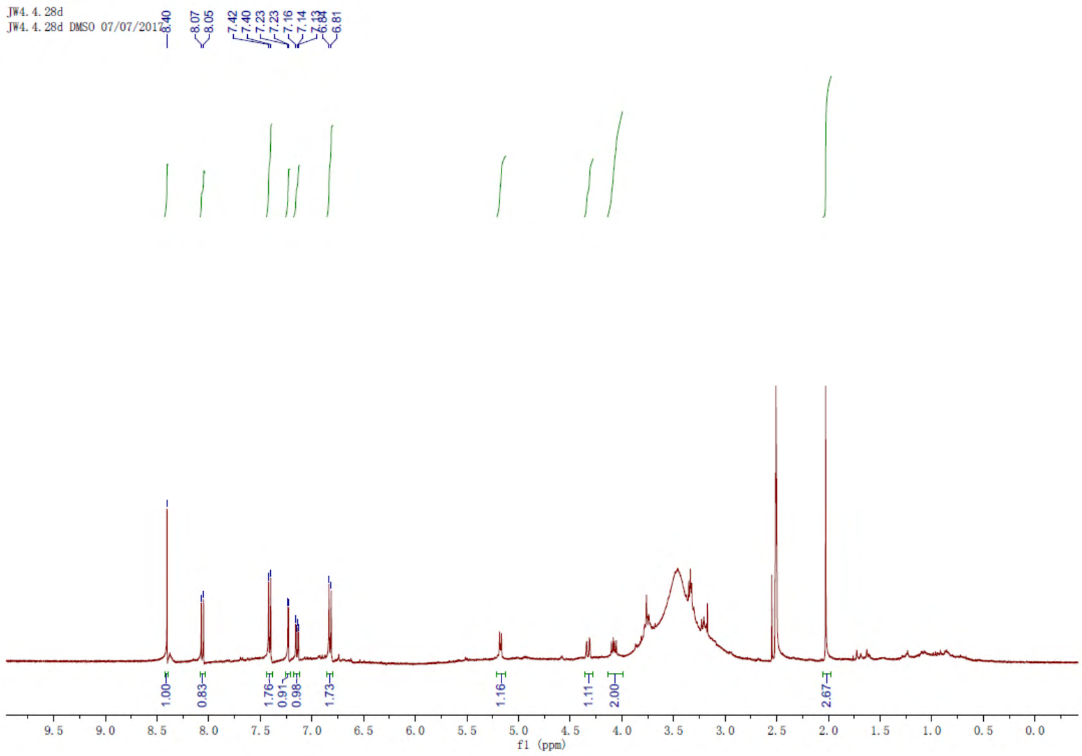


Figure S123. LC-MS spectrum of compound **77**.

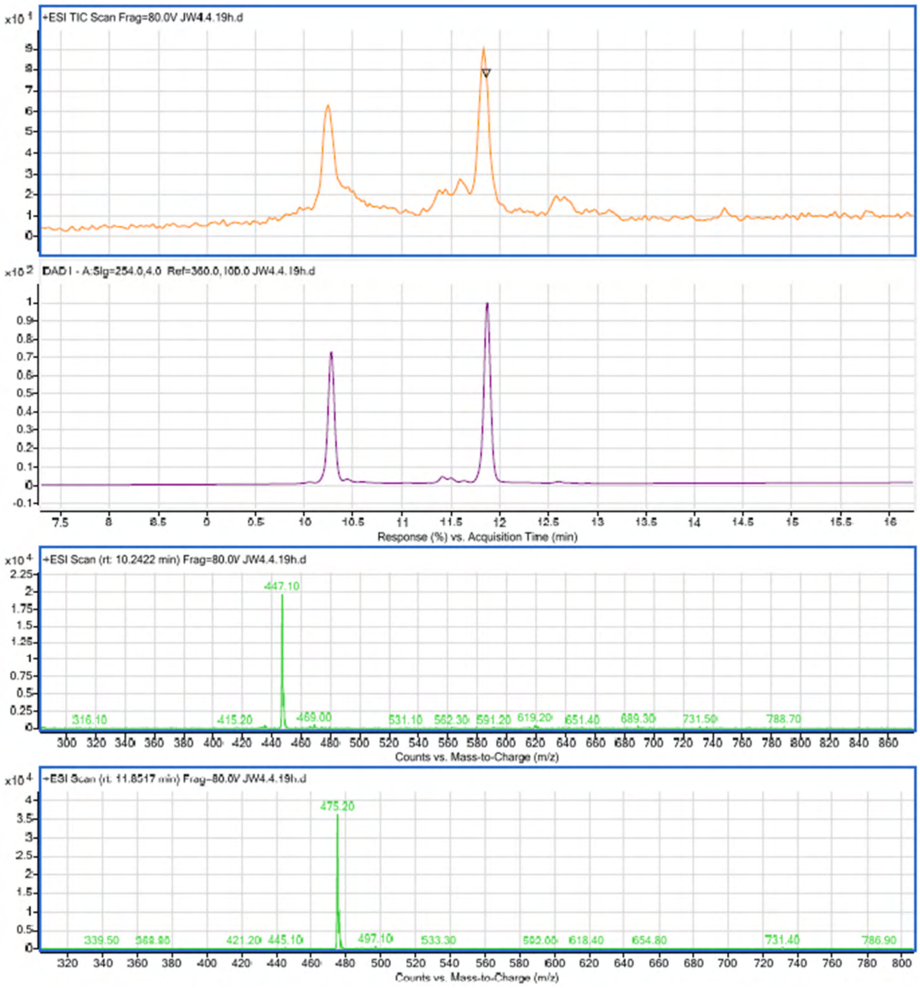


Figure S124. [1]H-NMR spectrum of compound **77**.

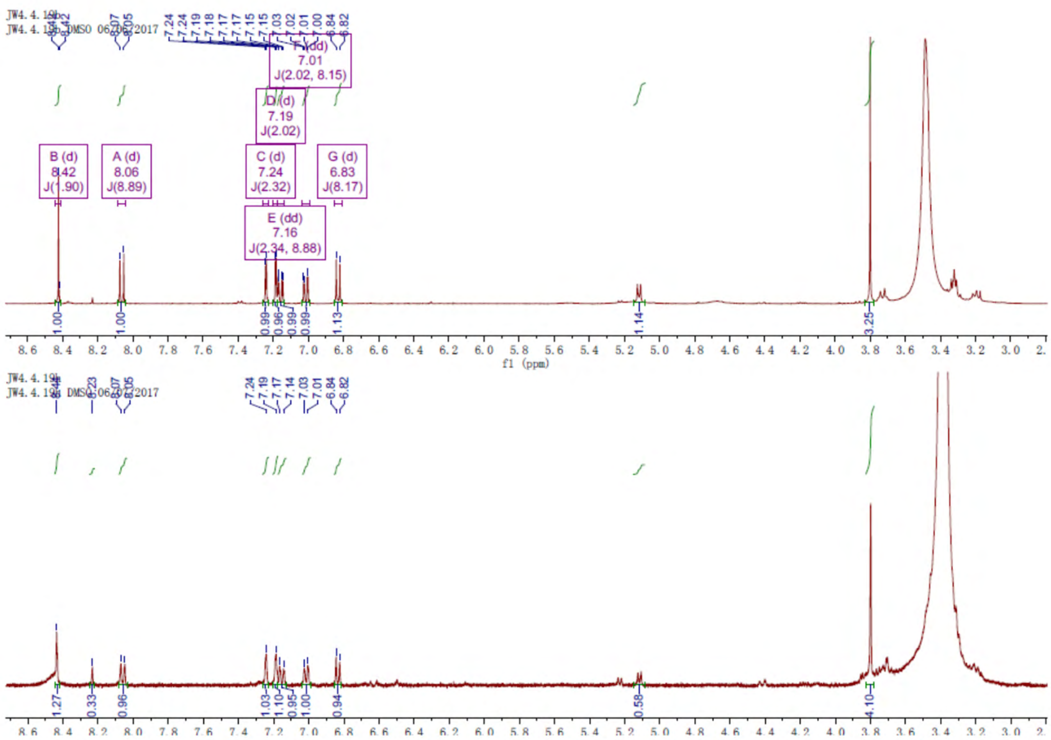


Figure S125. LC-MS spectrum of compound **78**.

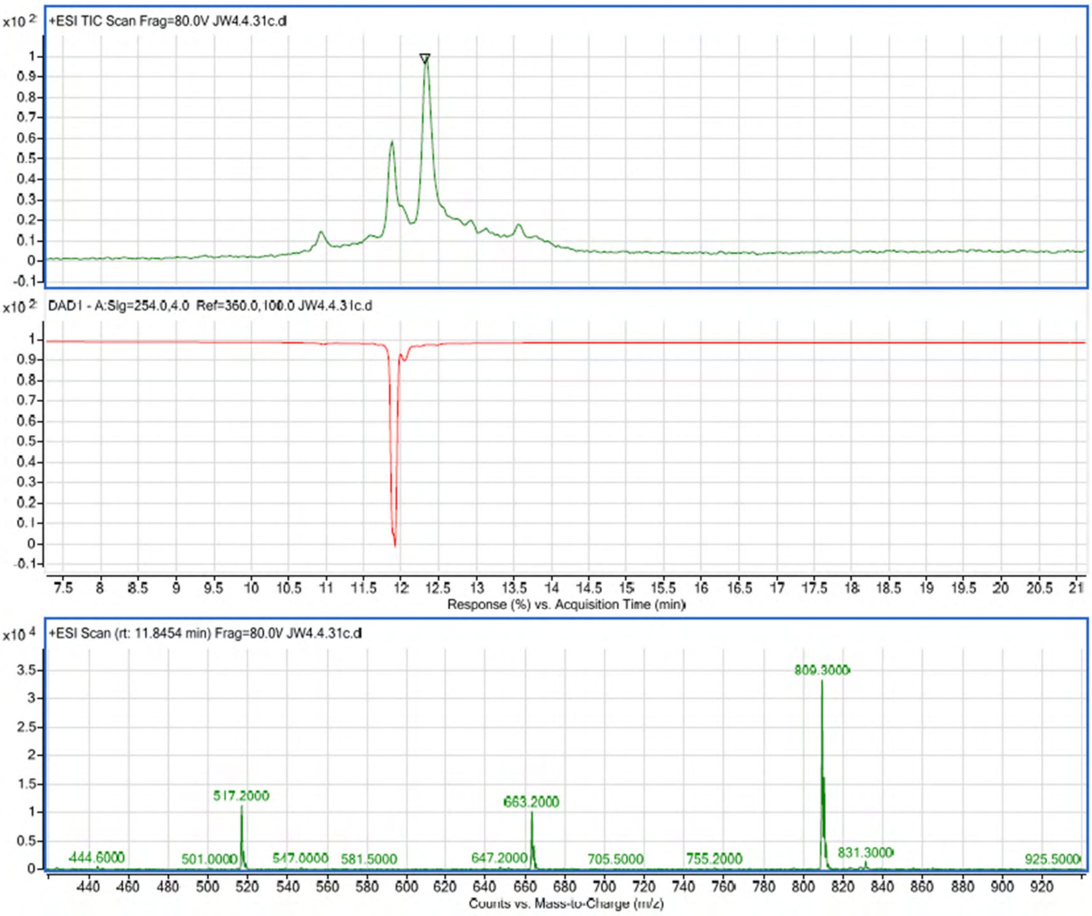


Figure S126. ^{1}H-NMR spectrum of compound **78**.

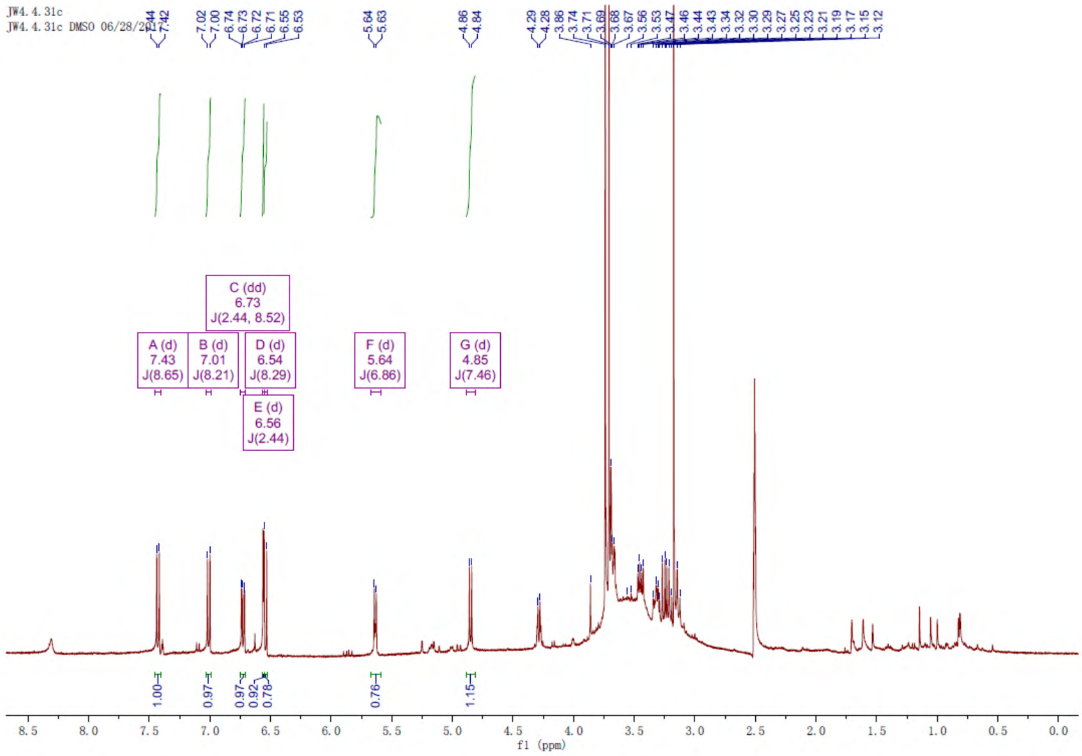


Figure S127. LC-MS spectrum of compound **79**.

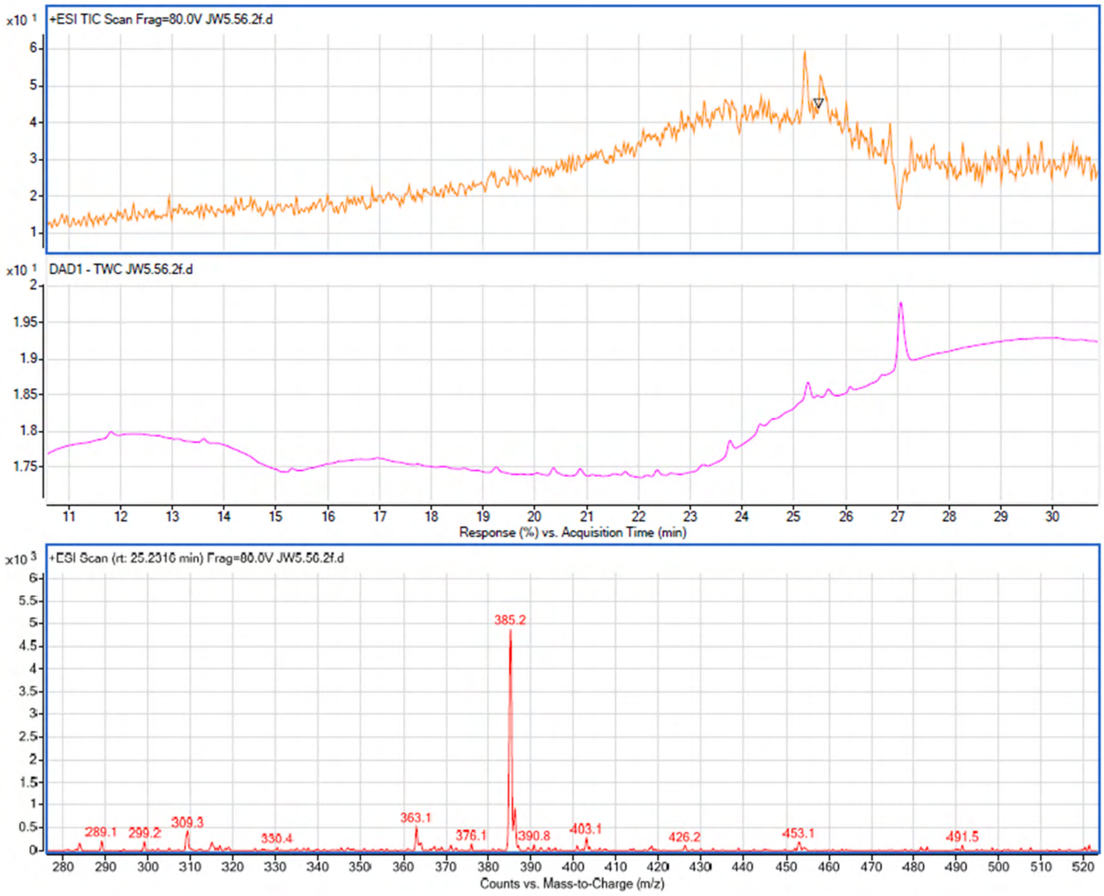


Figure S128. [1]H-NMR spectrum of compound **79**.

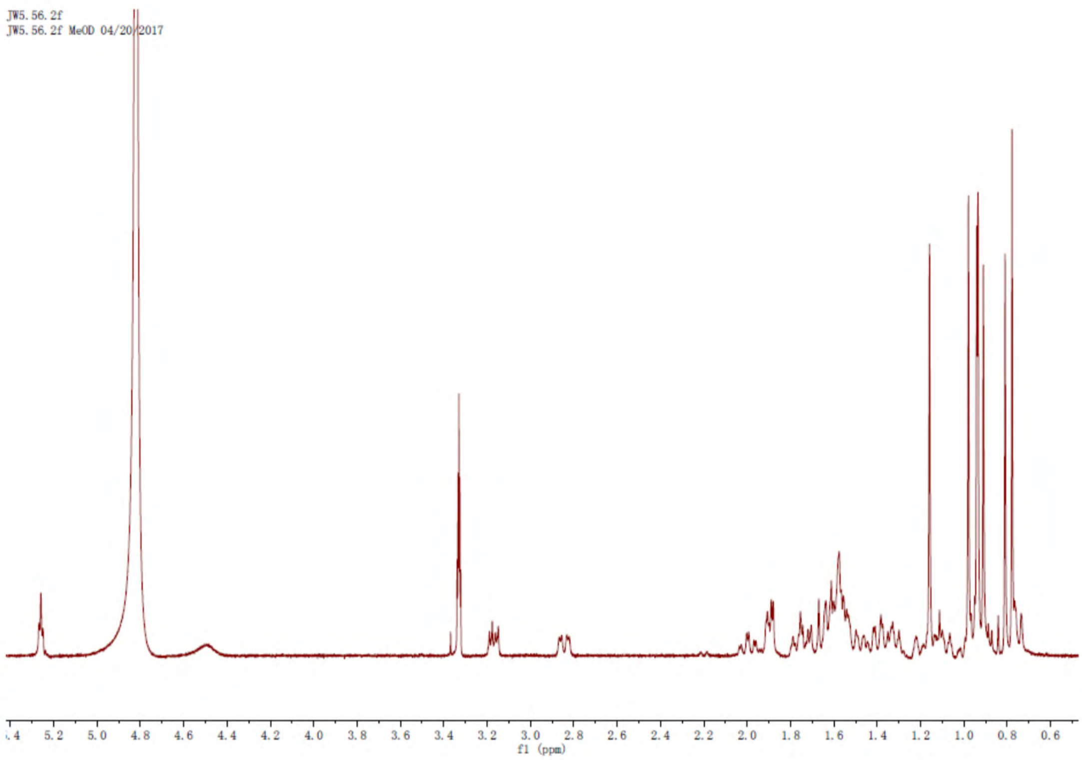


Figure S129. LC-MS spectrum of compound **80**.

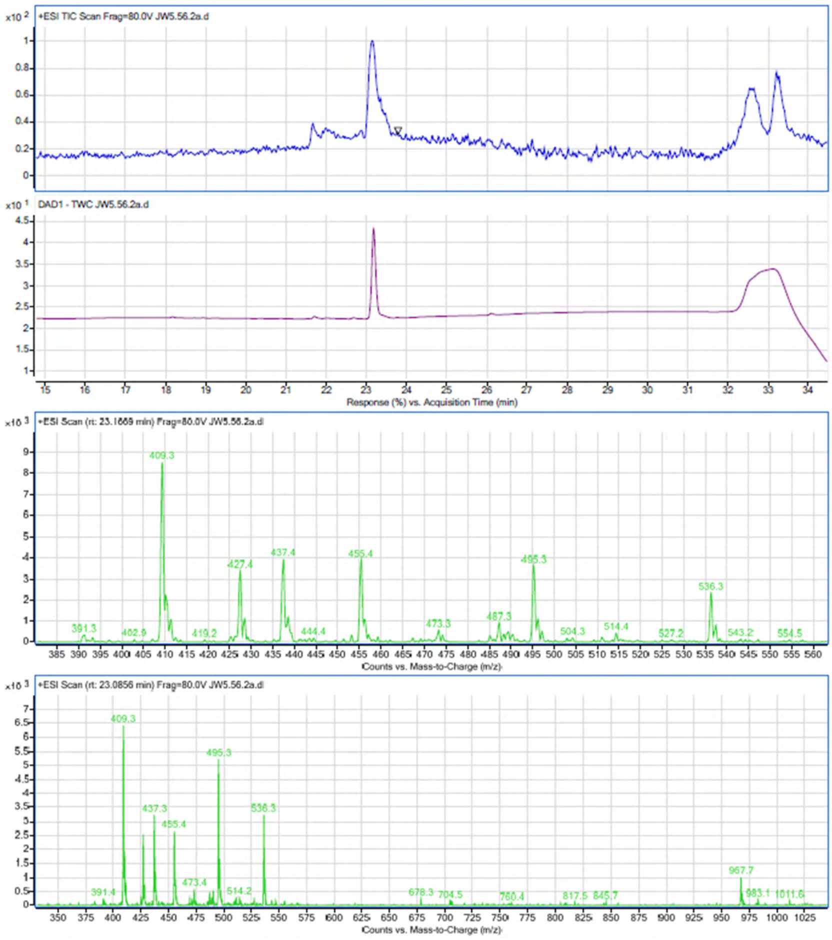


Figure S130. ^{1}H-NMR spectrum of compound **80**.

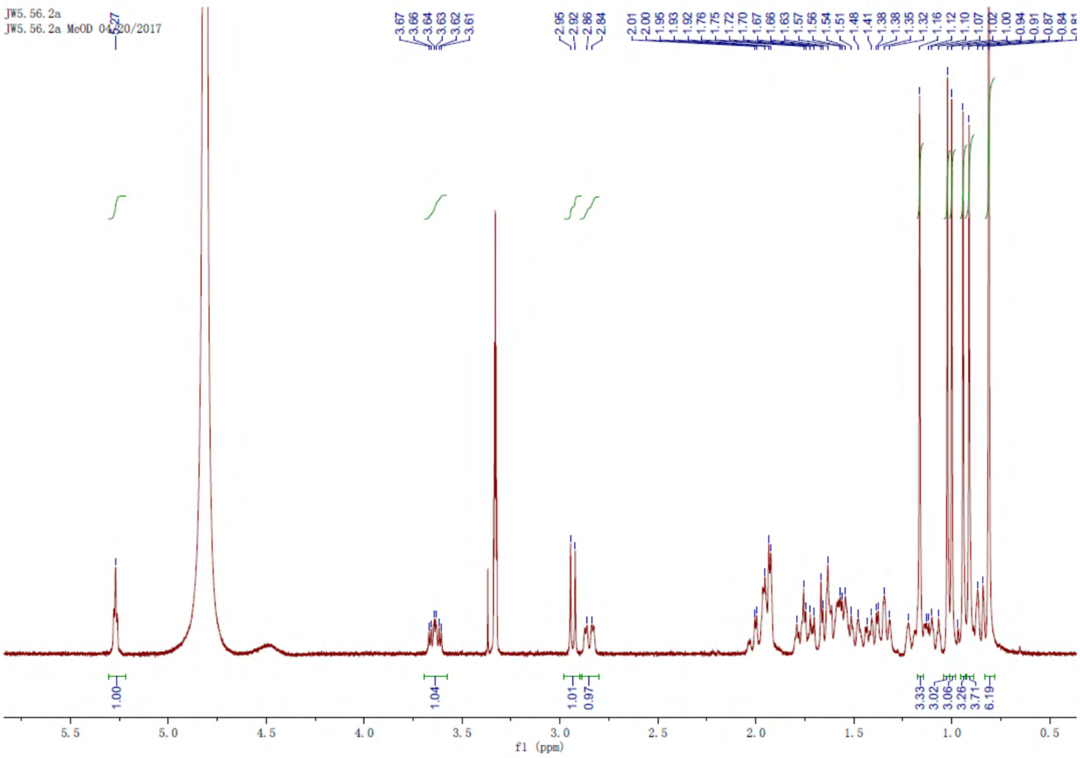


Figure S131. LC-MS spectrum of compound **81**.

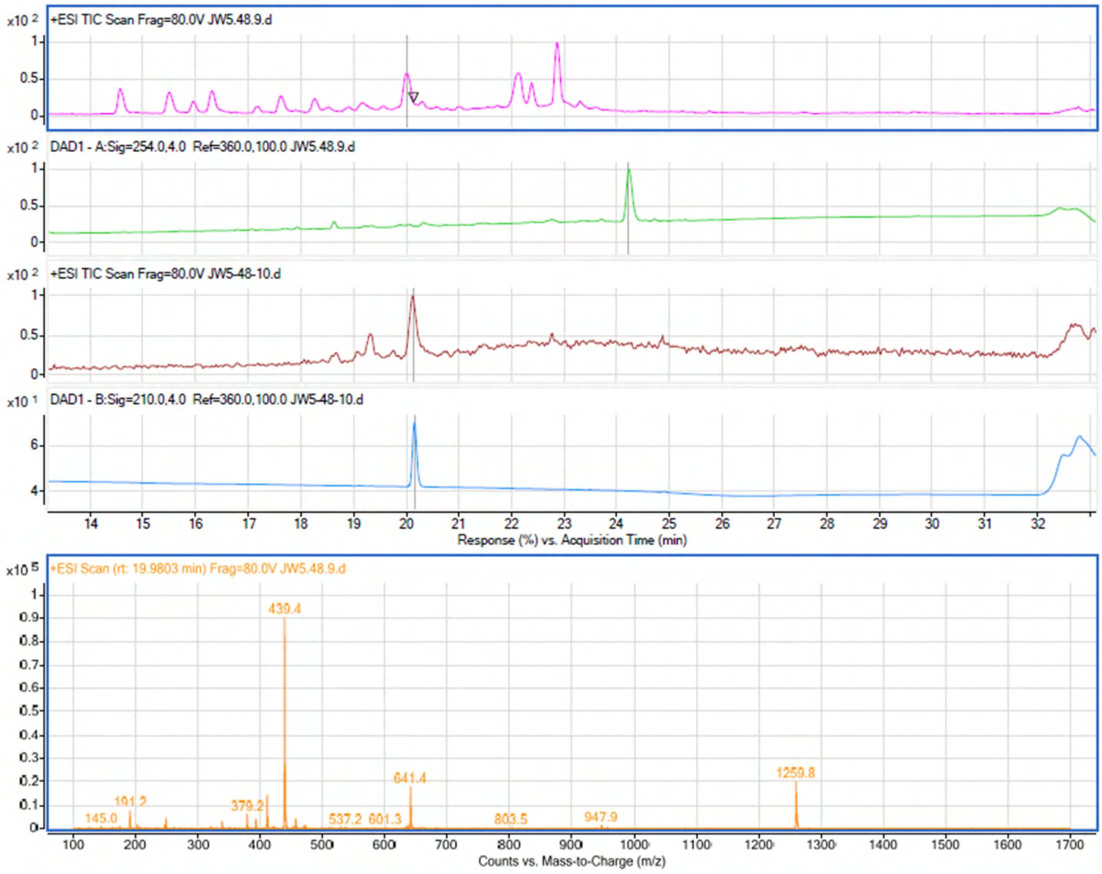


Figure S132. ^{1}H-NMR spectrum of compound **81**.

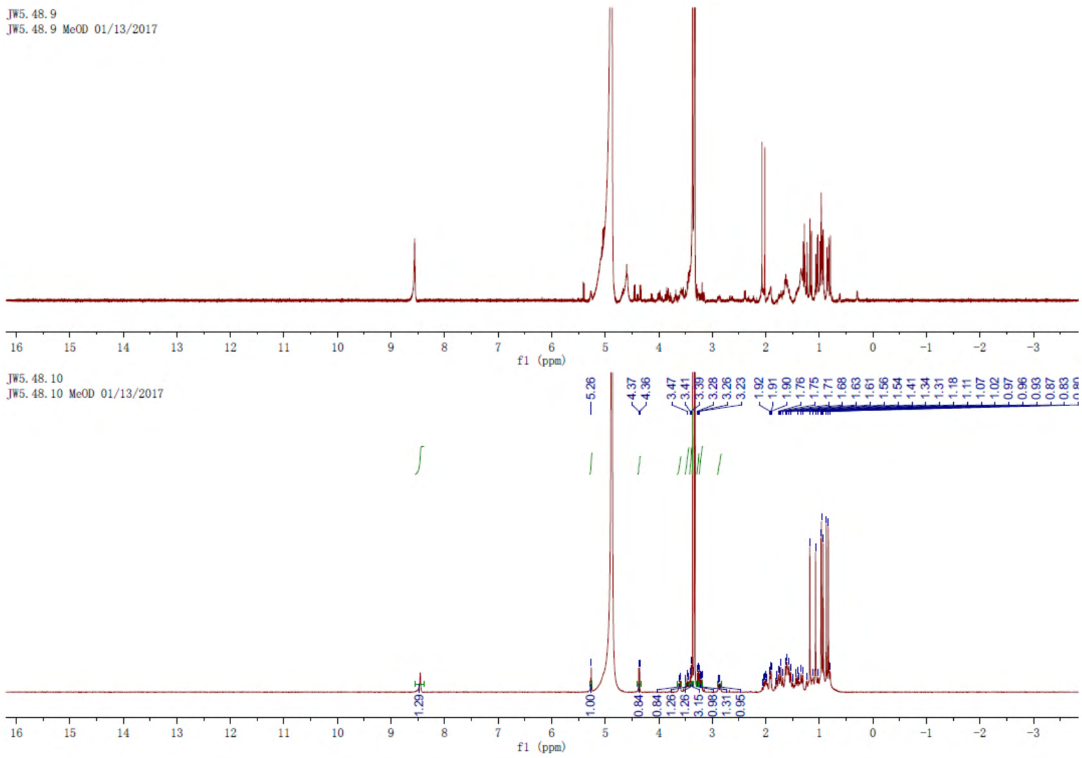


Figure S133. LC-MS spectrum of compound **82**.

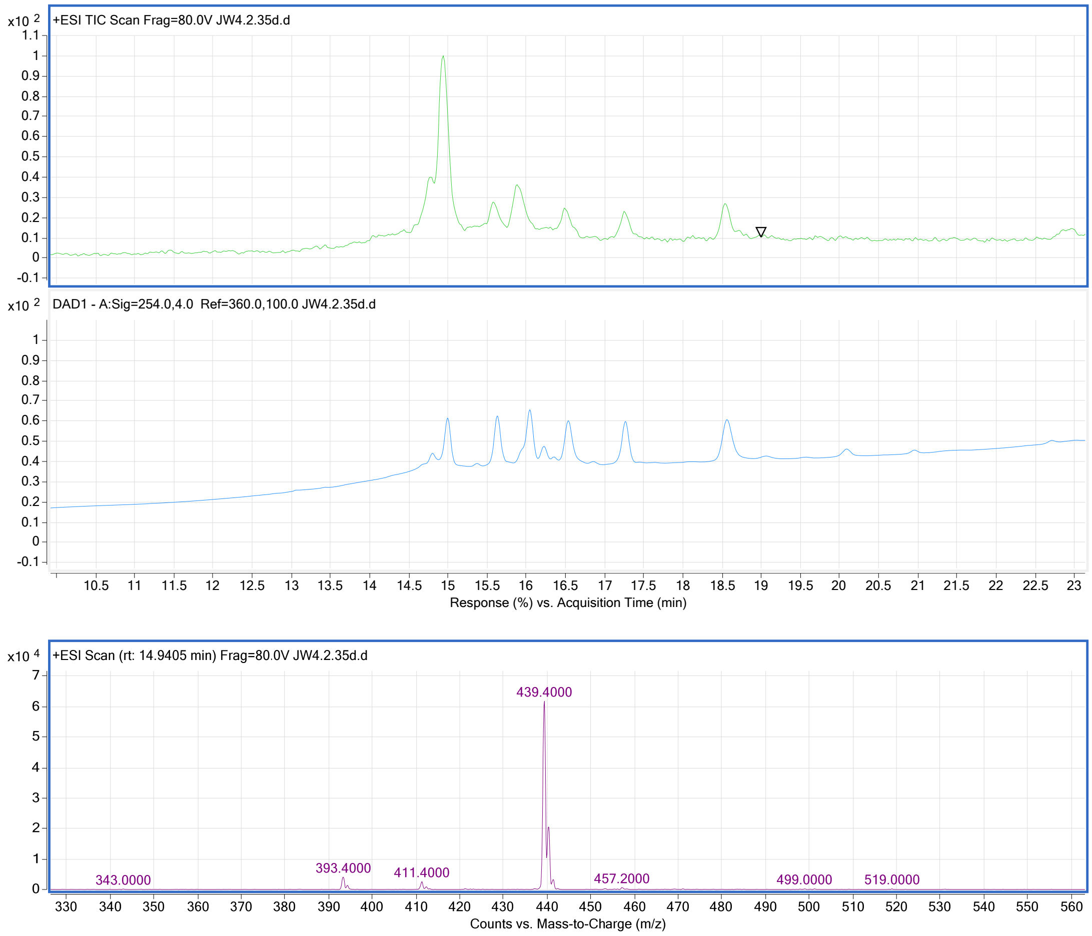


Figure S134. ^{13}C-NMR spectrum of compound **82**.

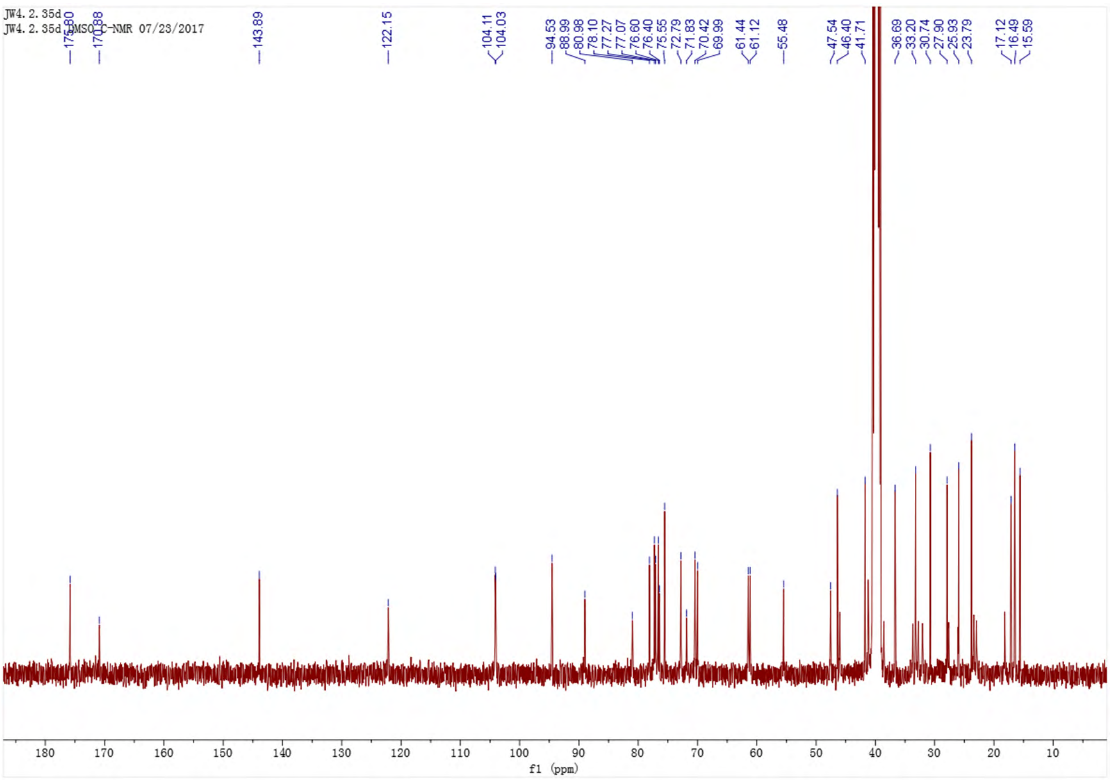


Figure S135. LC-MS spectrum of compound **83**.

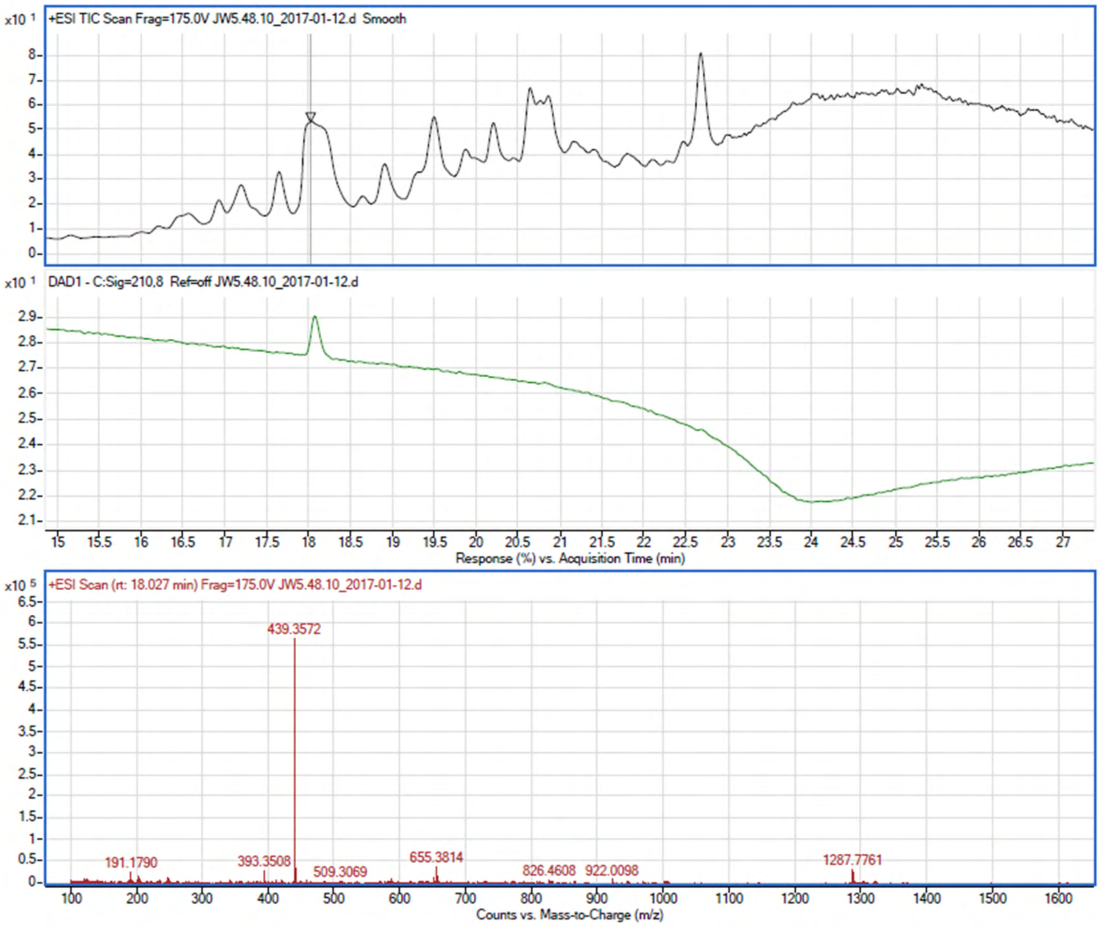


Figure S136. [1]H-NMR spectrum of compound **83**.

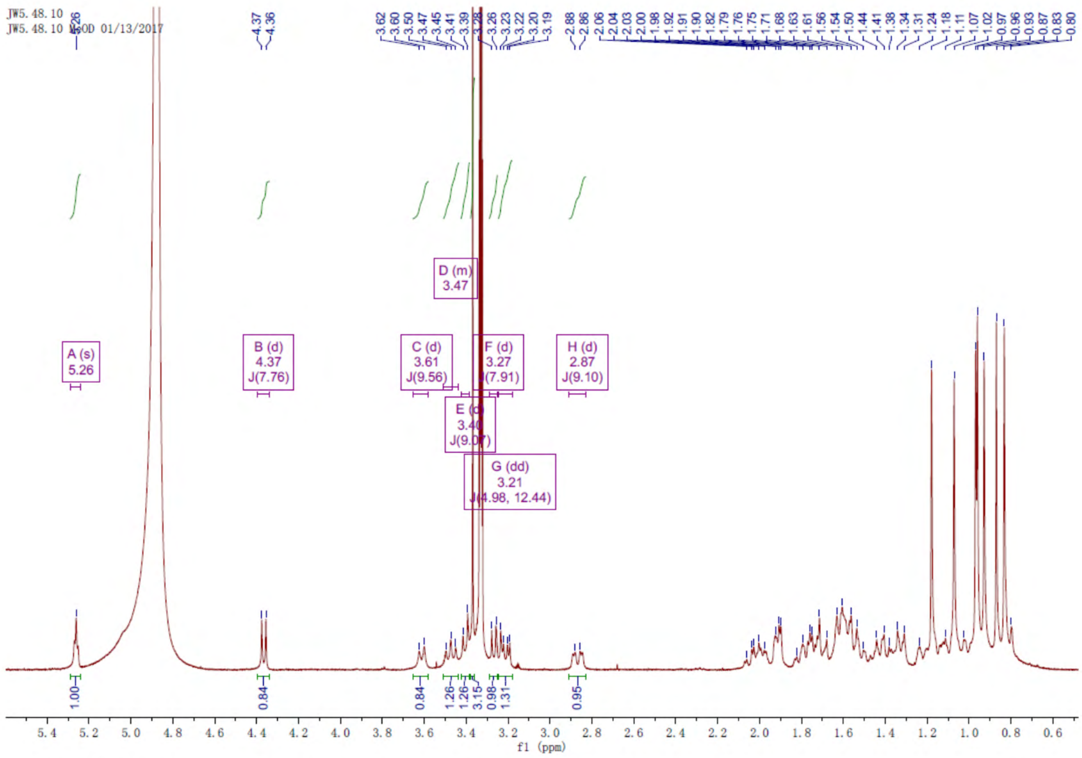


Figure S137. LC-MS spectrum of compound **84**.

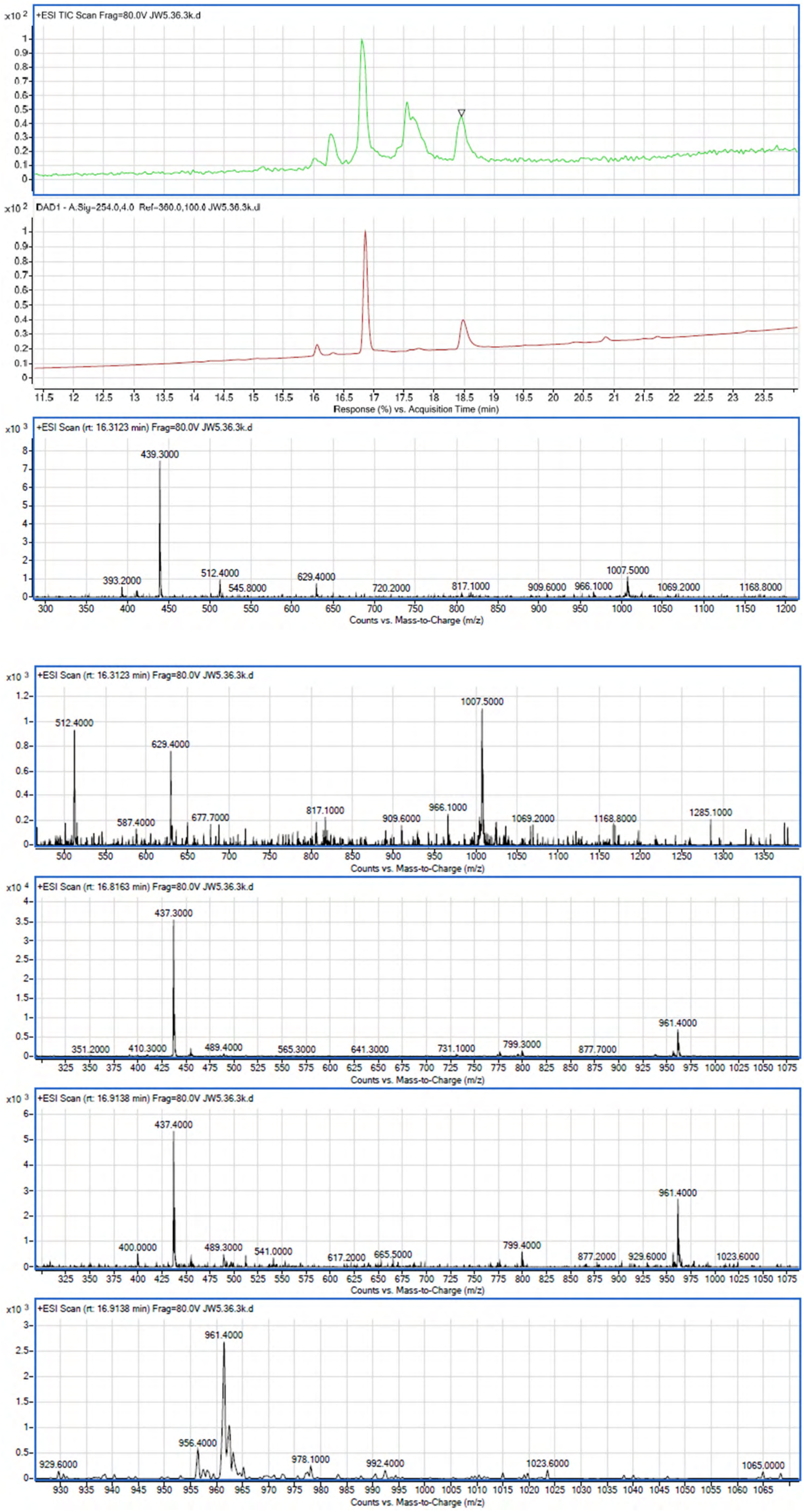


Figure S138. ^{1}H-NMR spectrum of compound **84**.

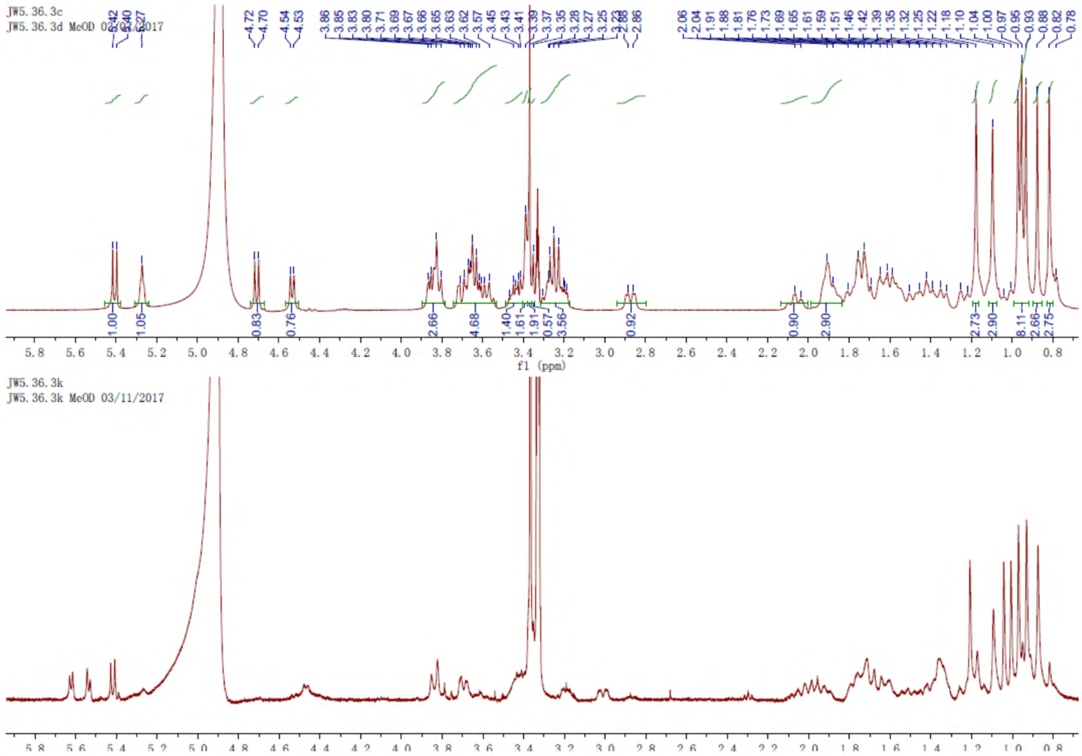


Figure S139. LC-MS spectrum of compound **85**.

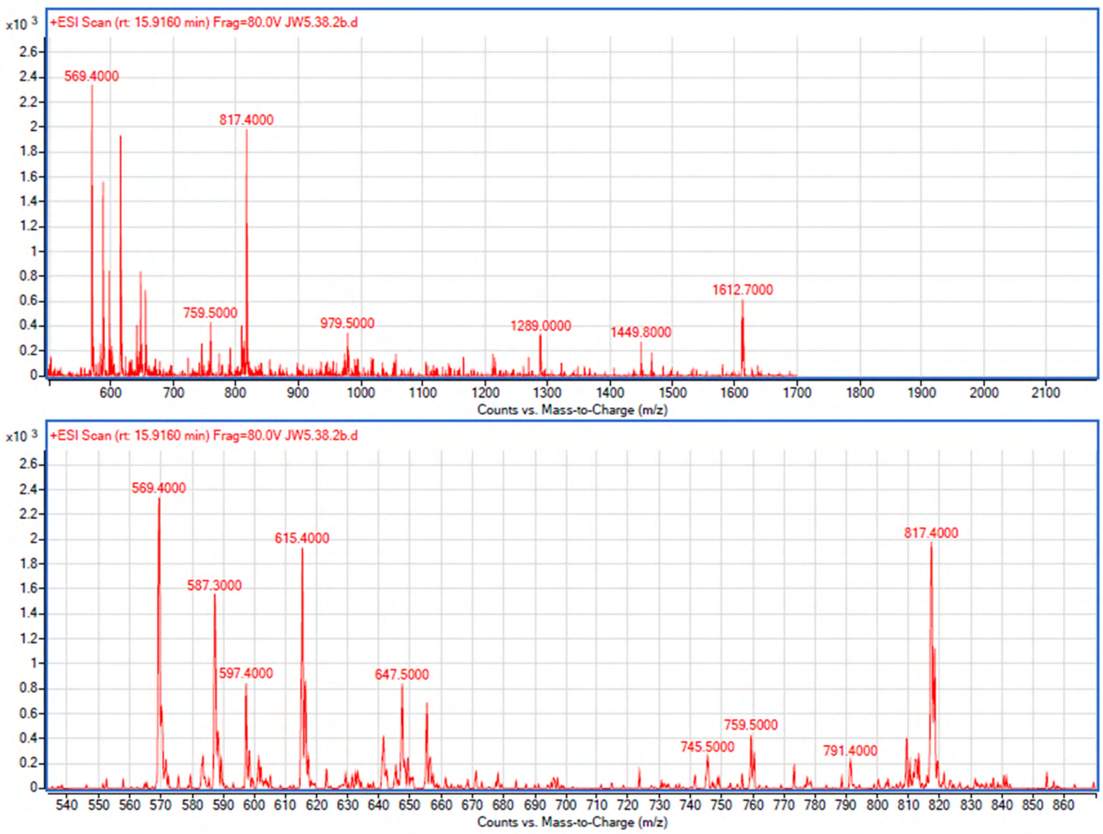


Figure S140. ^{1}H-NMR spectrum of compound **85**.

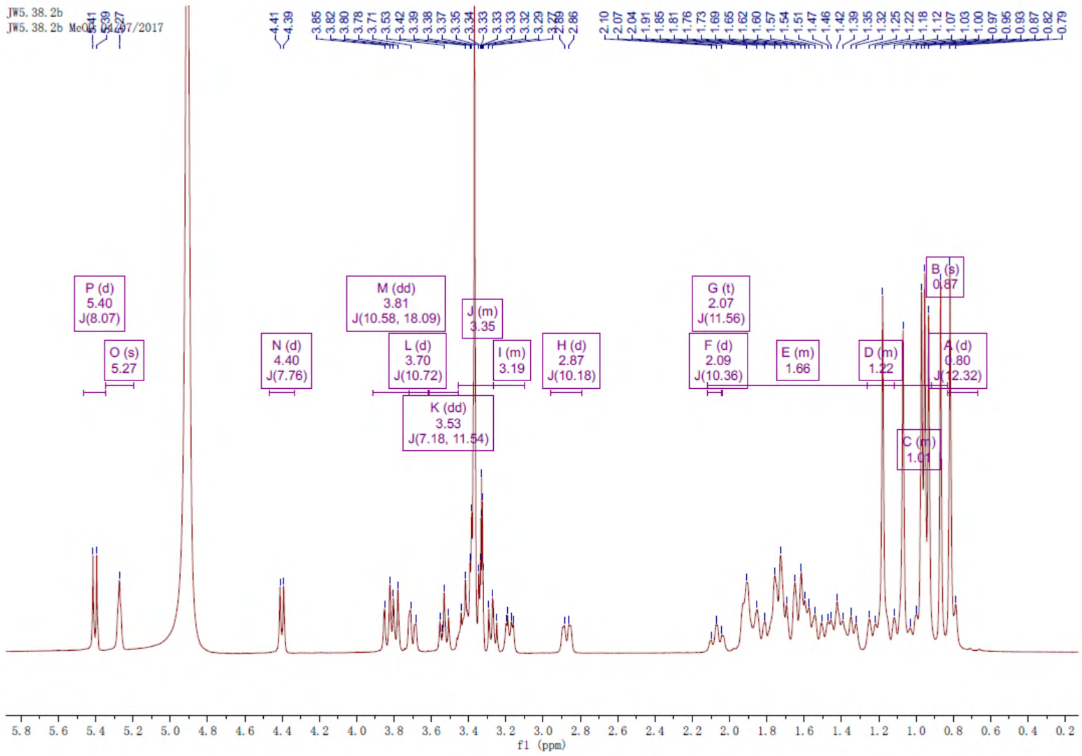


Figure S141. LC-MS spectrum of compound **86**.

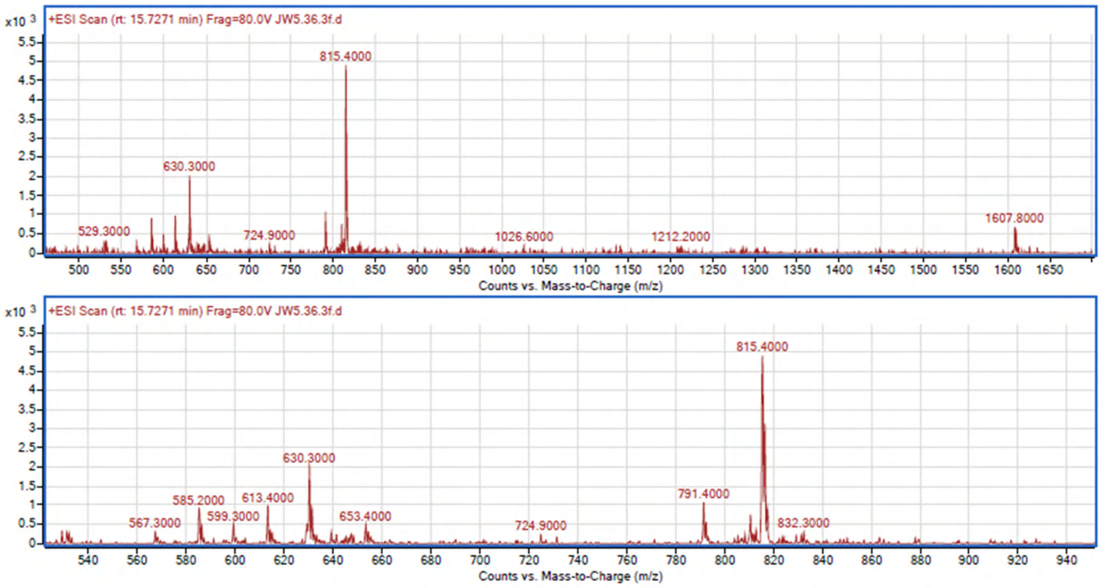


Figure S142. ^{1}H-NMR spectrum of compound **86**.

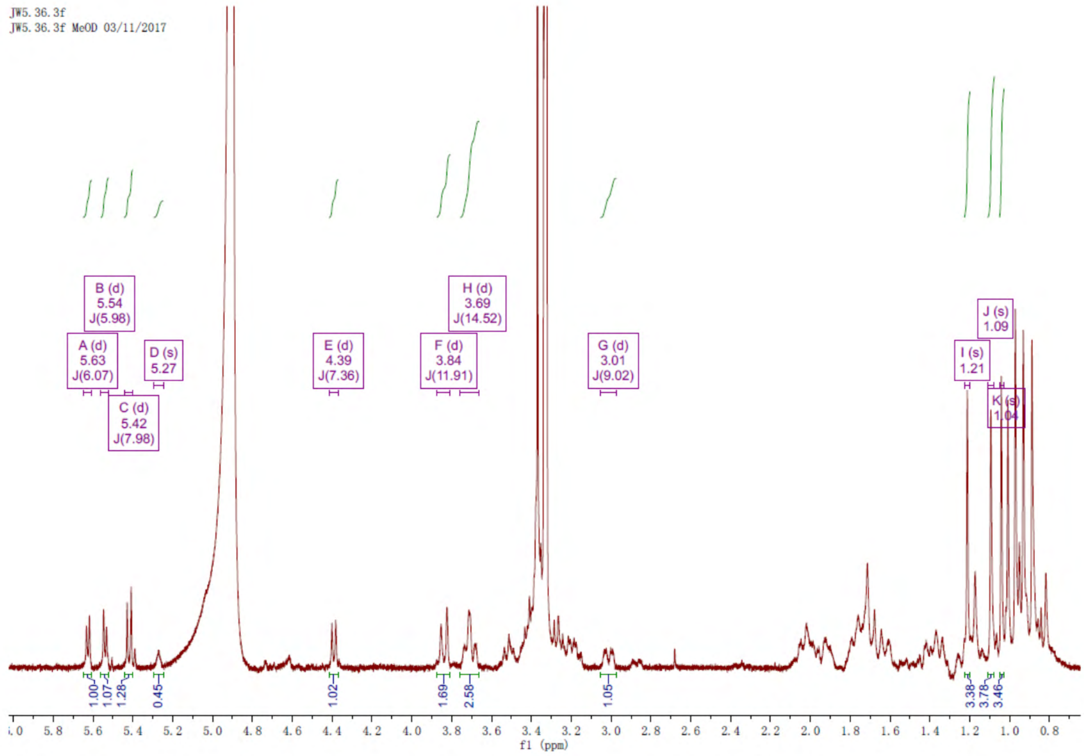


Figure S143. LC-MS spectrum of compound **87**.

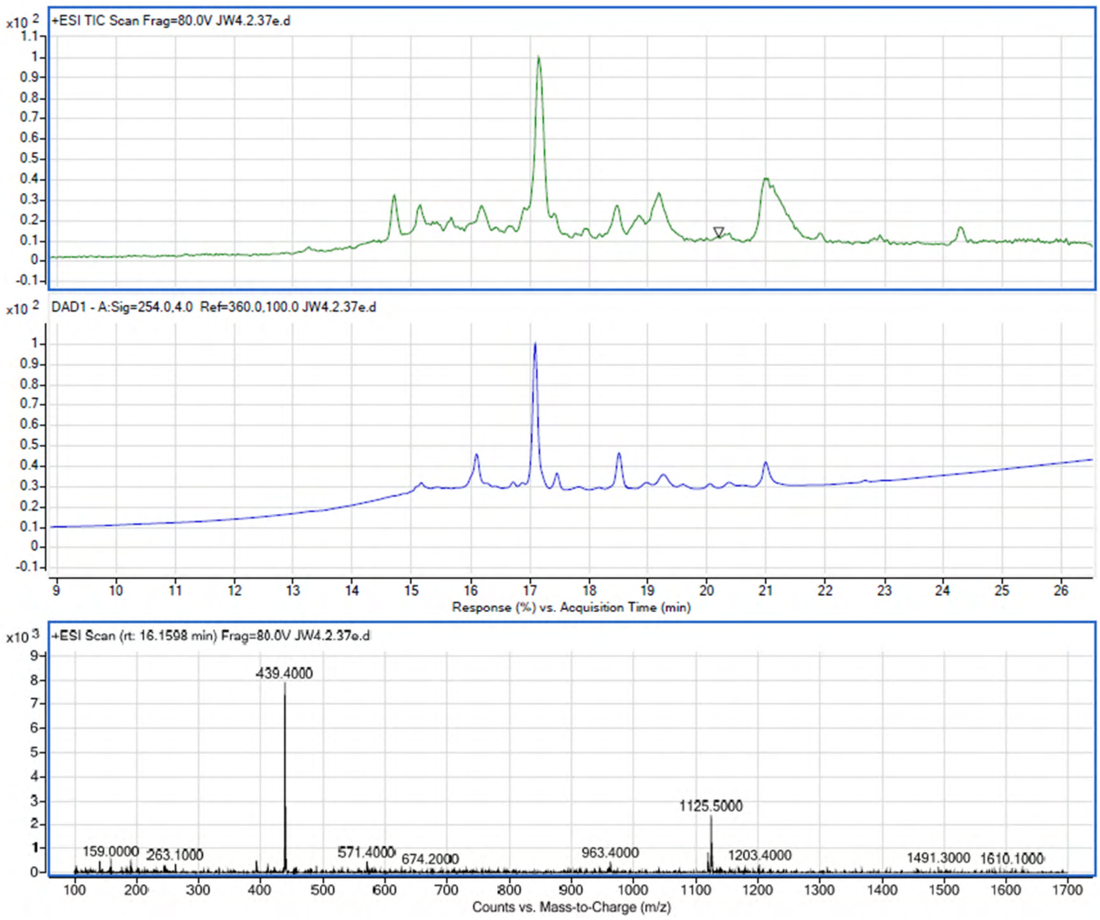


Figure S144. ^{1}H-NMR spectrum of compound **87**.

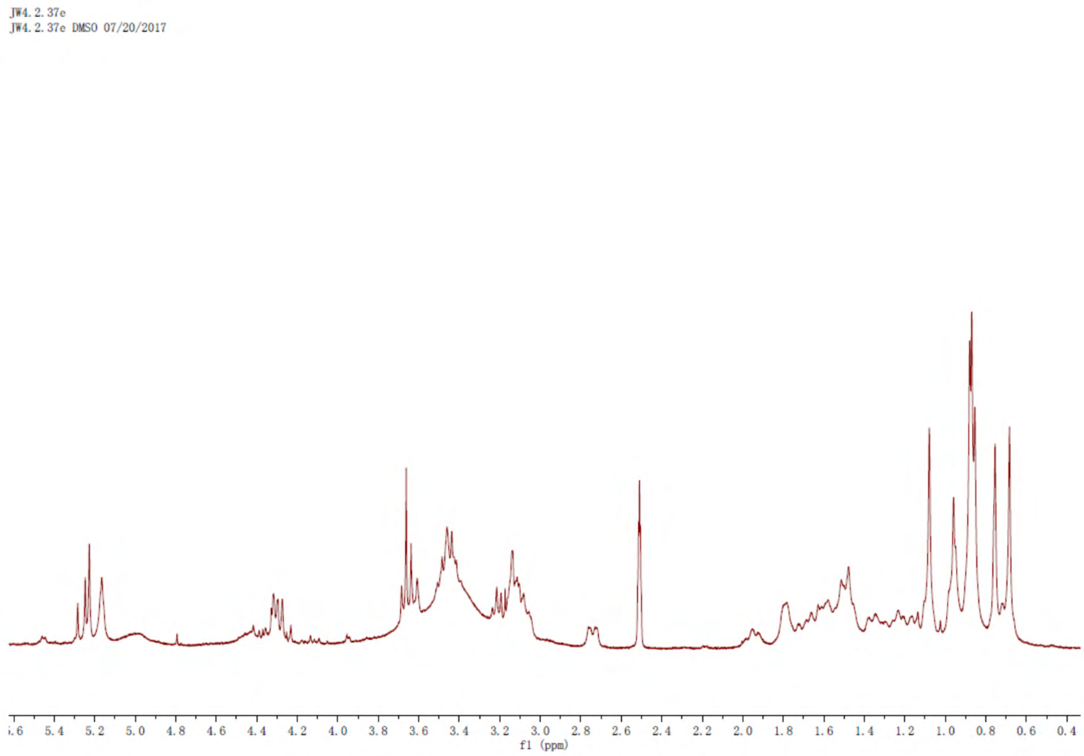


Figure S145. LC-MS spectrum of compound **88**.

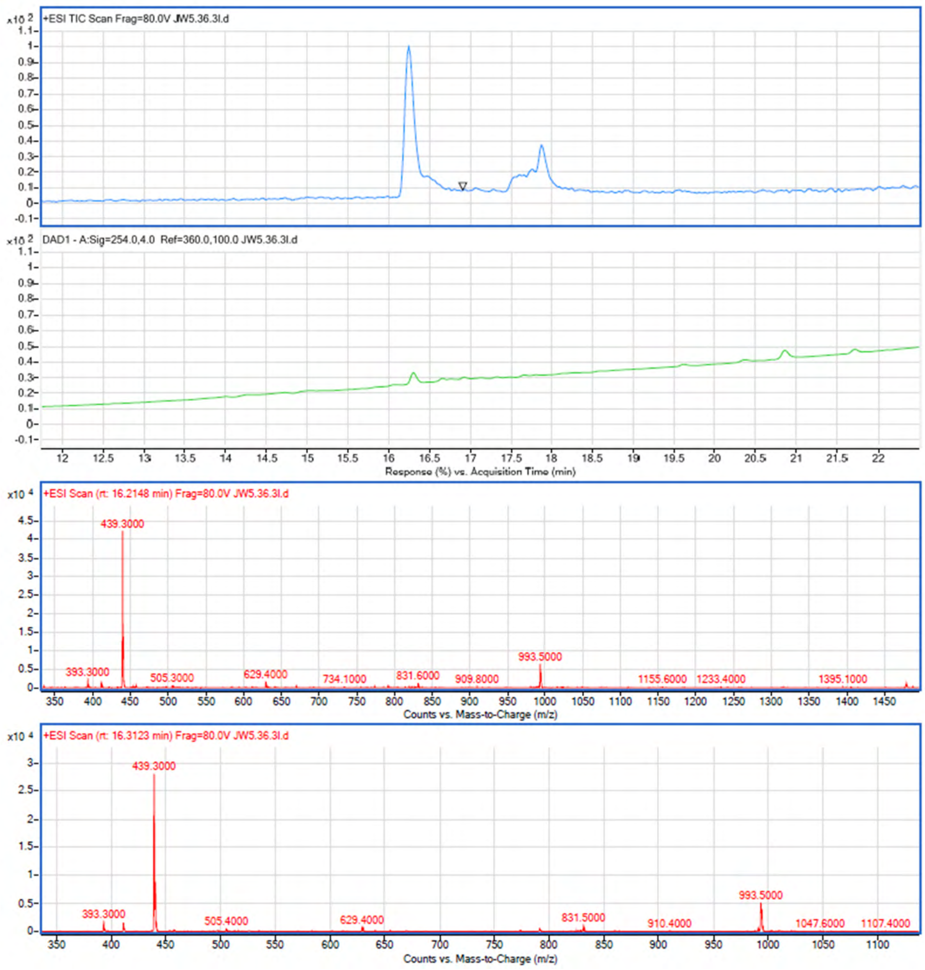


Figure S146. ^{1}H-NMR spectrum of compound **88**.

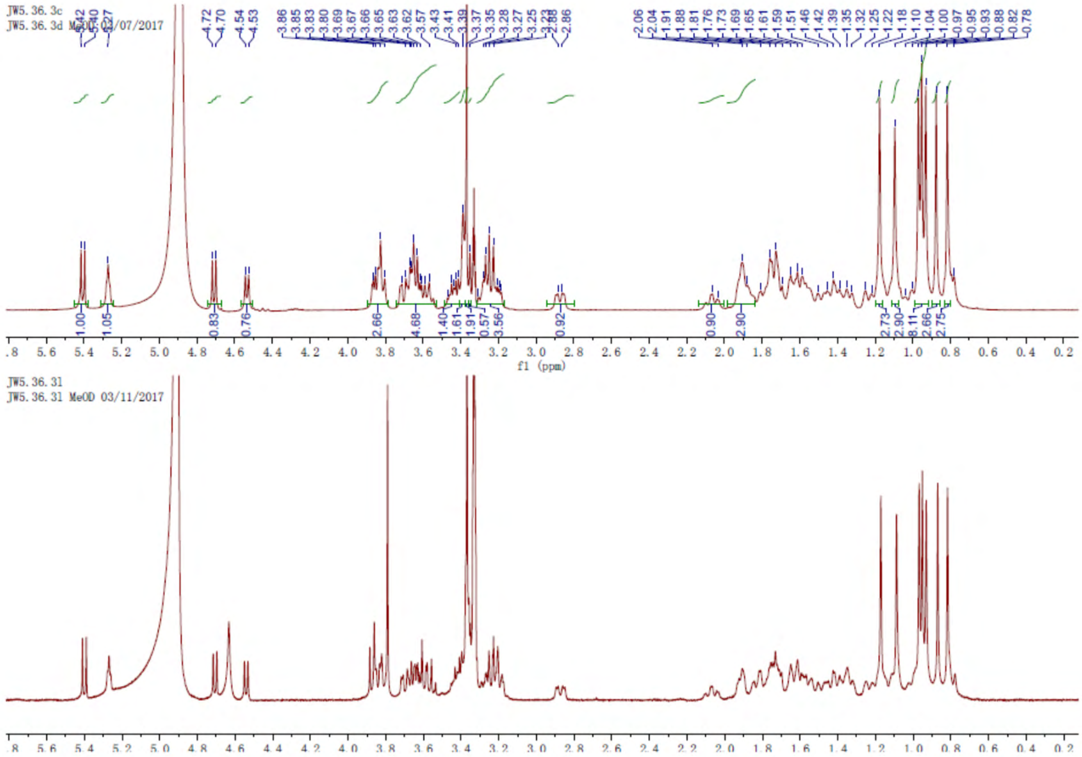


Figure S147. LC-MS spectrum of compound **89**.

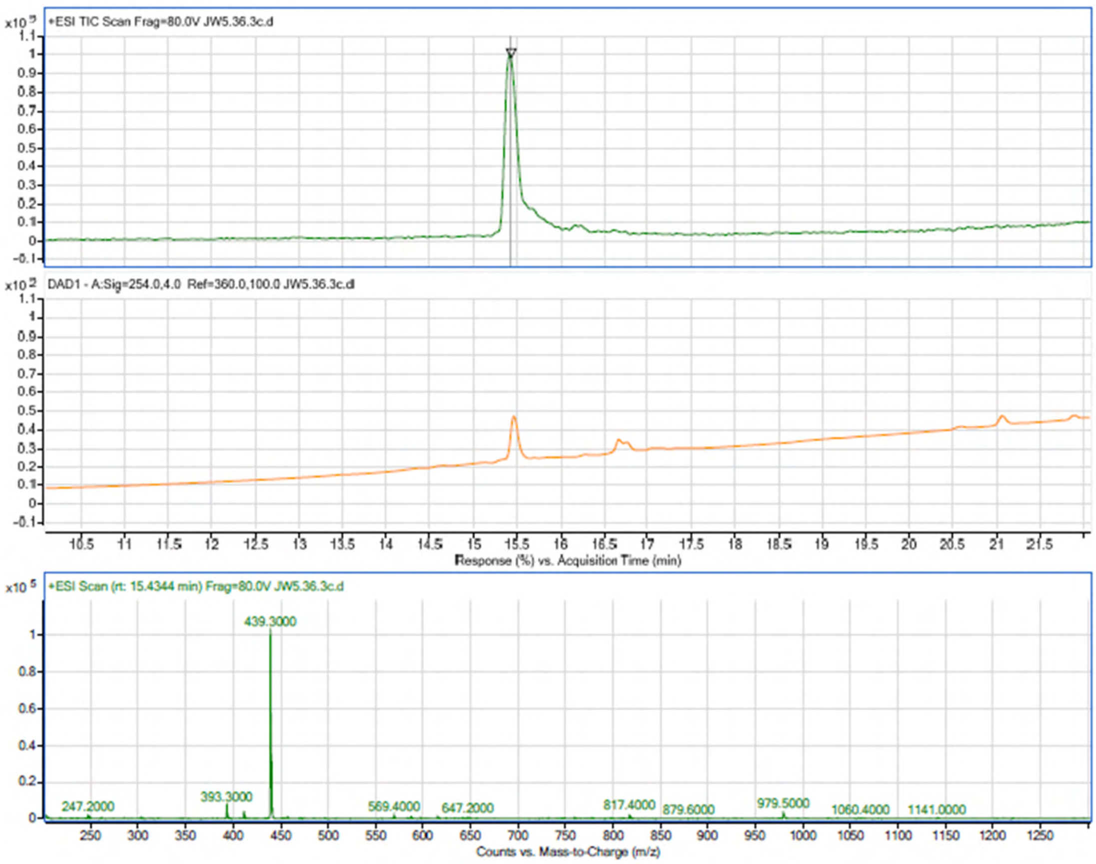


Figure S148. ^{1}H-NMR spectrum of compound **89**.

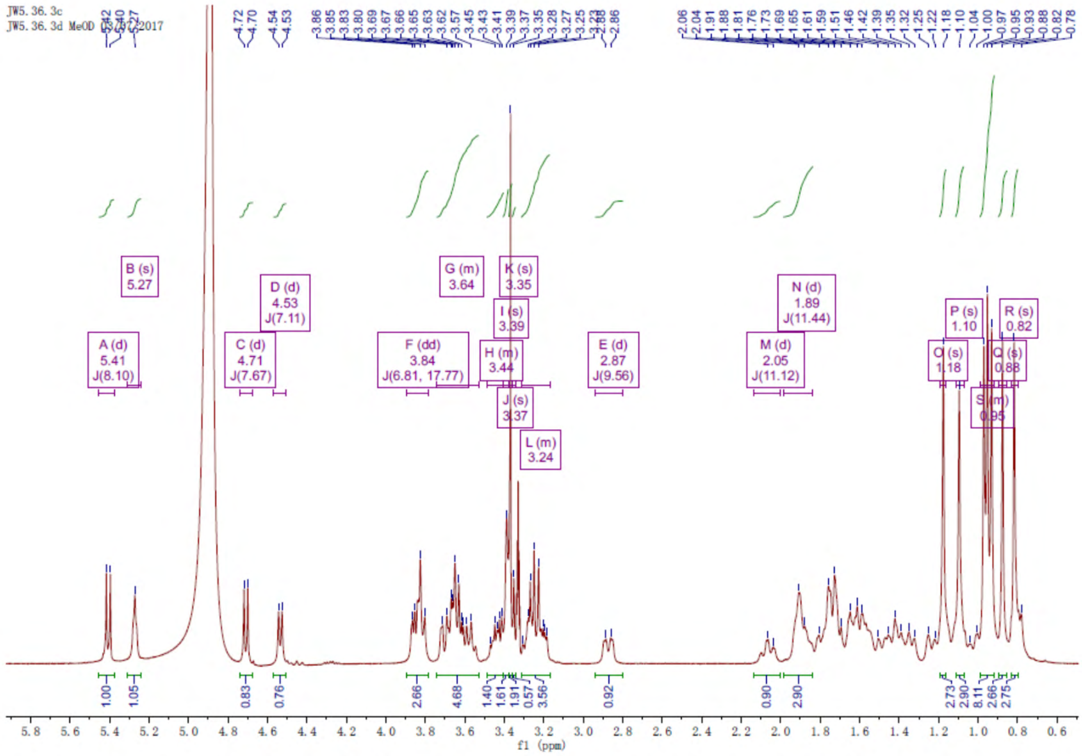


Figure S149. LC-MS spectrum of compound **90**.

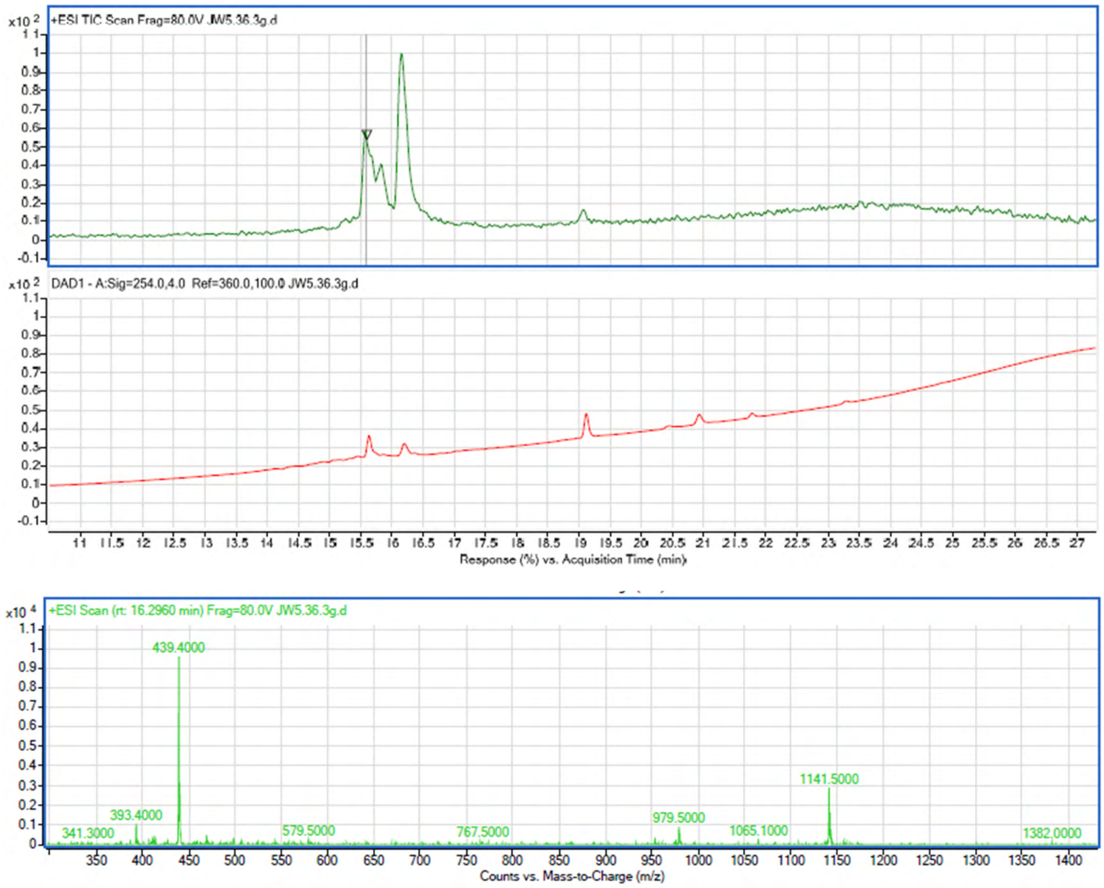


Figure S150. ^{1}H-NMR spectrum of compound **90**.

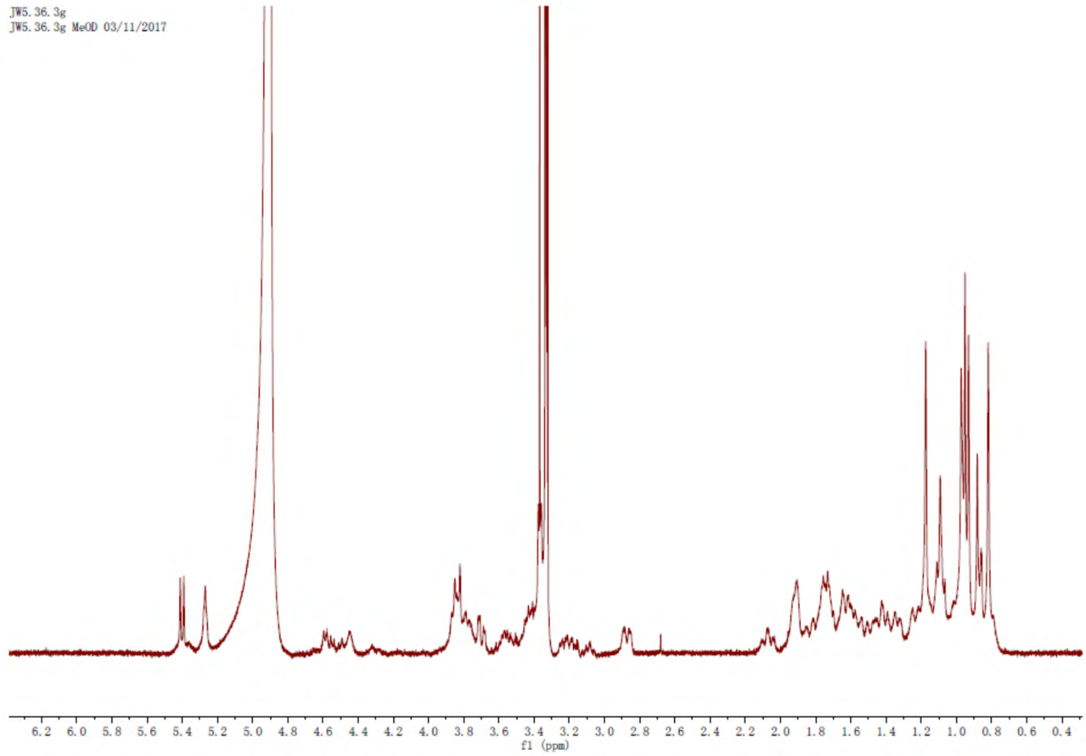


Figure S151. LC-MS spectrum of compound **91**.

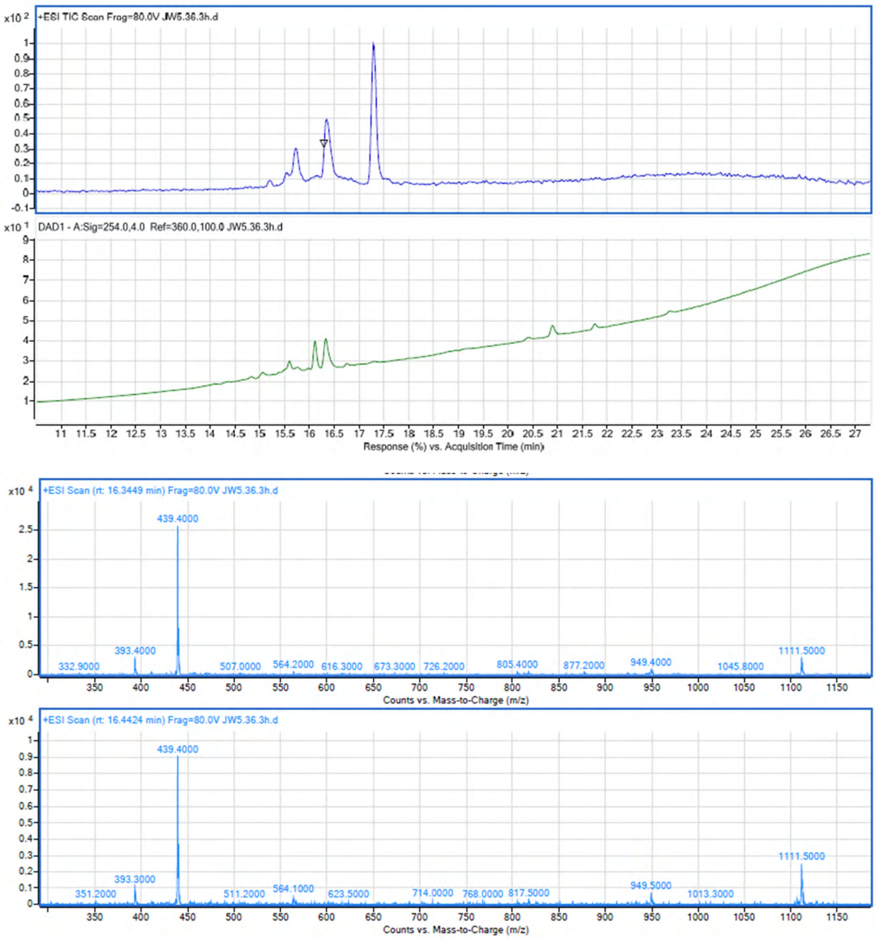


Figure S152. ^{1}H-NMR spectrum of compound **91**.

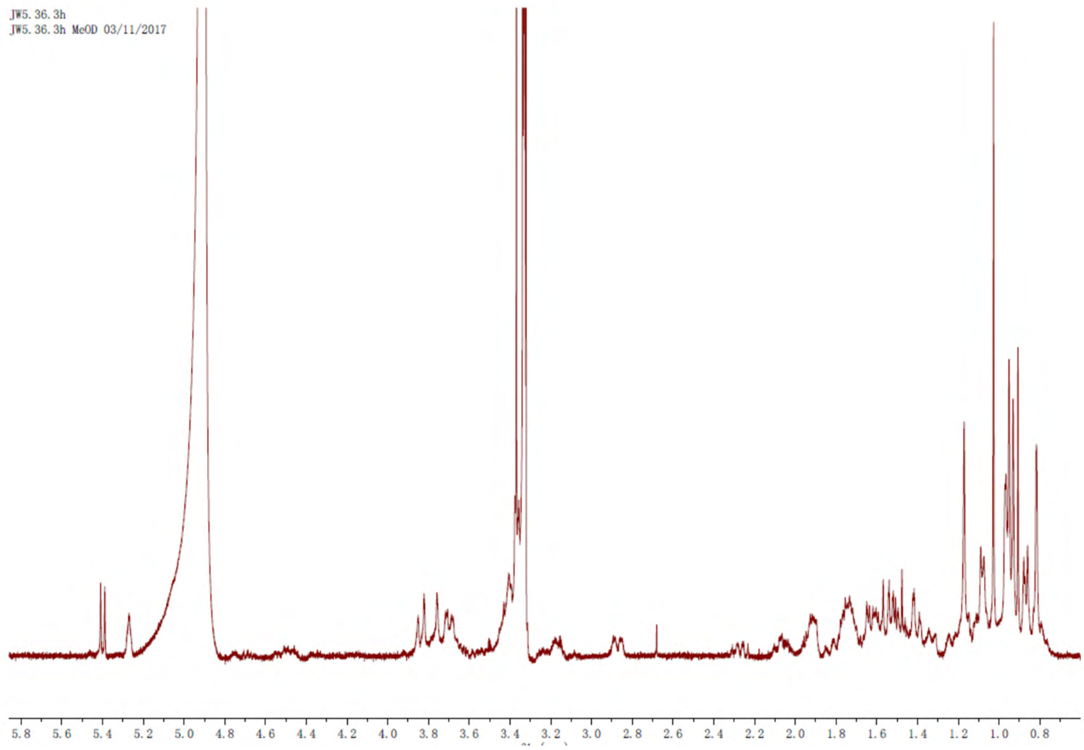


Figure S153. LC-MS spectrum of compound **92**.

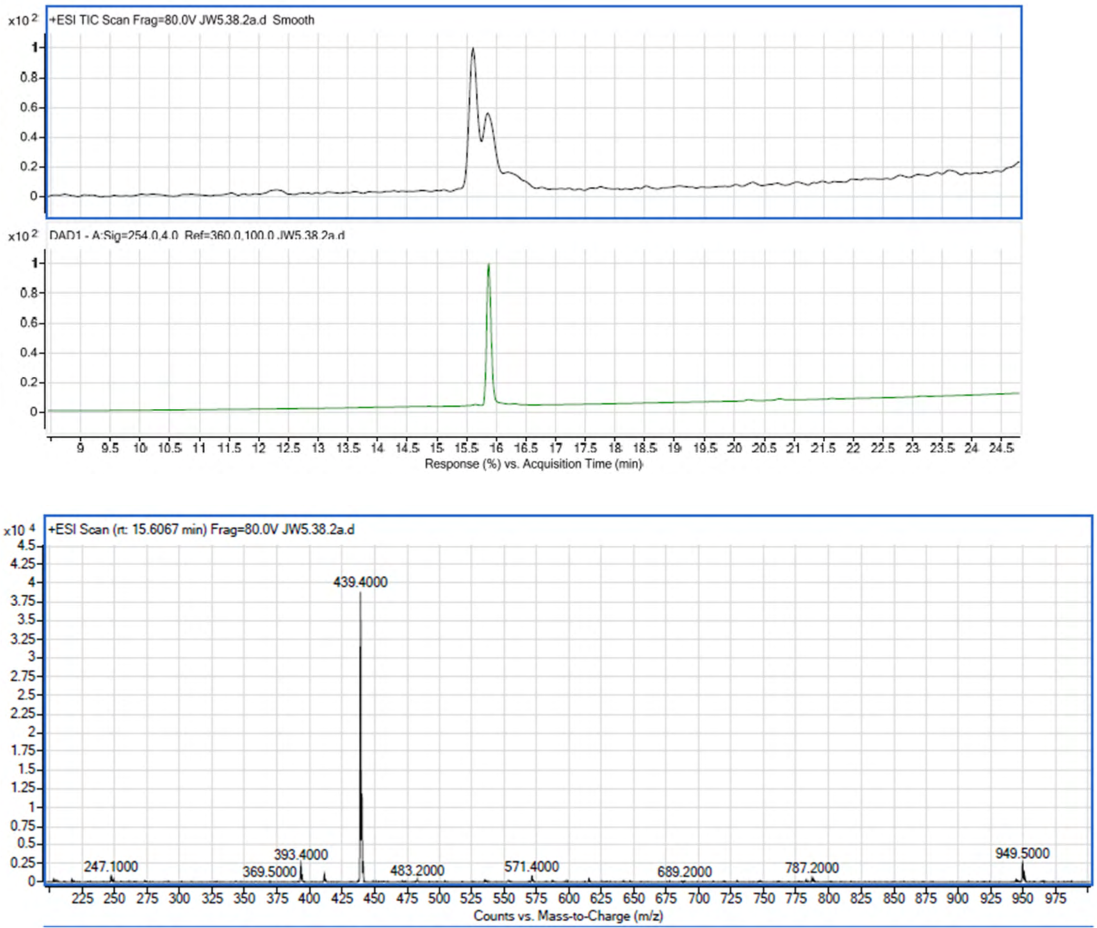


Figure S154. ^{1}H-NMR spectrum of compound **92**.

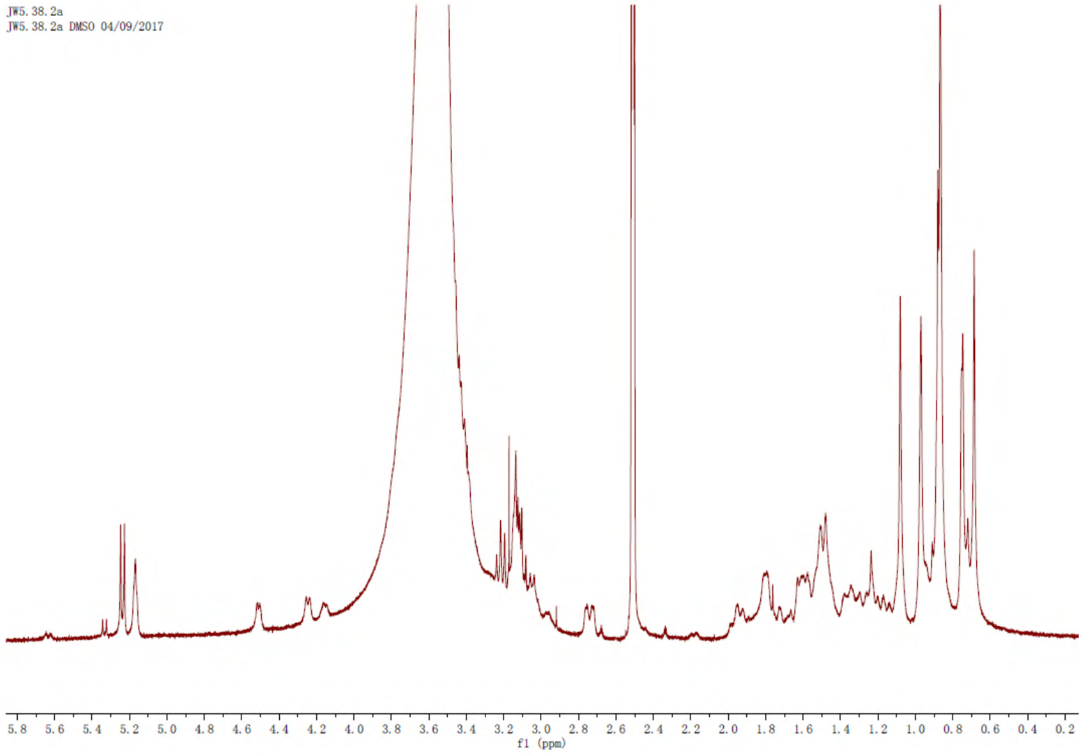


Figure S155. LC-MS spectrum of compound **93**.

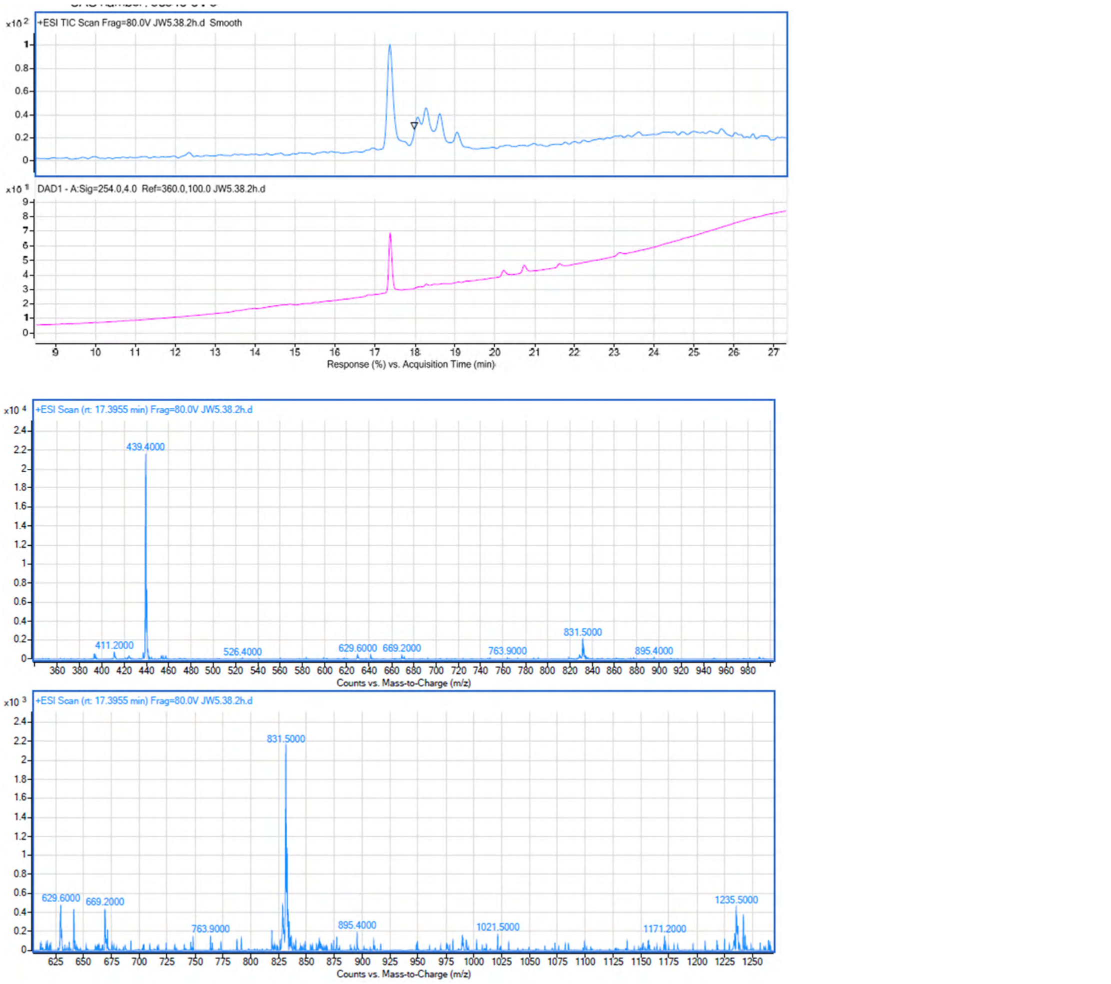


Figure S156. ^{1}H-NMR spectrum of compound **93**.

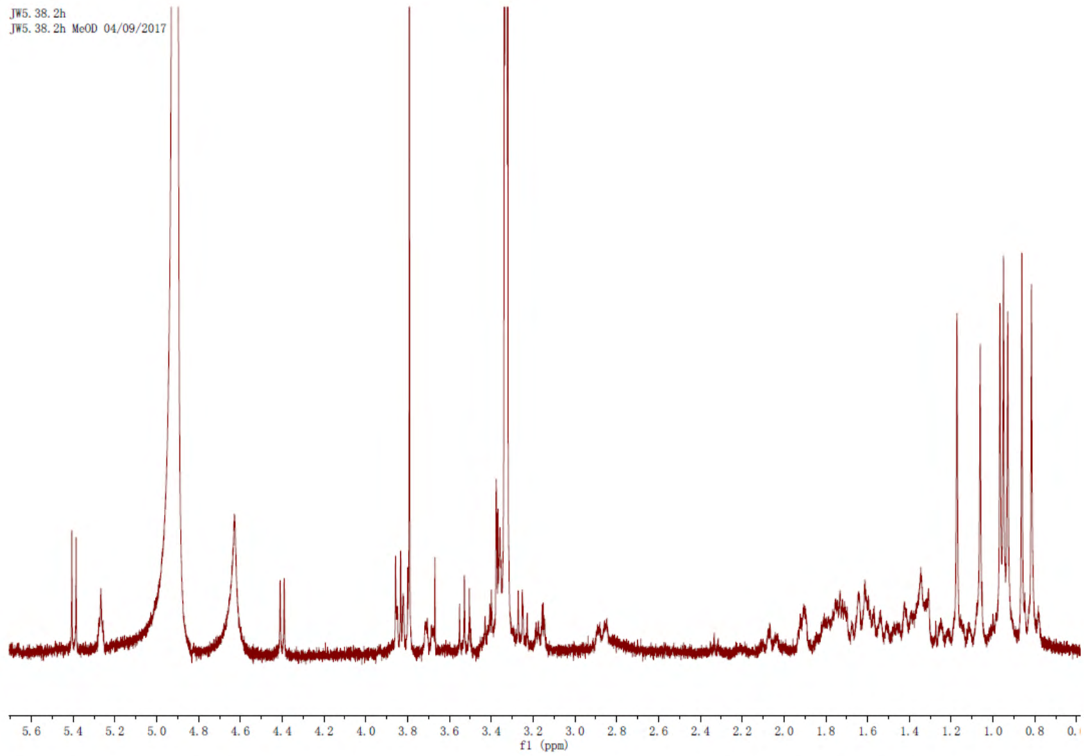


Figure S157. LC-MS spectrum of compound **94**.

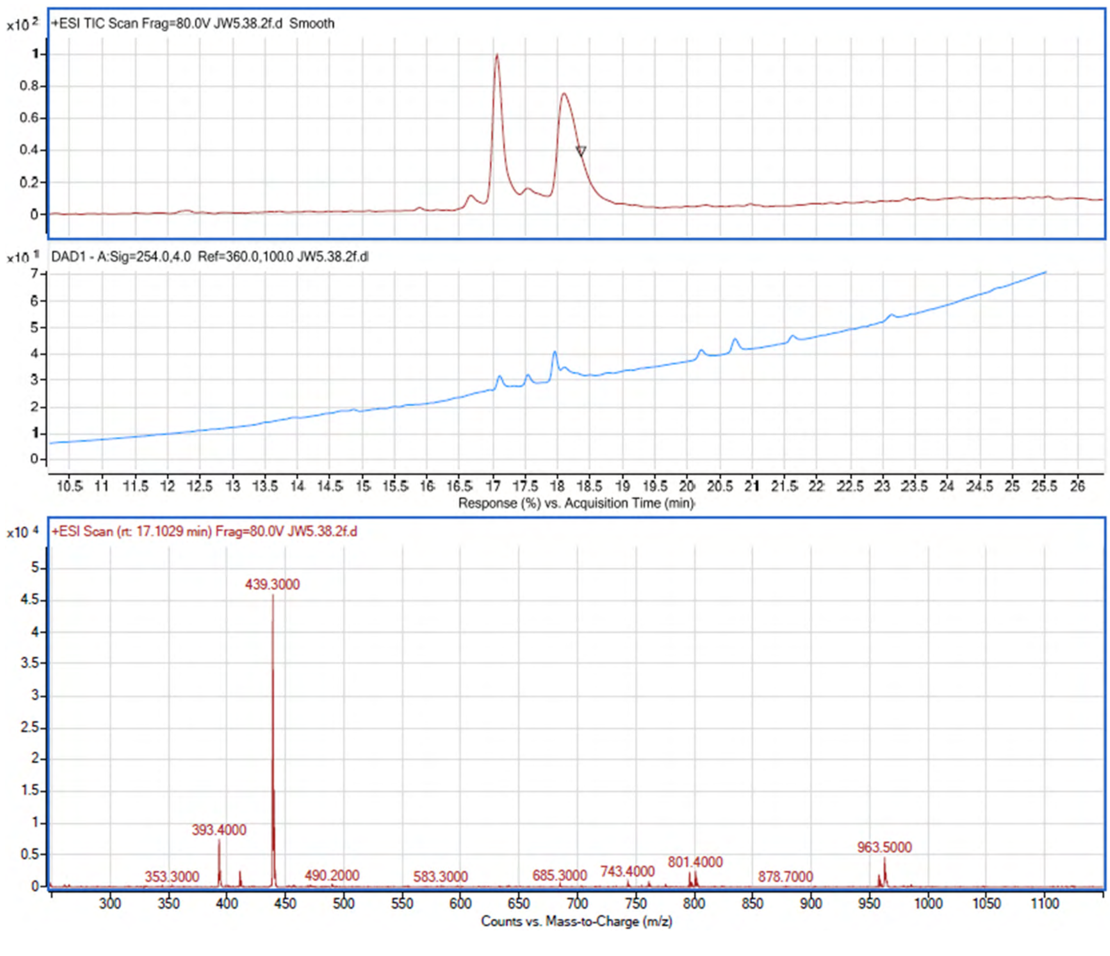


Figure S158. ^{1}H-NMR spectrum of compound **94**.

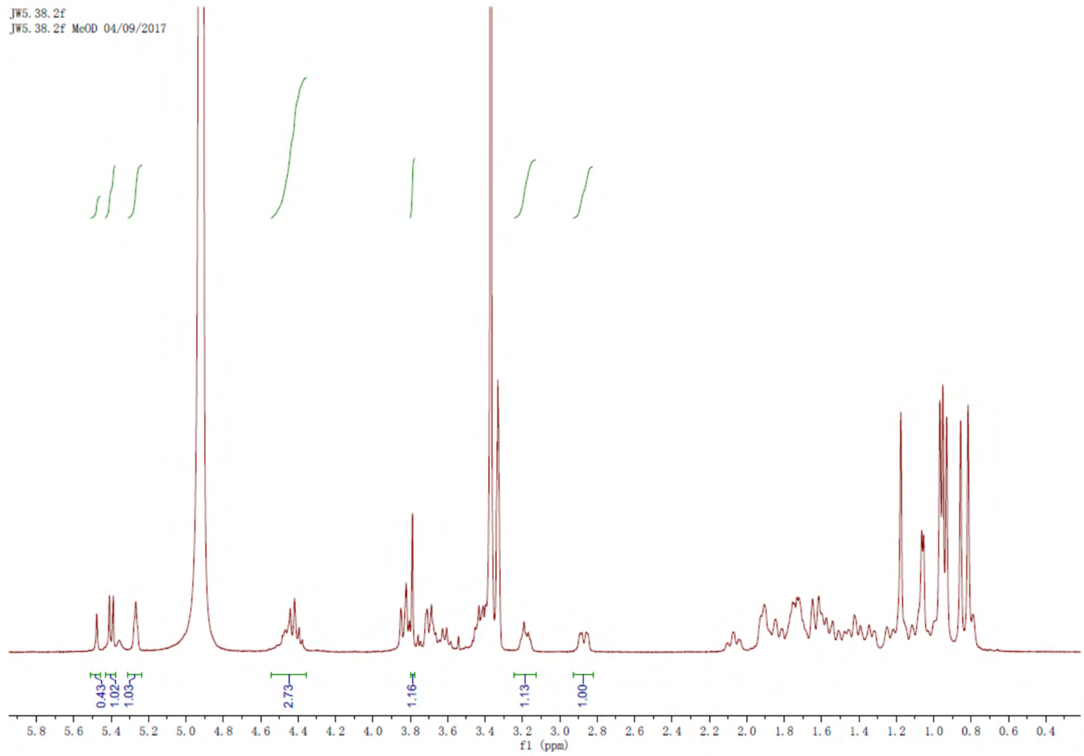


Figure S159. LC-MS spectrum of compound **95**.

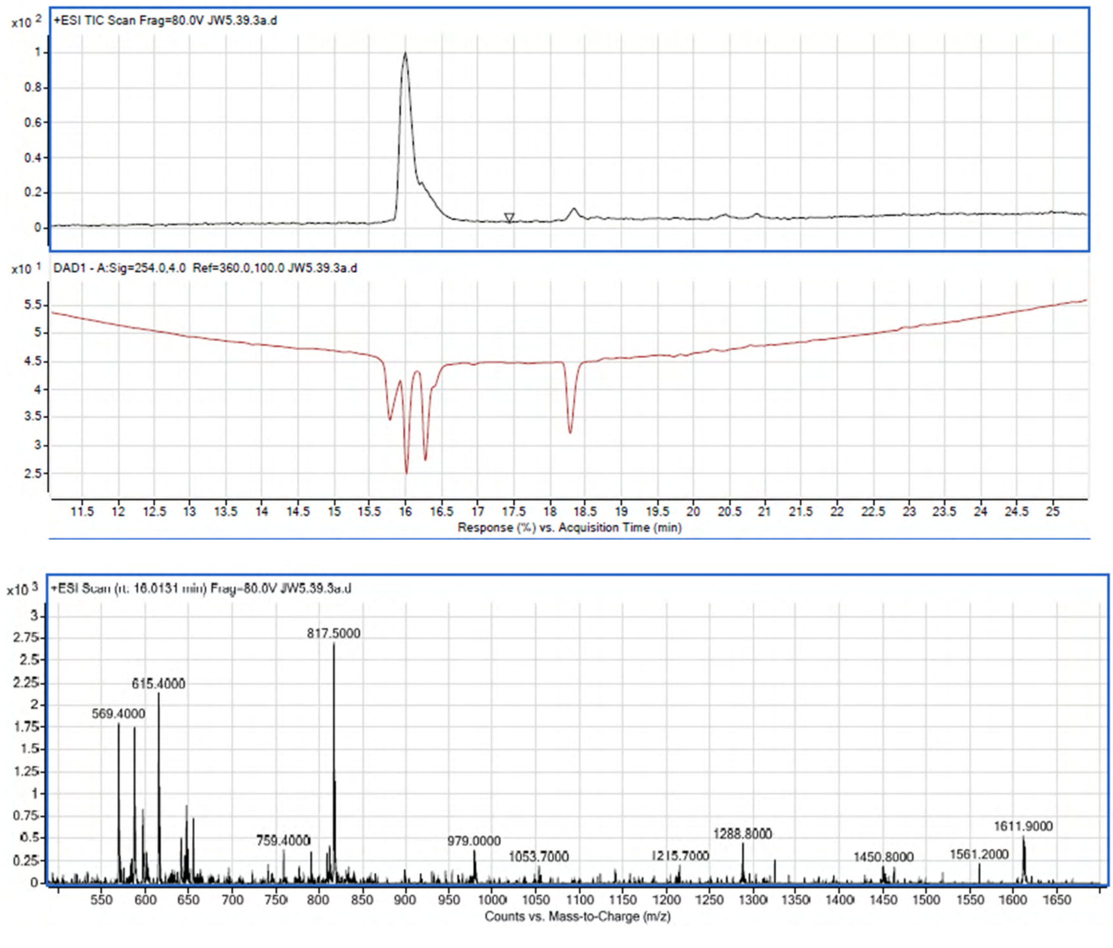


Figure S160. ^{1}H-NMR spectrum of compound **95**.

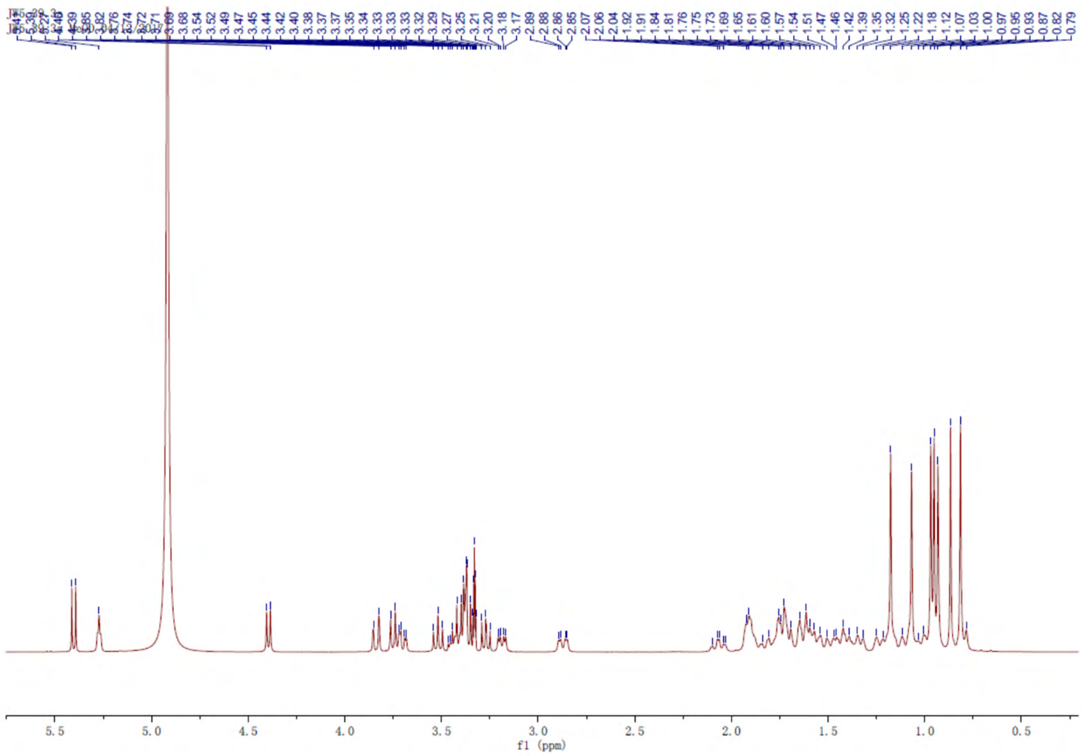


Figure S161. LC-MS spectrum of compound **96**.

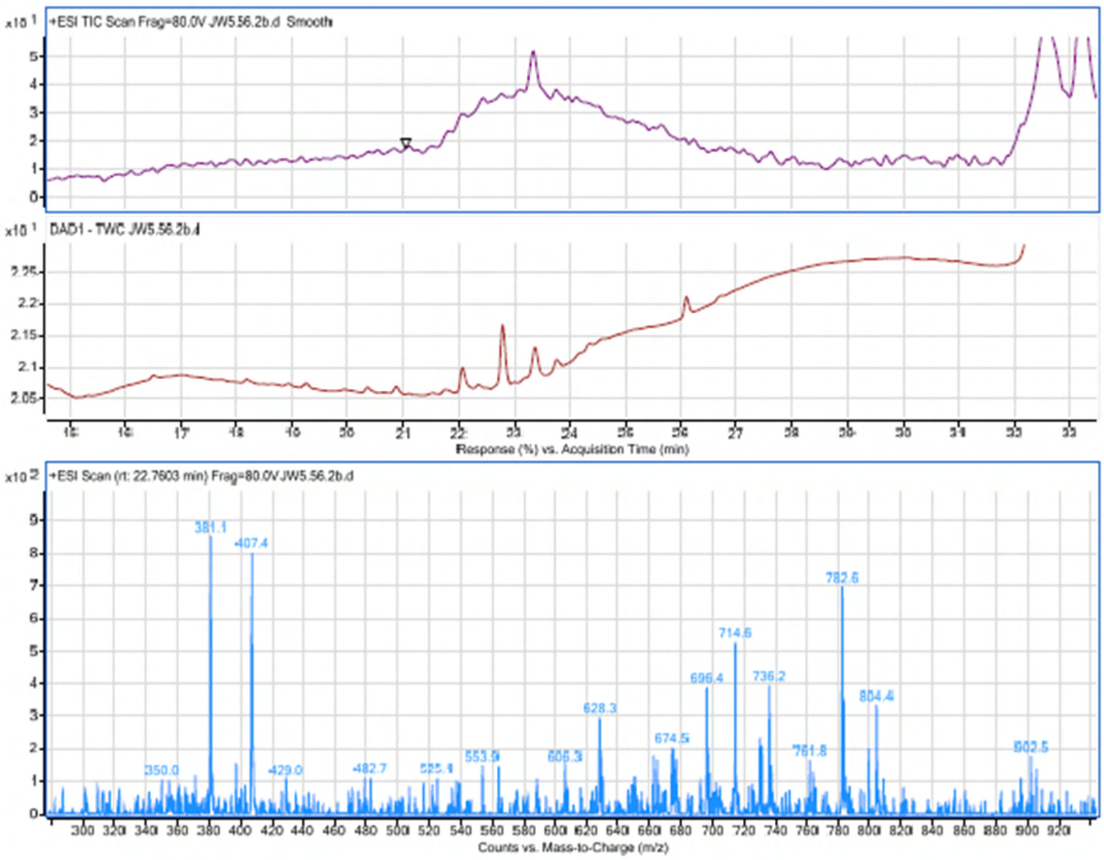


Figure S162. ^{1}H-NMR spectrum of compound **96**.

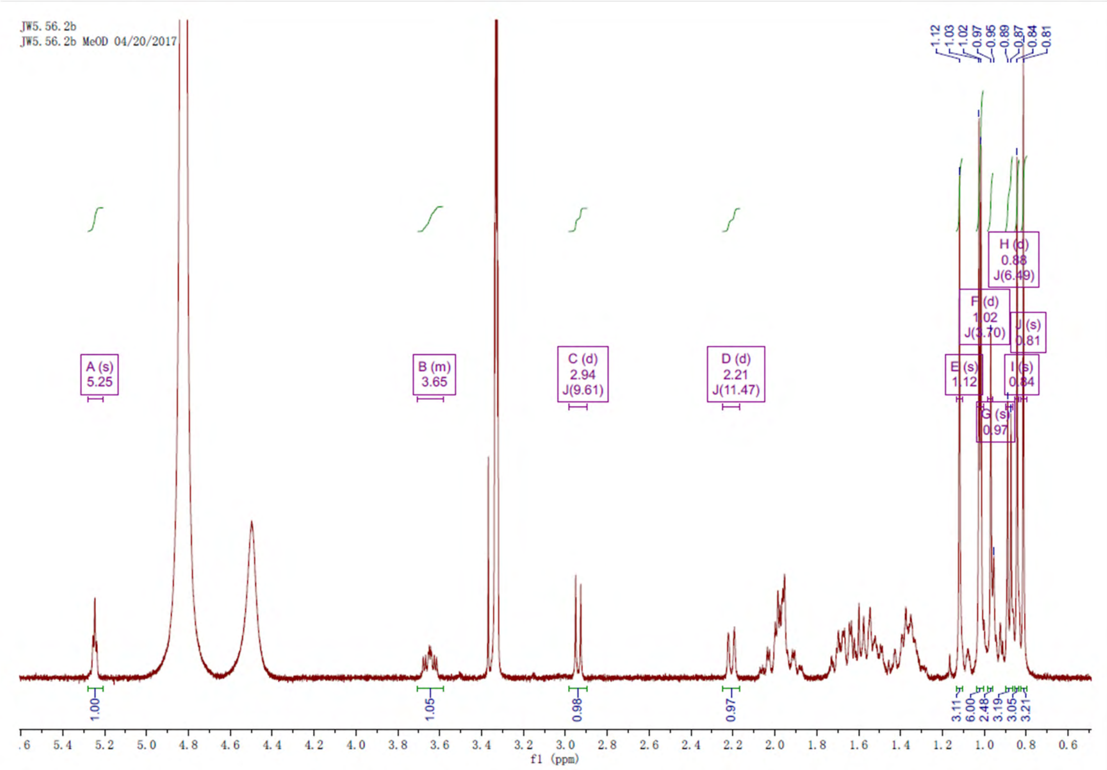


Figure S163. LC-MS spectrum of compound **97**.

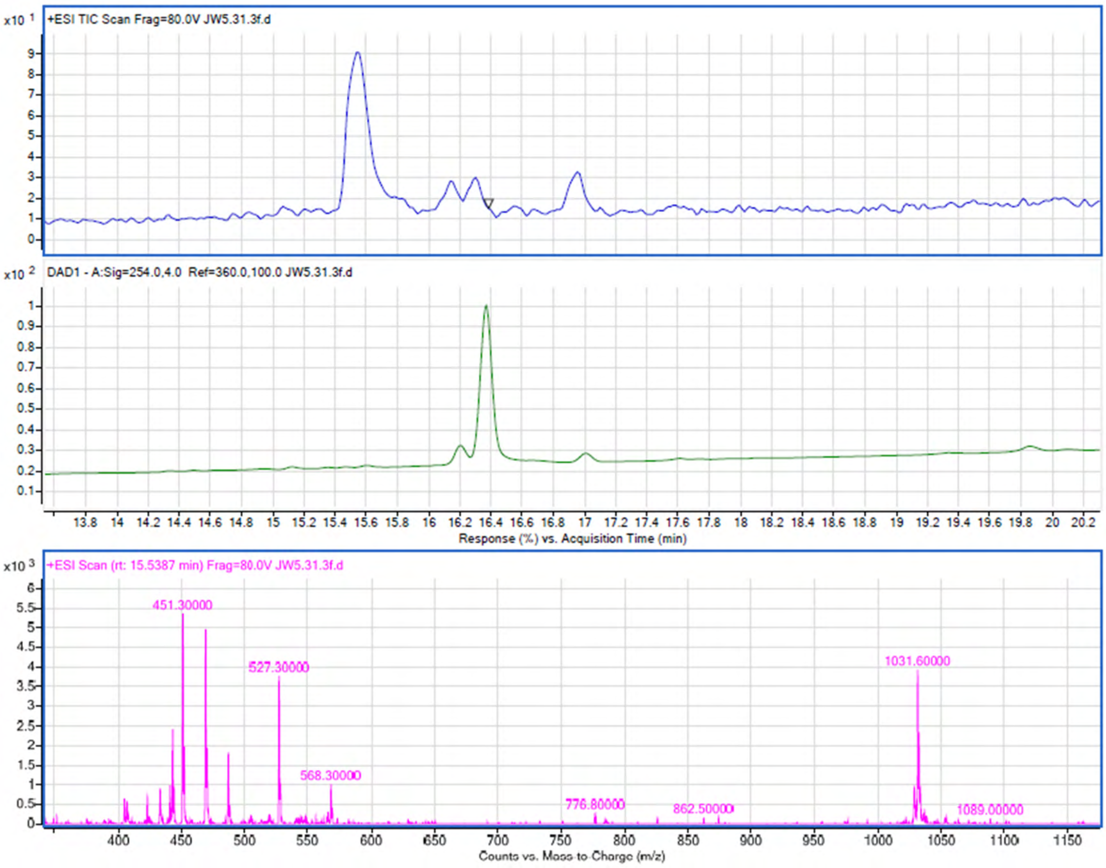


Figure S164. ^{1}H-NMR spectrum of compound **97**.

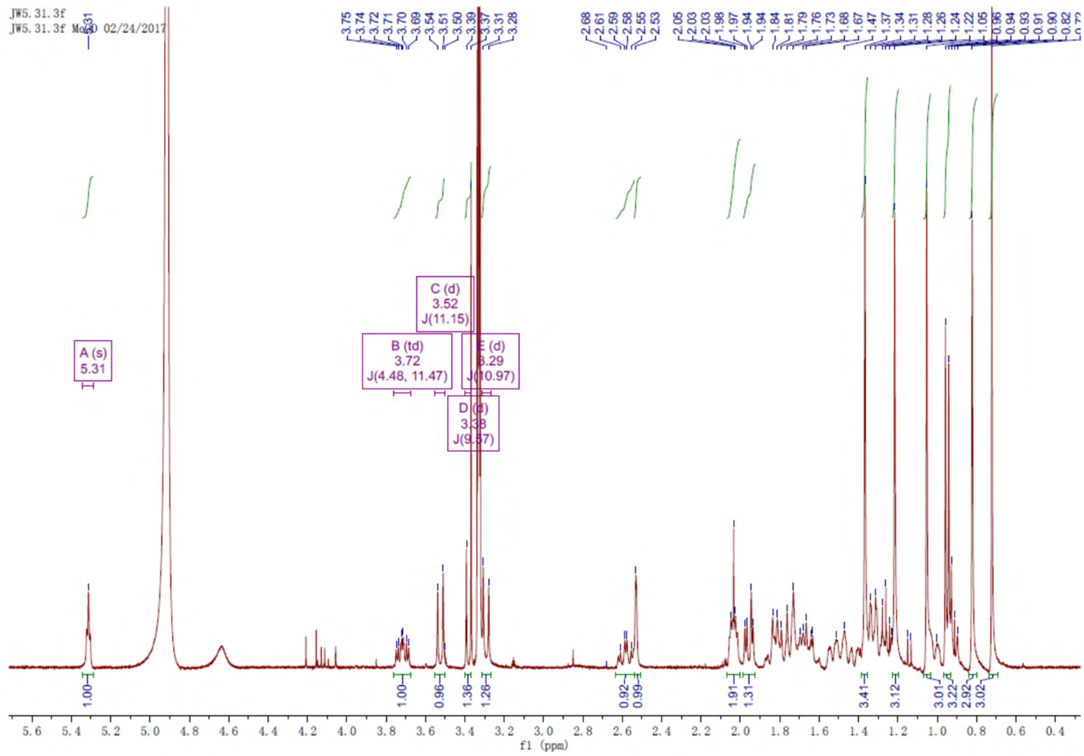


Figure S165. LC-MS spectrum of compound **98**.

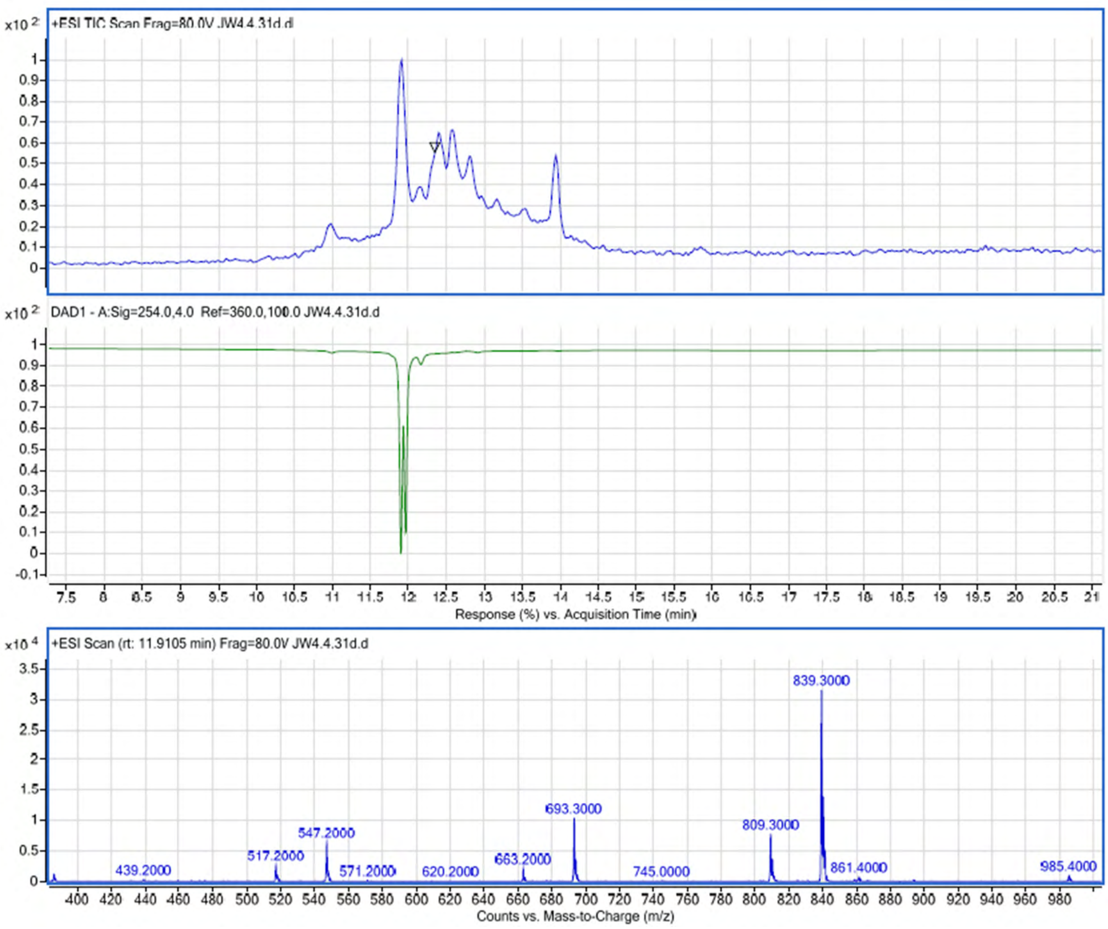


Figure S166. ^{1}H-NMR spectrum of compound **98**.

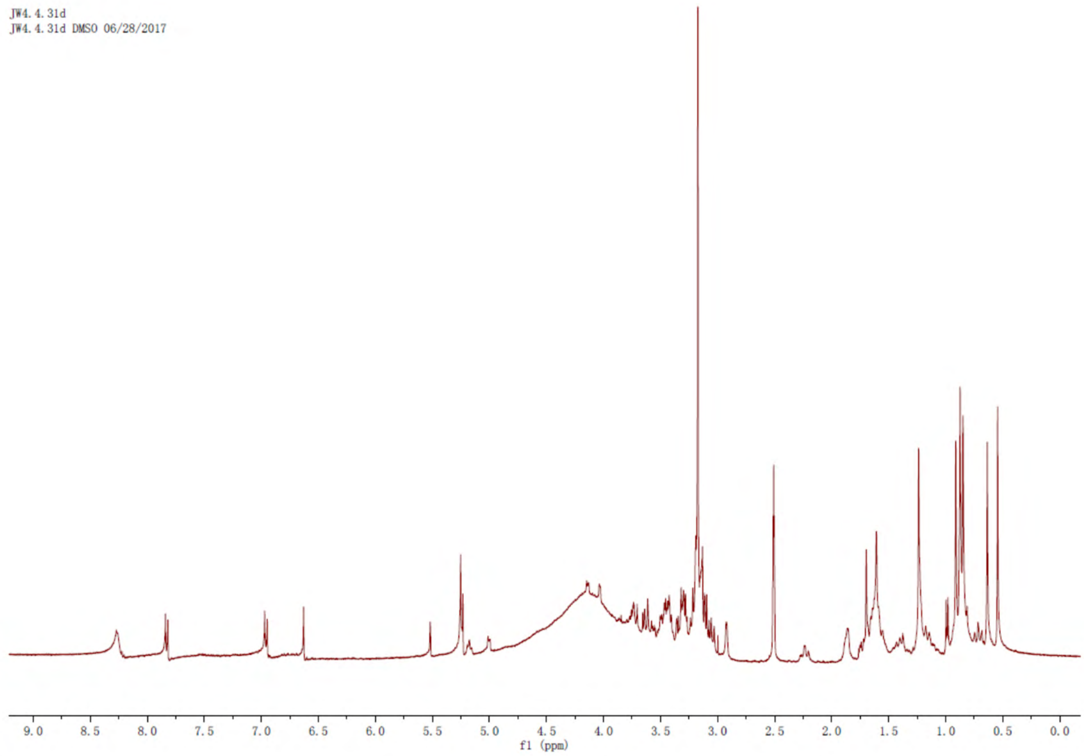


Figure S167. LC-MS spectrum of compound **99**.

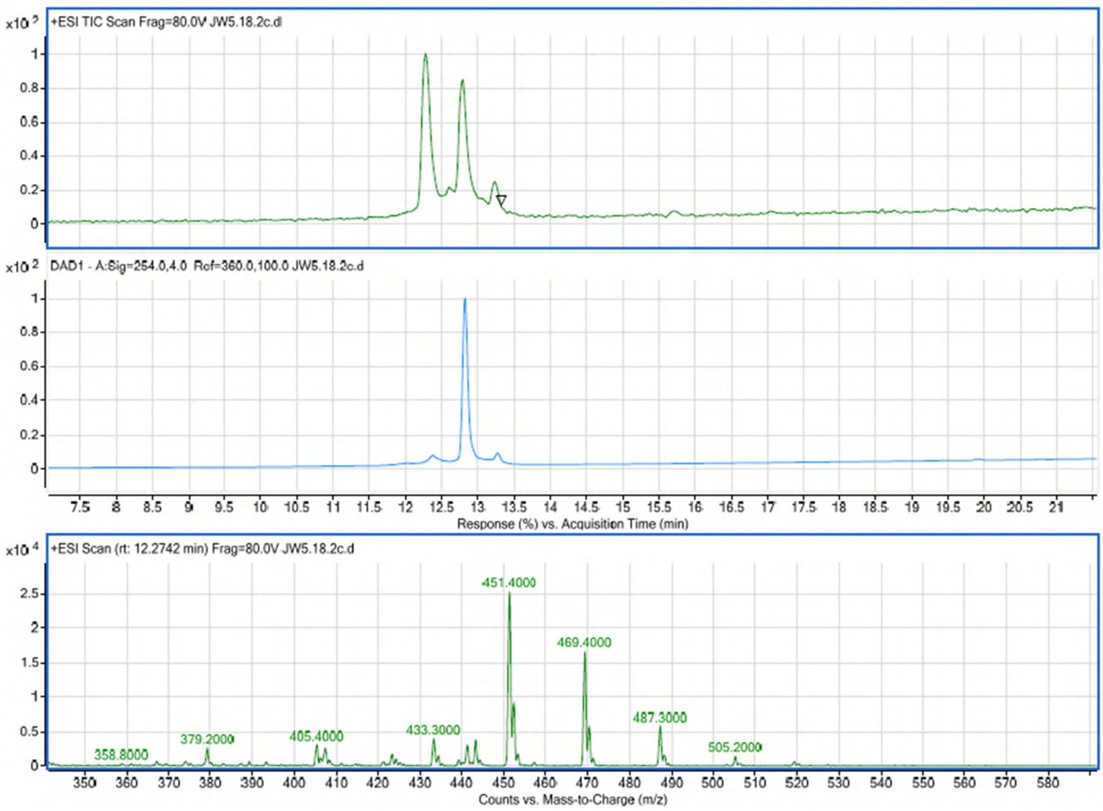


Figure S168. ^{1}H-NMR spectrum of compound **99**.

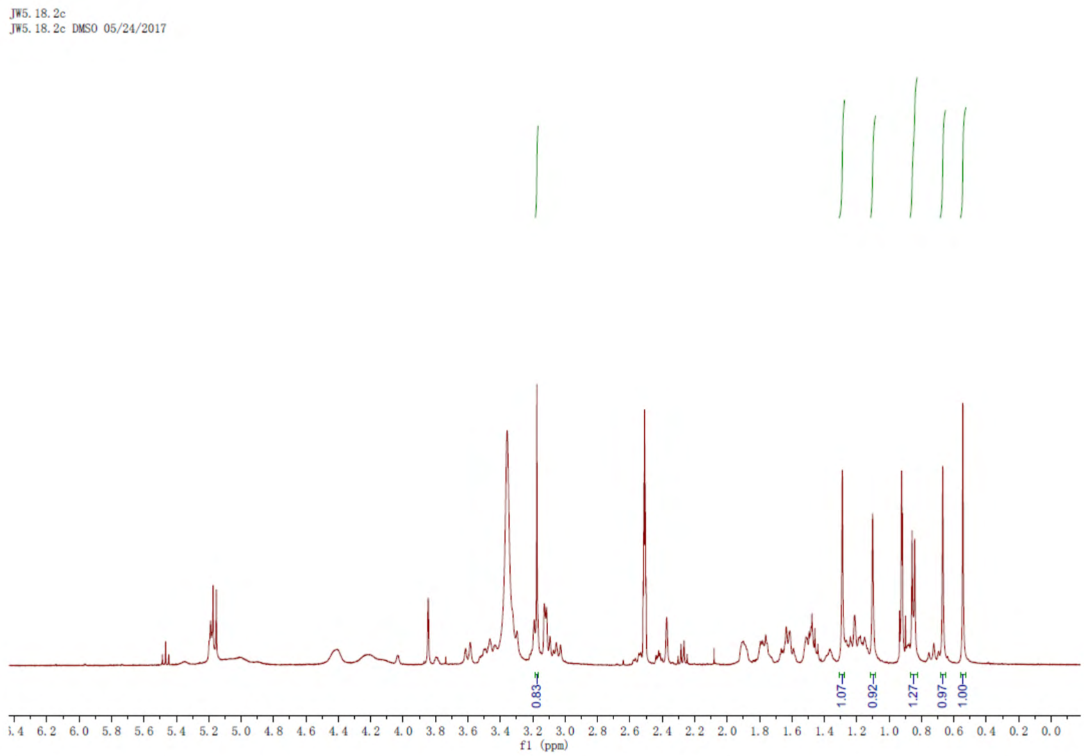
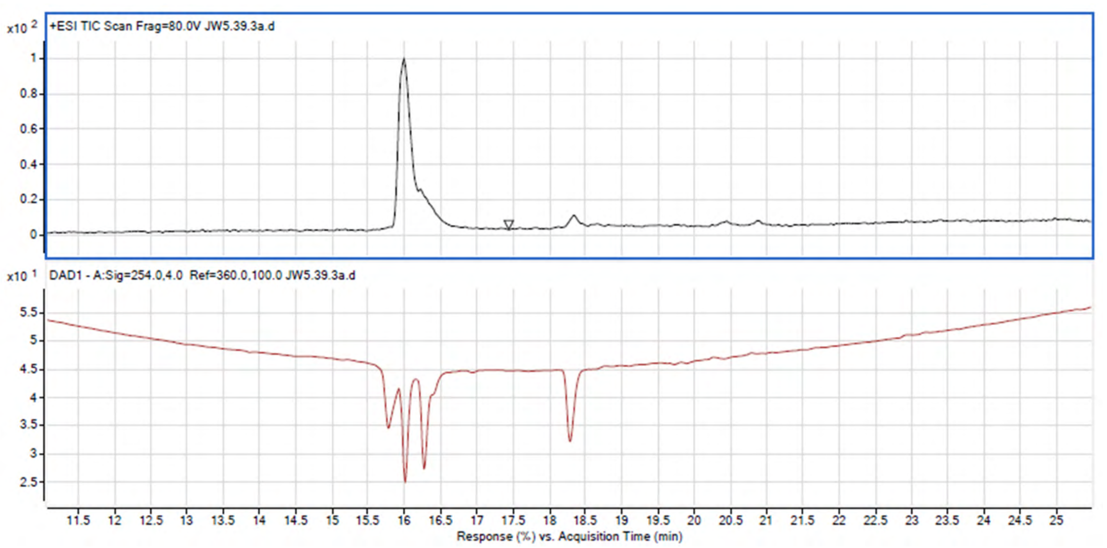


Figure S169. LC-MS spectrum of compound **100**.



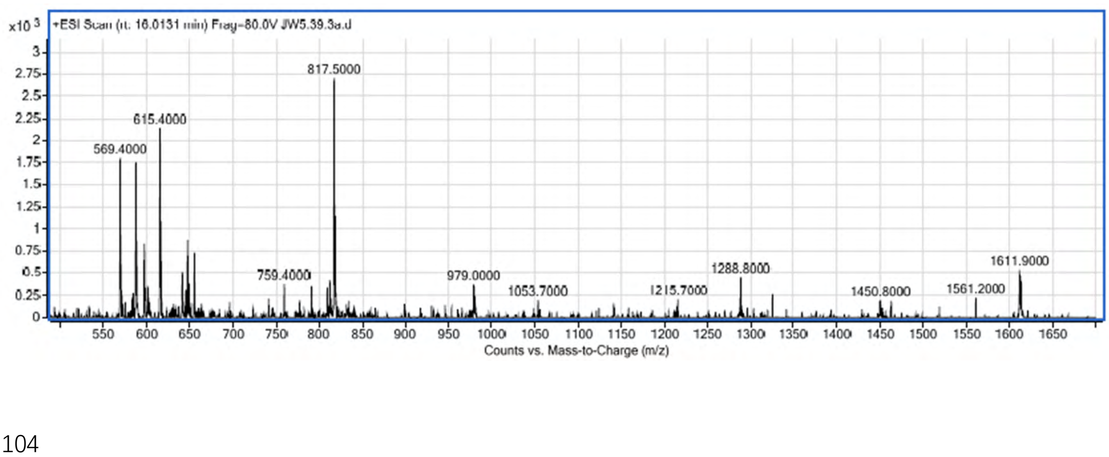


Figure S170. ^{1}H-NMR spectrum of compound **100**.

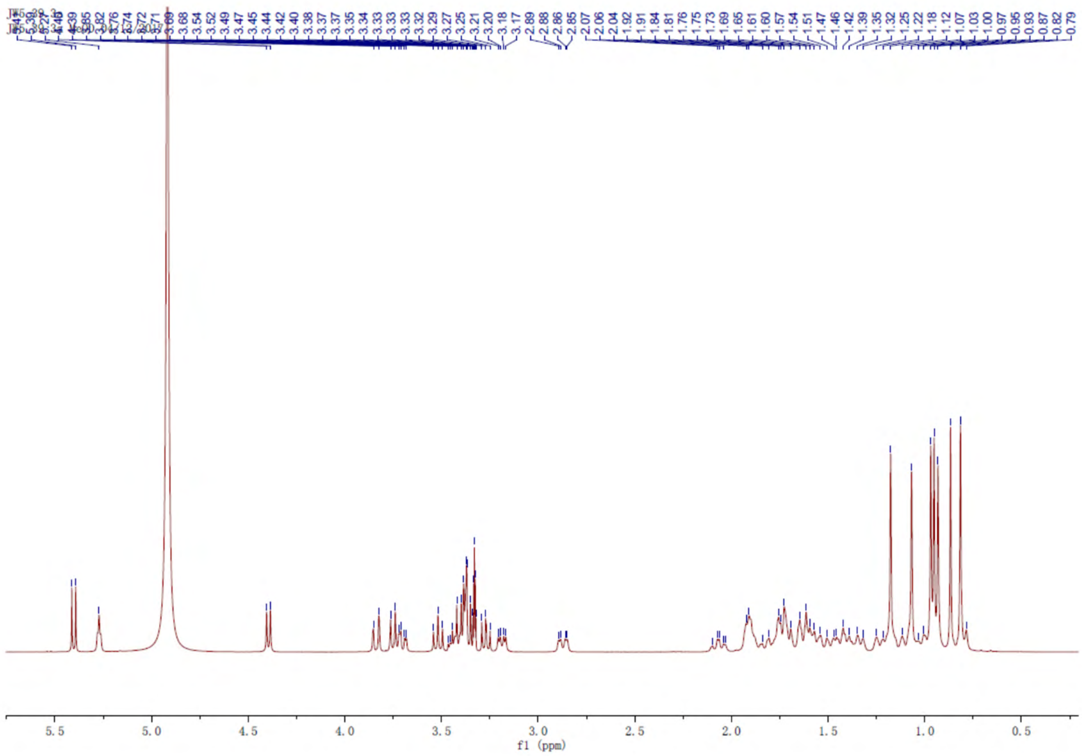


Figure S171. LC-MS spectrum of compound **101**.

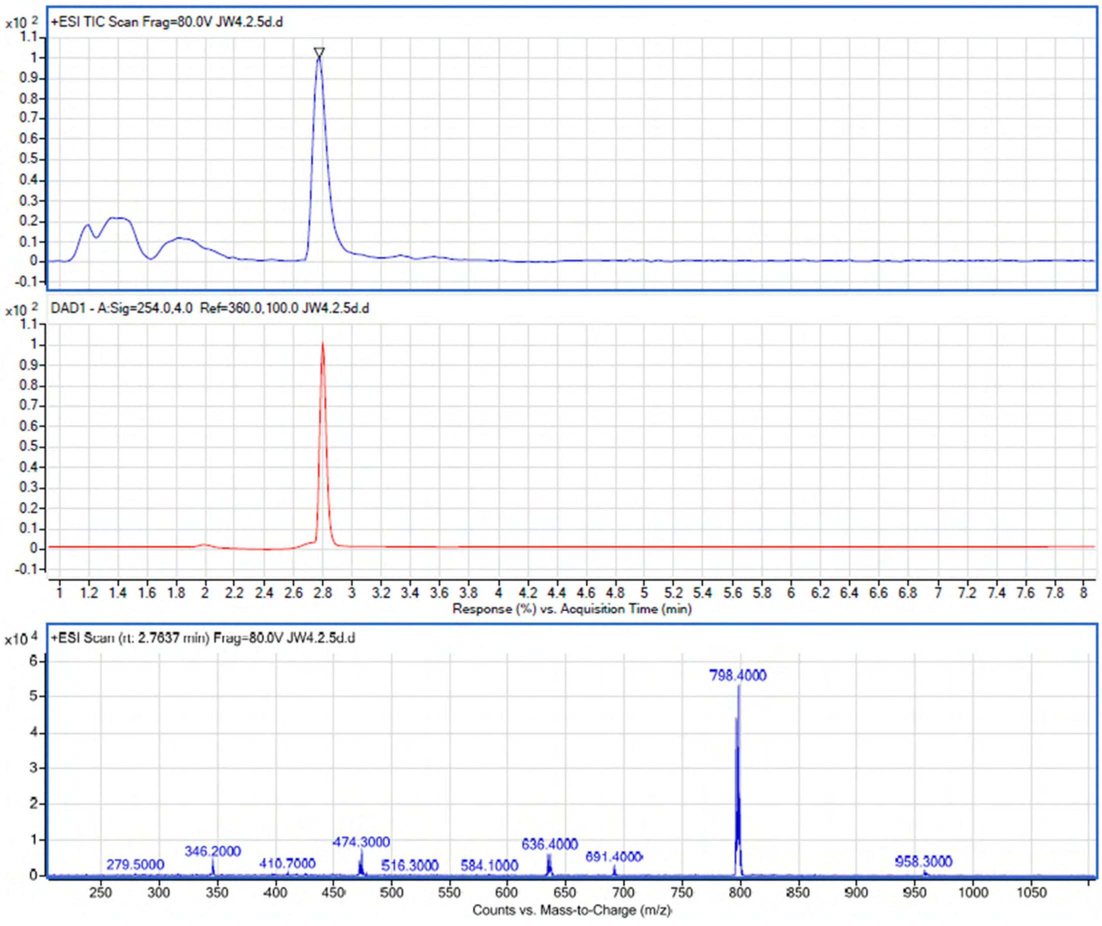


Figure S172. ^{1}H-NMR spectrum of compound **101**.

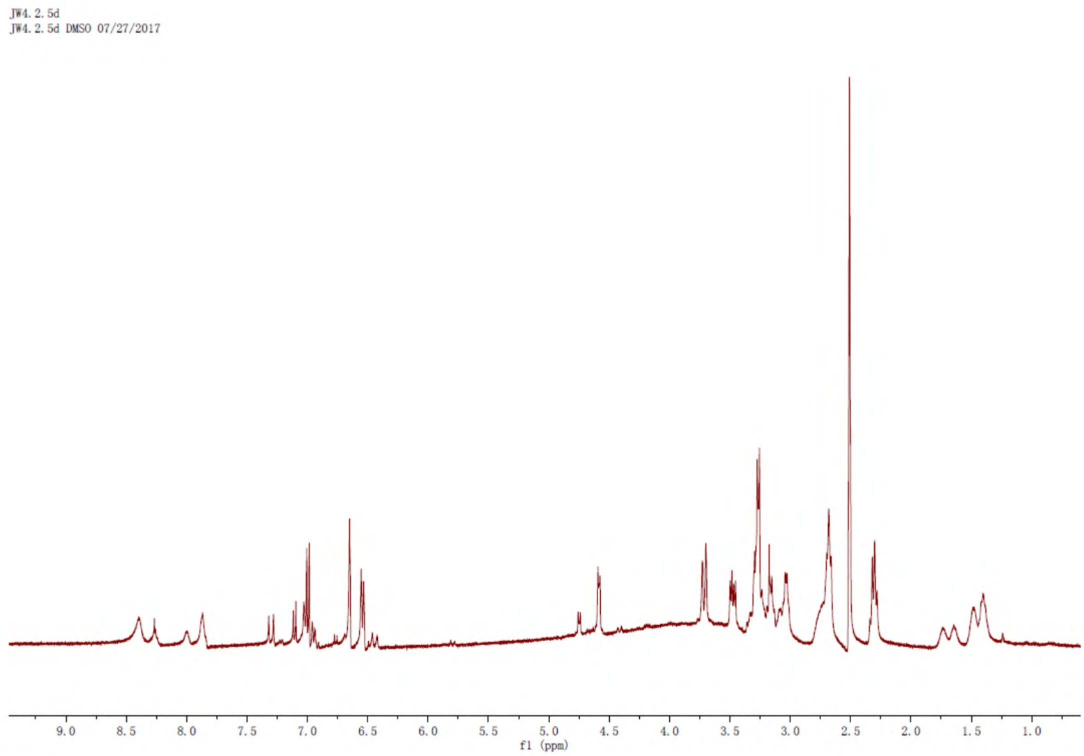


Figure S173. HSQC spectrum of compound **101**.

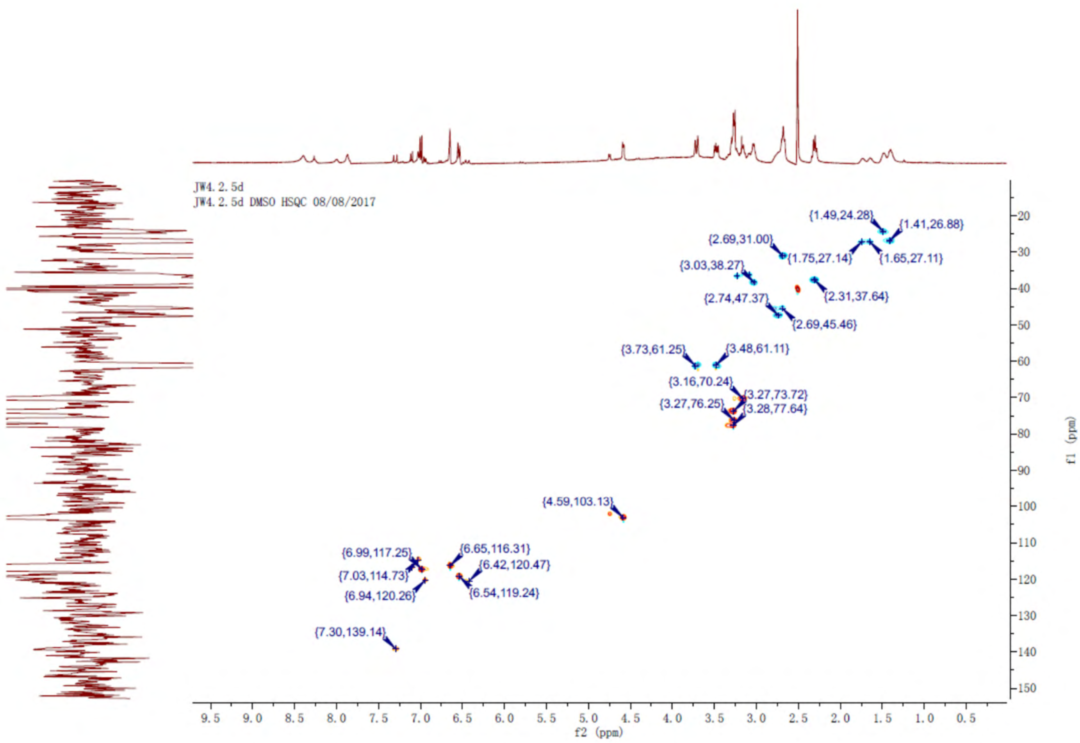


Figure S174. HMBC spectrum of compound **101**.

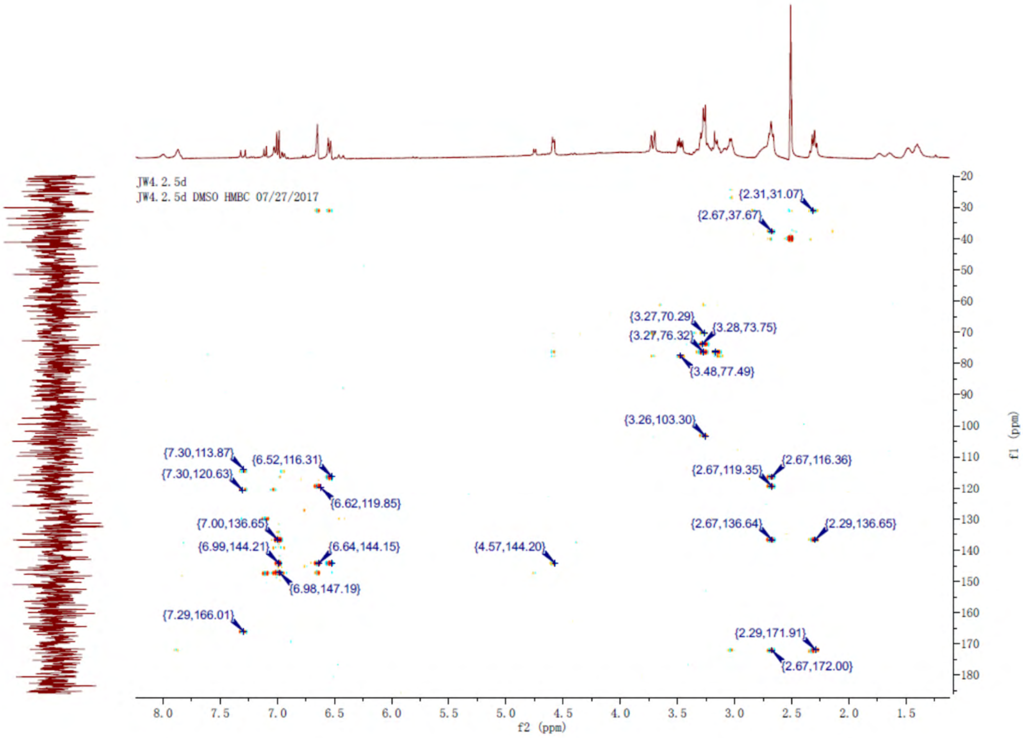


Figure S175. LC-MS spectrum of compound **102**.

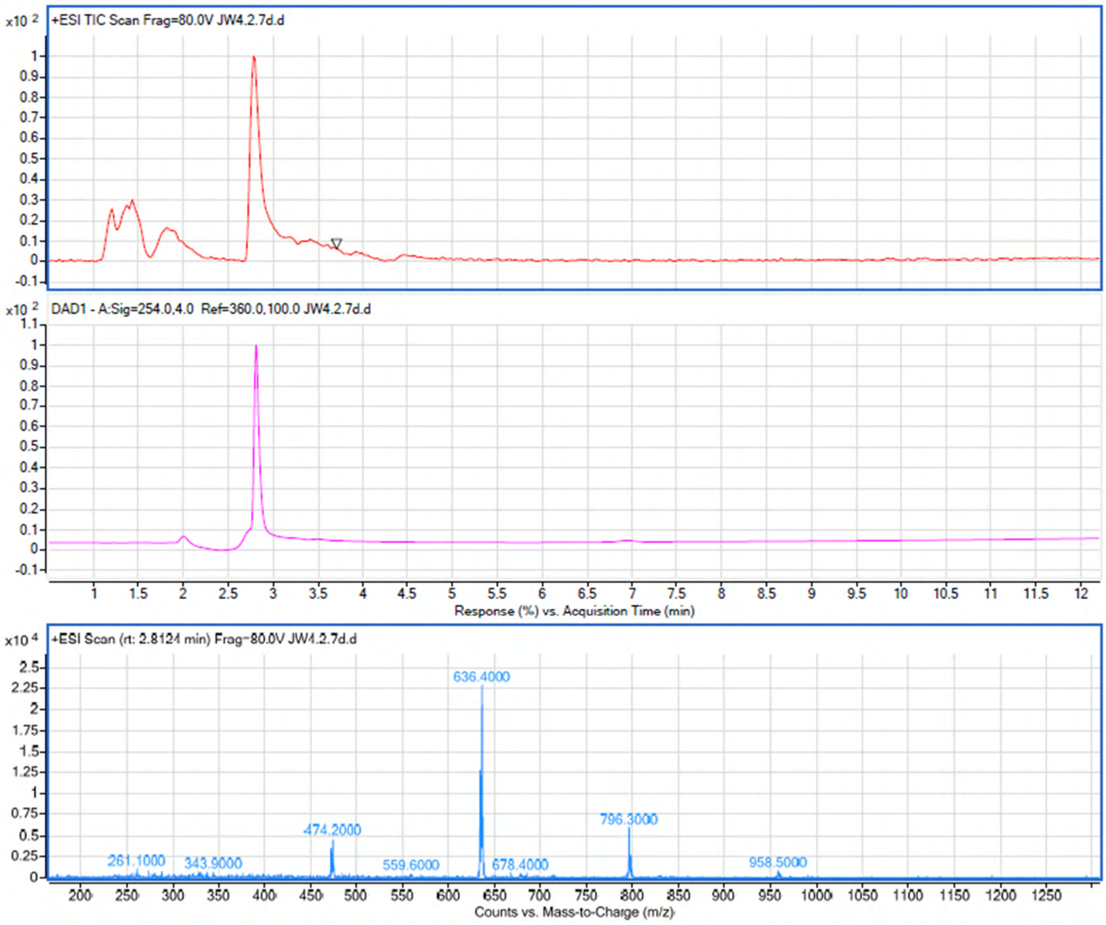


Figure S176. ^{1}H-NMR spectrum of compound **102**.

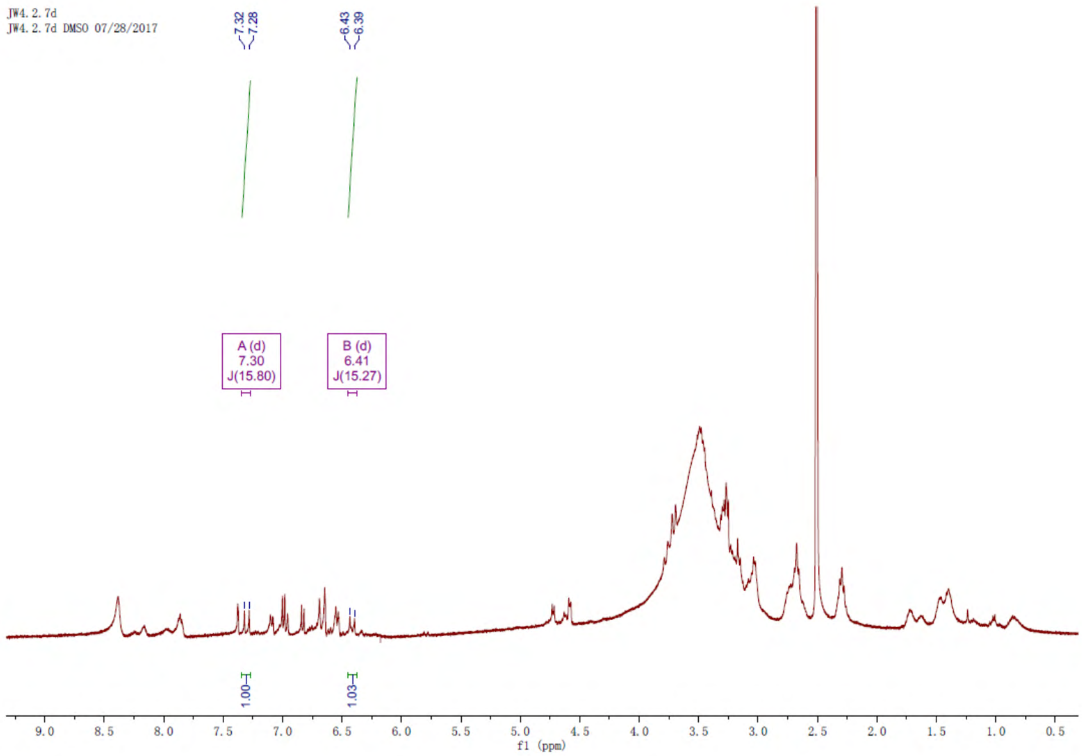


Figure S177. LC-MS spectrum of compound **104**.

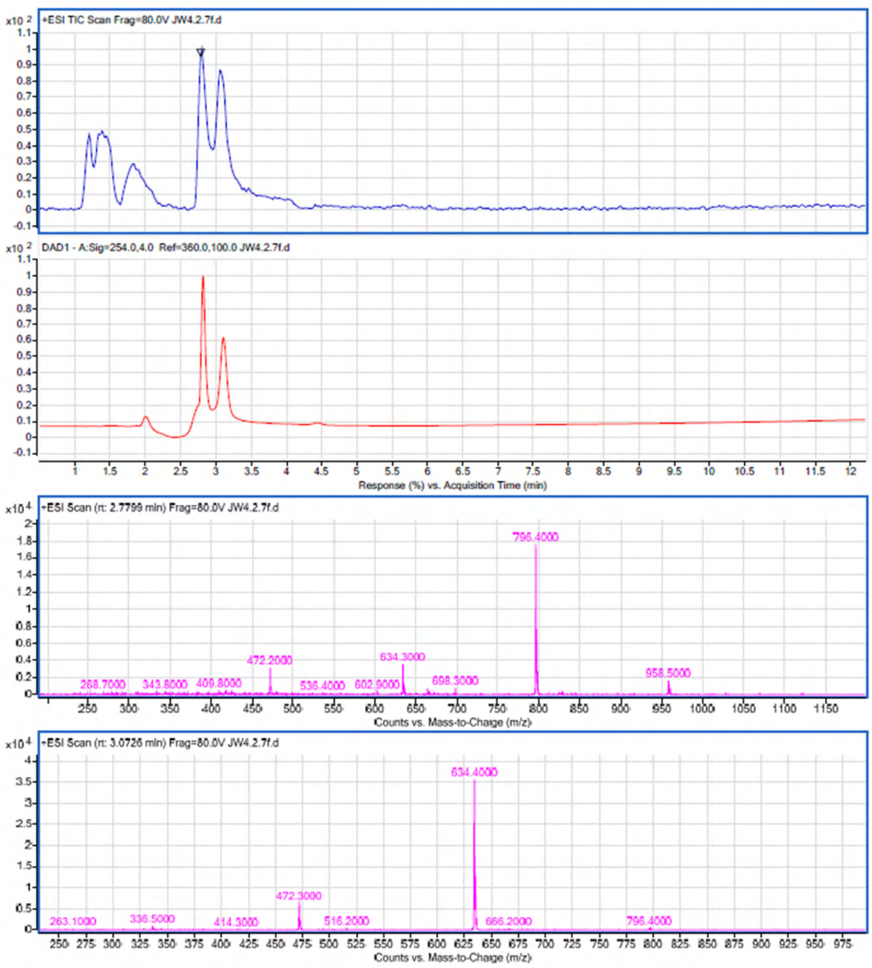


Figure S178. [1]H-NMR spectrum of compound **104**.

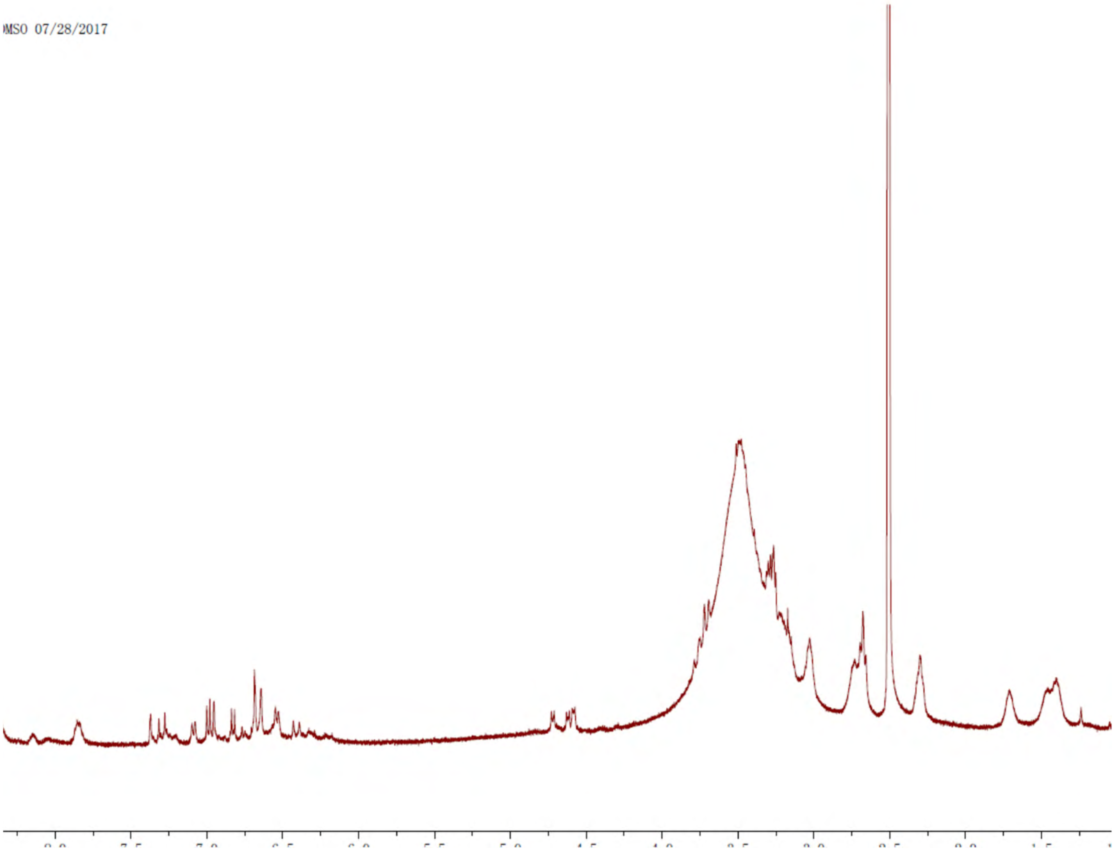


Figure S179. LC-MS spectrum of compound **105**.

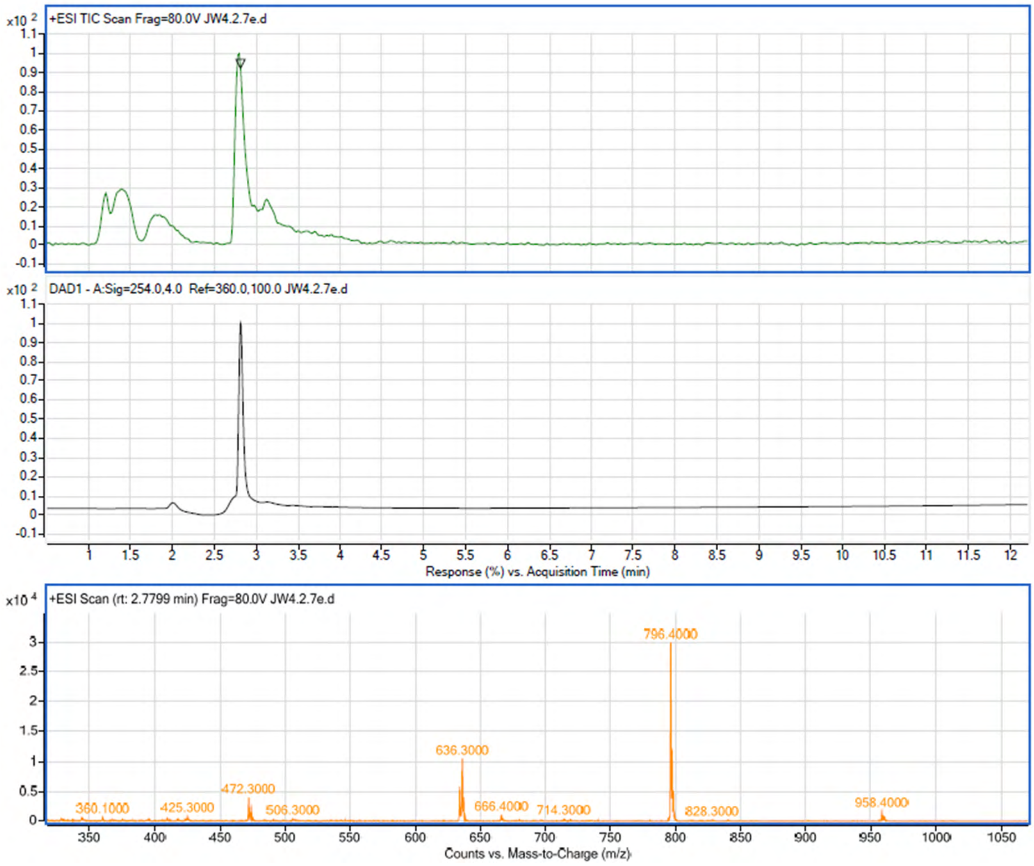


Figure S180. ^{1}H-NMR spectrum of compound **105**.

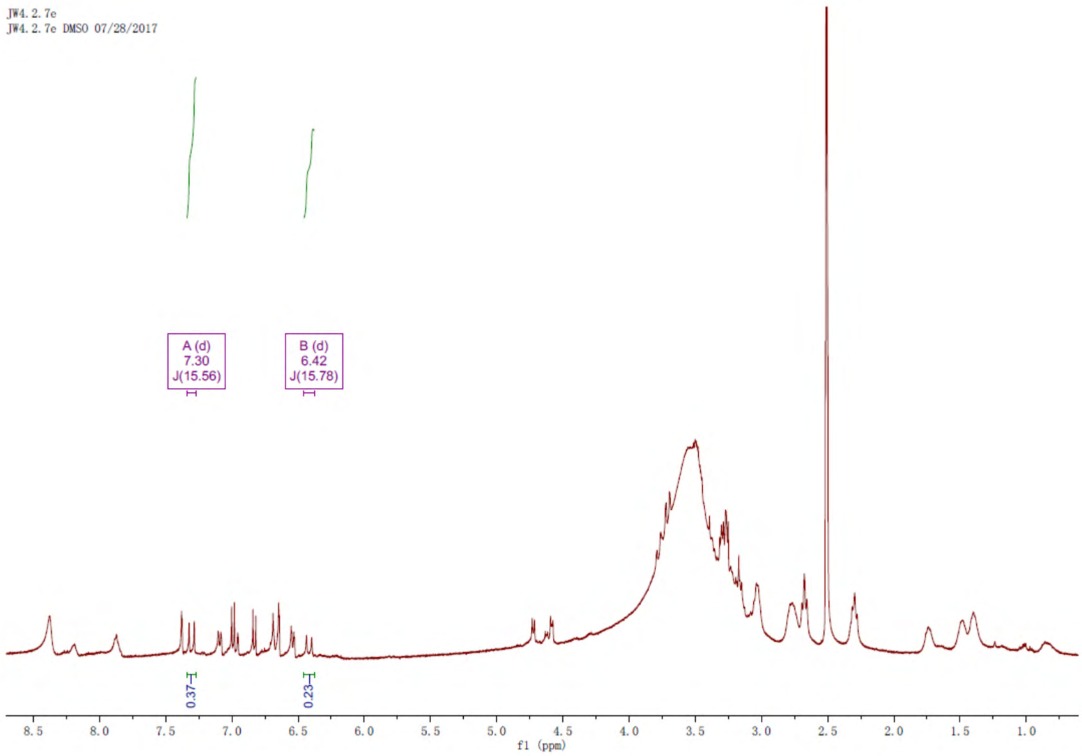


Figure S181. LC-MS spectrum of compound **106**.

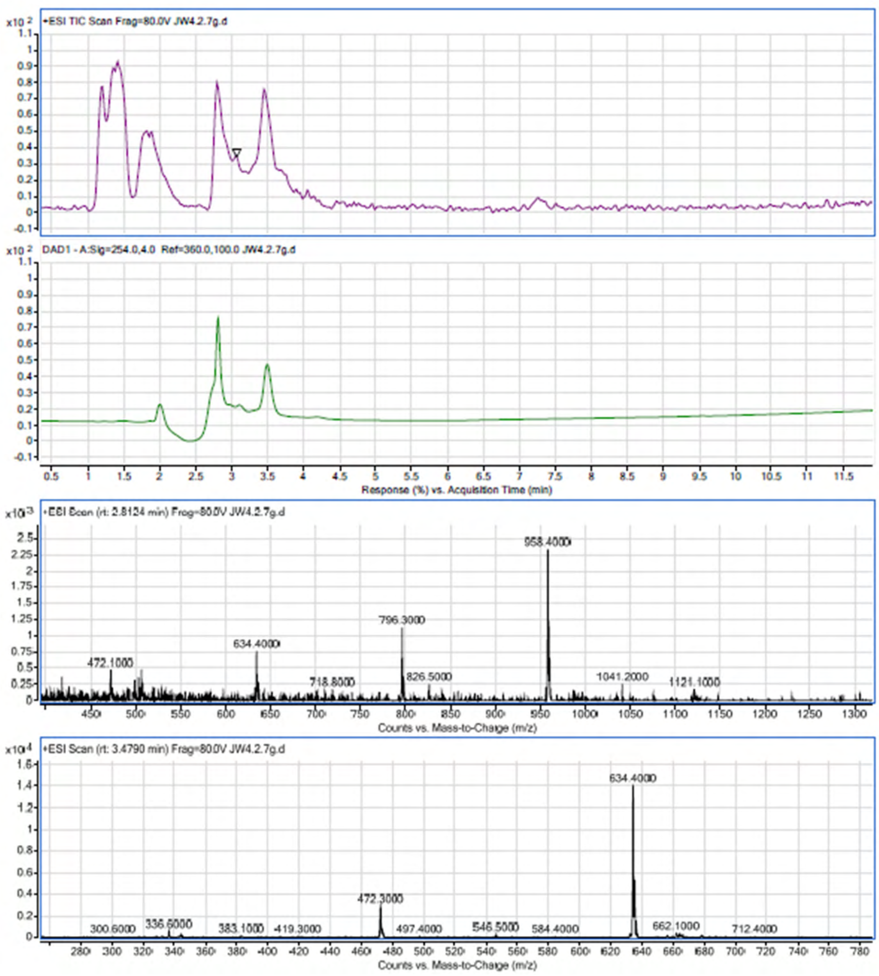


Figure S182. ^{1}H-NMR spectrum of compound **106**.

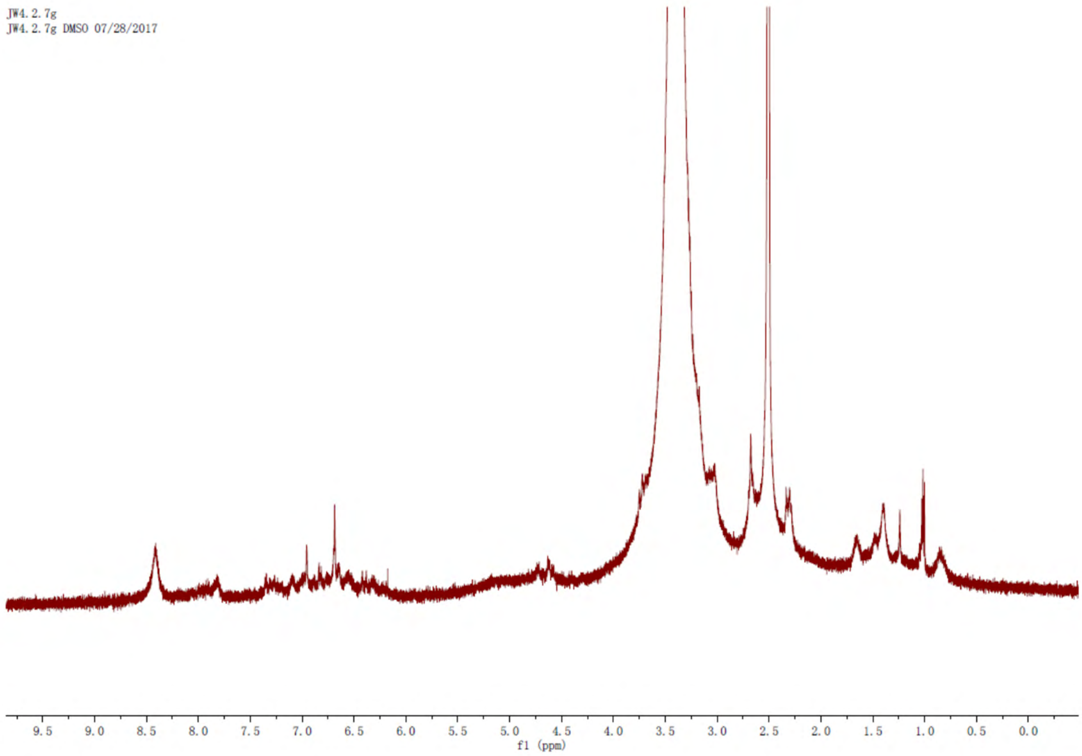


Figure S183. LC-MS spectrum of compound **107**.

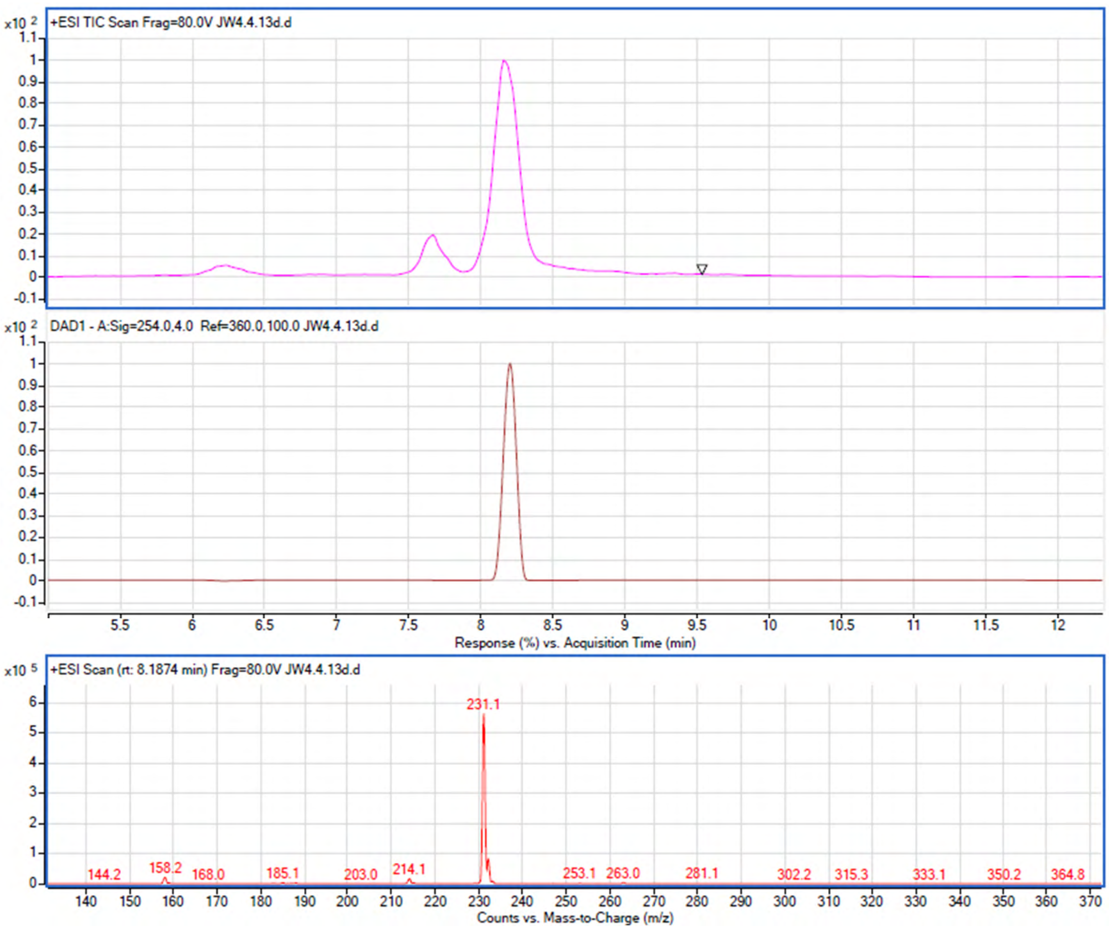


Figure S184. ^{1}H-NMR spectrum of compound **107**.

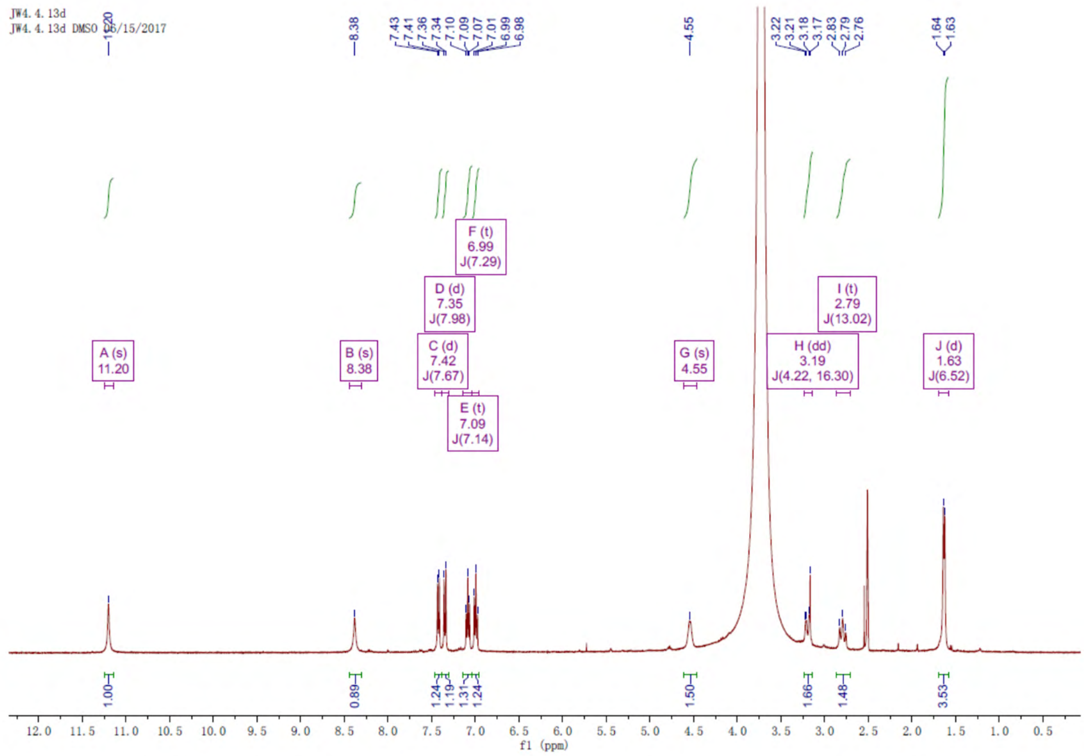
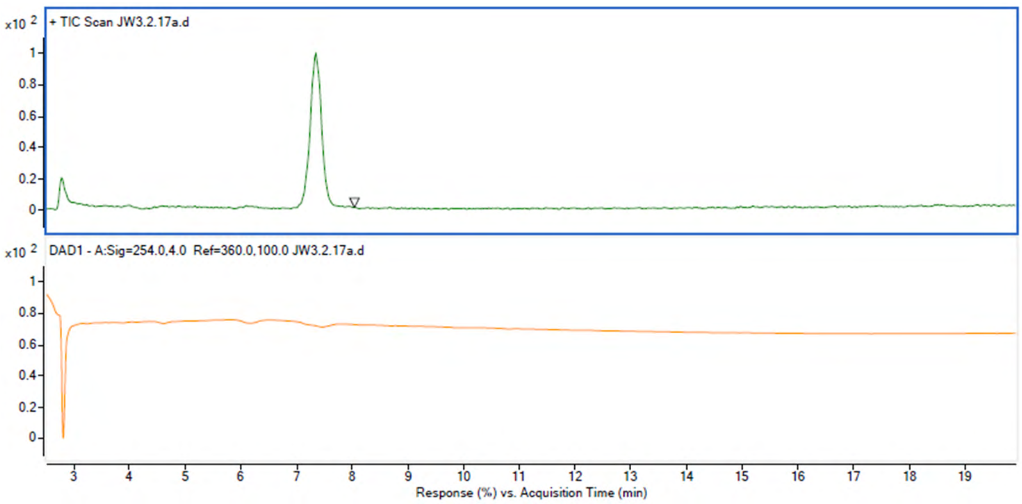


Figure S185. LC-MS spectrum of compound **108**.



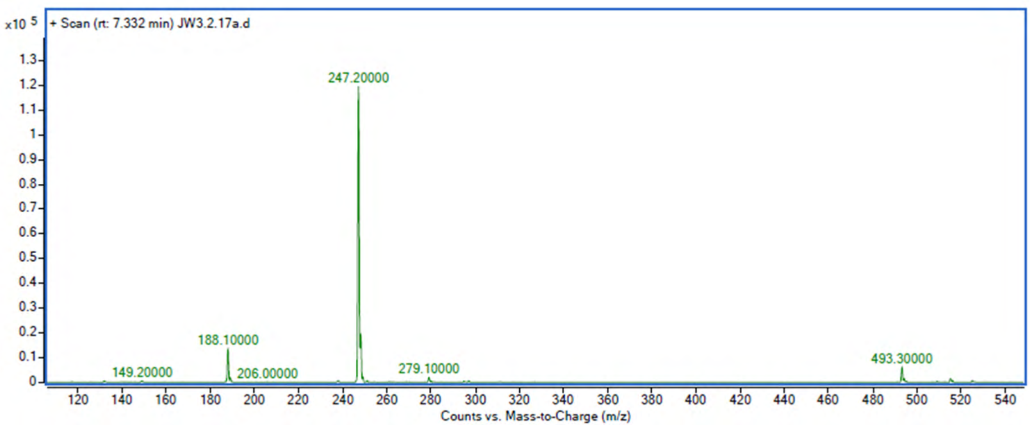


Figure S186. ^{1}H-NMR spectrum of compound **108**.

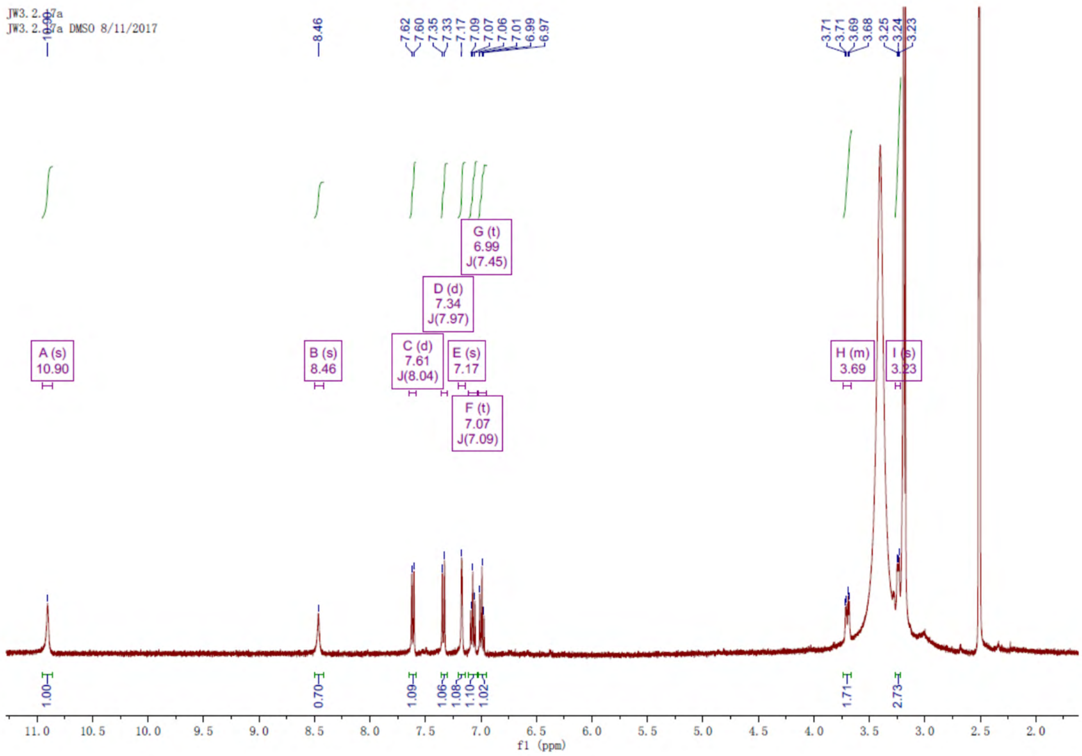


Figure S187. LC-MS spectrum of compound **109**.

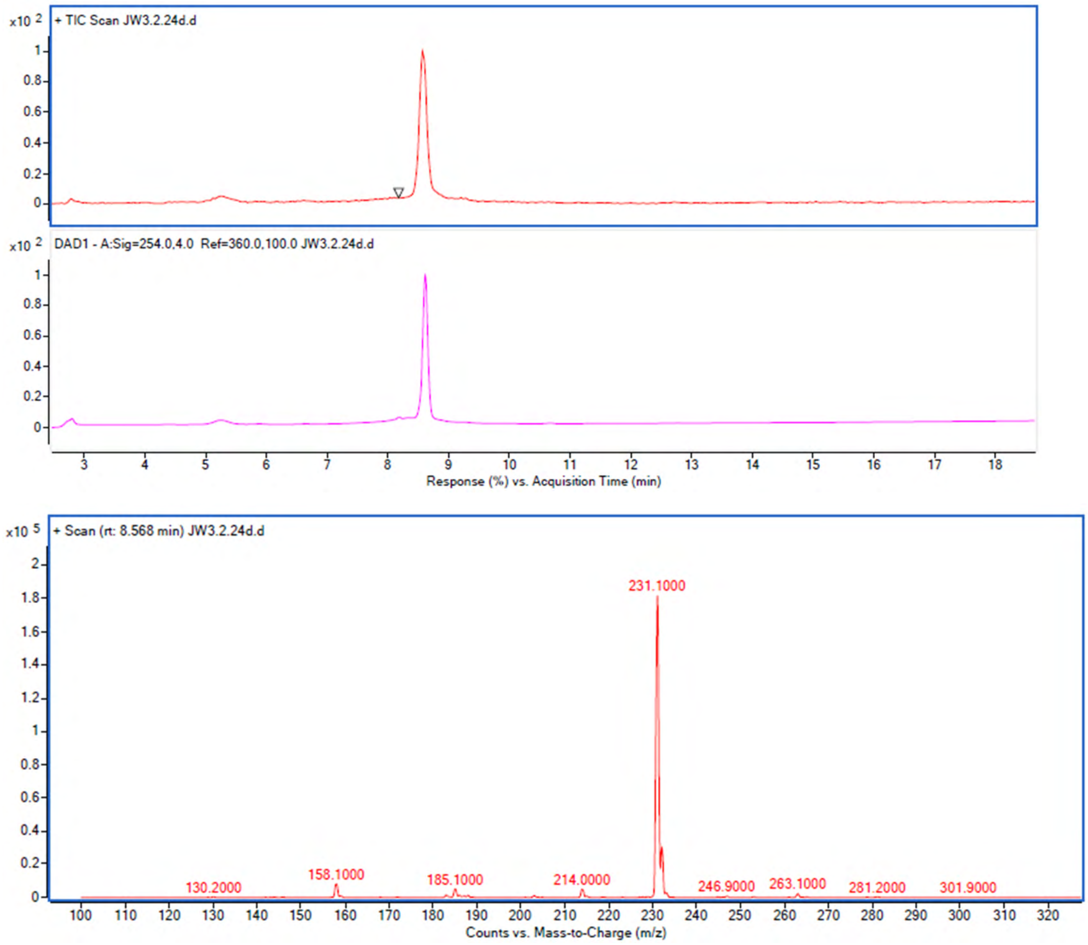


Figure S188. ^{1}H-NMR spectrum of compound **109**.

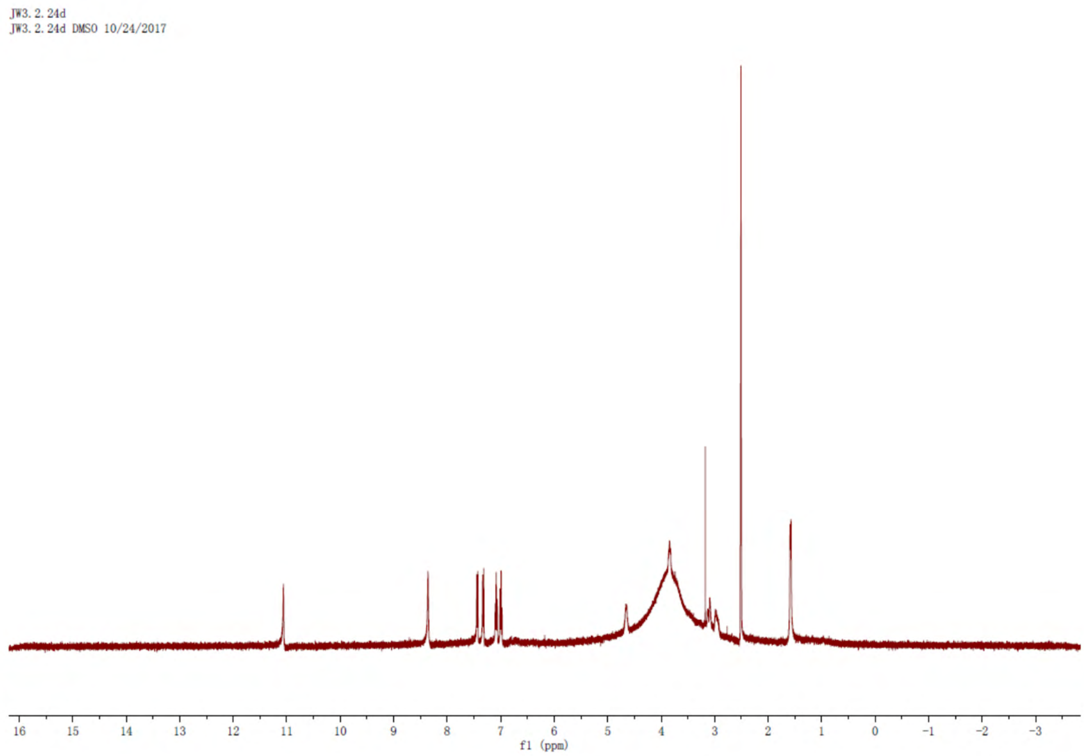
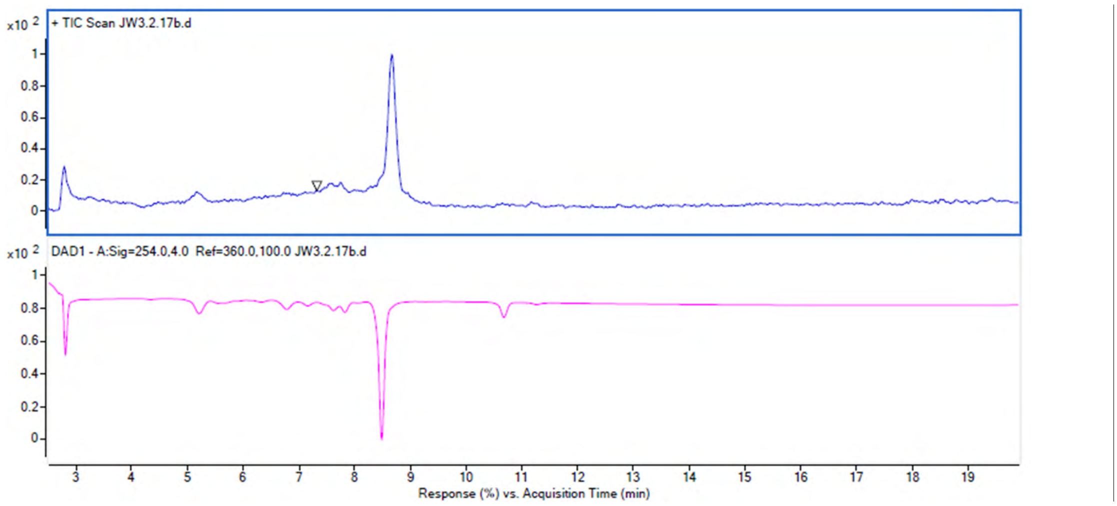


Figure S189. LC-MS spectrum of compound **110**.



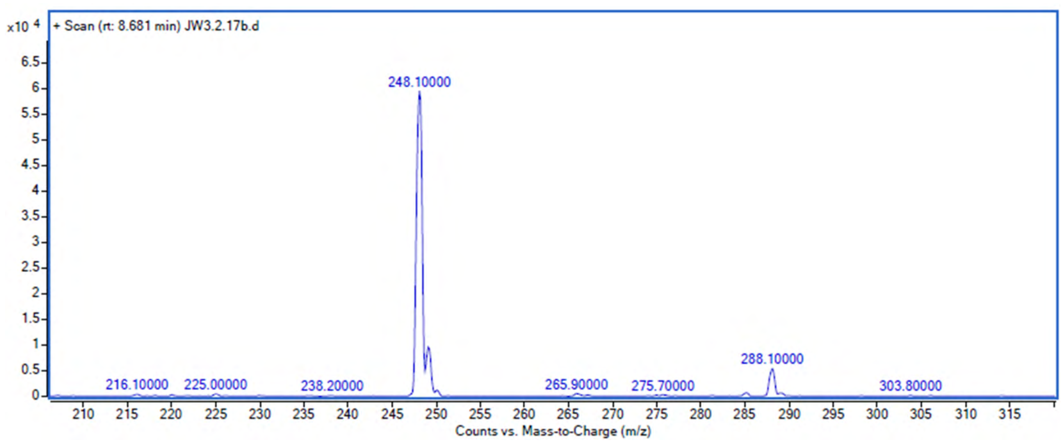


Figure S190. ^{1}H-NMR spectrum of compound **110**.

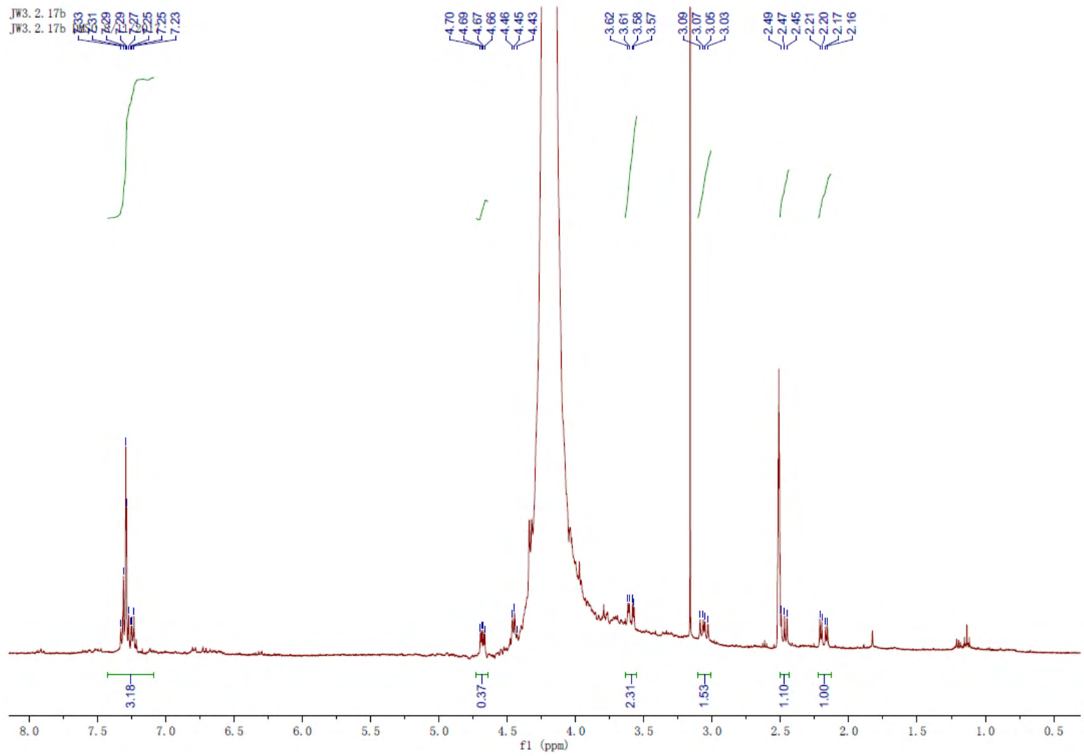


Figure S191. LC-MS spectrum of compound **111**.

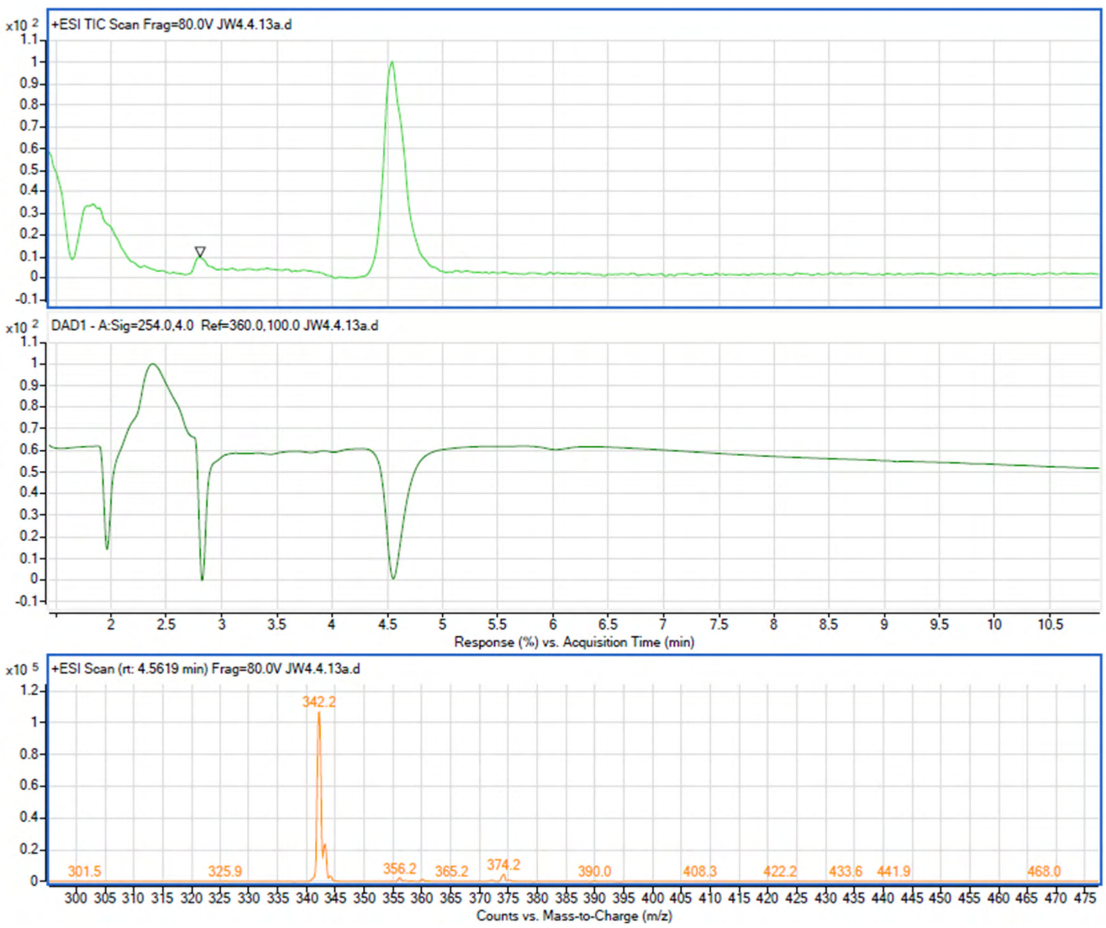
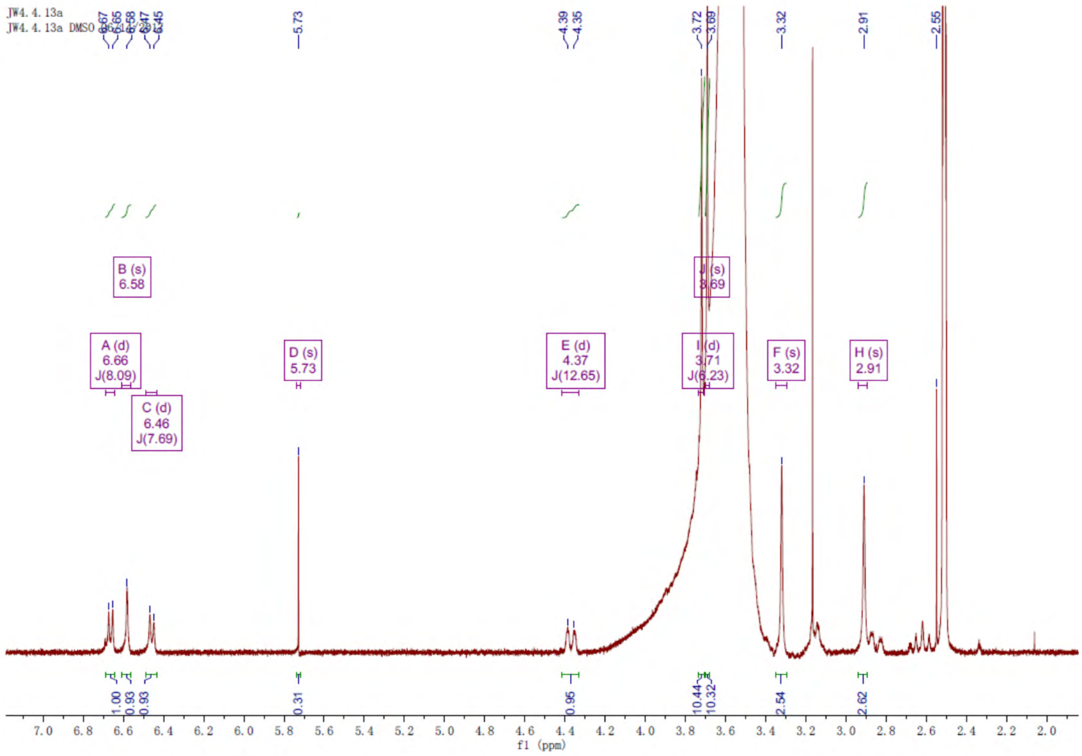


Figure S192. ^{1}H-NMR spectrum of compound **111**.



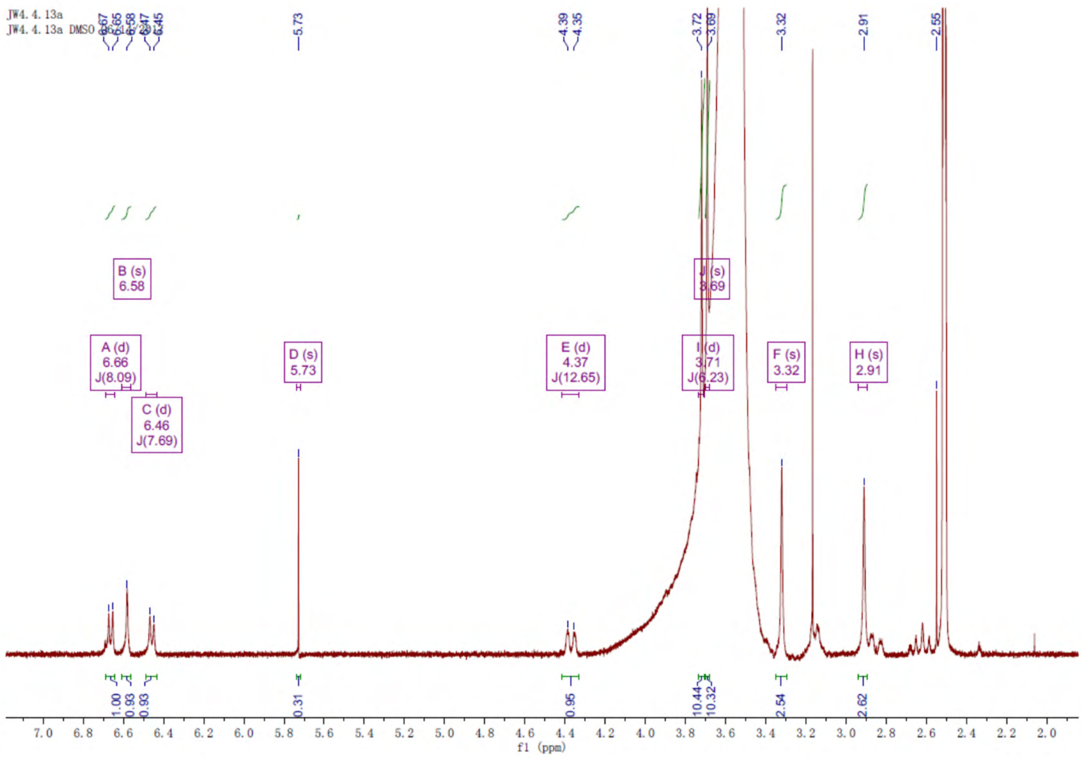


Figure S193. LC-MS spectrum of compound **112**.

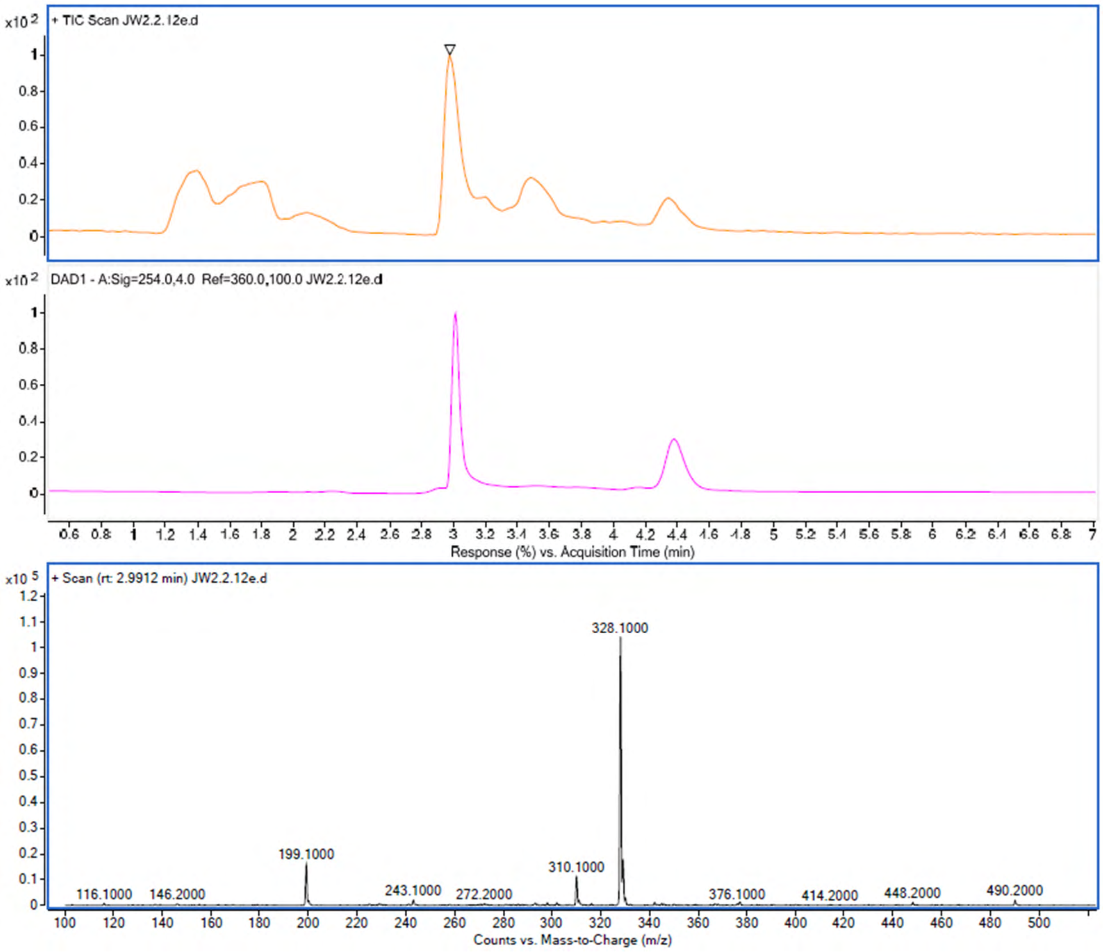


Figure S194. [1]H-NMR spectrum of compound **112**.

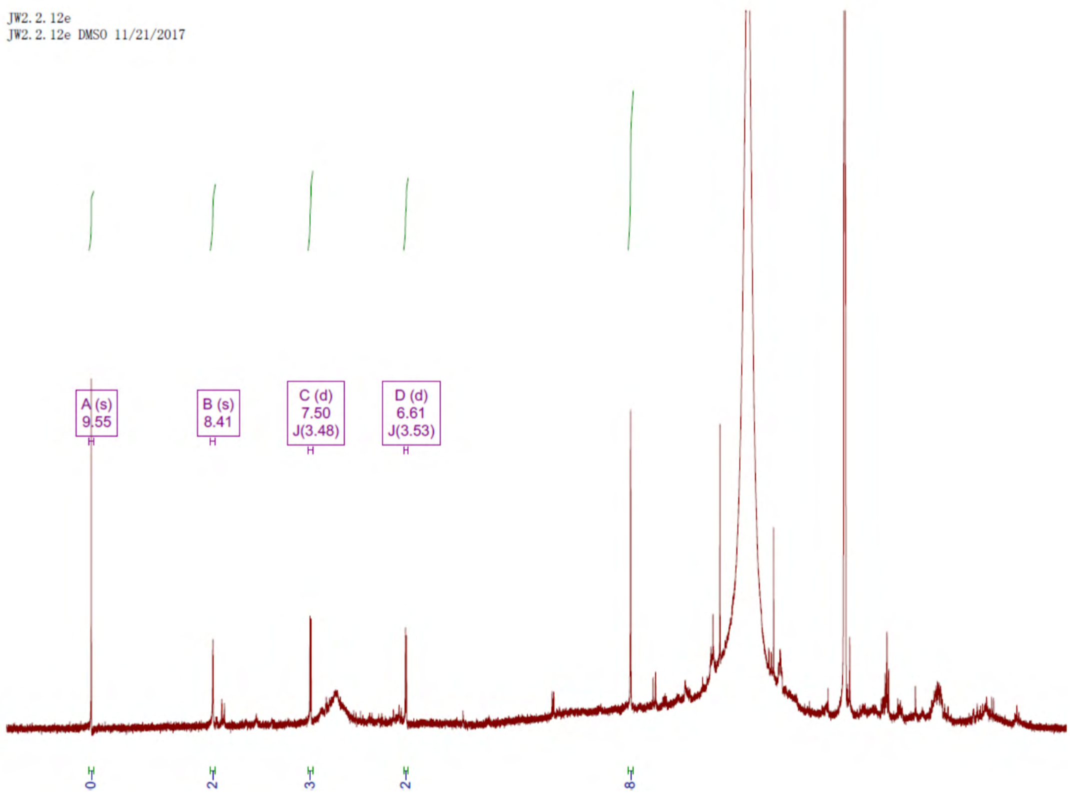


Figure S195. LC-MS spectrum of compound **113**.

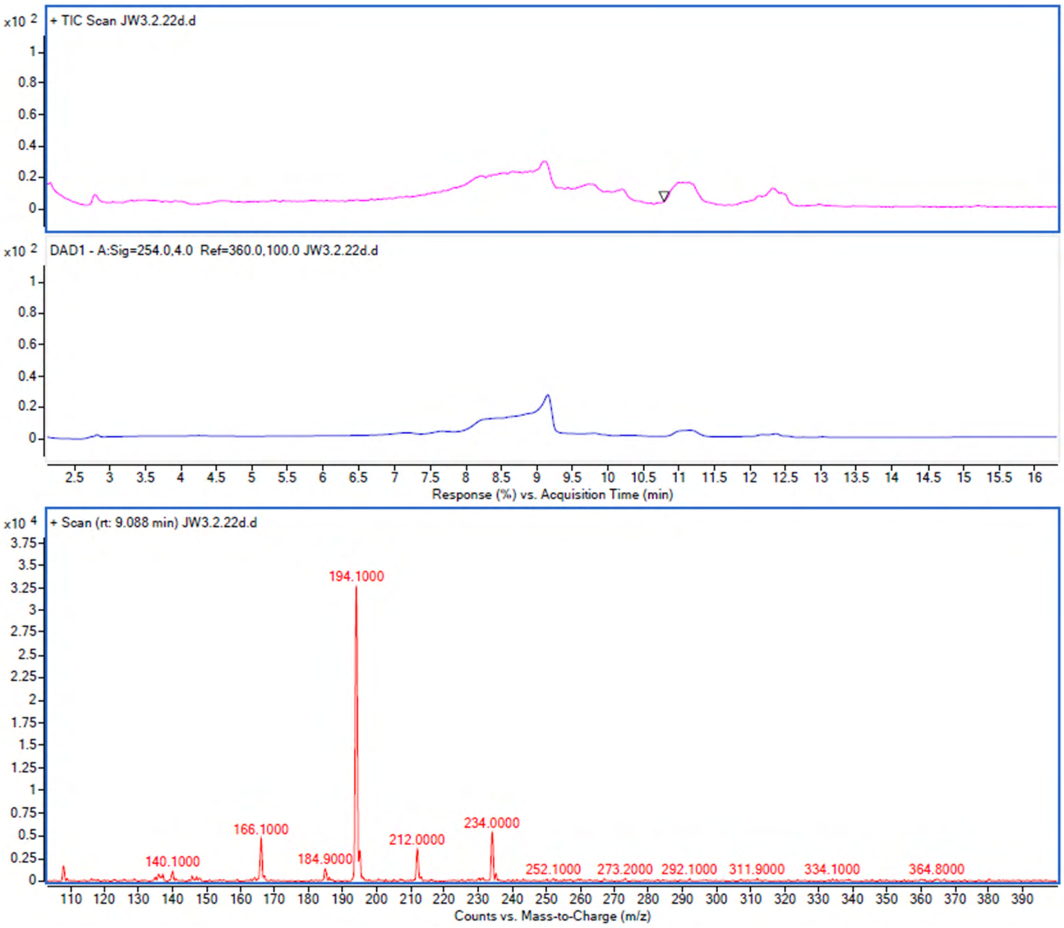


Figure S196. [1]H-NMR spectrum of compound **113**.

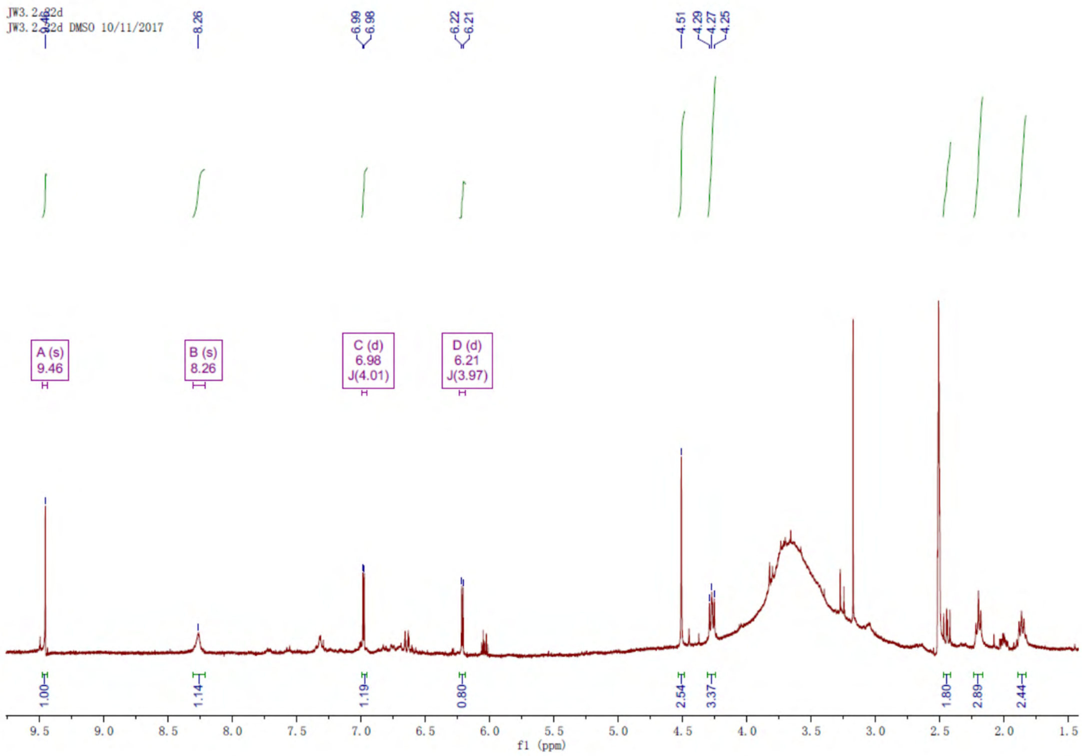


Figure S197. LC-MS spectrum of compound **114**.

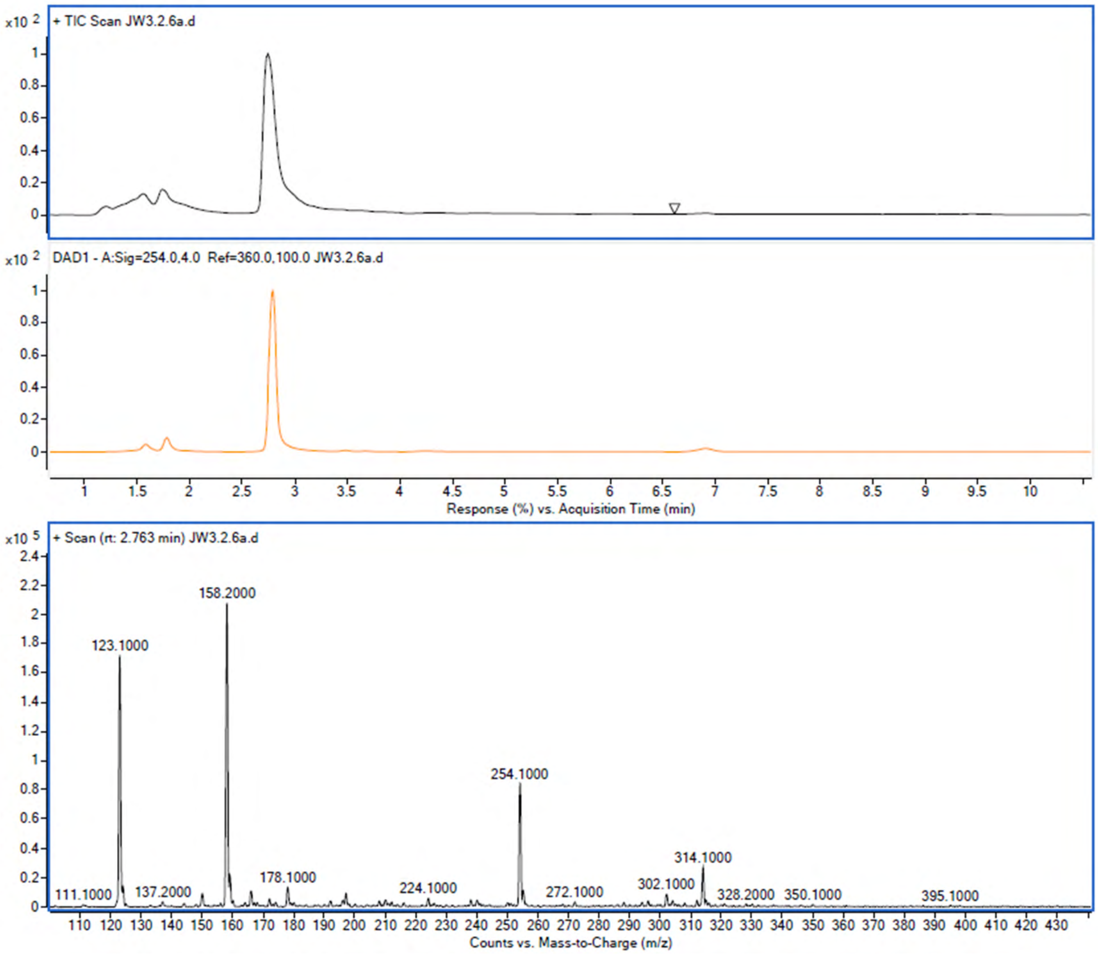


Figure S198. ^{1}H-NMR spectrum of compound **114**.

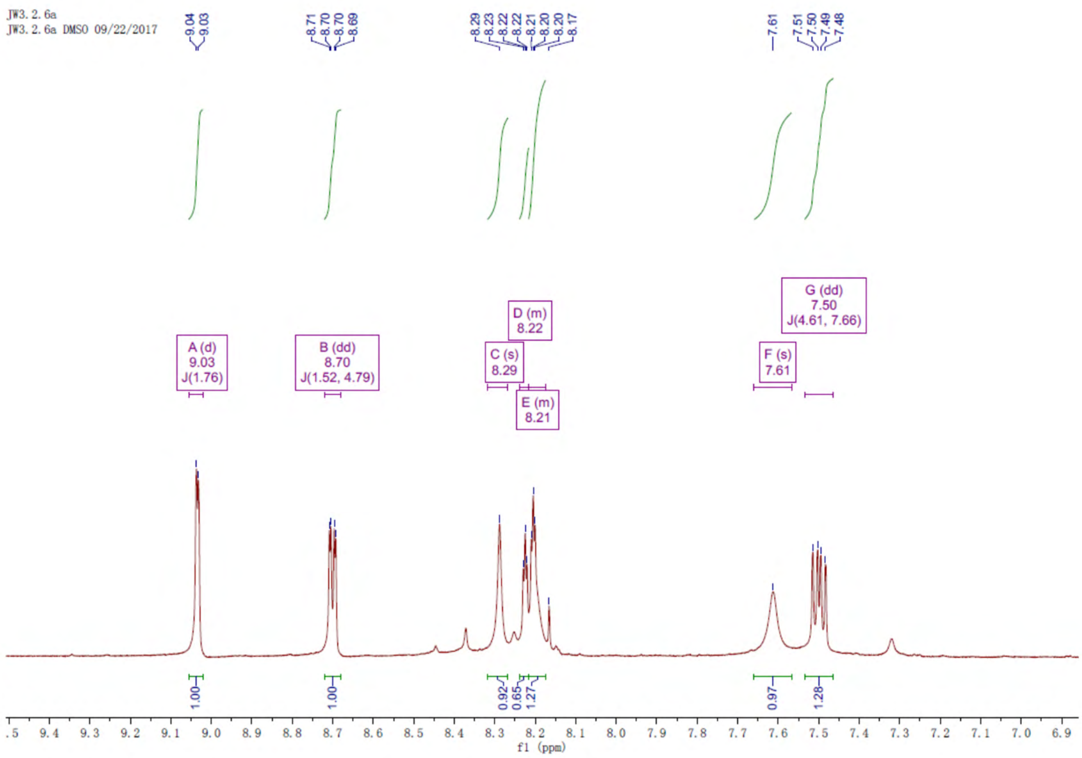


Figure S199. LC-MS spectrum of compound **115**.

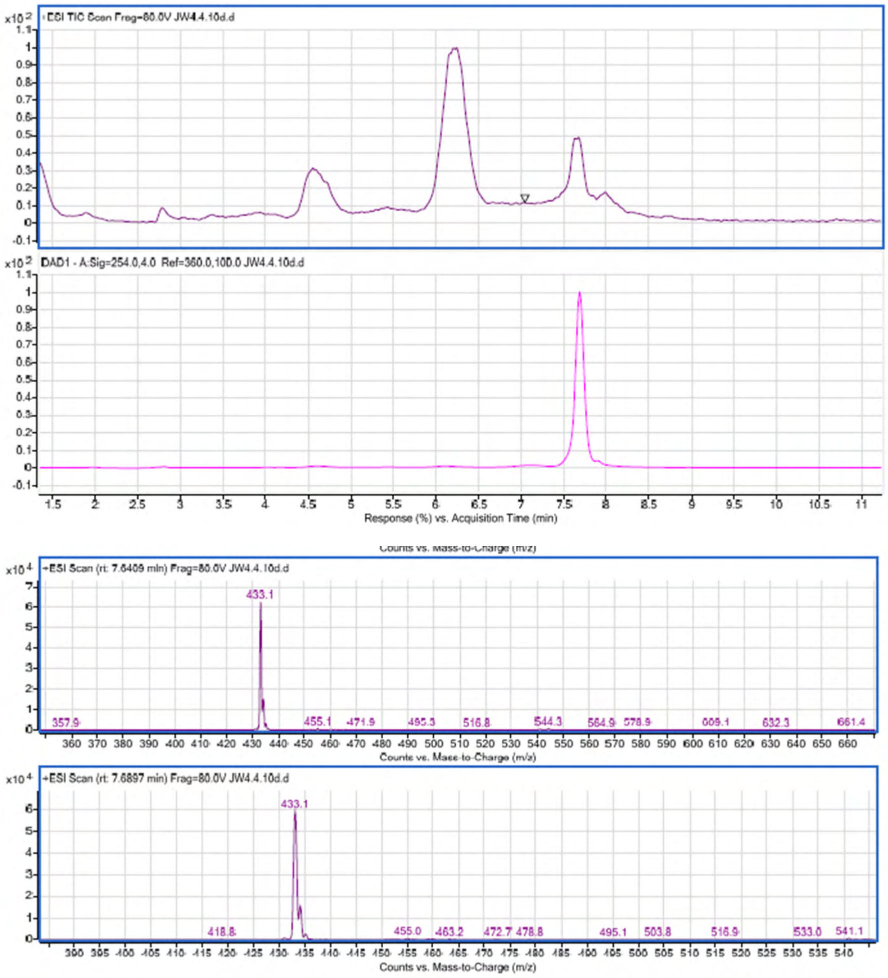


Figure S200. [1]H-NMR spectrum of compound **115**.

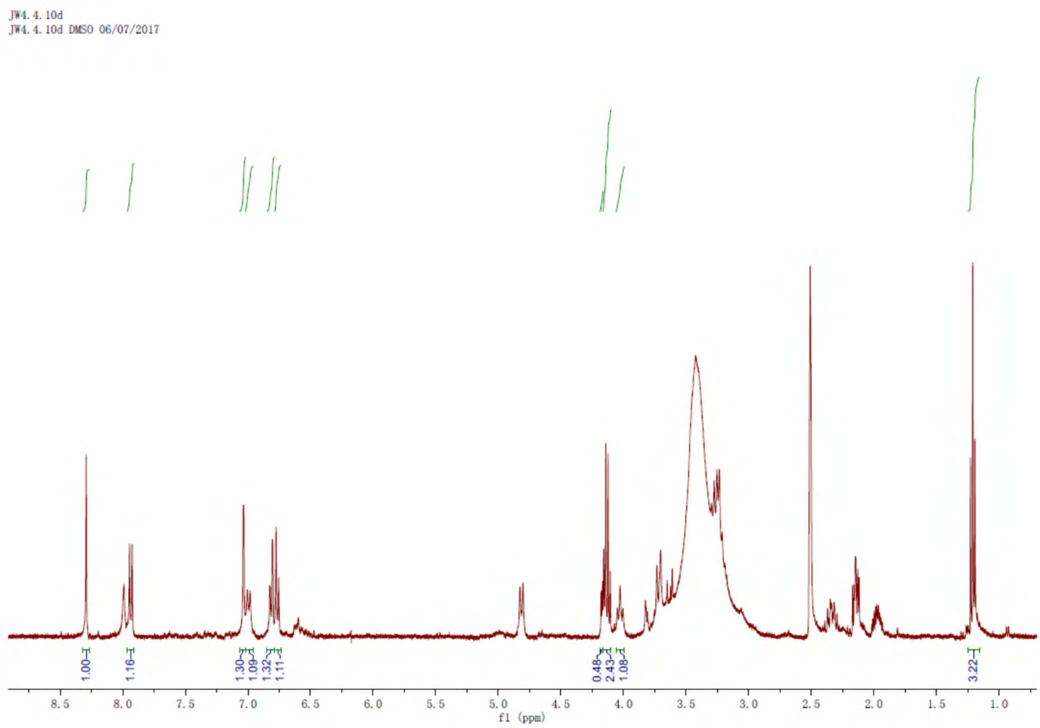


Figure S201. LC-MS spectrum of compound **116**.

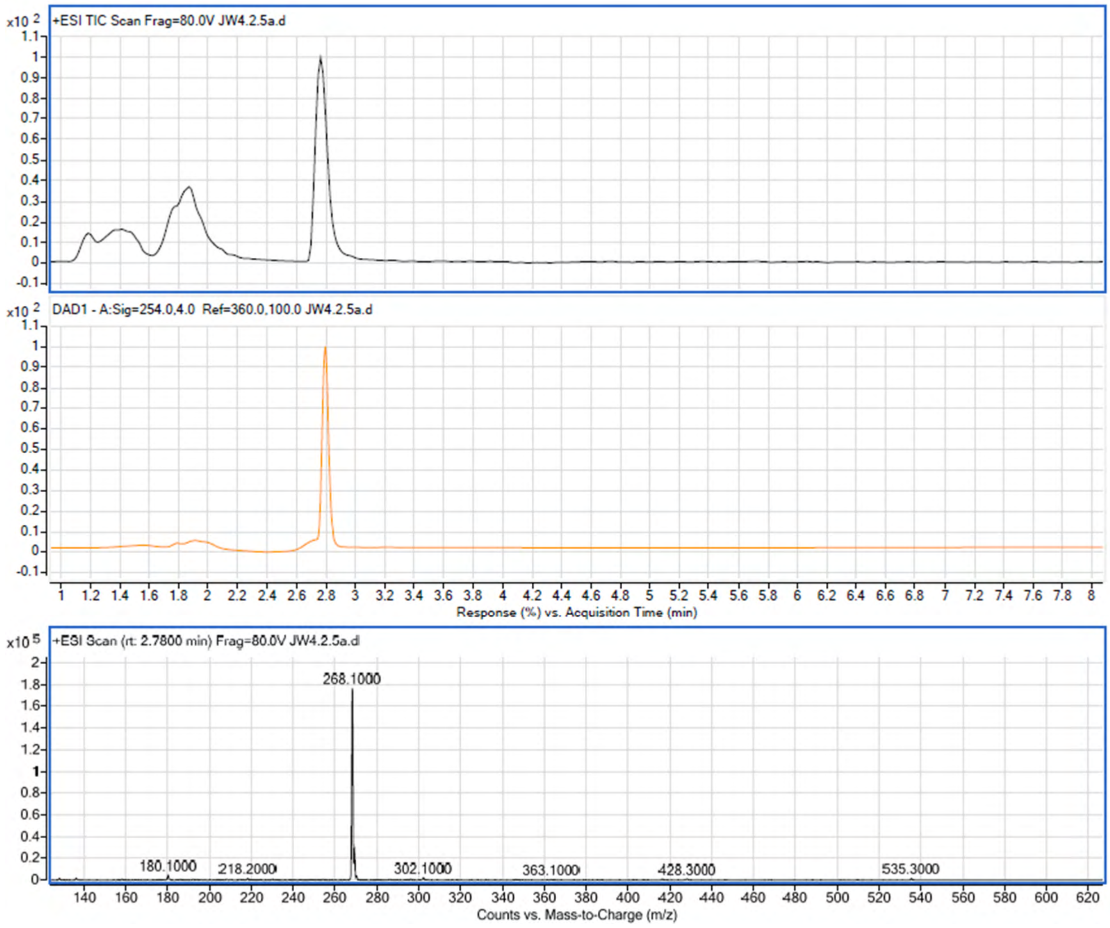


Figure S202. [1]H-NMR spectrum of compound **116**.

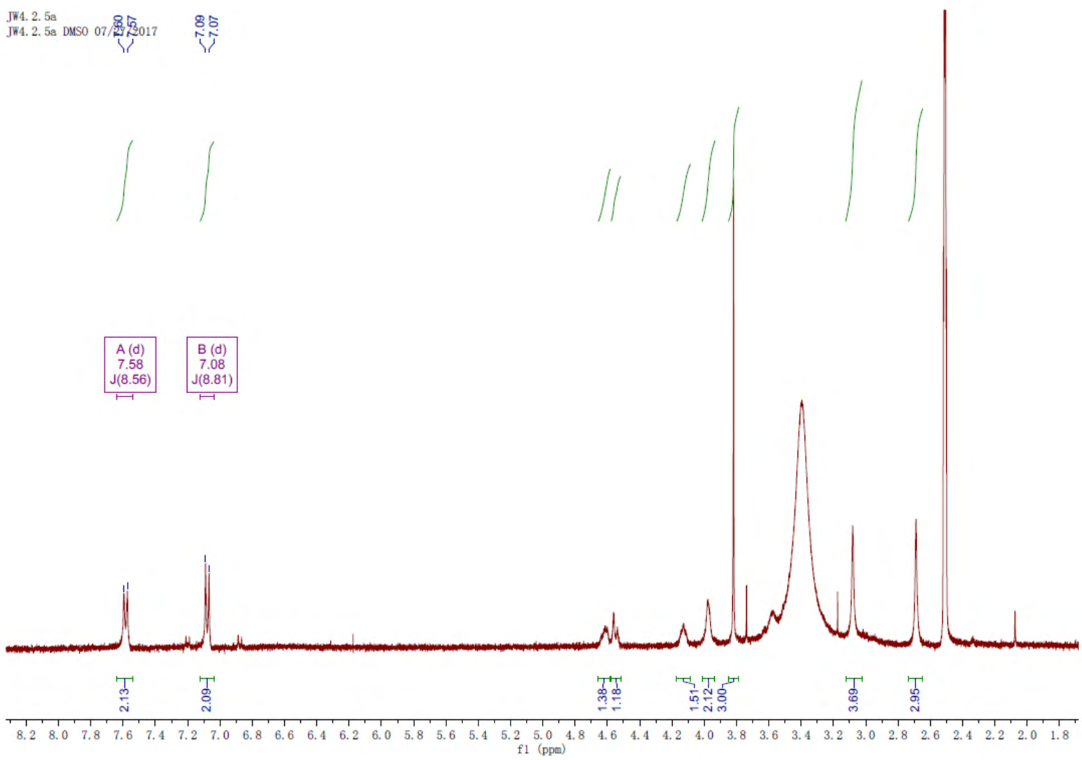


Figure S203. ^{1}H-NMR spectrum of compound **117**.

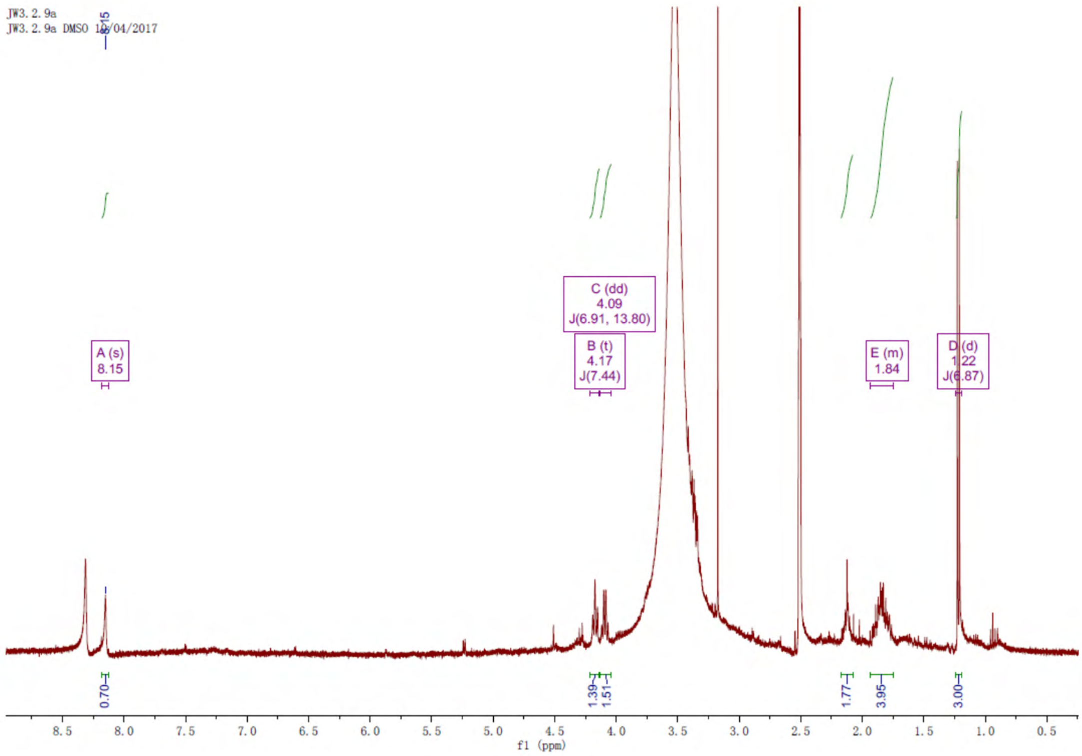


Figure S204. HSQC spectrum of compound **117**.

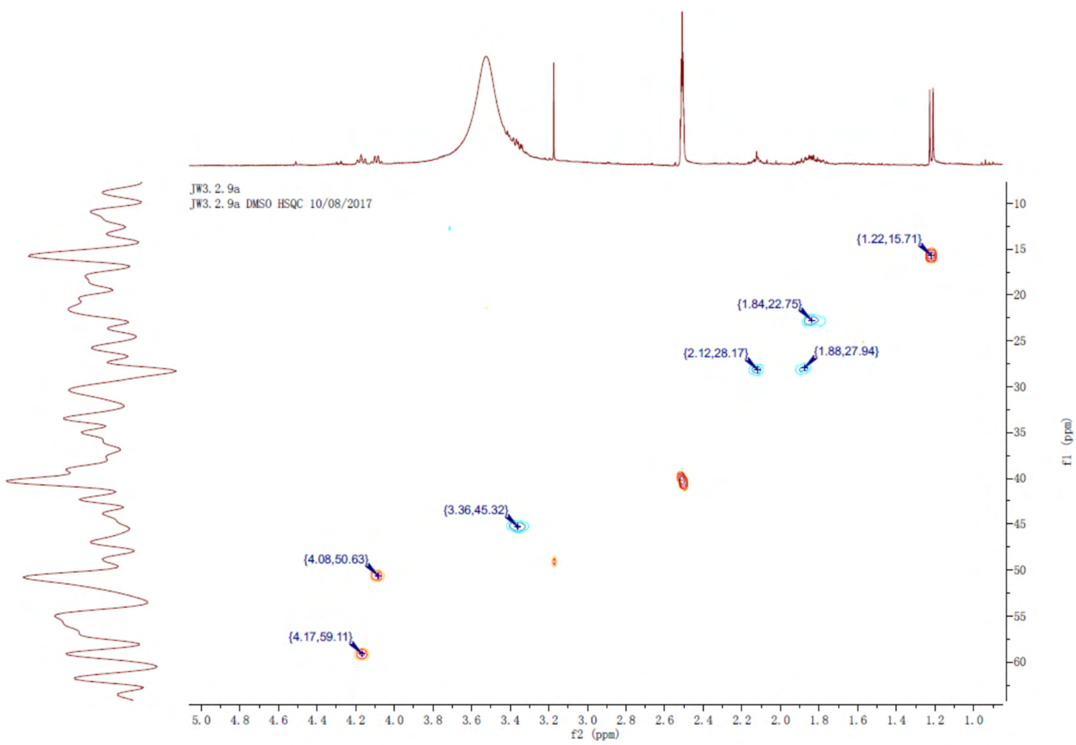


Figure S205. ¹H-NMR spectrum of compound **118**.

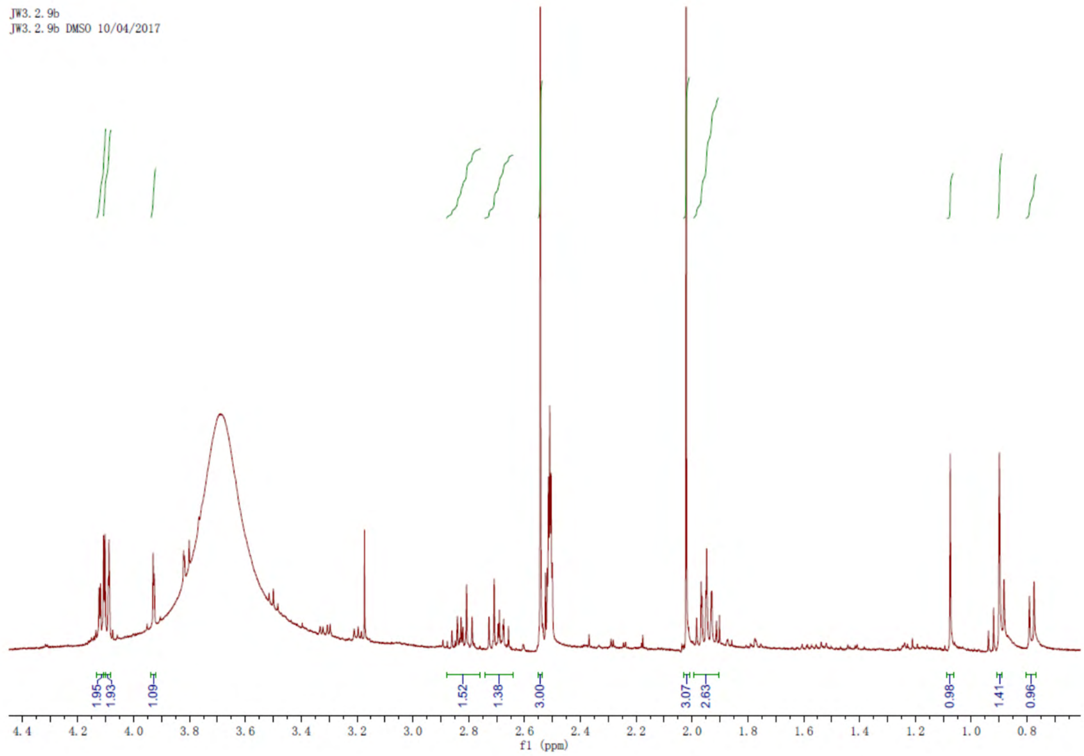


Figure S206. HMBC spectrum of compound **118**.

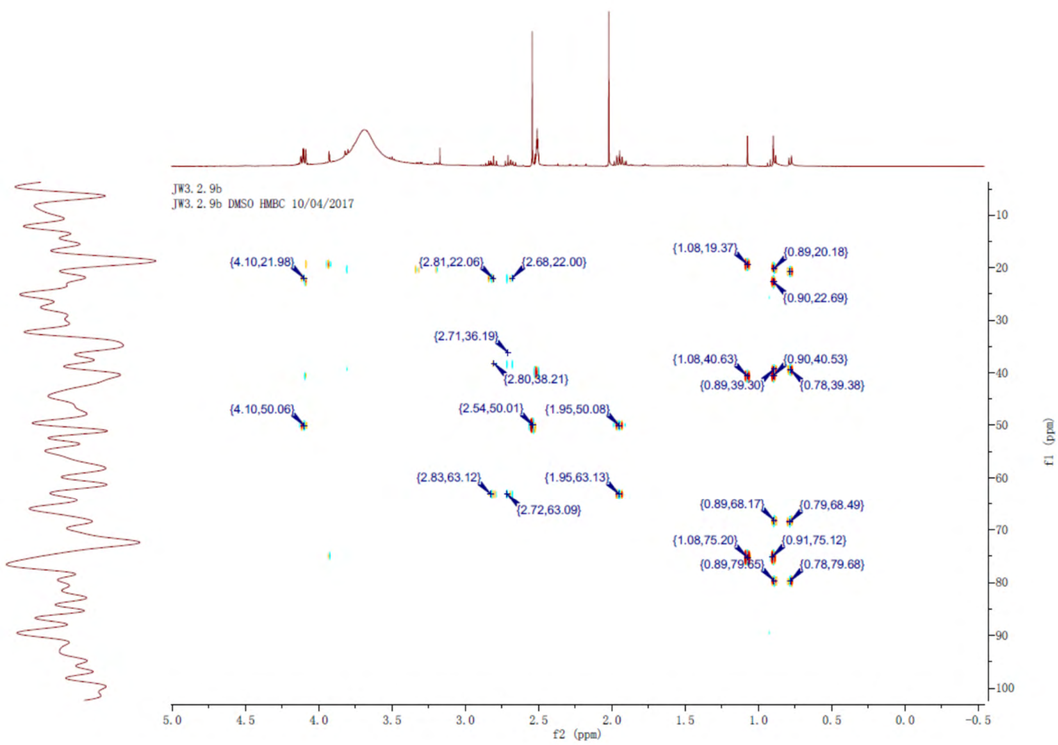


Figure S207. LC-MS spectrum of compound **119**.

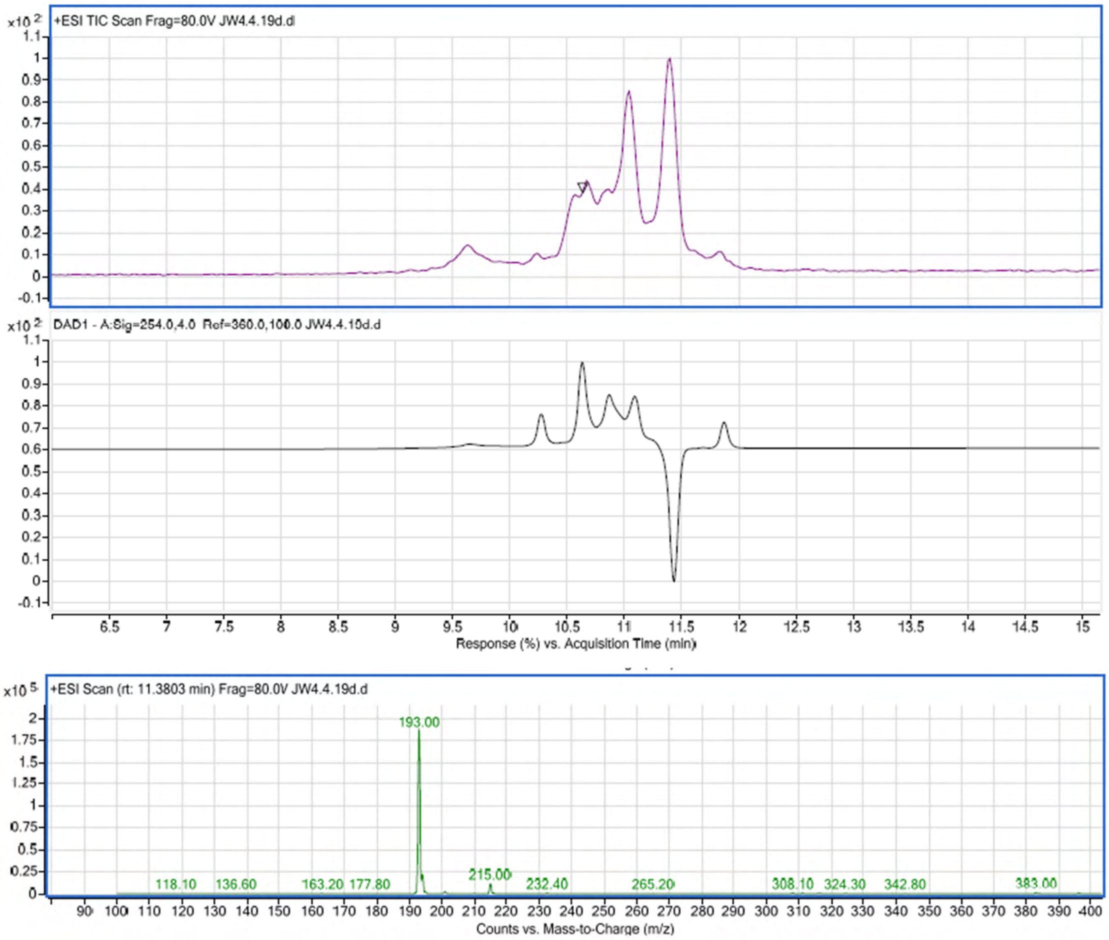


Figure S208. ^{1}H-NMR spectrum of compound **119**.

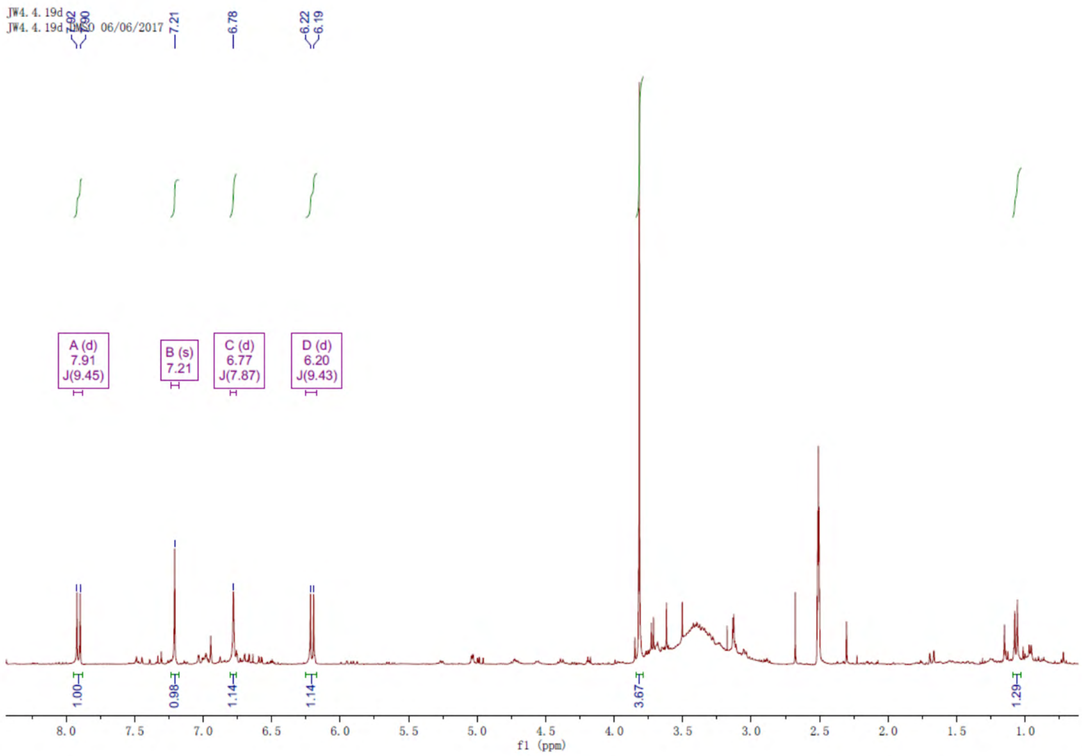


Figure S209. LC-MS spectrum of compound **120**.

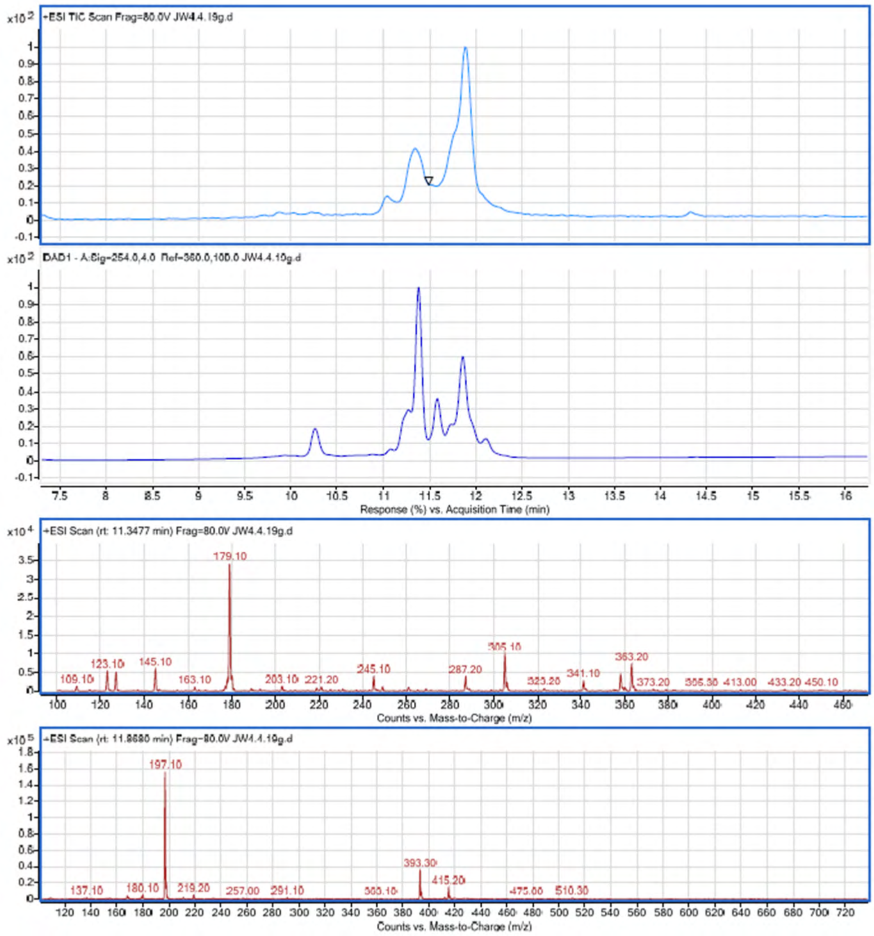


Figure S210. [1]H-NMR spectrum of compound **120**.

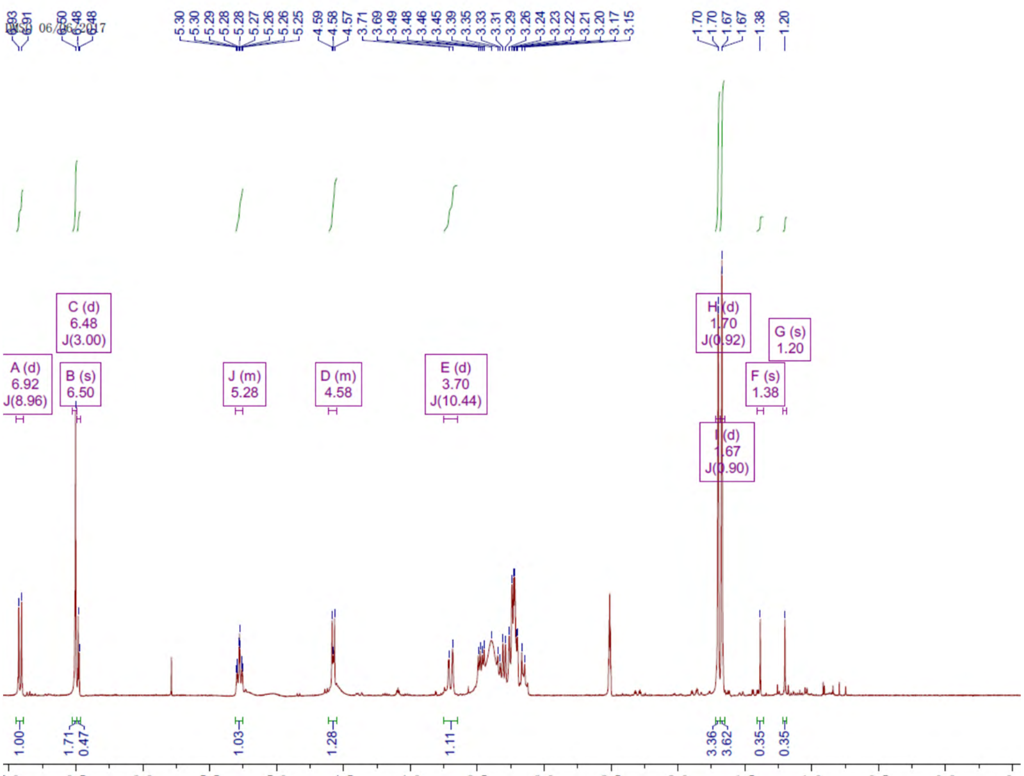


Figure S211. [1]H-NMR spectrum of compound **121**.

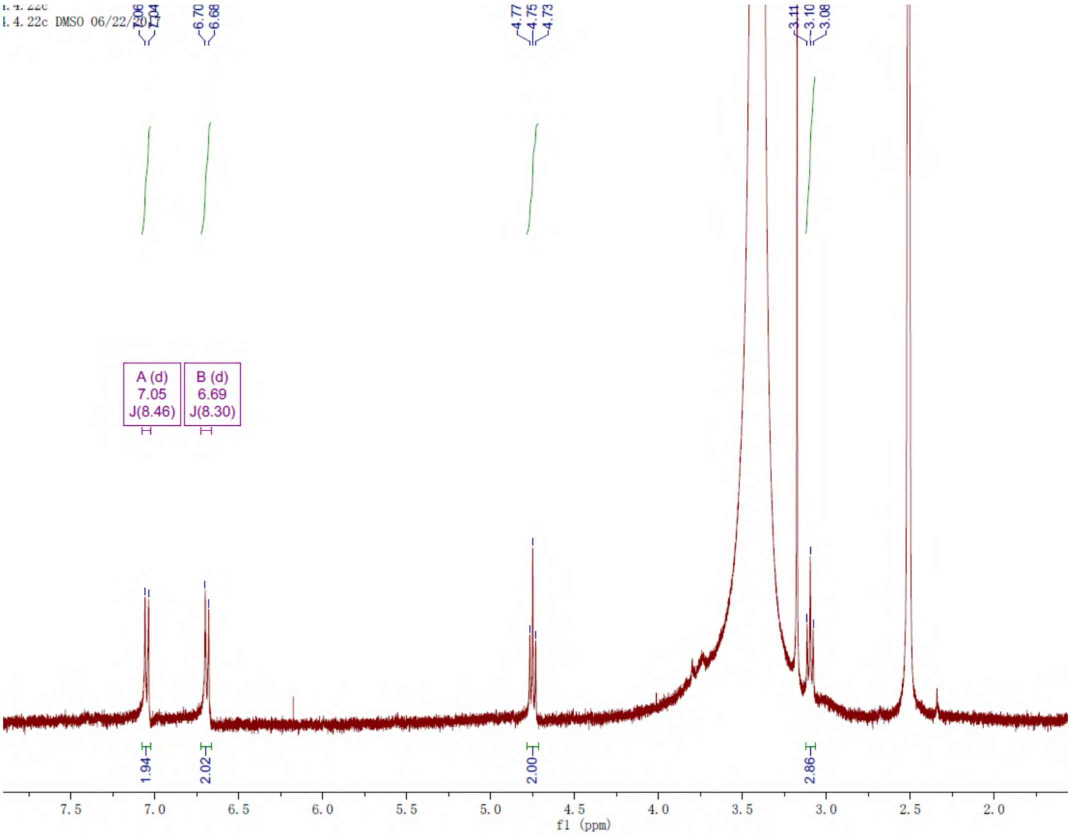


Figure S212. LC-MS spectrum of compound **122**.

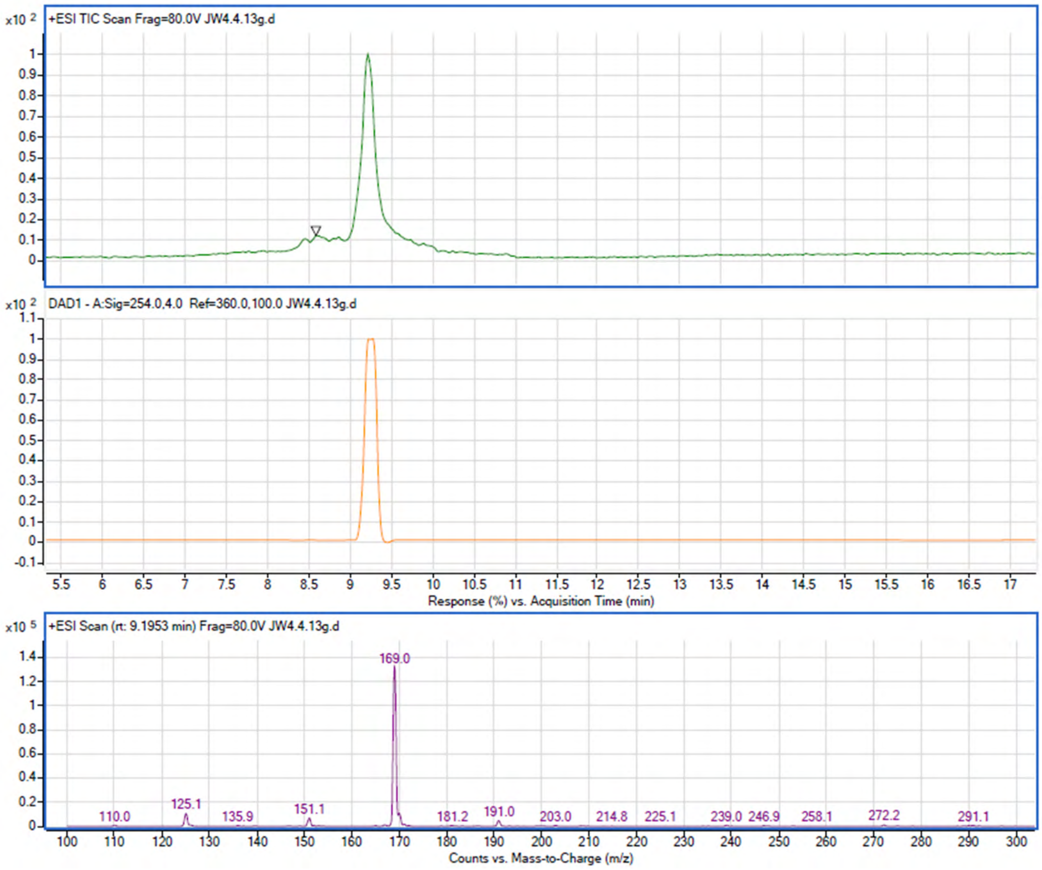


Figure S213. ^{1}H-NMR spectrum of compound **122**.

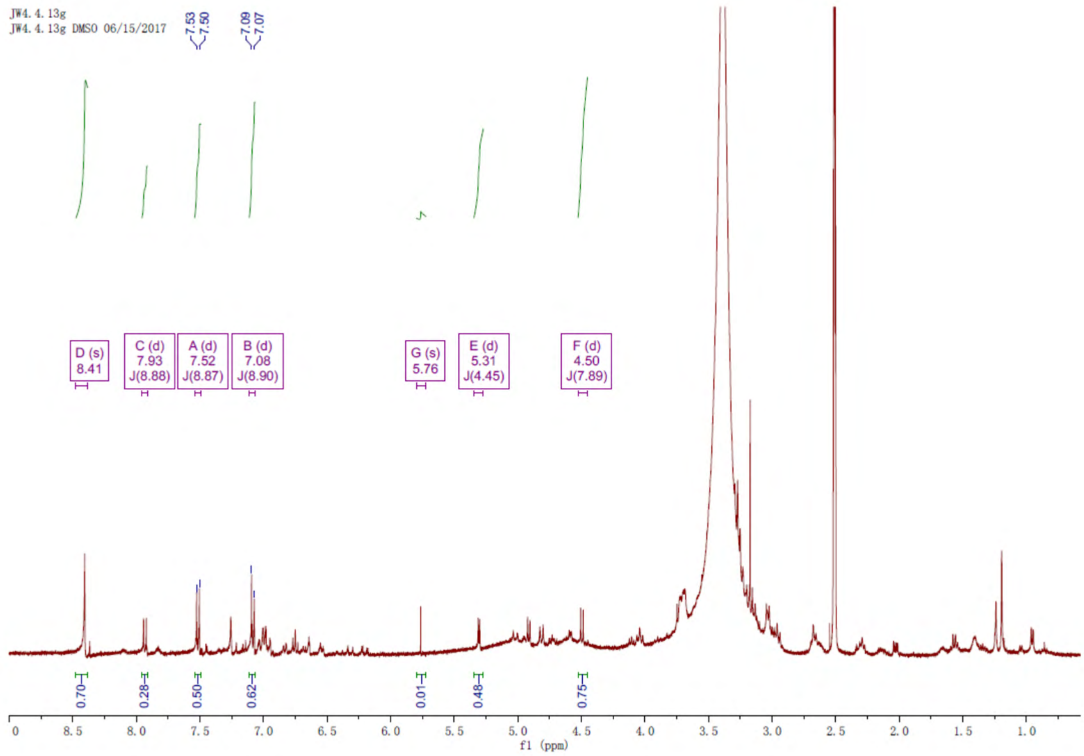


Figure S214. LC-MS spectrum of compound **123**.

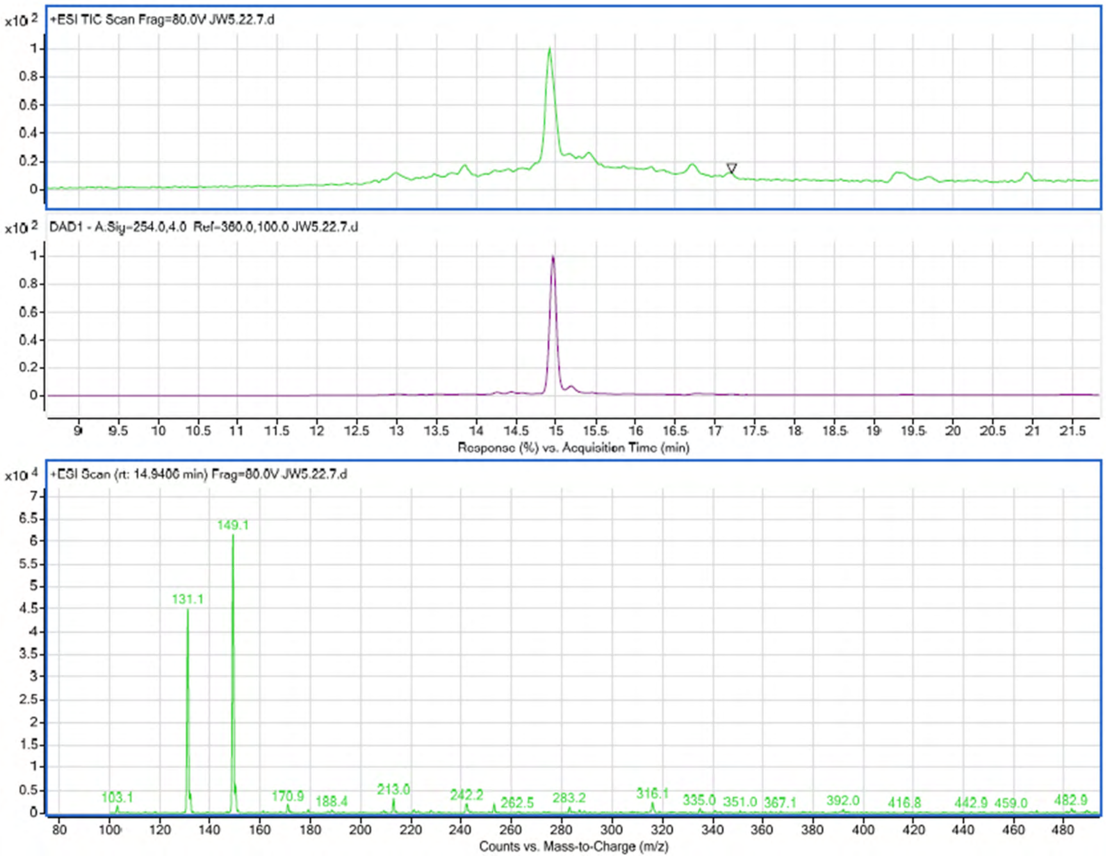


Figure S215. ^{1}H-NMR spectrum of compound **123**.

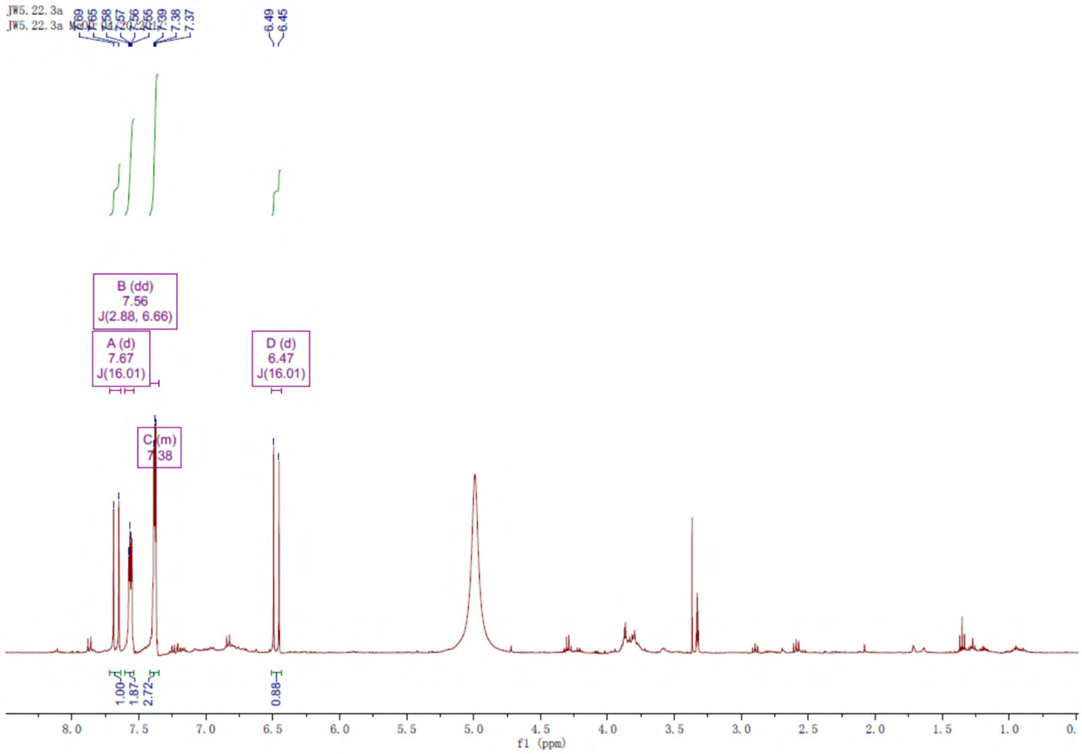


Figure S216. LC-MS spectrum of compound **124**.

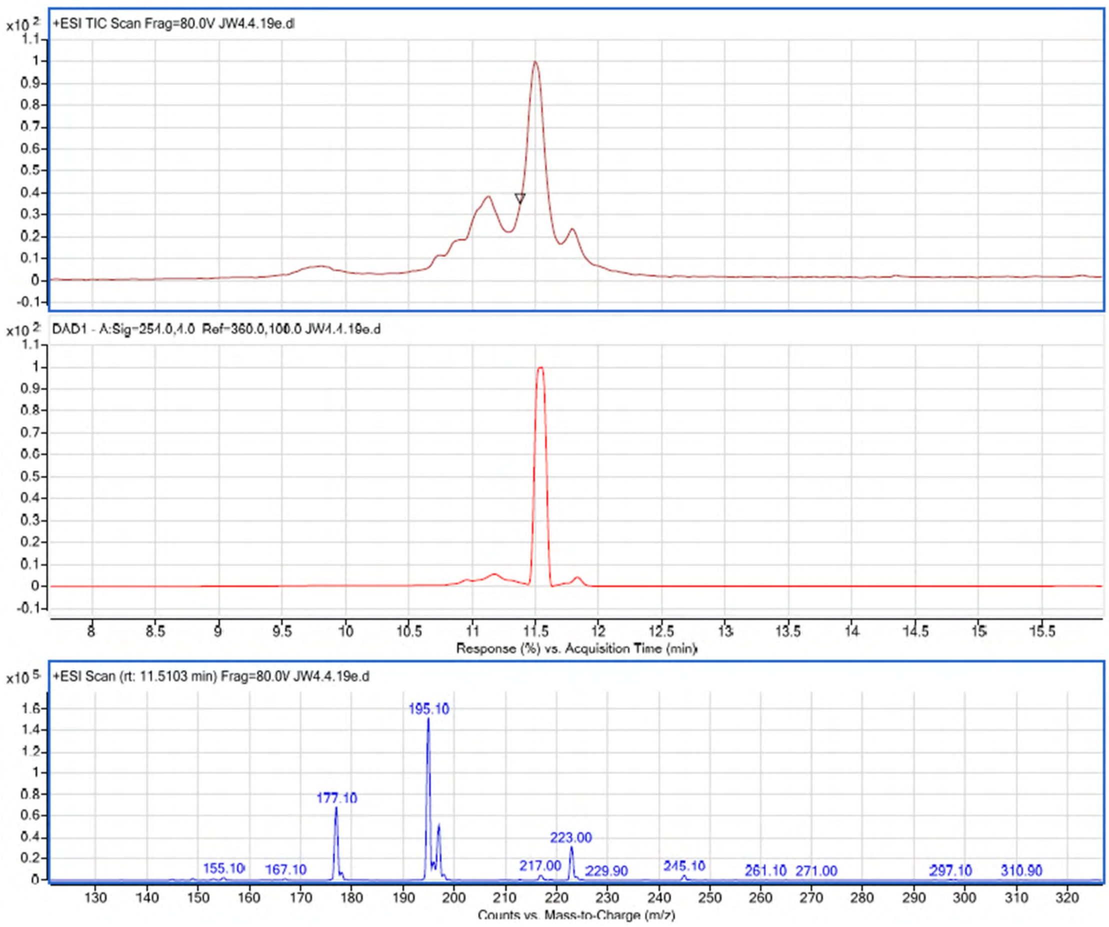


Figure S217. ^{1}H-NMR spectrum of compound **124**.

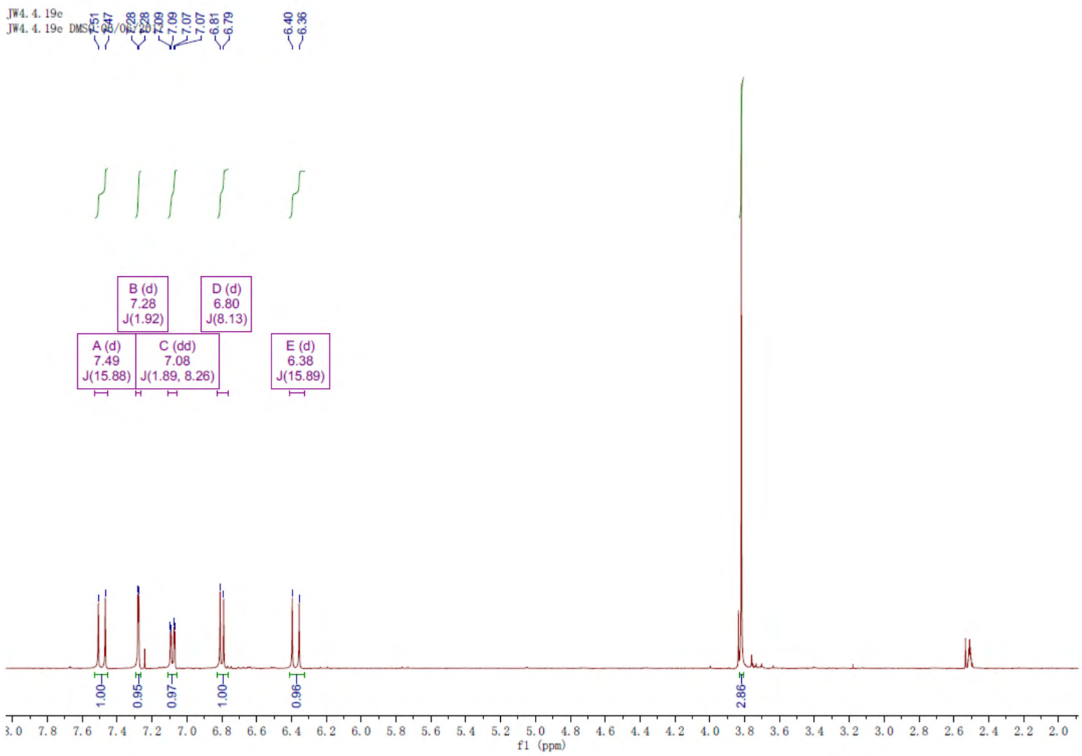


Figure S218. LC-MS spectrum of compound **125**.

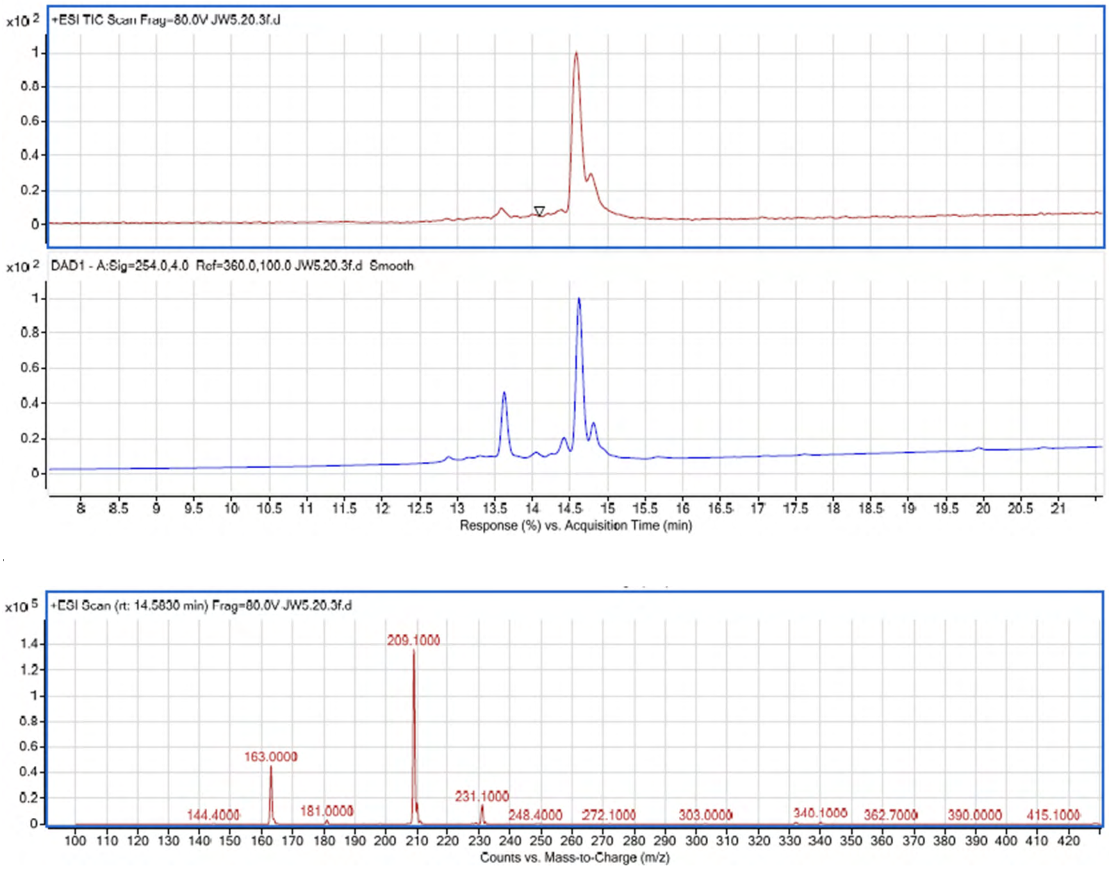


Figure S219. [1]H-NMR spectrum of compound **125**.

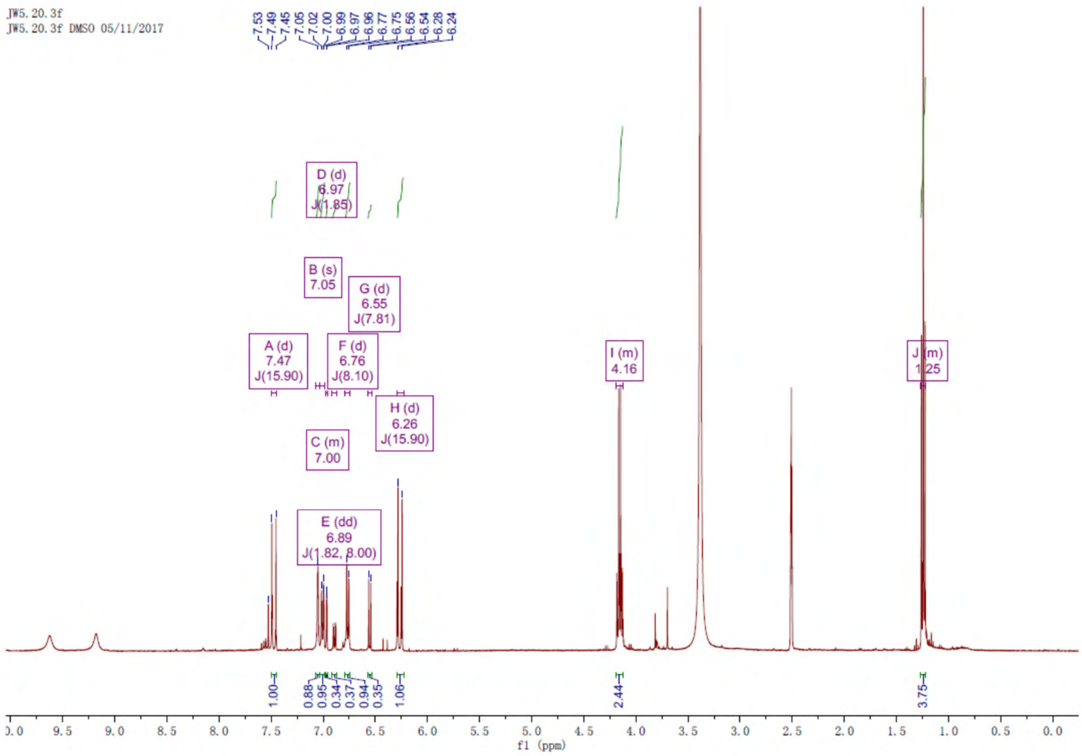


Figure S220. LC-MS spectrum of compound **126**.

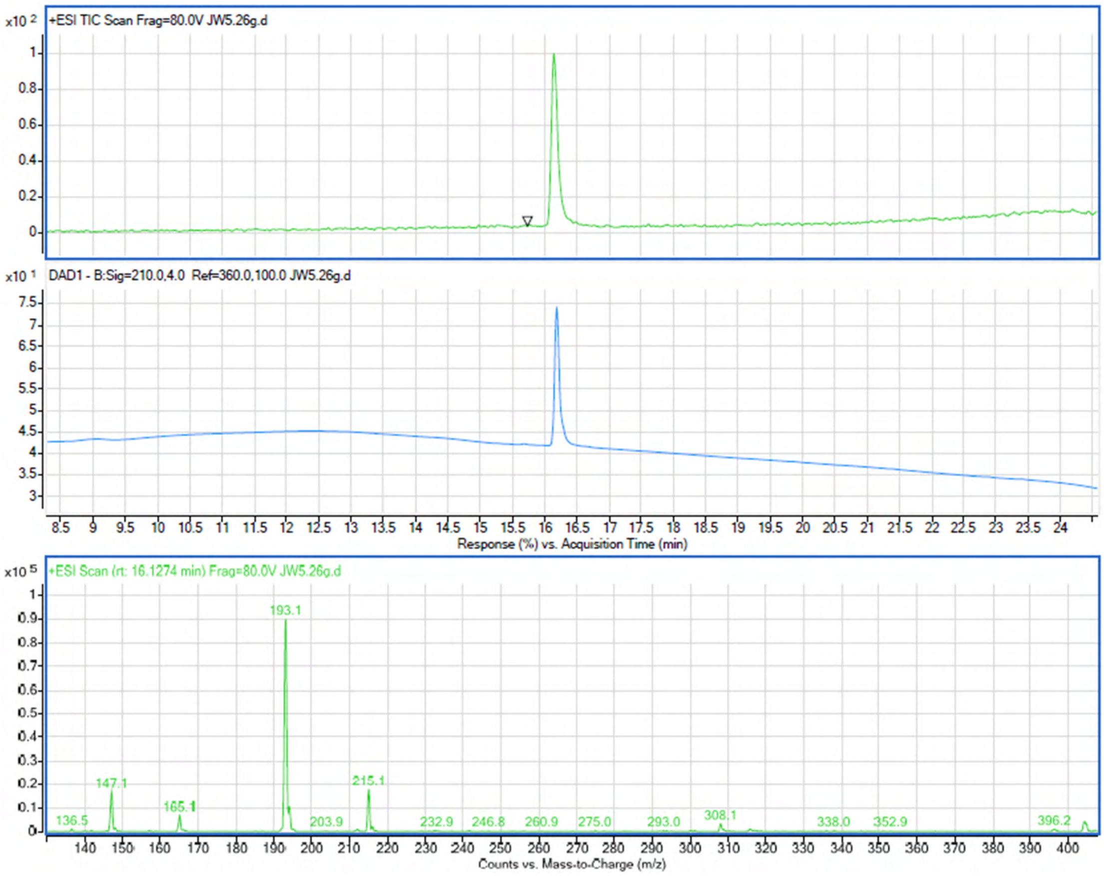


Figure S221. ^{1}H-NMR spectrum of compound **126**.

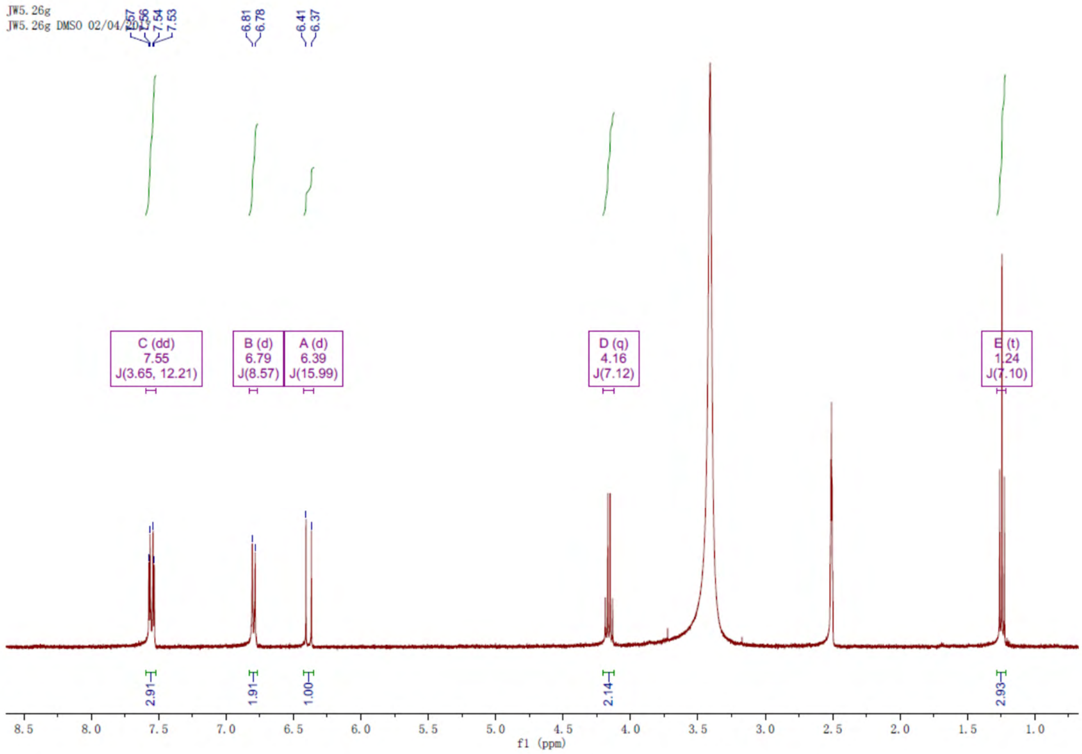


Figure S222. LC-MS spectrum of compound **127**.

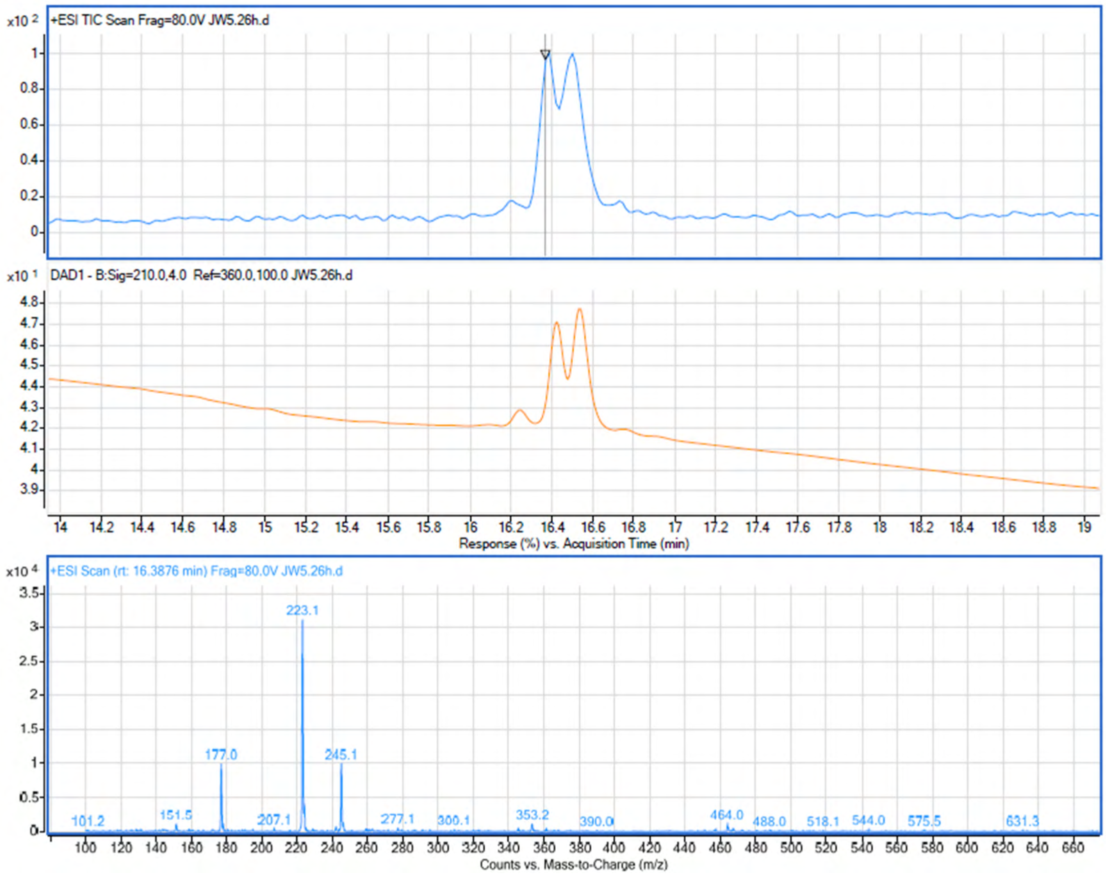


Figure S223. ^{1}H-NMR spectrum of compound **127**.

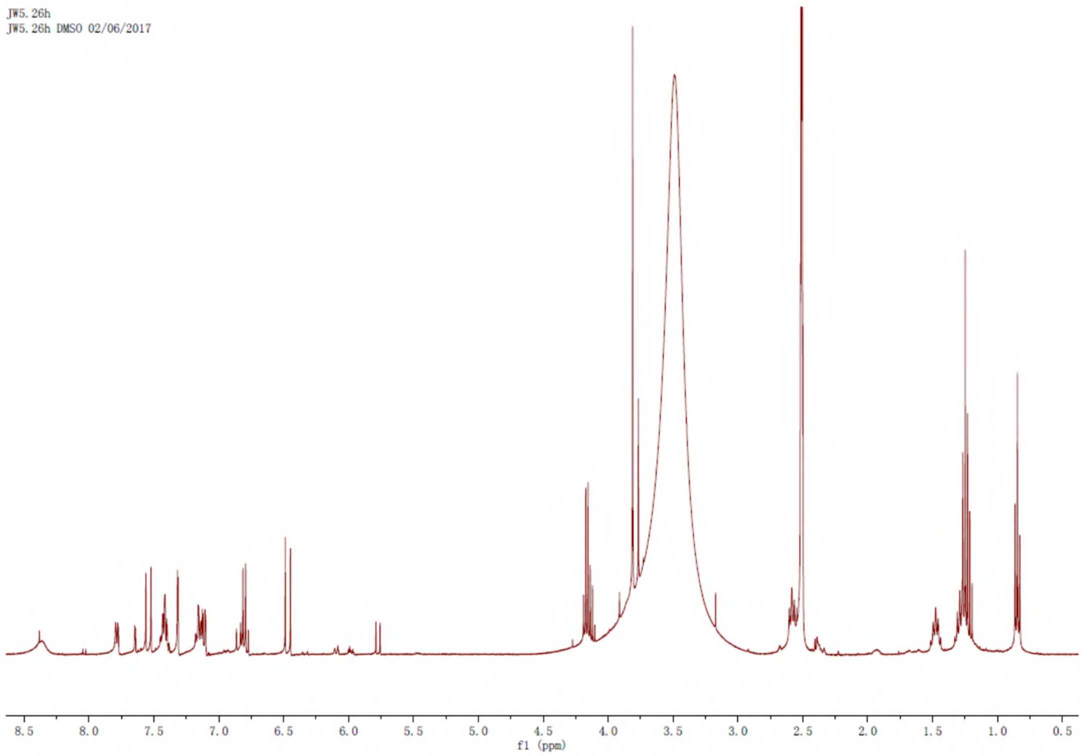


Figure S224. LC-MS spectrum of compound **128**.

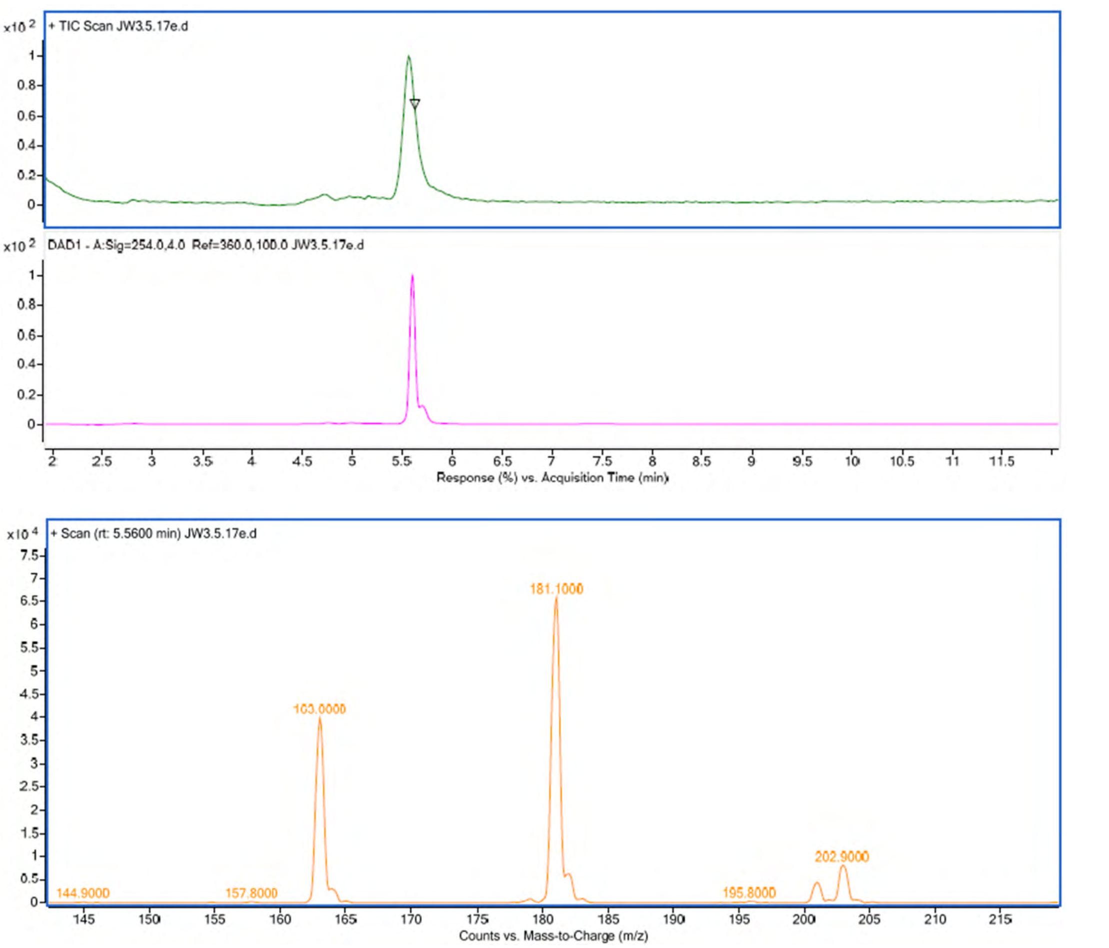


Figure S225. [1]H-NMR spectrum of compound **128**.

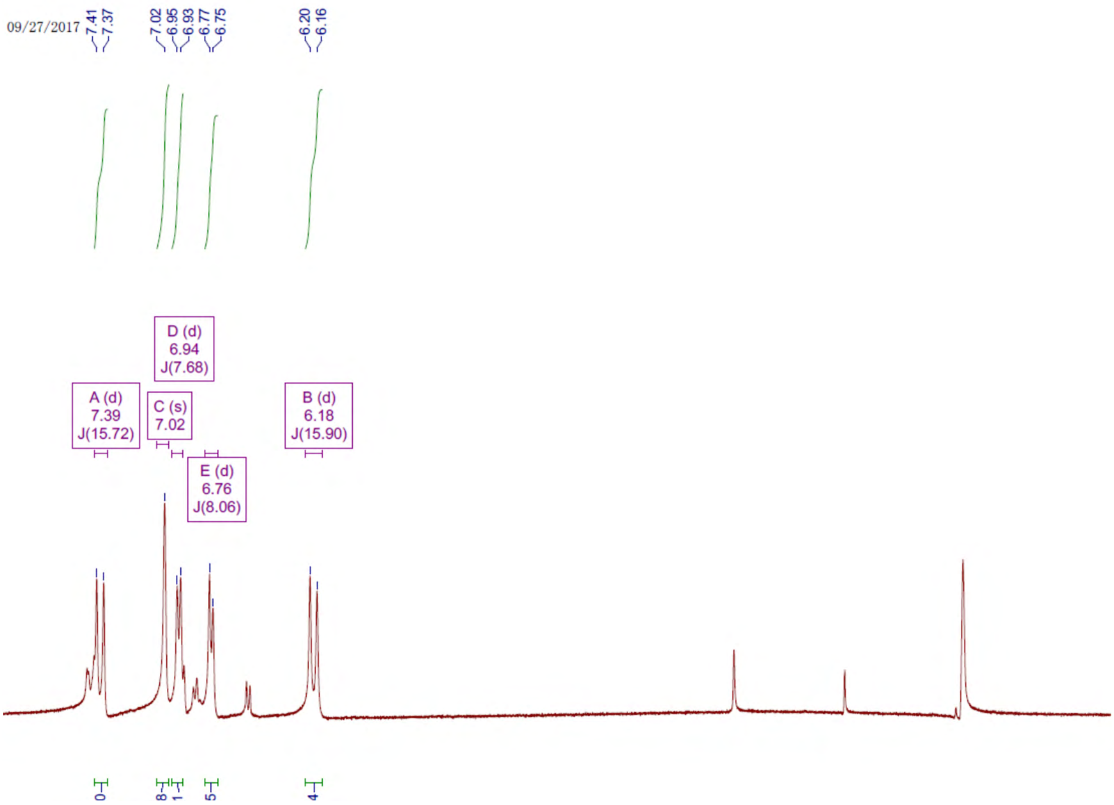


Figure S226. LC-MS spectrum of compound **129**.

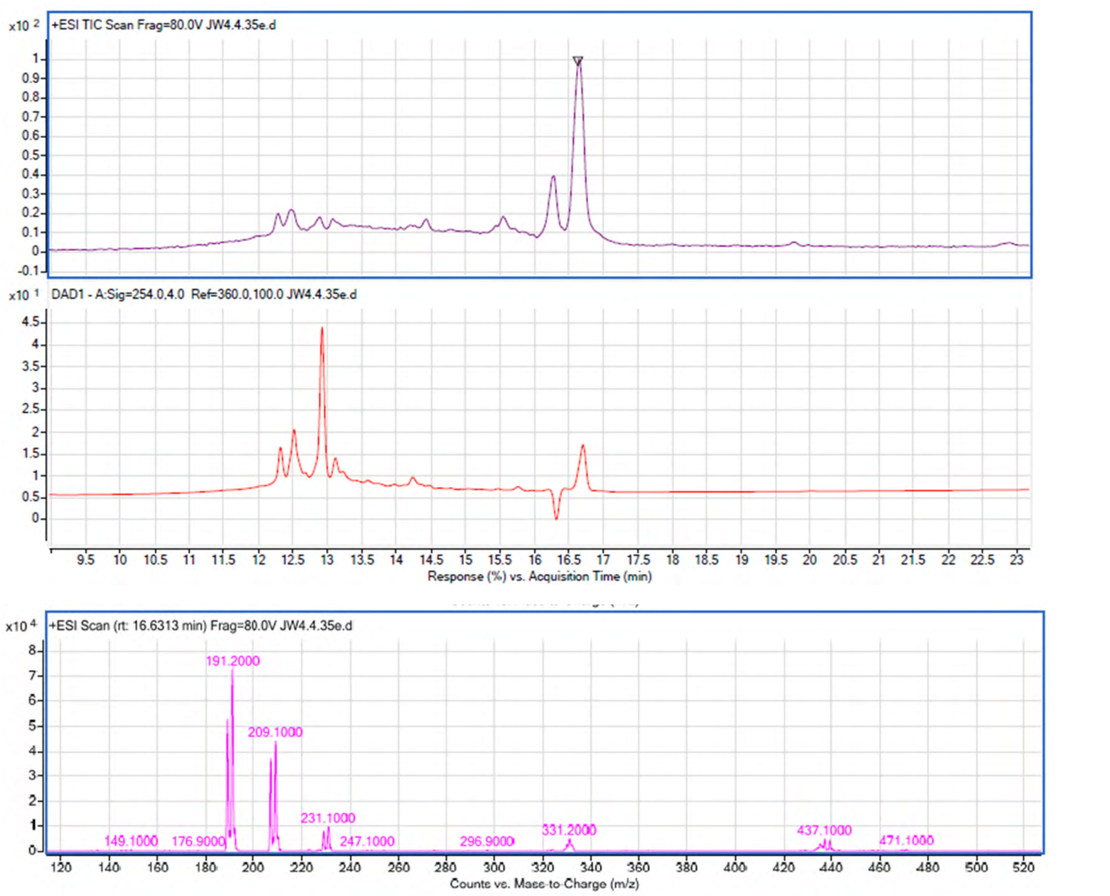


Figure S227. ^{1}H-NMR spectrum of compound **129**.

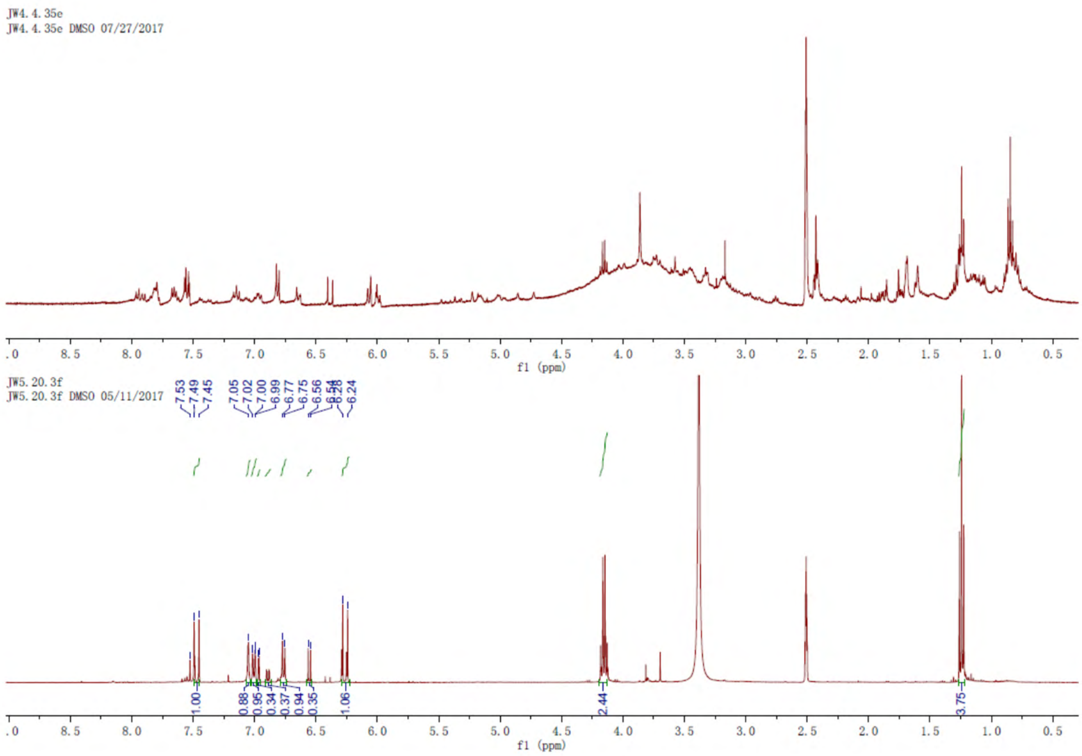


Figure S228. LC-MS spectrum of compound **130**.

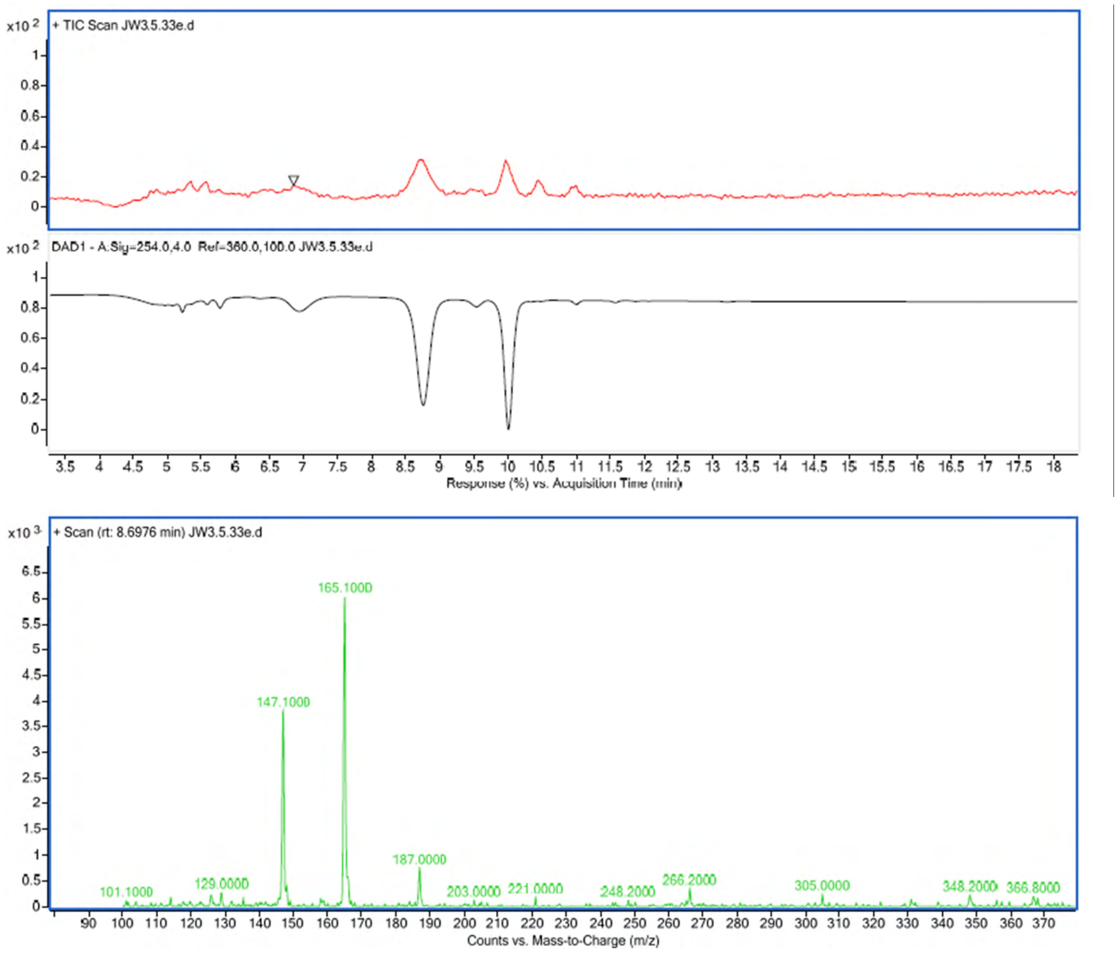


Figure S229. ^{1}H-NMR spectrum of compound **130**.

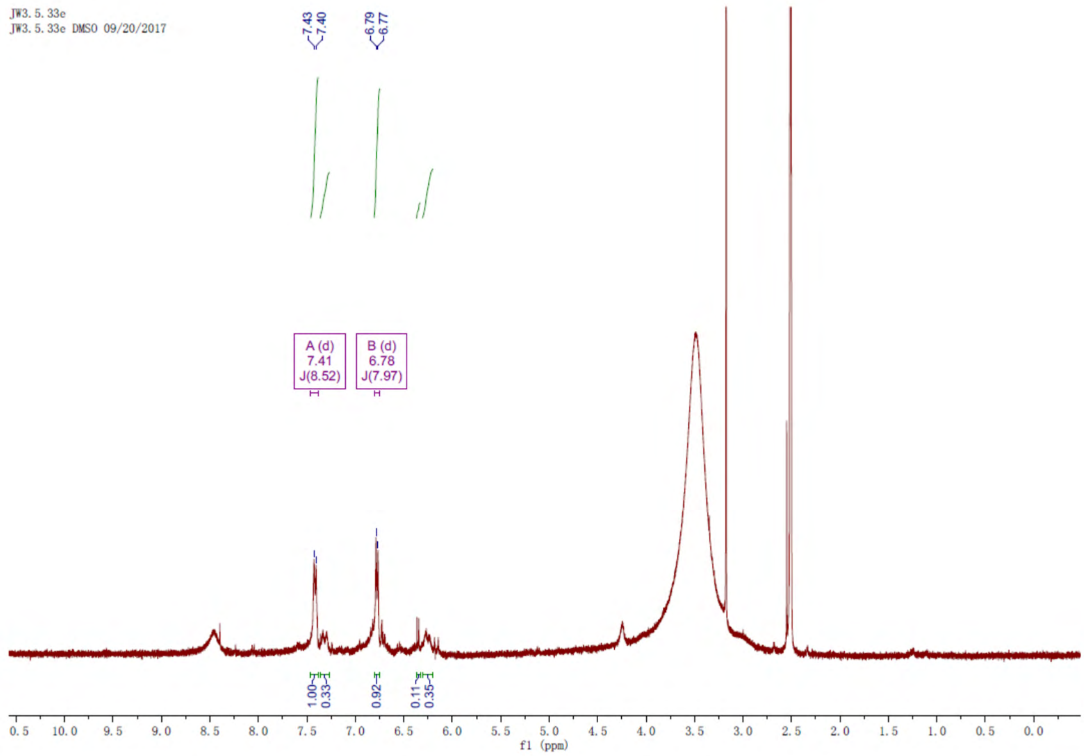
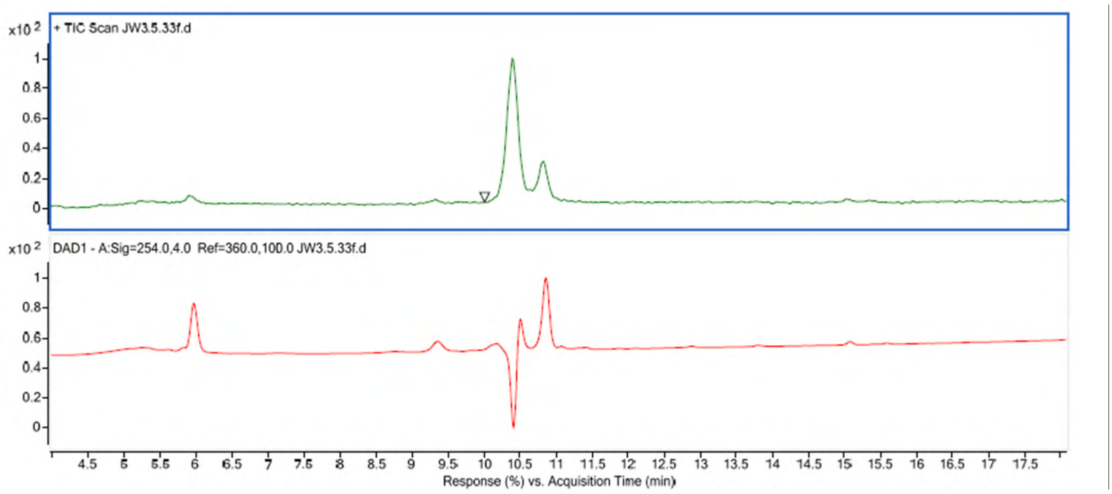


Figure S230. LC-MS spectrum of compound **131**.



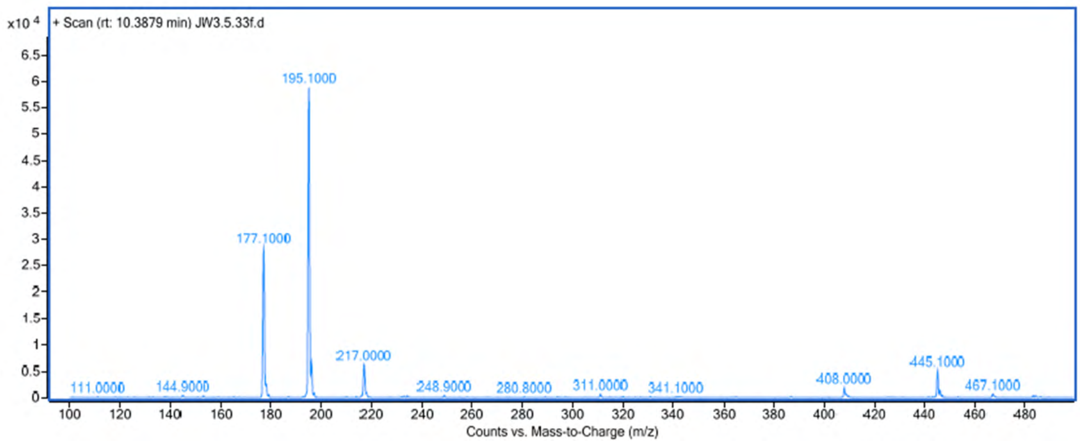


Figure S231. ^{1}H-NMR spectrum of compound **131**.

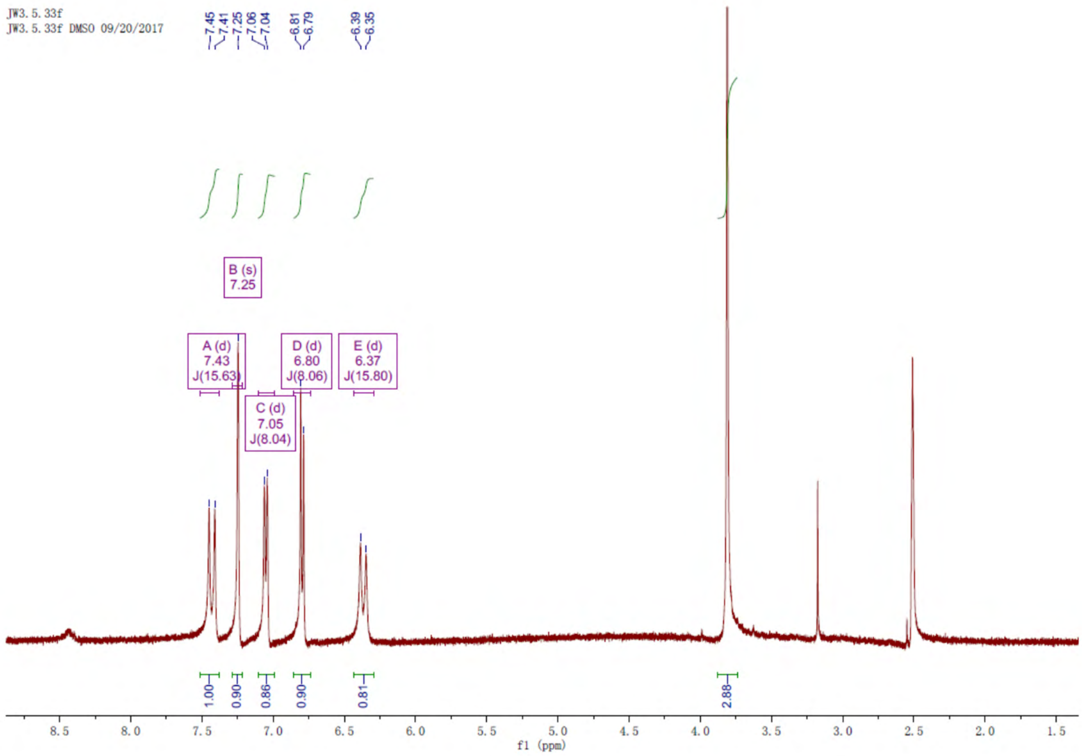
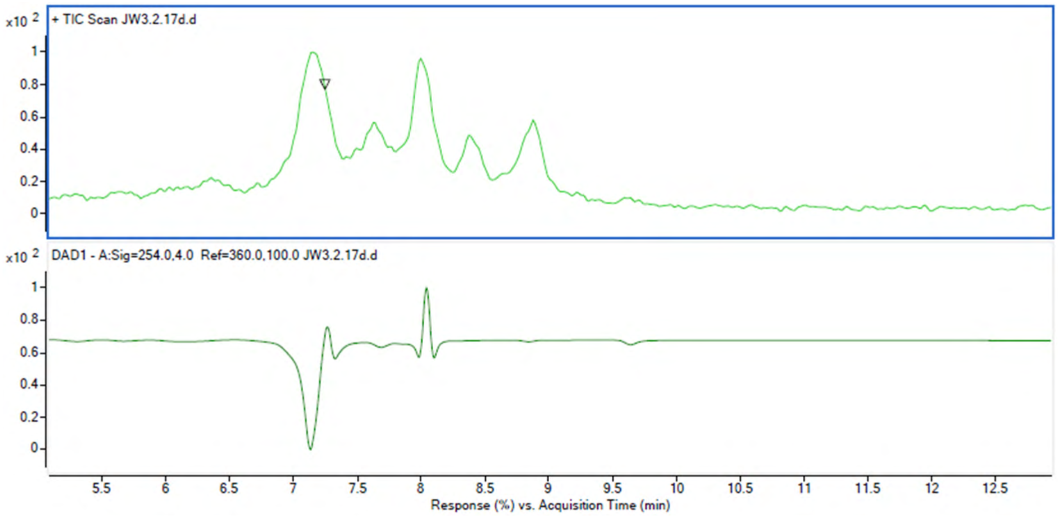


Figure S232. LC-MS spectrum of compound **132**.



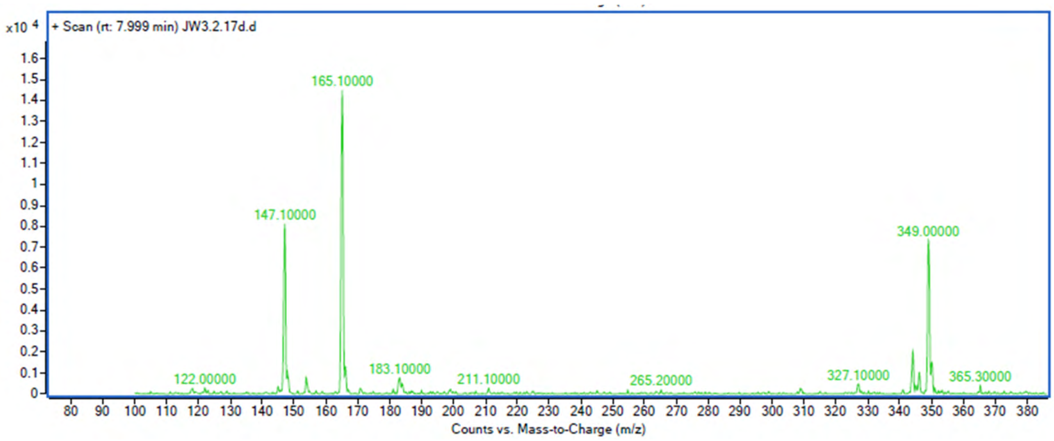


Figure S233. ^{1}H-NMR spectrum of compound **132**.

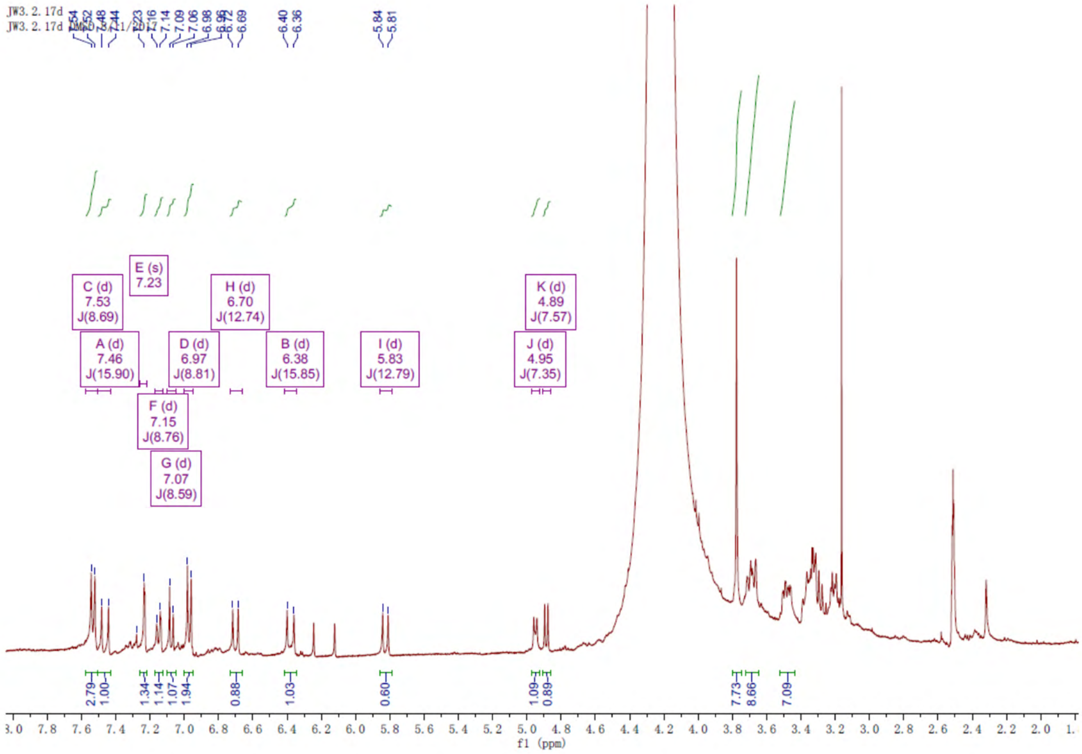


Figure S234. LC-MS spectrum of compound **133**.

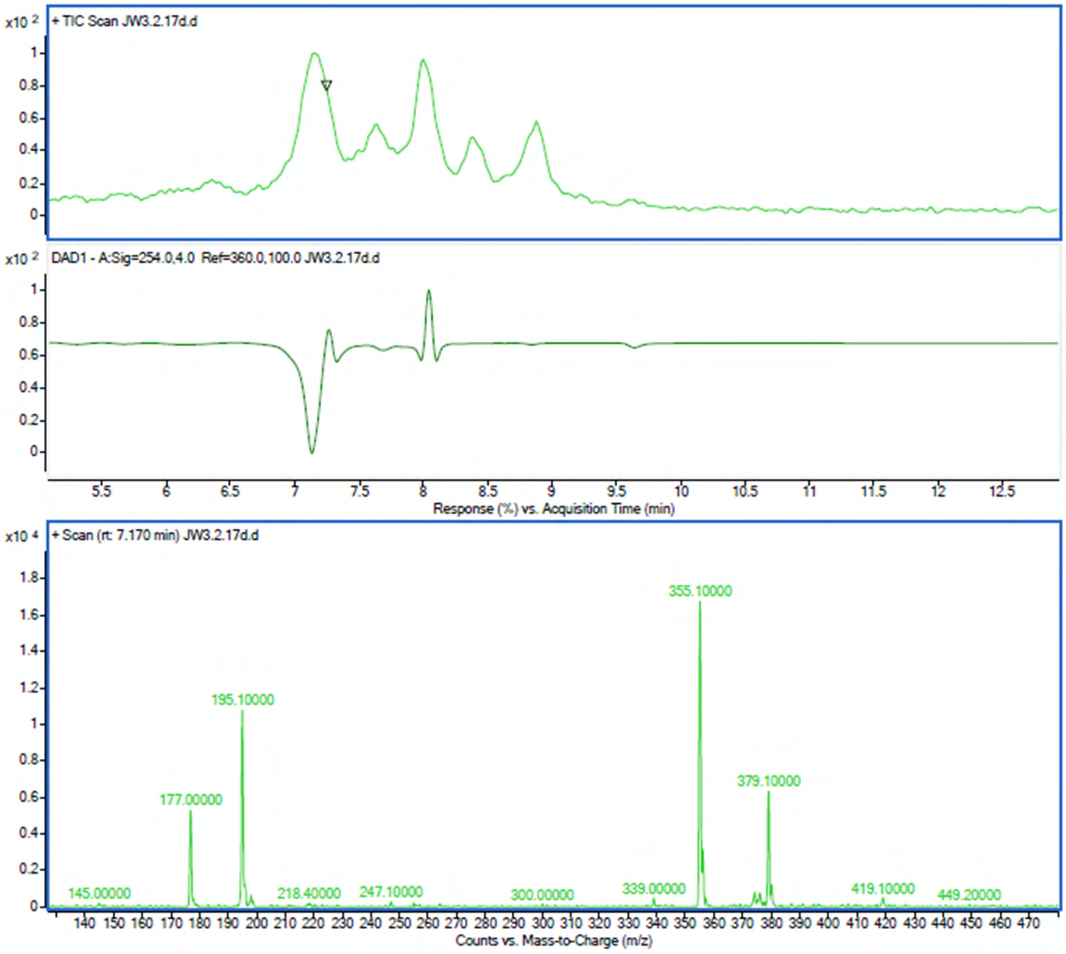


Figure S235. ^{1}H-NMR spectrum of compound **133**.

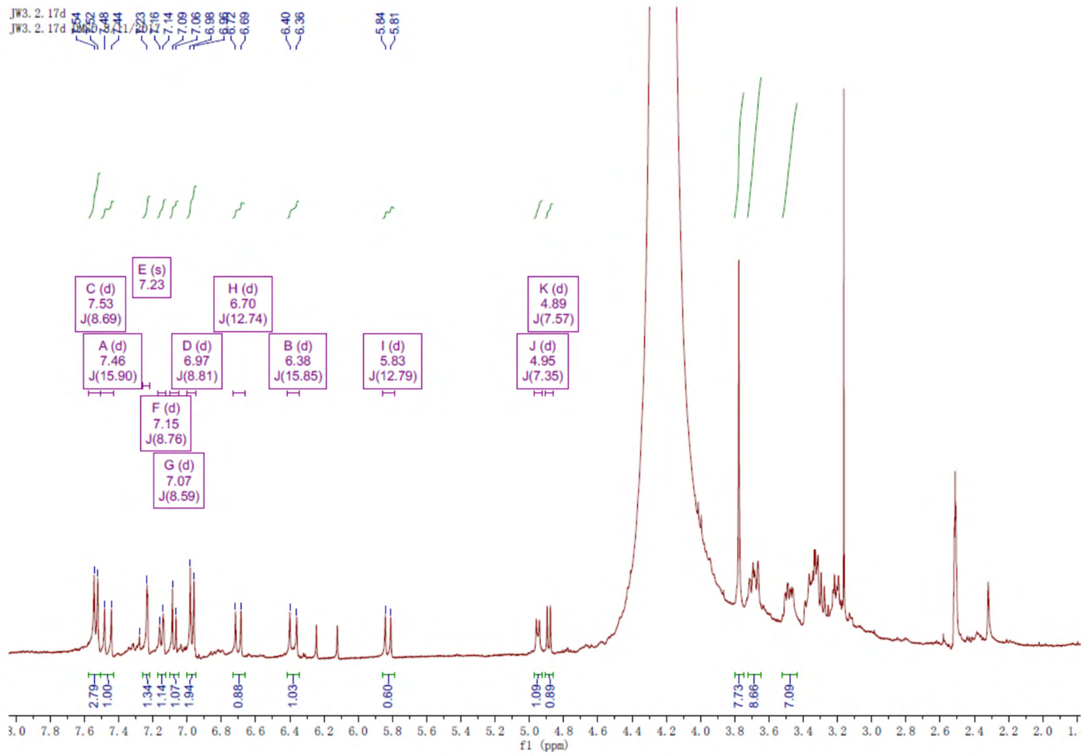


Figure S236. LC-MS spectrum of compound **134**.

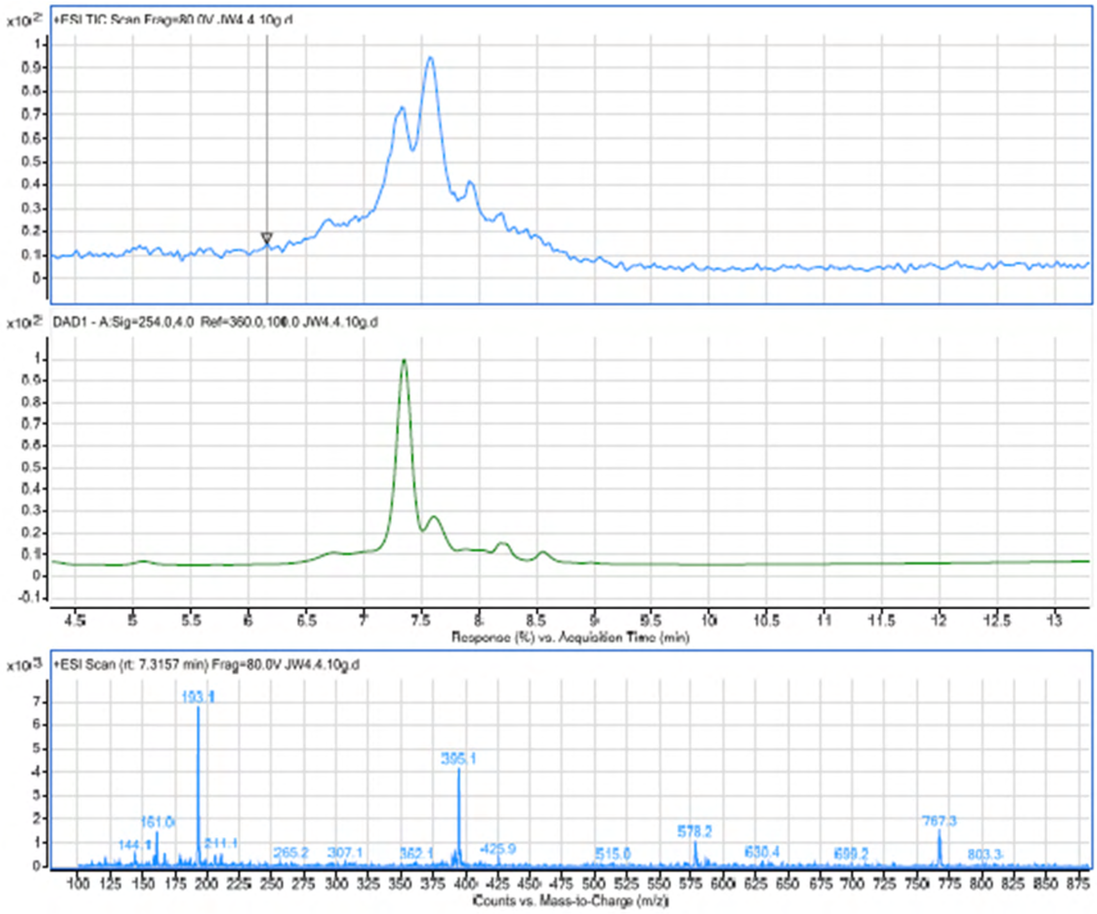


Figure S237. ^{1}H-NMR spectrum of compound **134**.

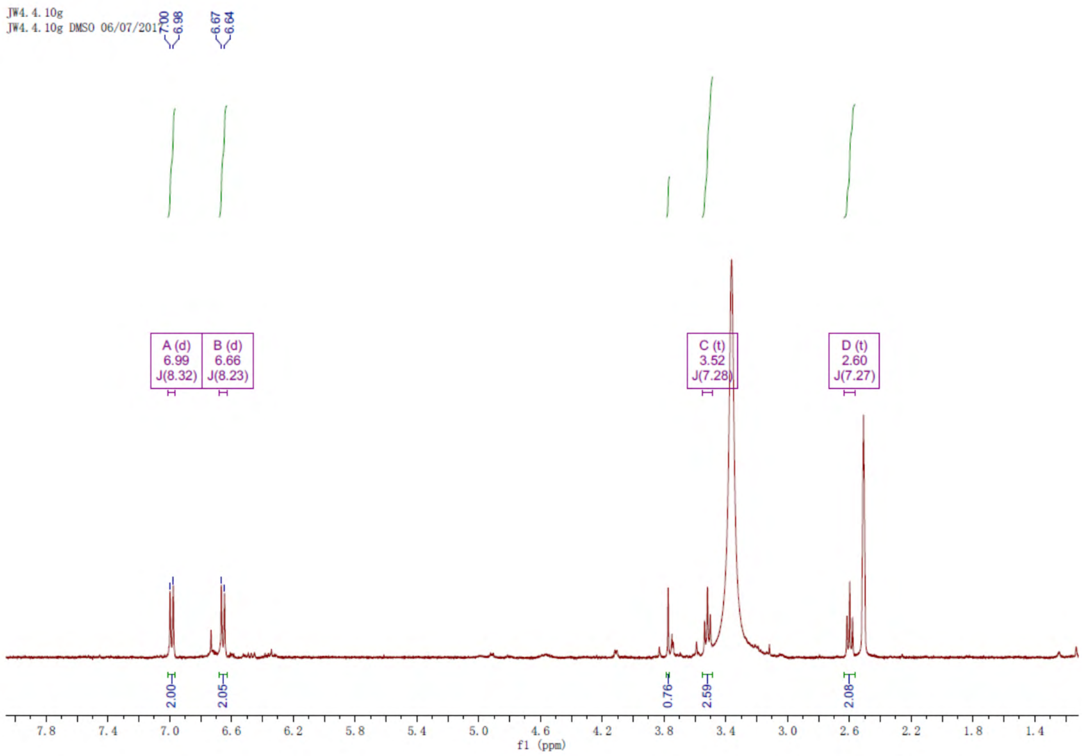


Figure S238. ^{1}H-NMR spectrum of compound **135**.

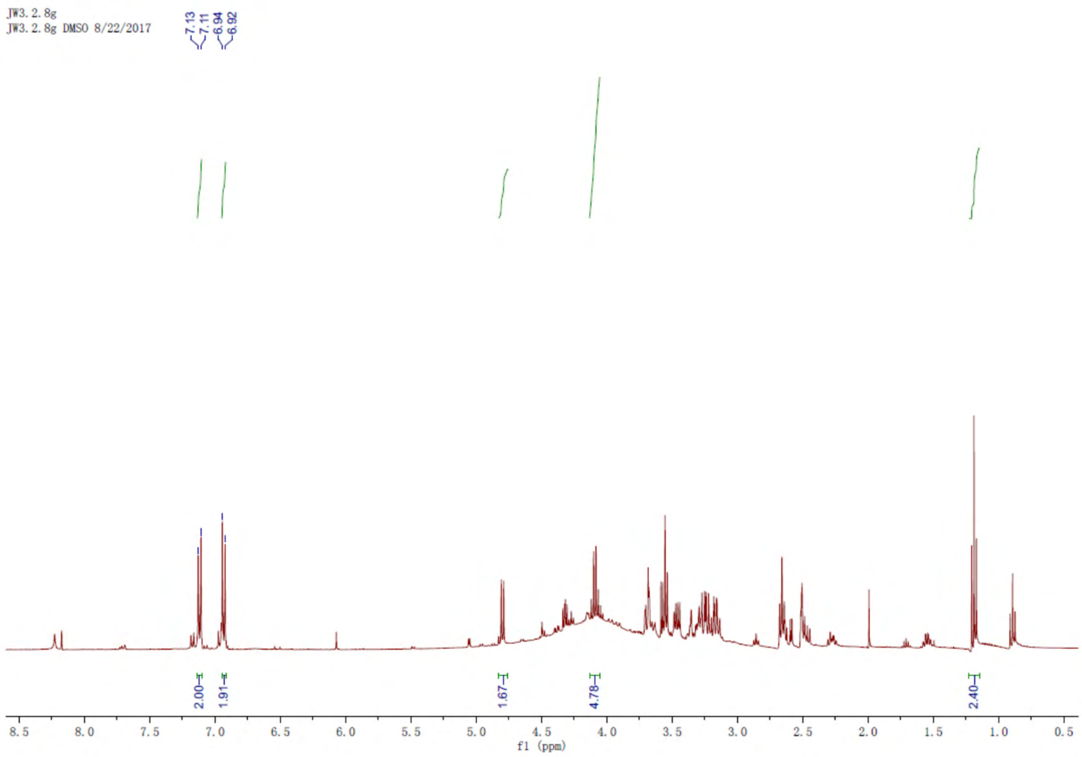


Figure S239. HMBC spectrum of compound **135**.

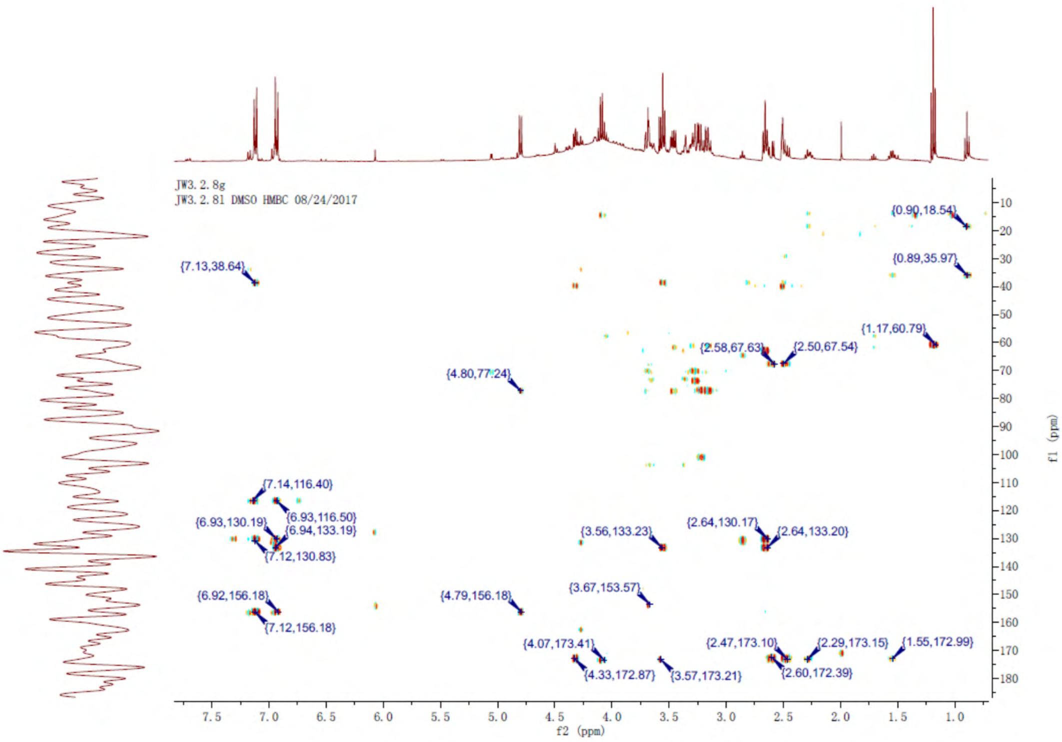


Figure S240. LC-MS spectrum of compound **136**.

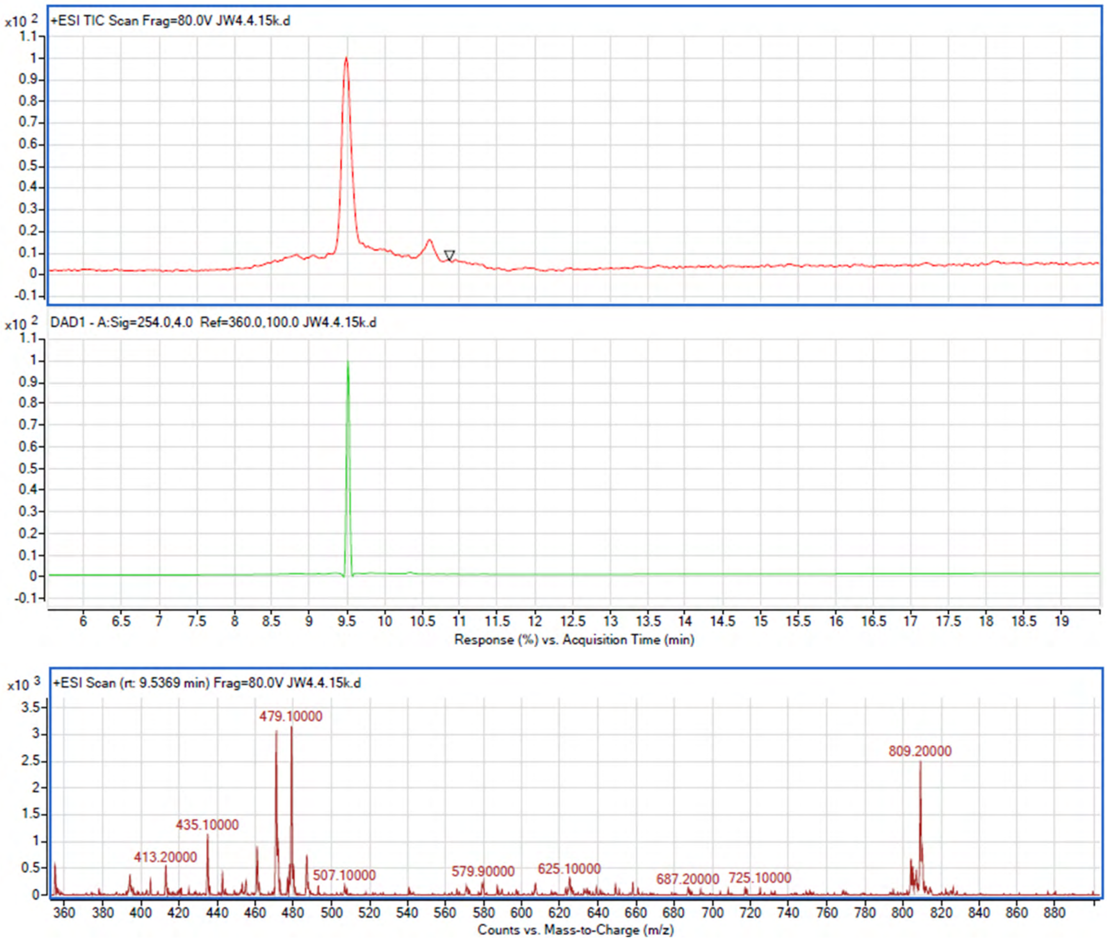


Figure S241. ^{1}H-NMR and HSQC spectra of compound **136**.

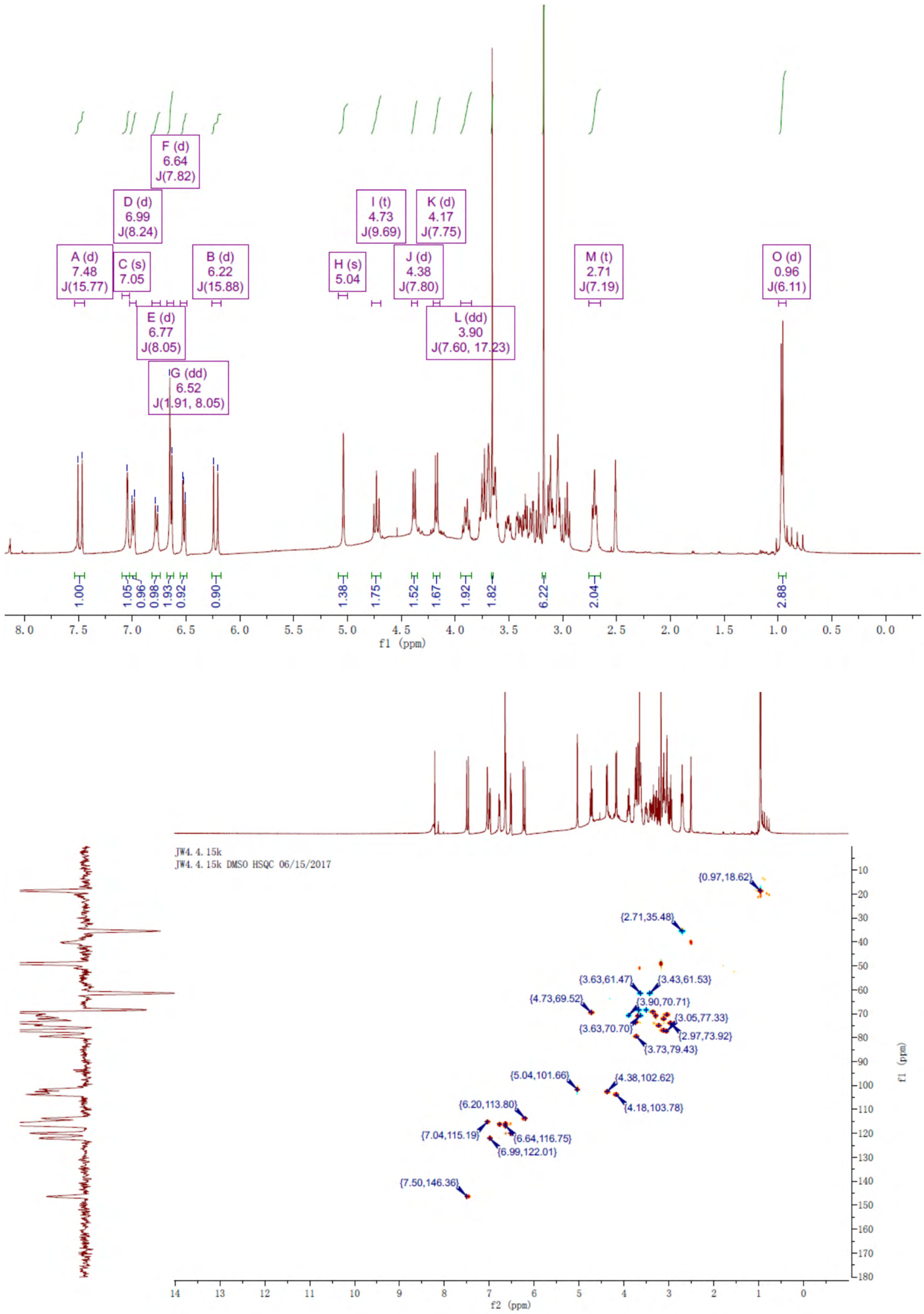


Figure S242. LC-MS spectrum of compound **137**.

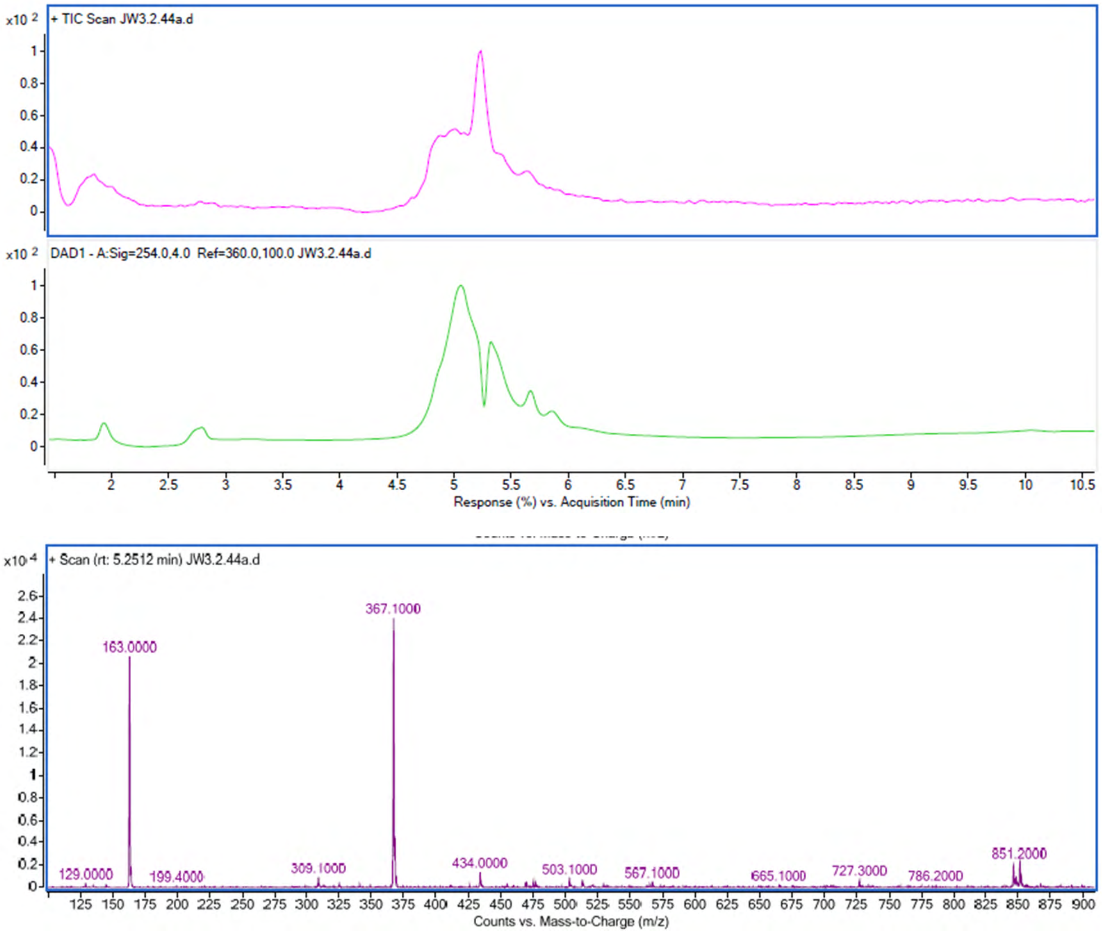


Figure S243. [1]H-NMR spectrum of compound **137**.

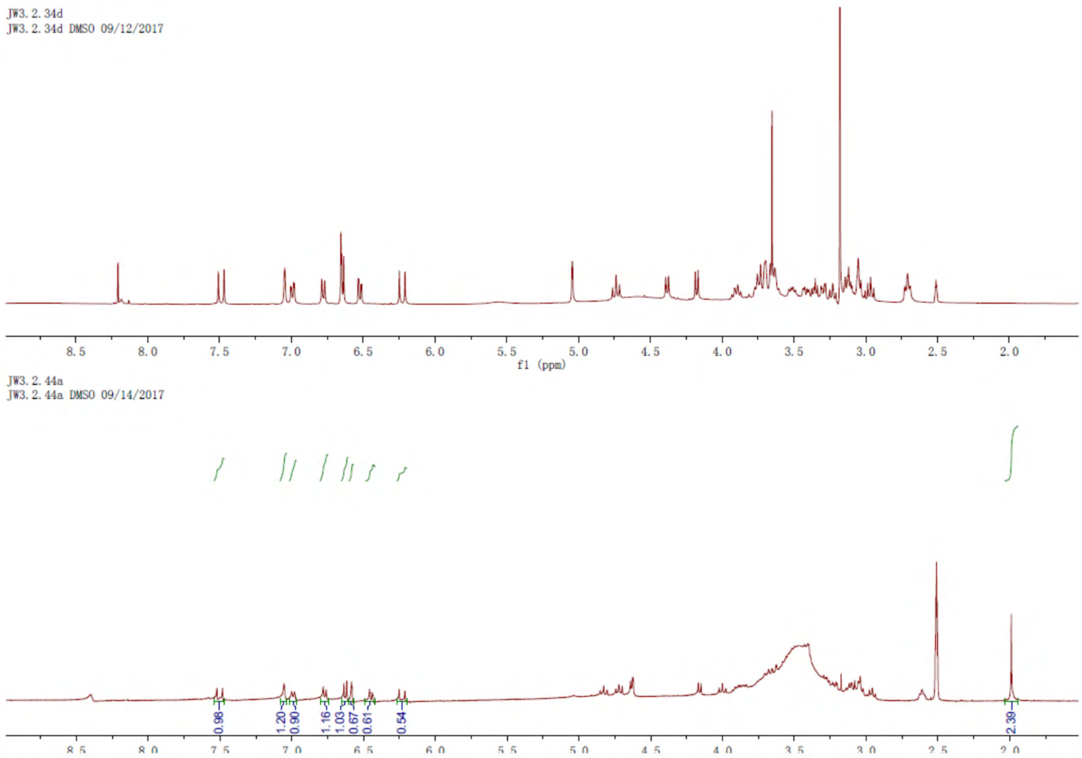


Figure S244. LC-MS spectrum of compound **138**.

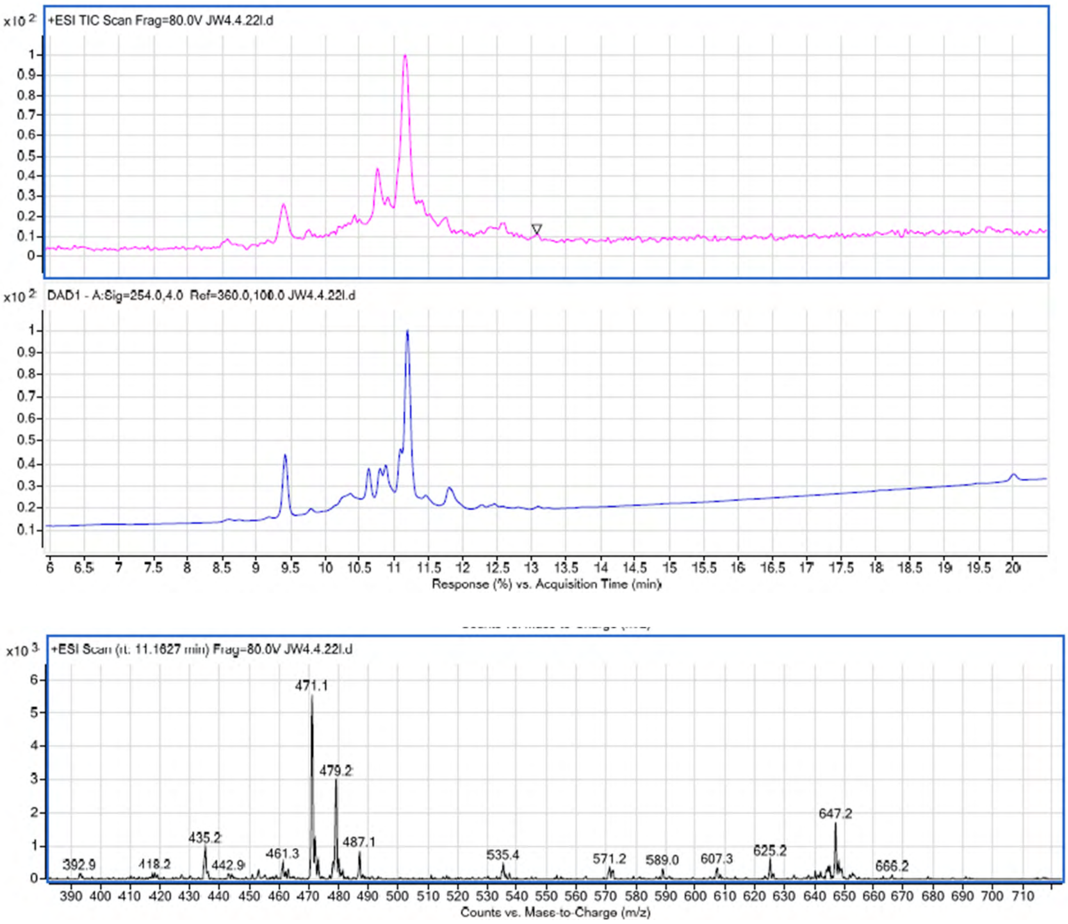


Figure S245. [1]H-NMR spectrum of compound **138**.

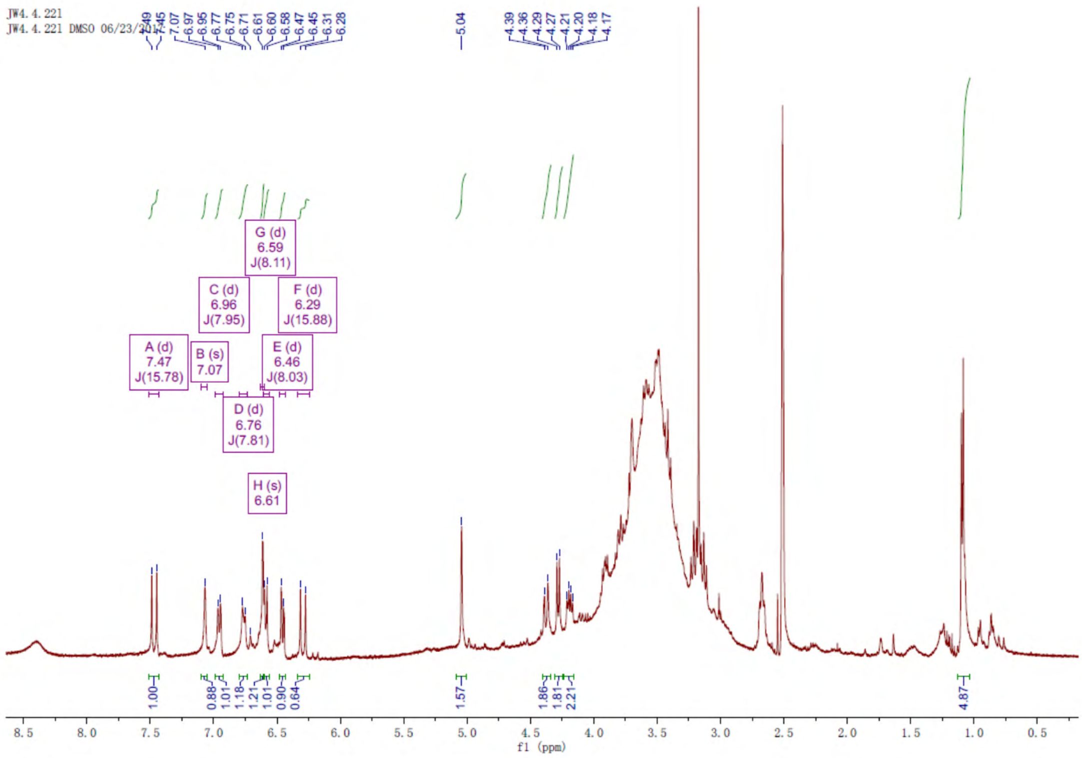


Figure S246. LC-MS spectrum of compound **139**.

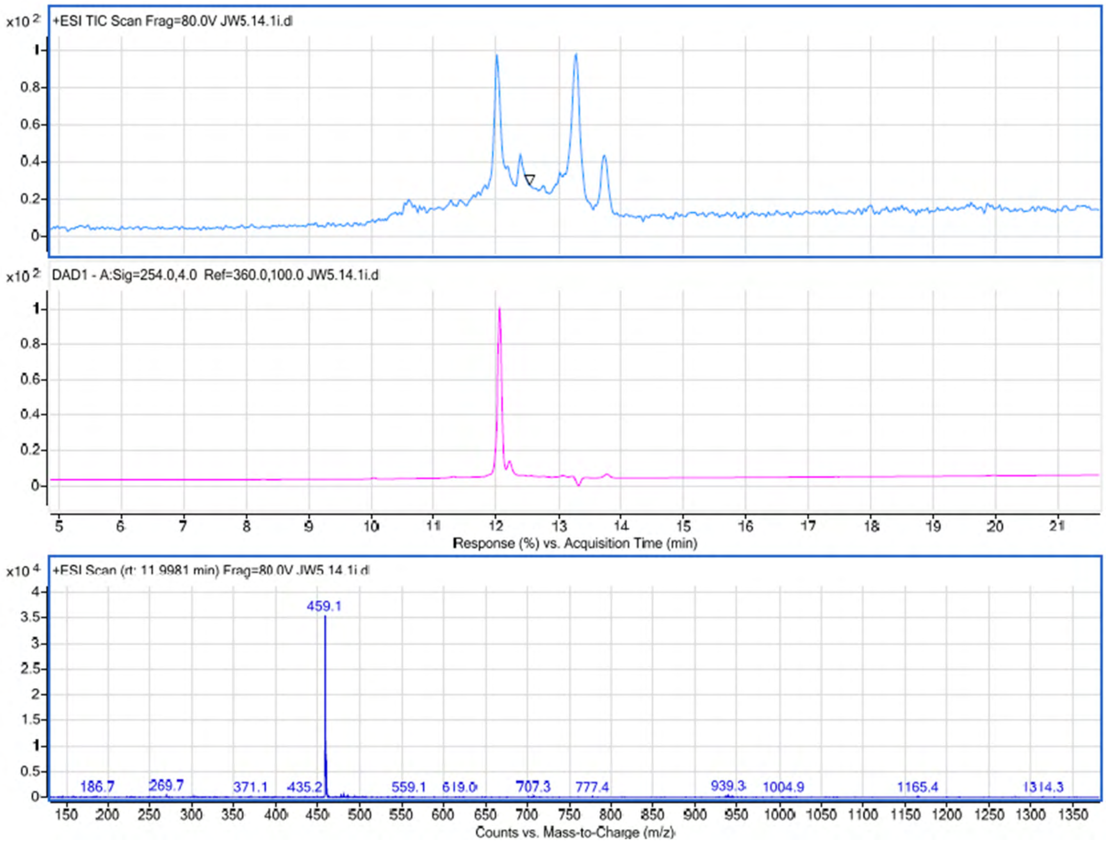


Figure S247. ^{1}H-NMR spectrum of compound **139**.

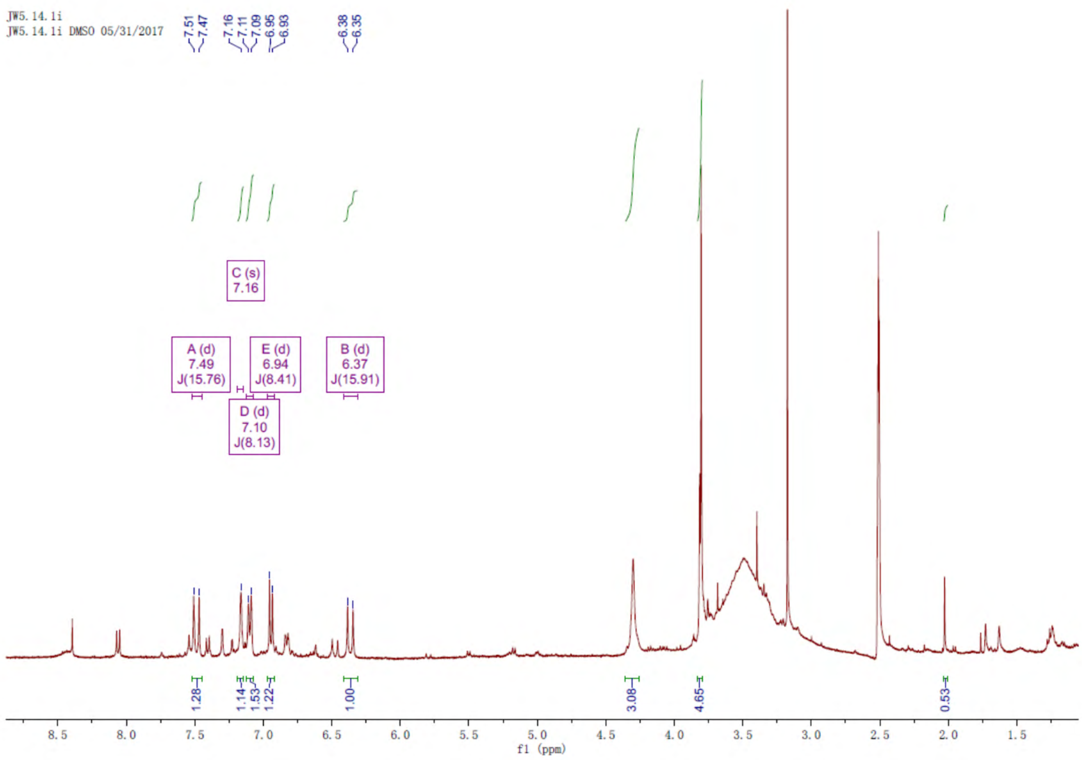


Figure S248. LC-MS spectrum of compound **140**.

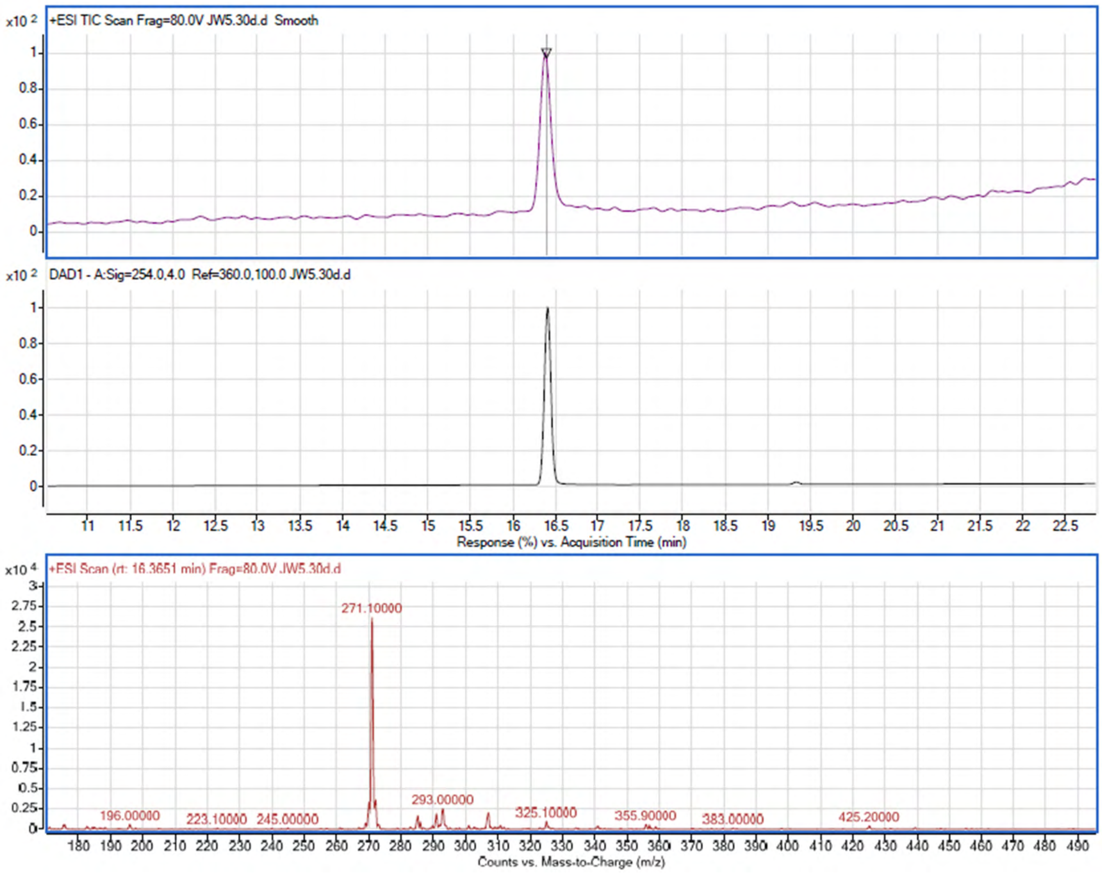
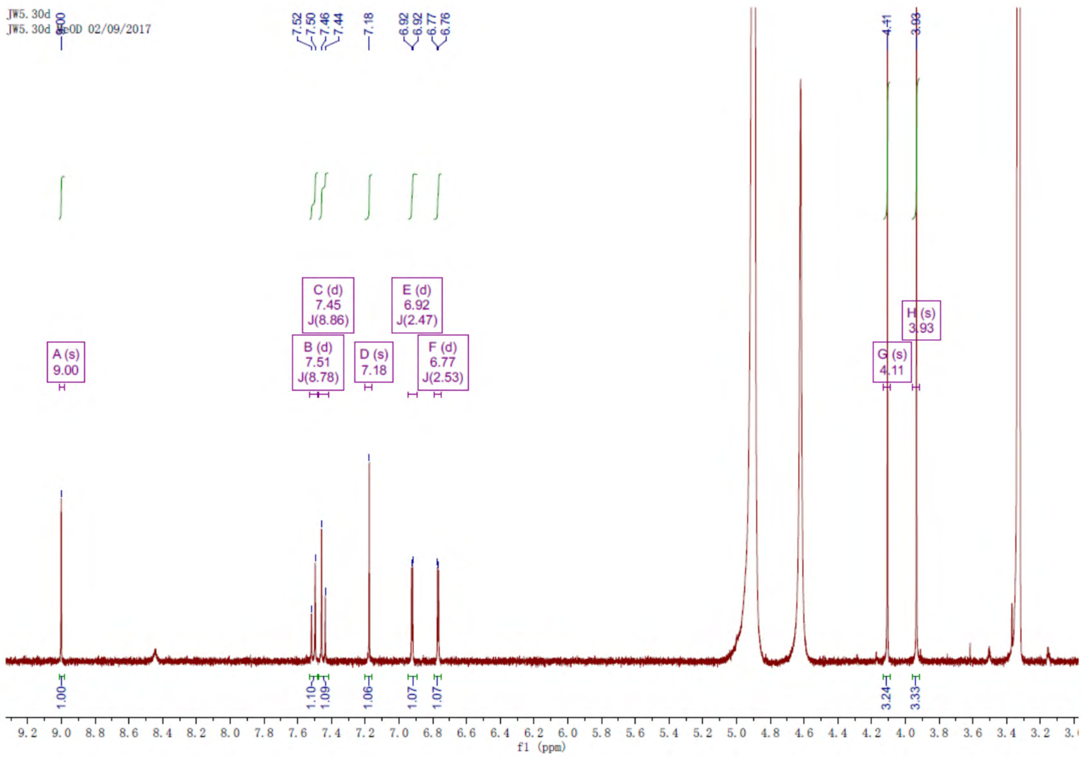


Figure S249. [1]H-NMR and HSQC spectra of compound **140**.



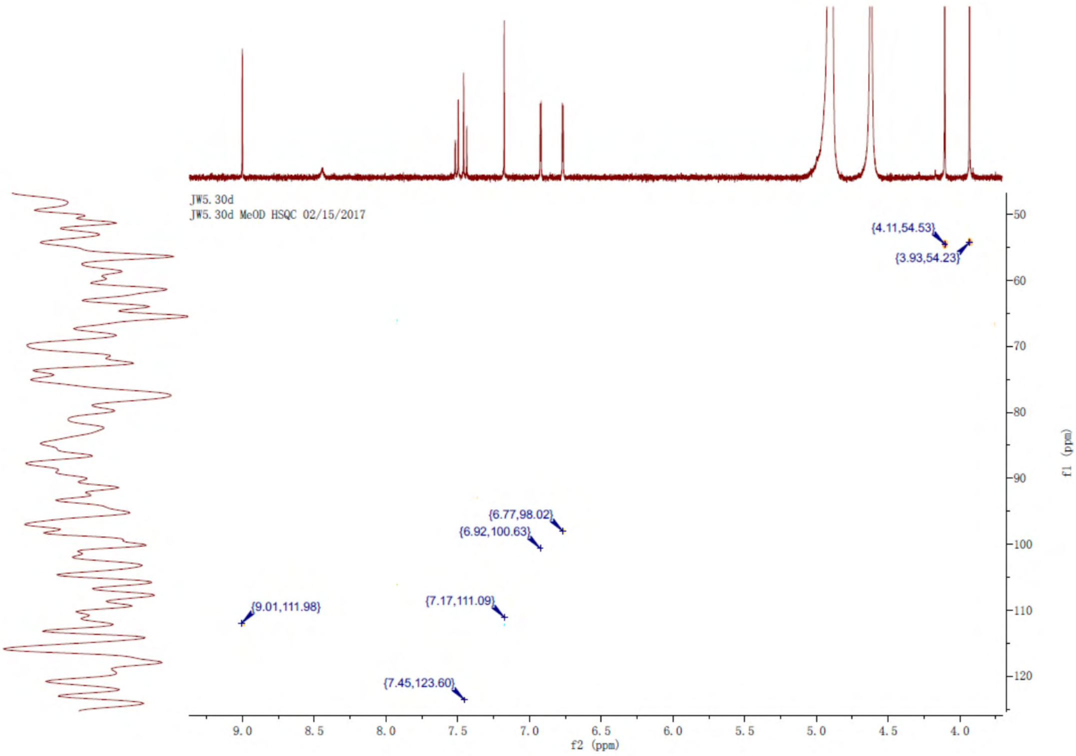


Figure S250. LC-MS spectrum of compound **141**.

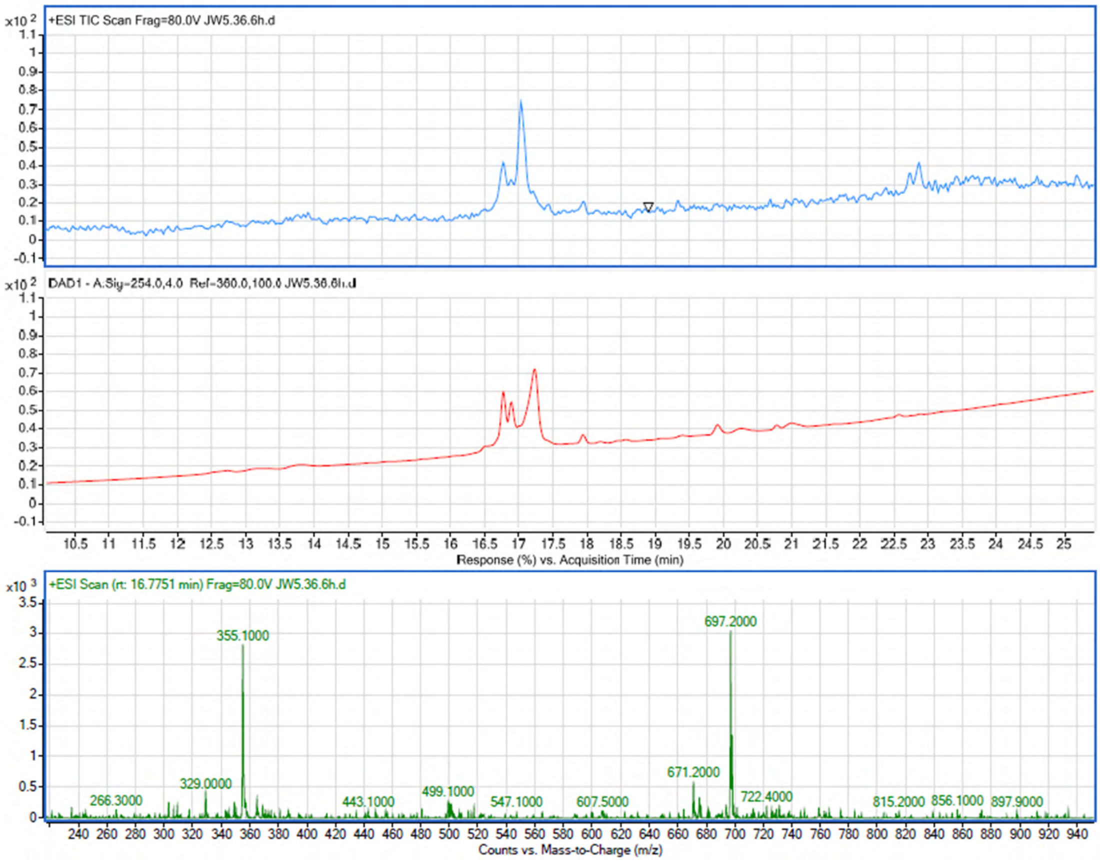


Figure S251. [1]H-NMR spectrum of compound **141**.

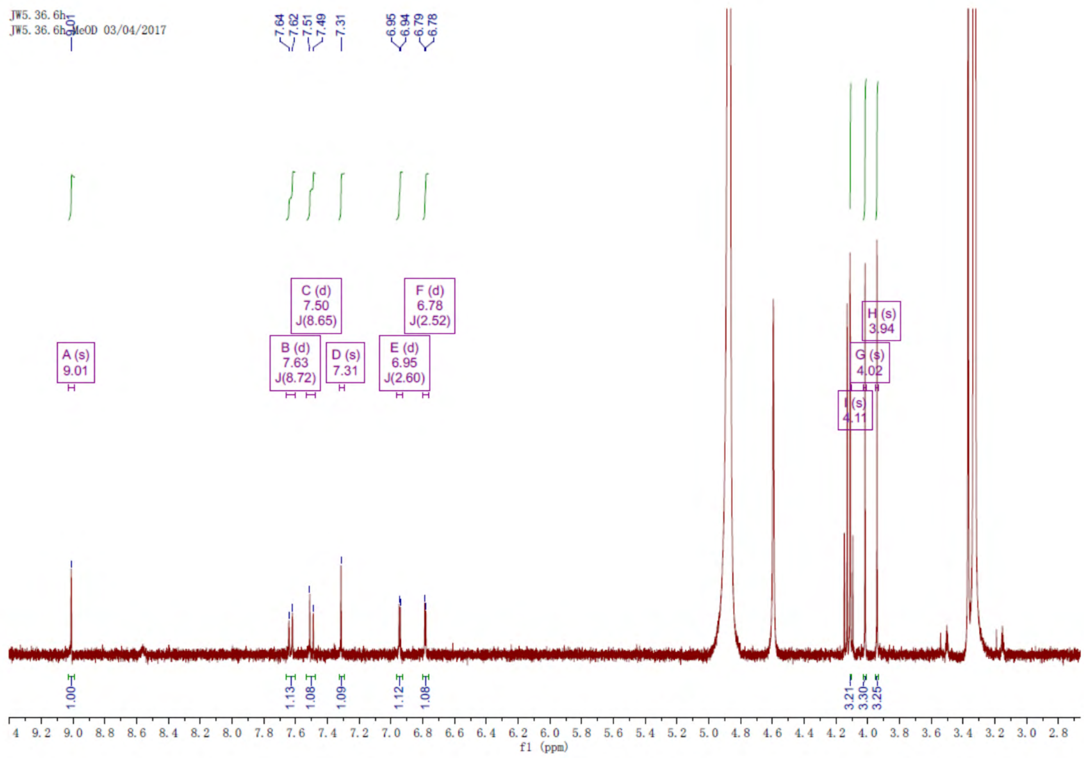


Figure S252. LC-MS spectrum of compound **142**.

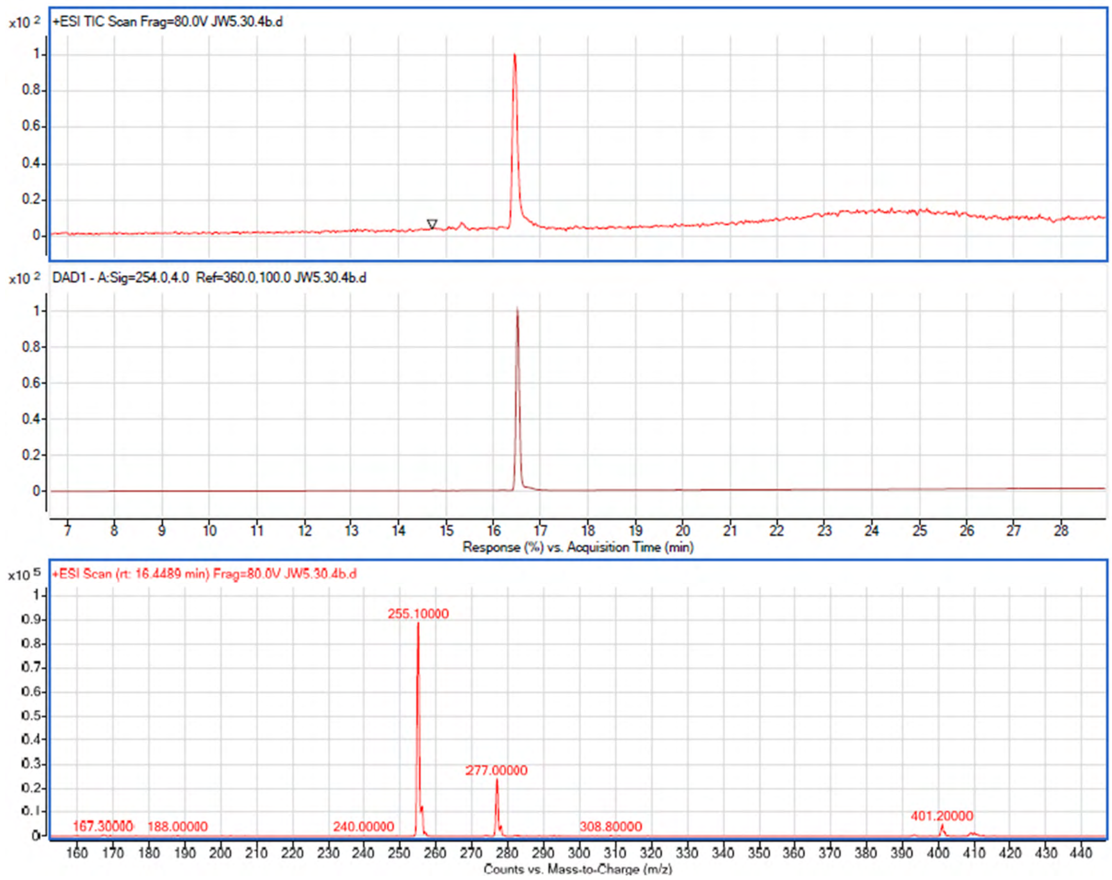


Figure S253. ^{1}H-NMR spectrum of compound **142**.

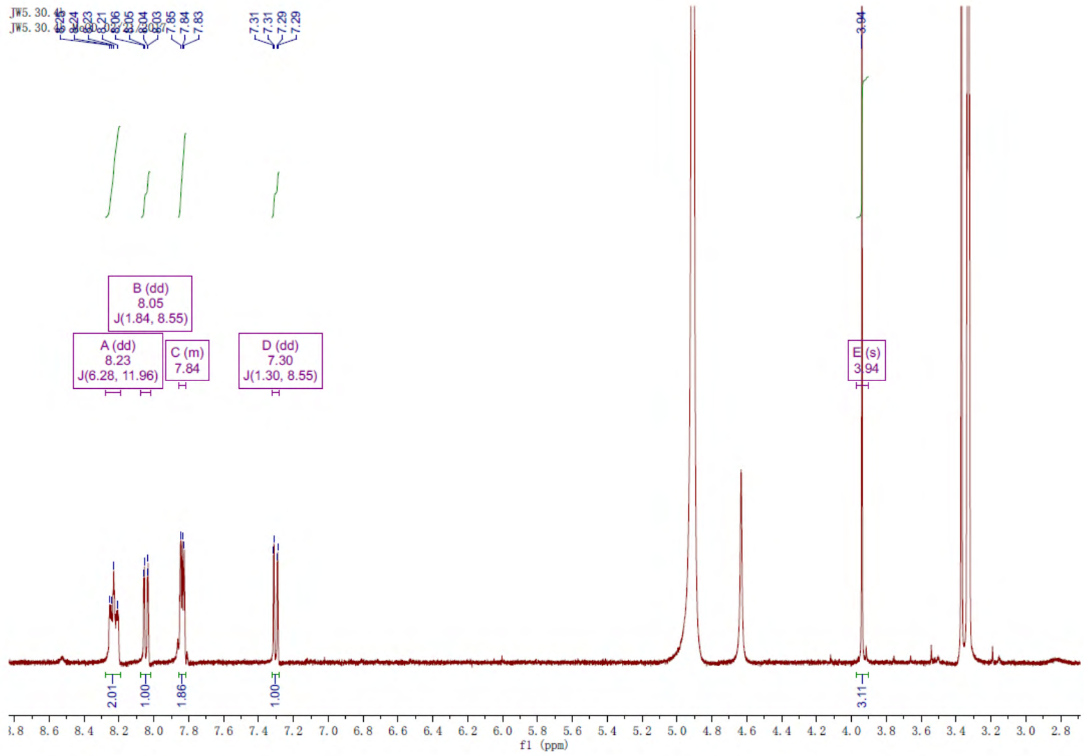


Figure S254. LC-MS spectrum of compound **143**.

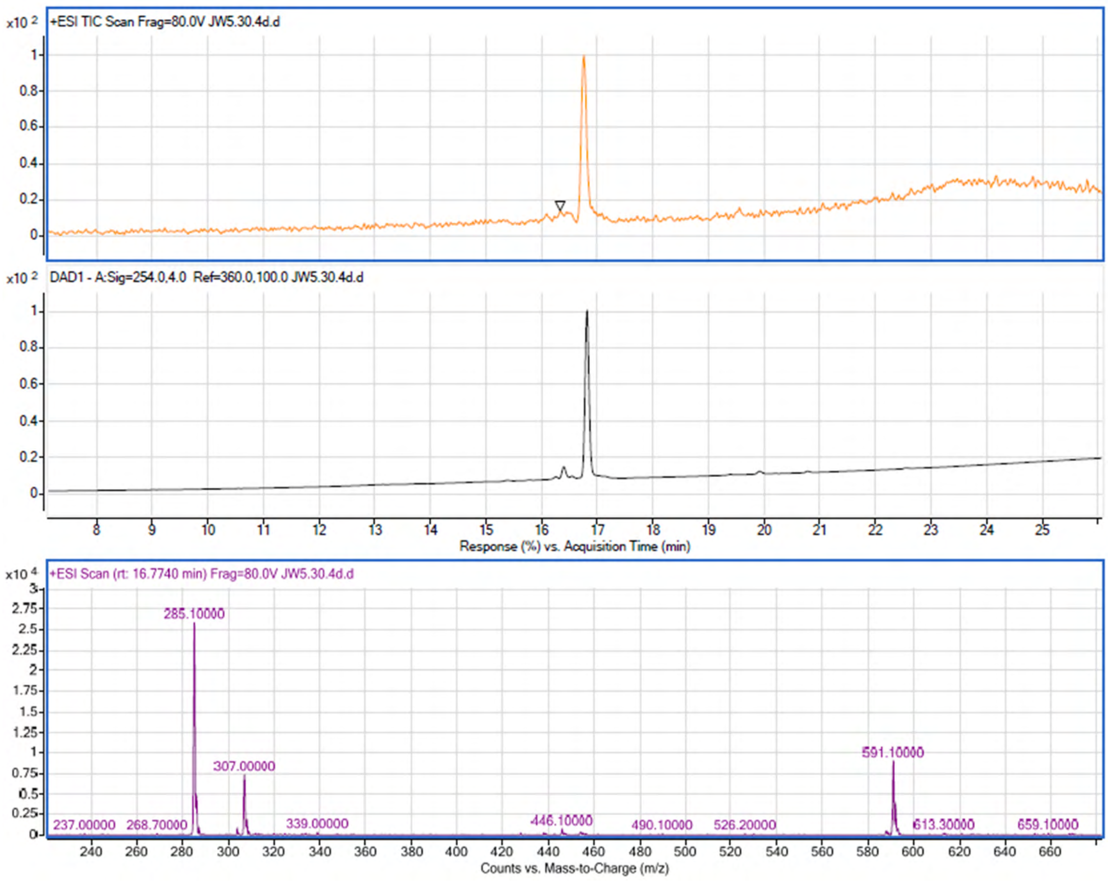


Figure S255. ^{1}H-NMR spectrum of compound **143**.

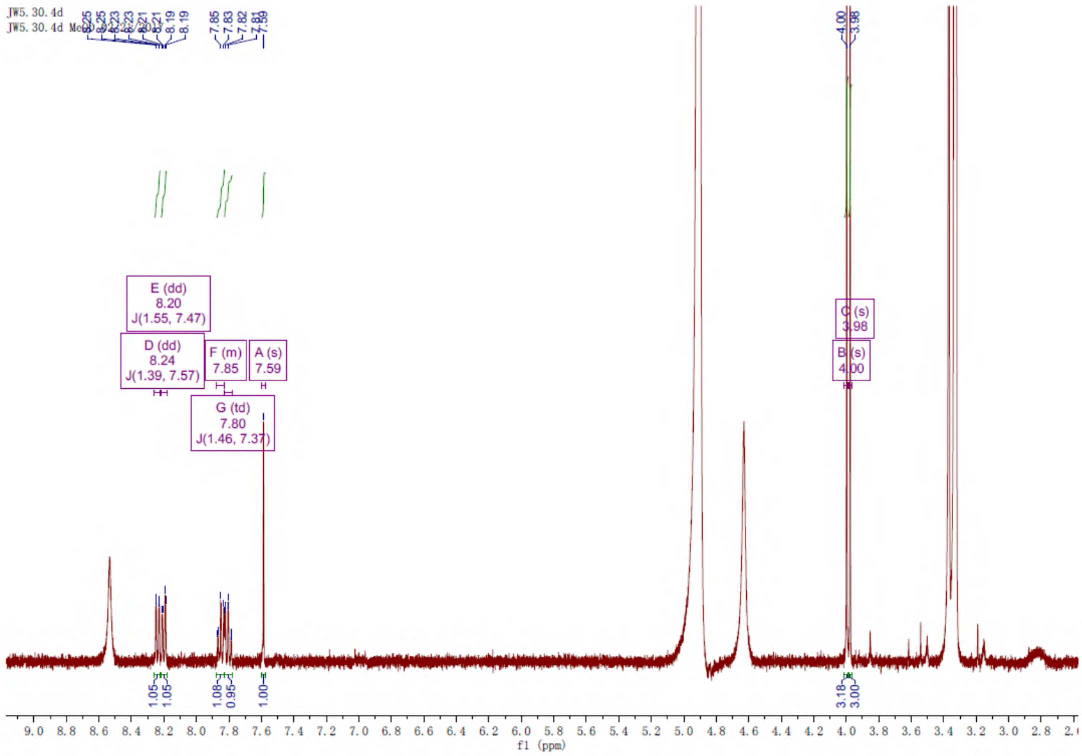


Figure S256. LC-MS spectrum of compound **144**.

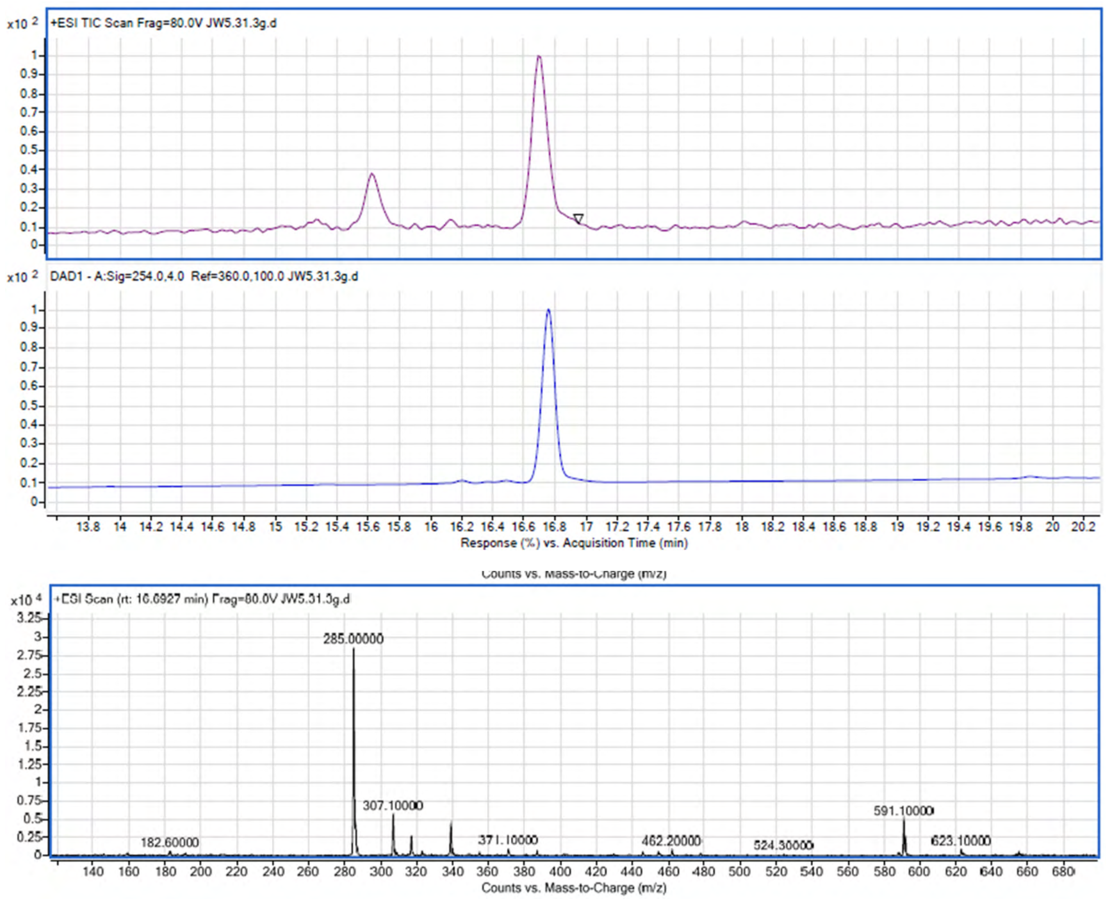


Figure S257. ^{1}H-NMR spectrum of compound **144**.

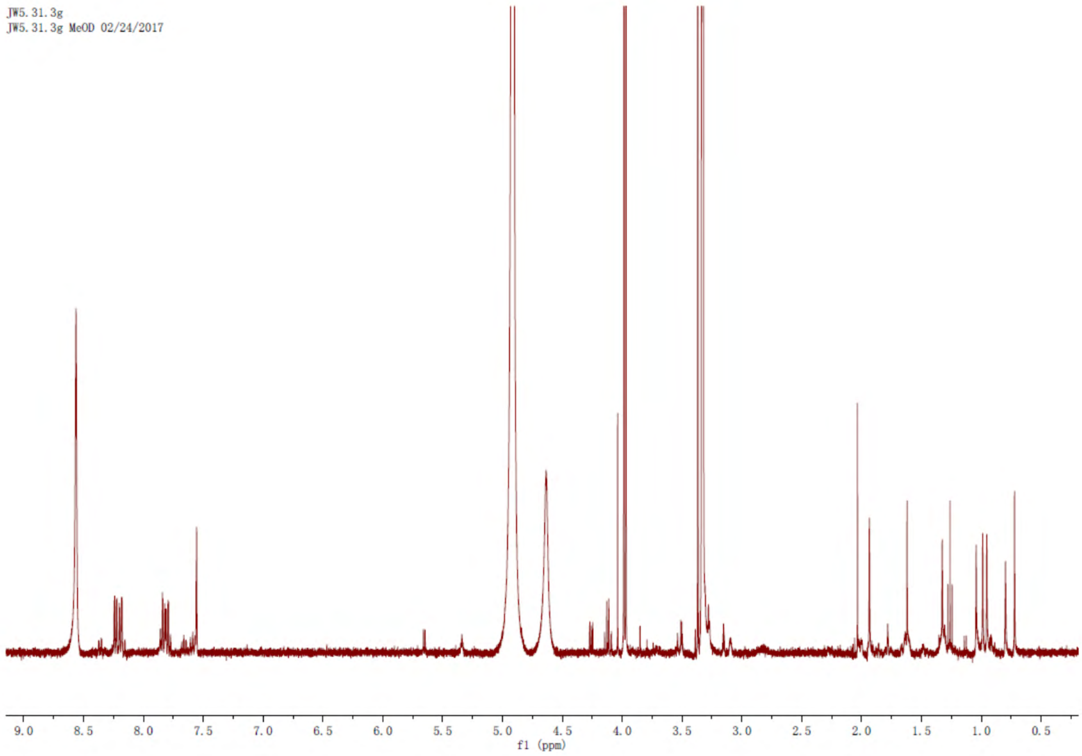


Figure S258. LC-MS spectrum of compound **145**.

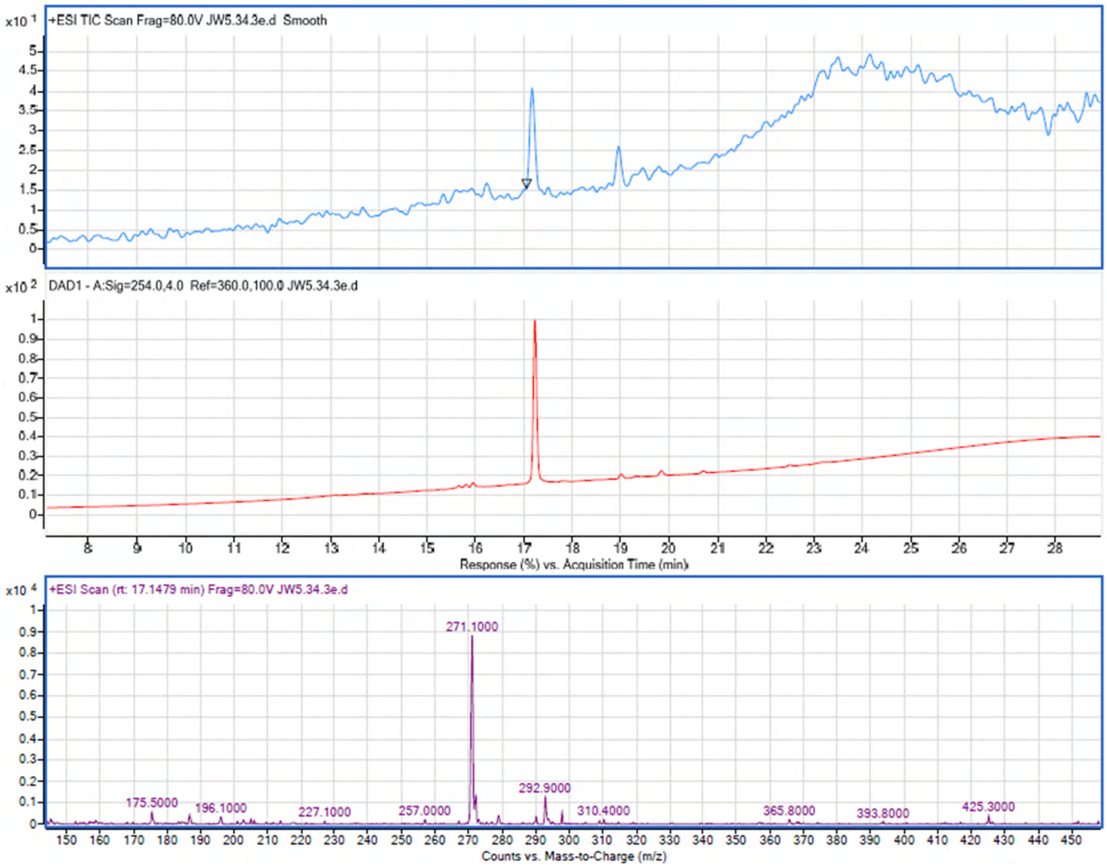


Figure S259. [1]H-NMR spectrum of compound **145**.

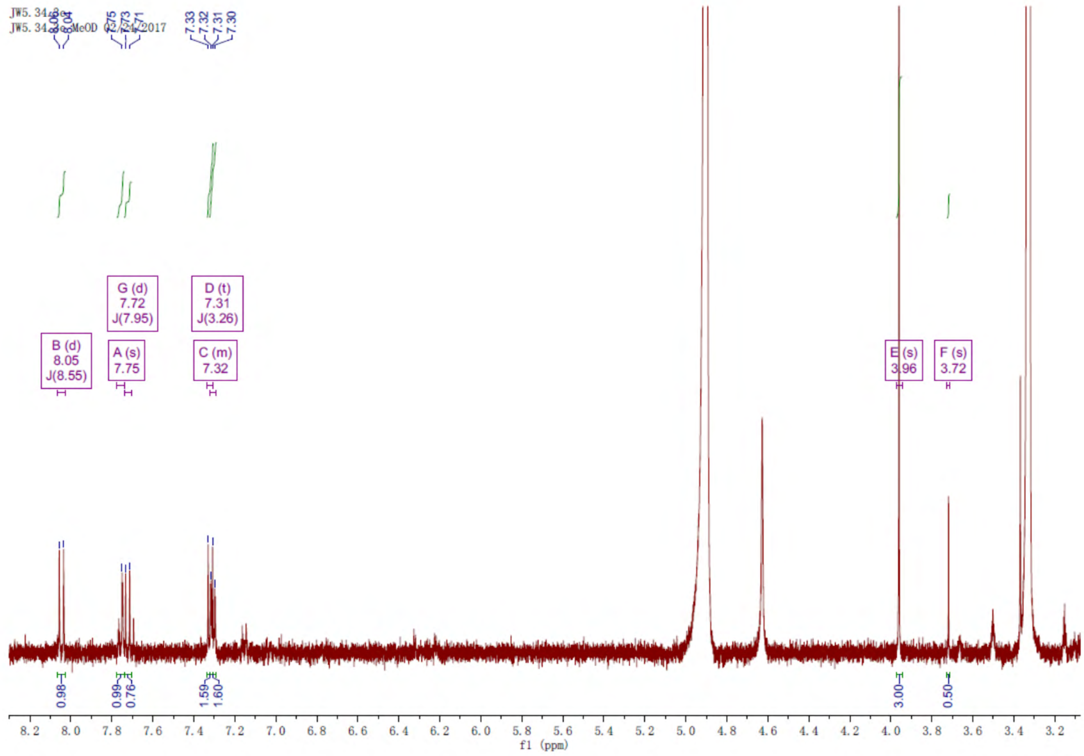


Figure S260. LC-MS spectrum of compound **146**.

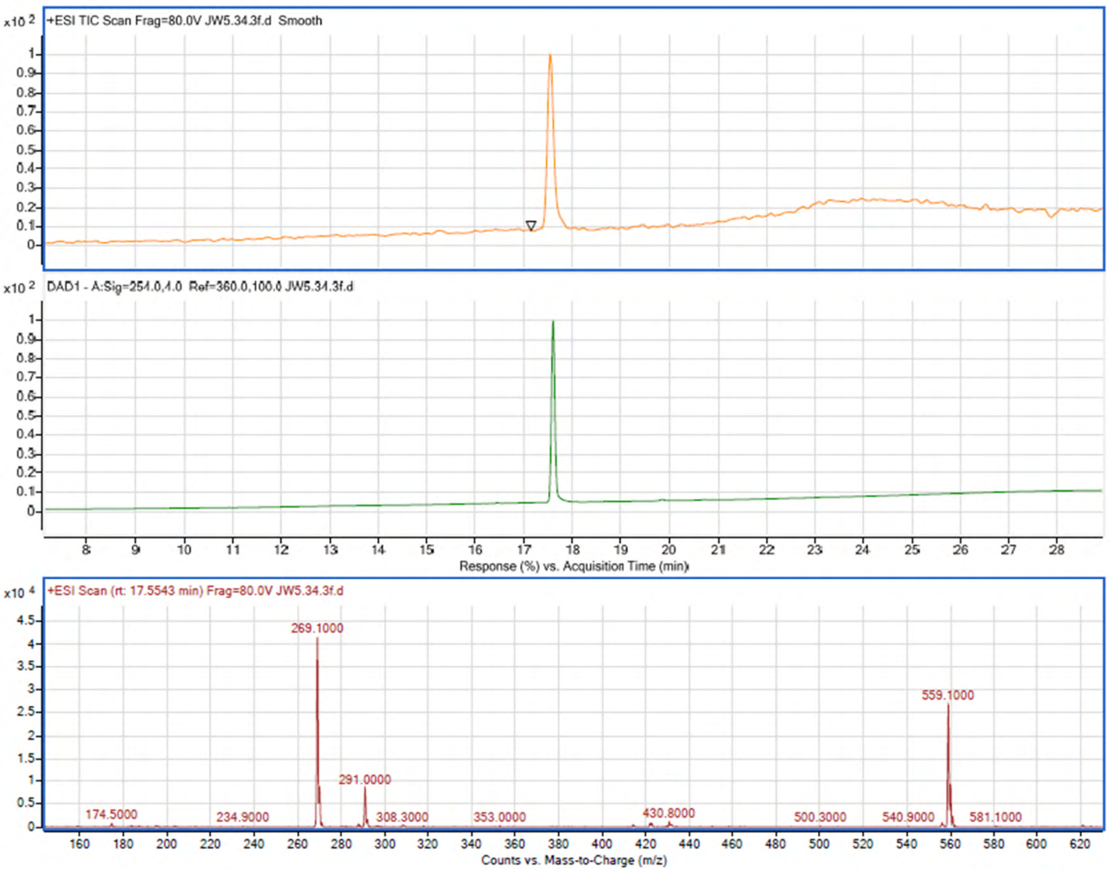


Figure S261. ^{1}H-NMR spectrum of compound **146**.

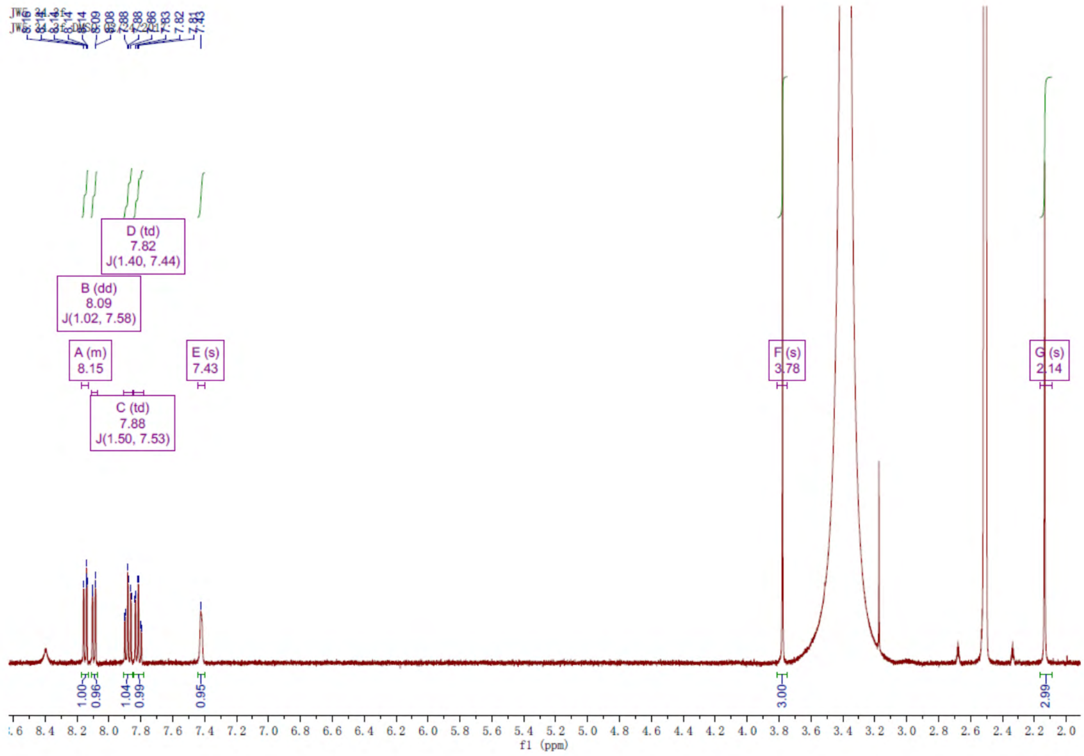


Figure S262. LC-MS spectrum of compound **147**.

Figure S263. ^{1}H-NMR spectrum of compound **147**.

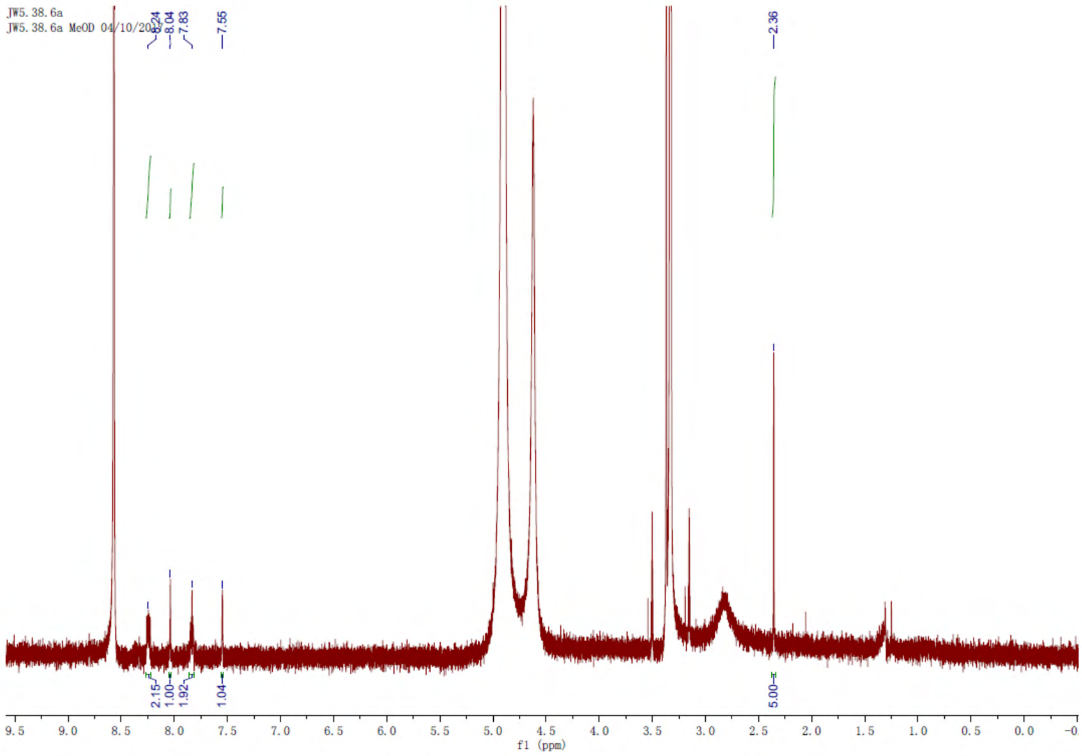


Figure S264. LC-MS spectrum of compound **148**.

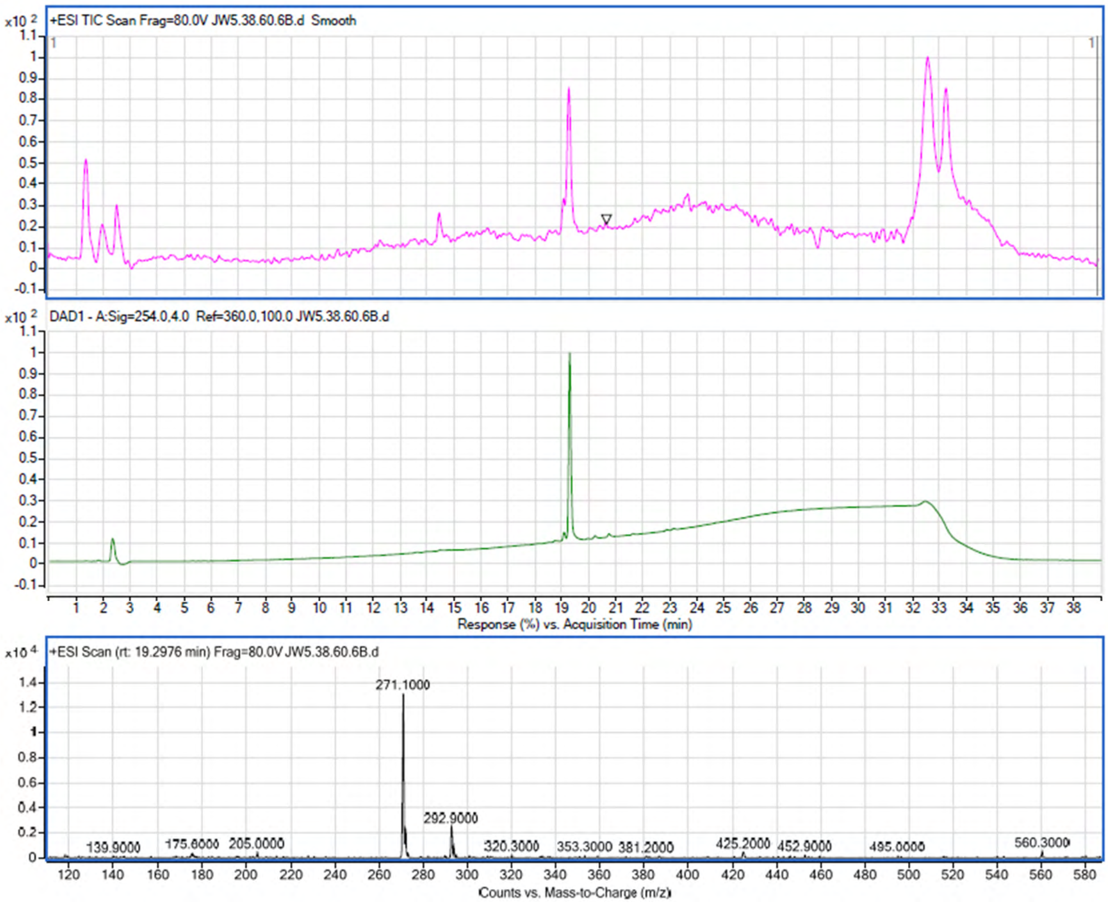


Figure S265. ^{1}H-NMR spectrum of compound **148**.

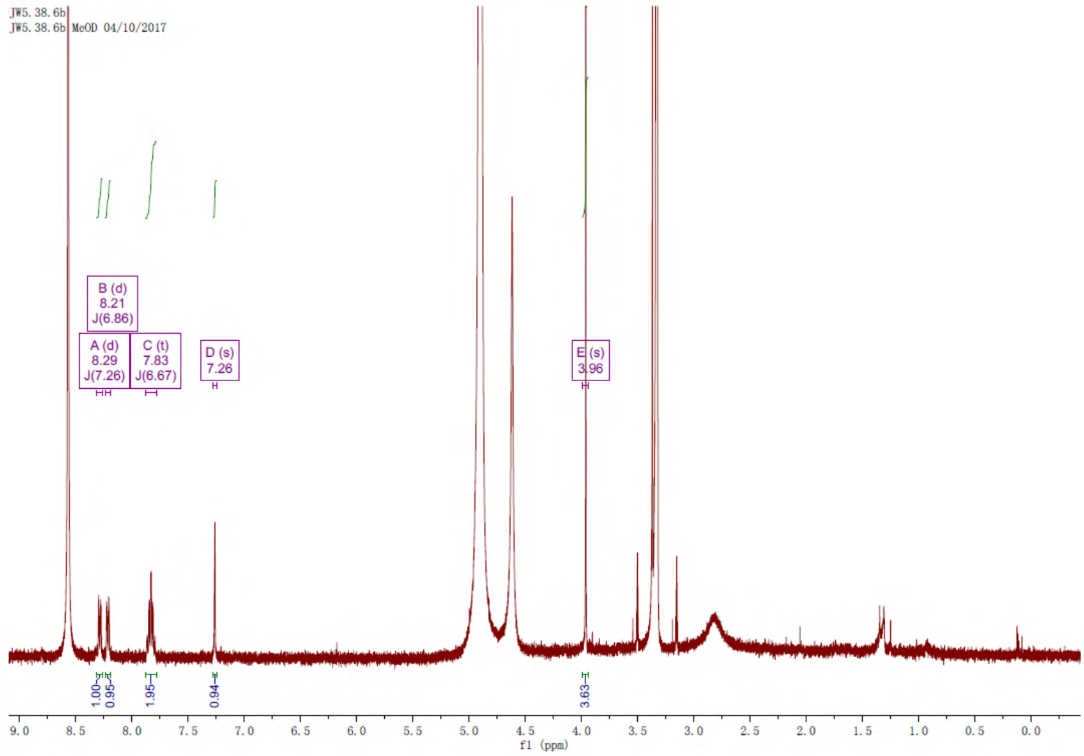


Figure S266. LC-MS spectrum of compound **149**.

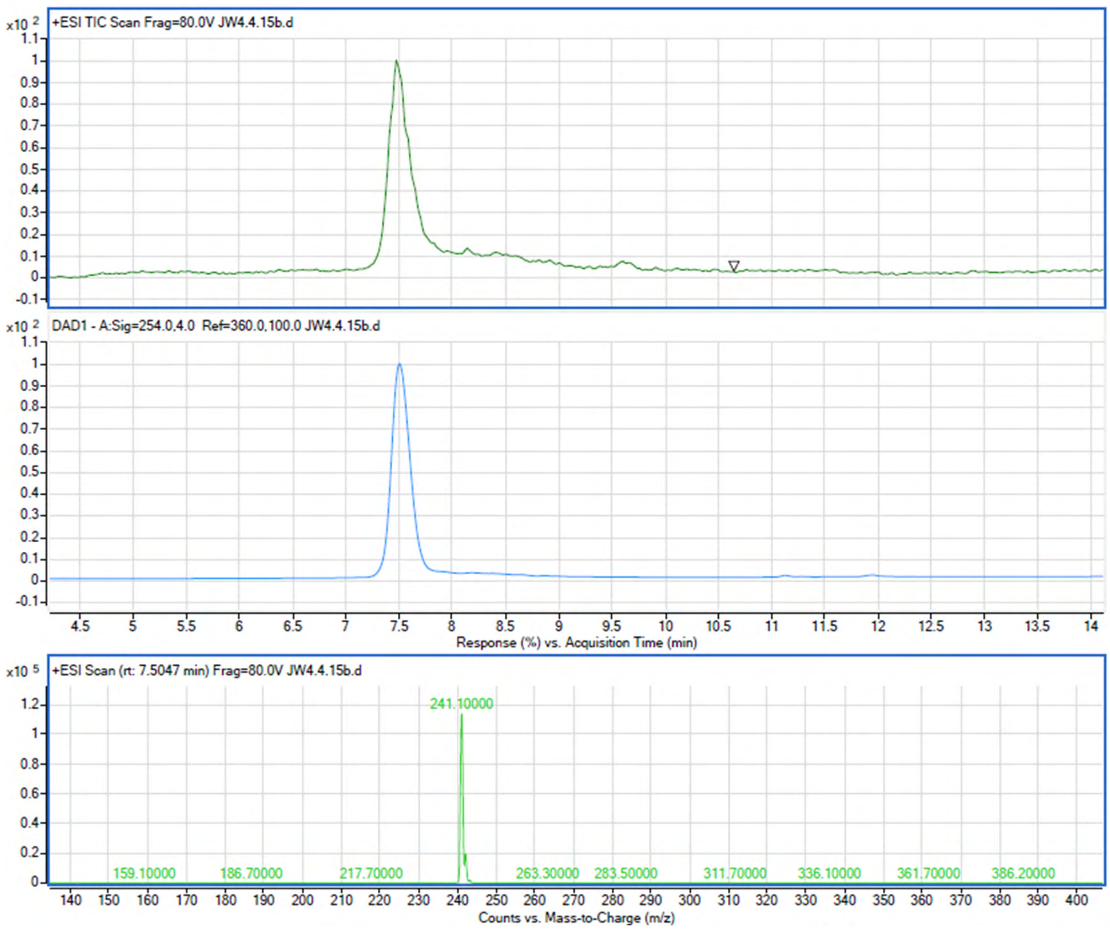


Figure S267. ^{1}H-NMR spectrum of compound **149**.

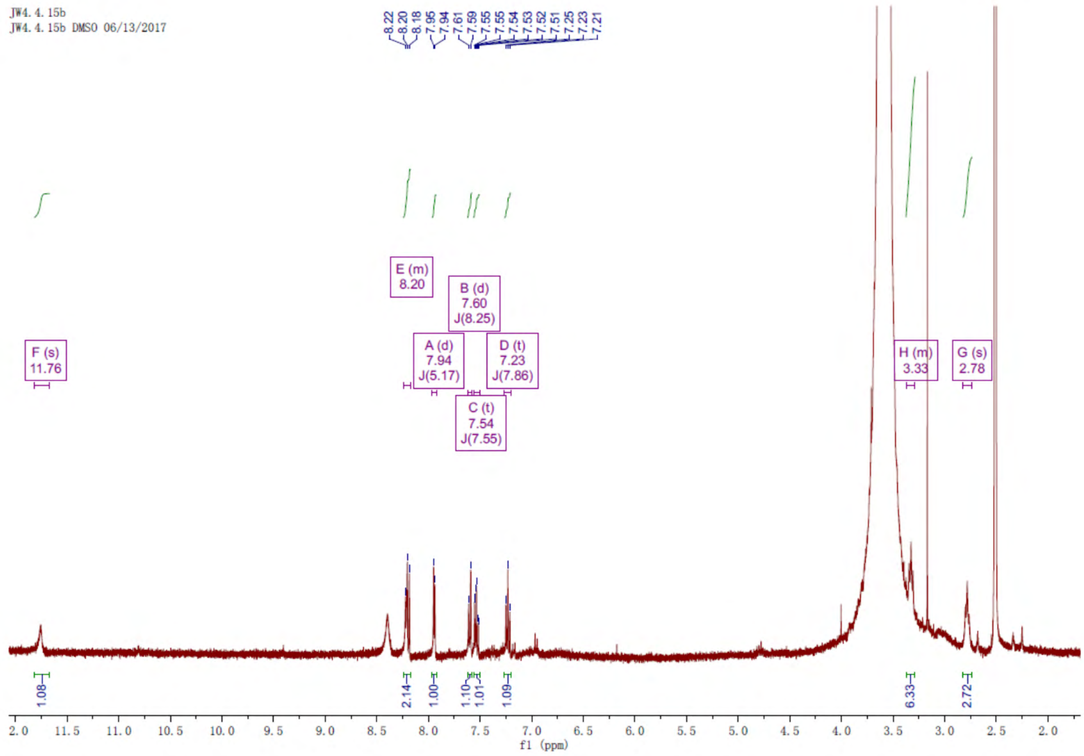


Figure S268. LC-MS spectrum of compound **150**.

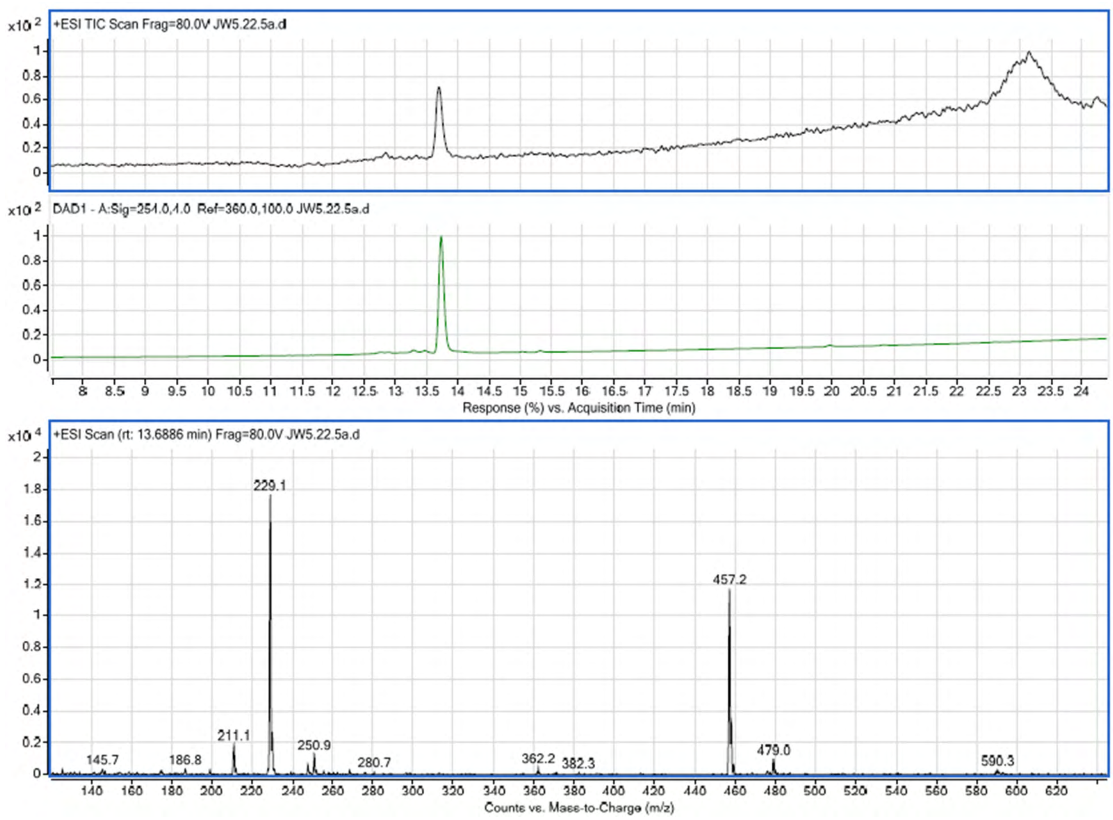


Figure S269. [1]H-NMR spectrum of compound **150**.

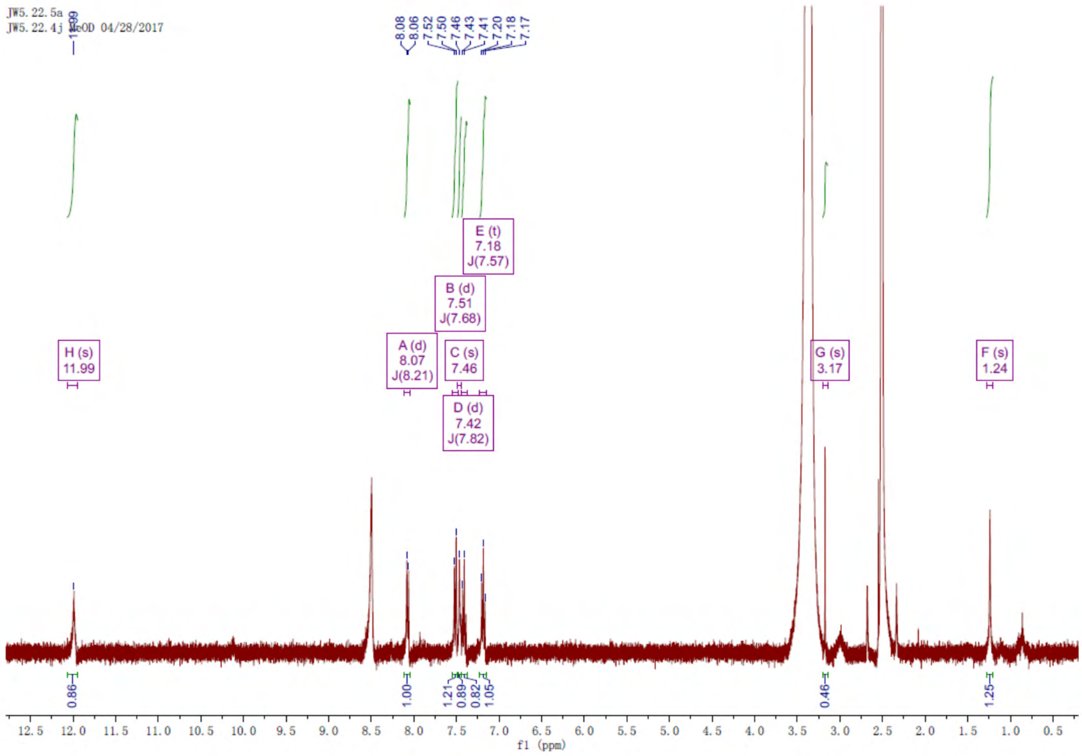


Figure S270. LC-MS spectrum of compound **151**.

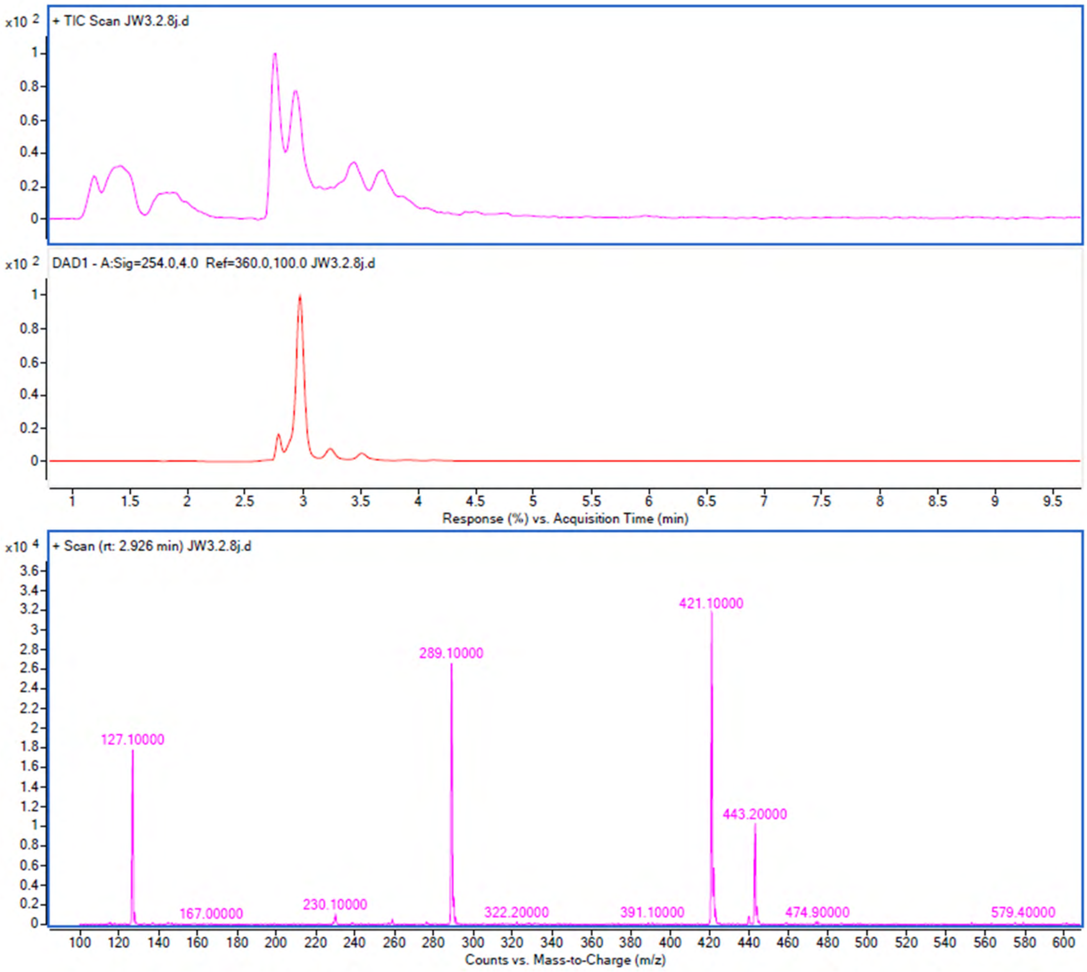
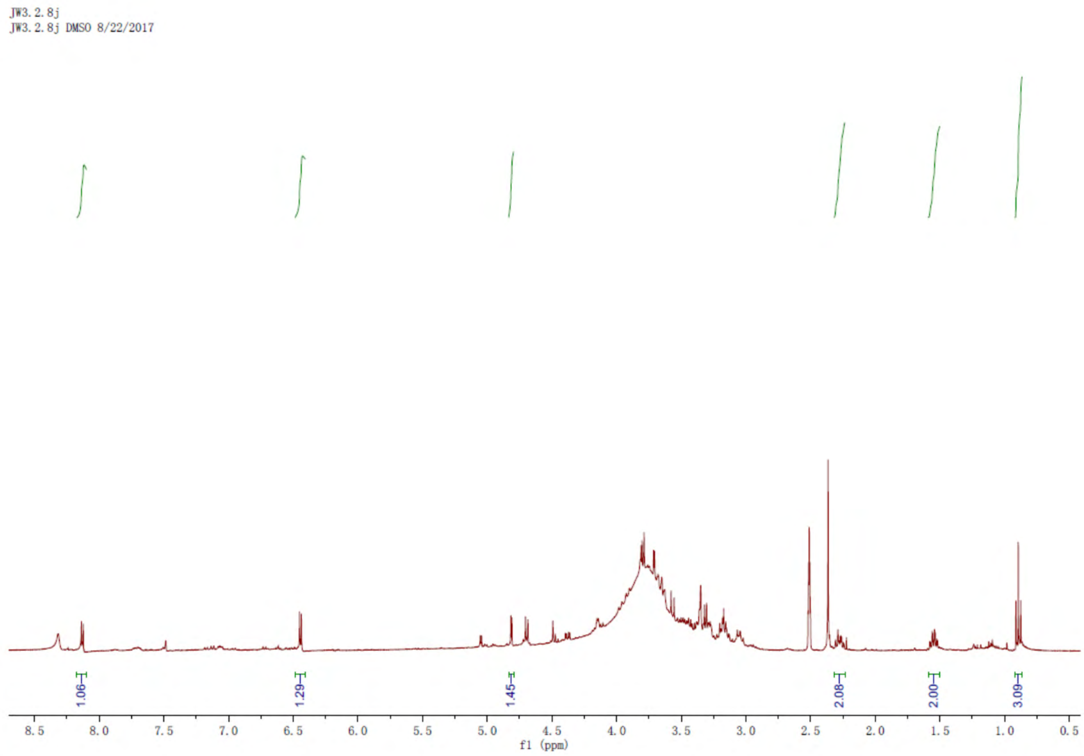


Figure S271. [1]H-NMR and HSQC spectra of compound **151**.



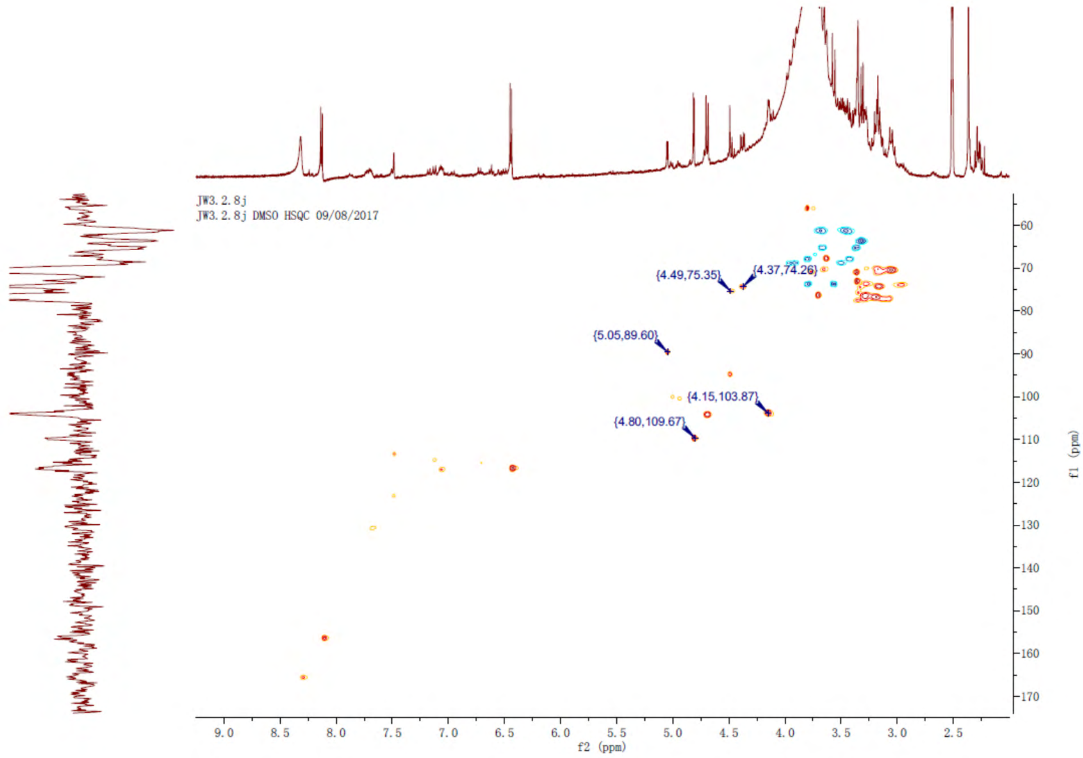


Figure S272. LC-MS spectrum of compound **152**.

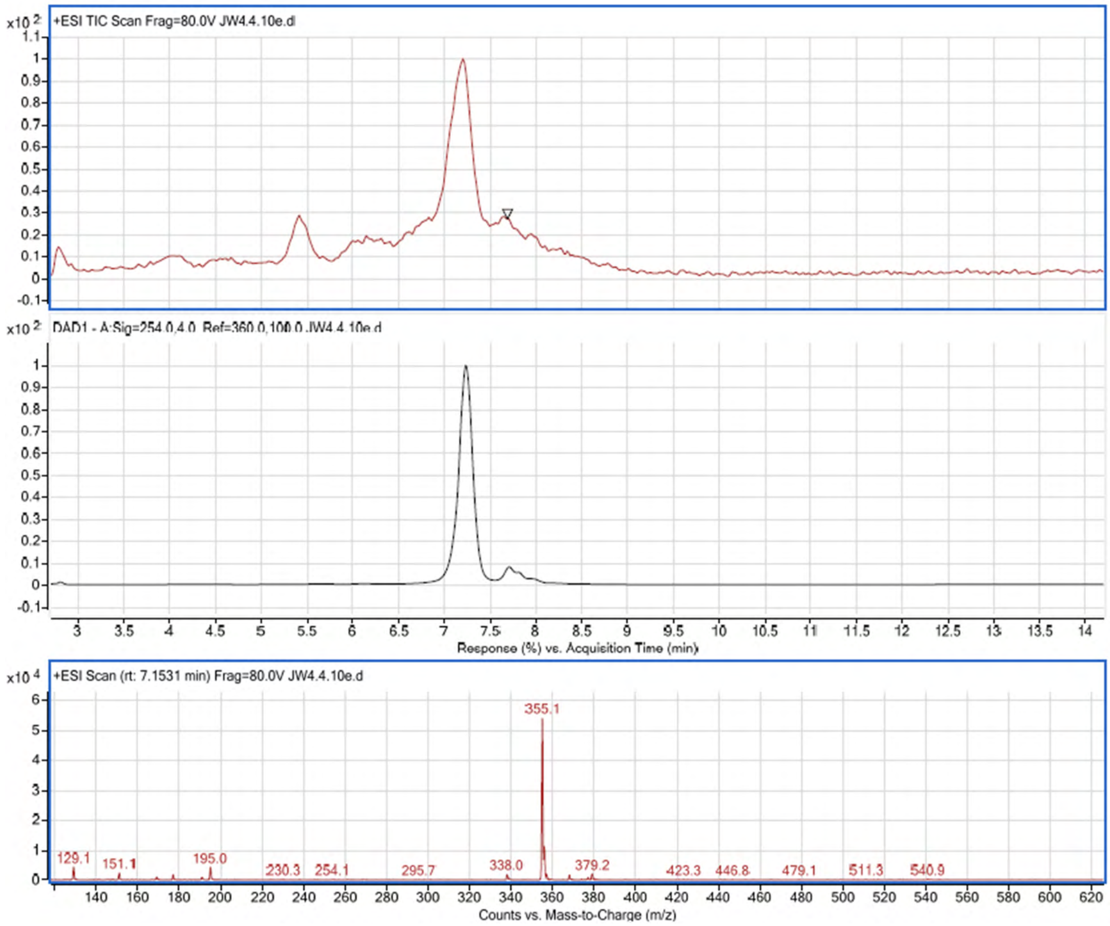


Figure S273. ^{1}H-NMR spectrum of compound **152**.

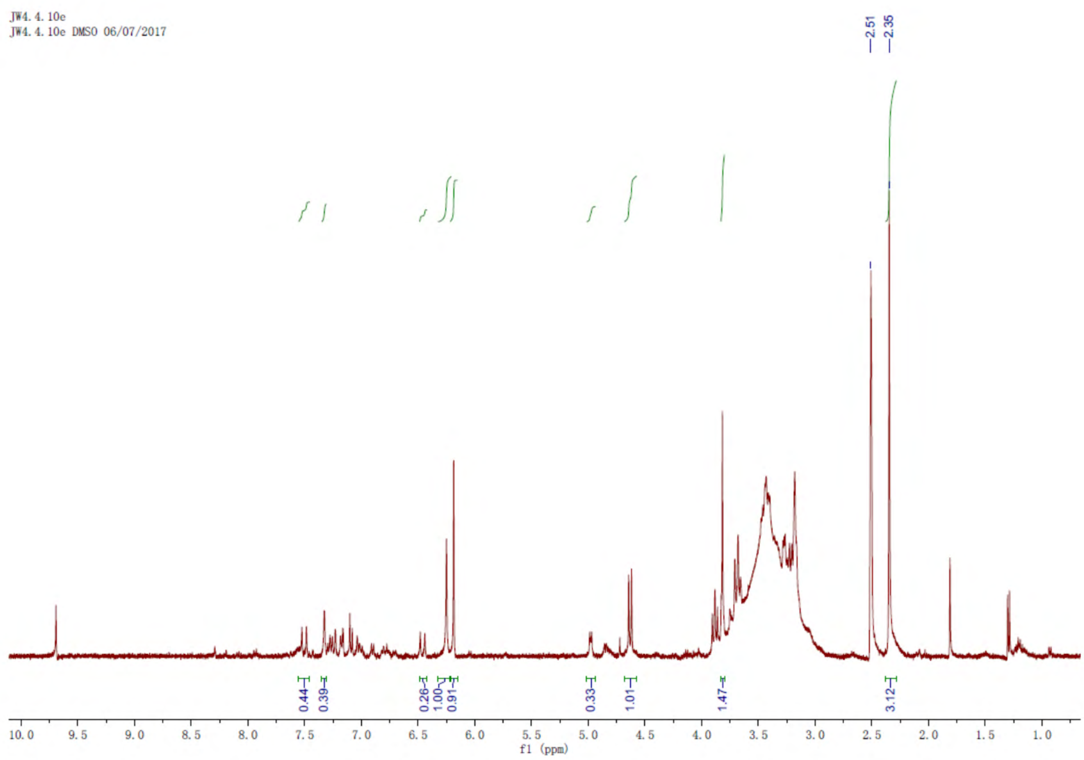


Figure S274. LC-MS spectrum of compound **153**.

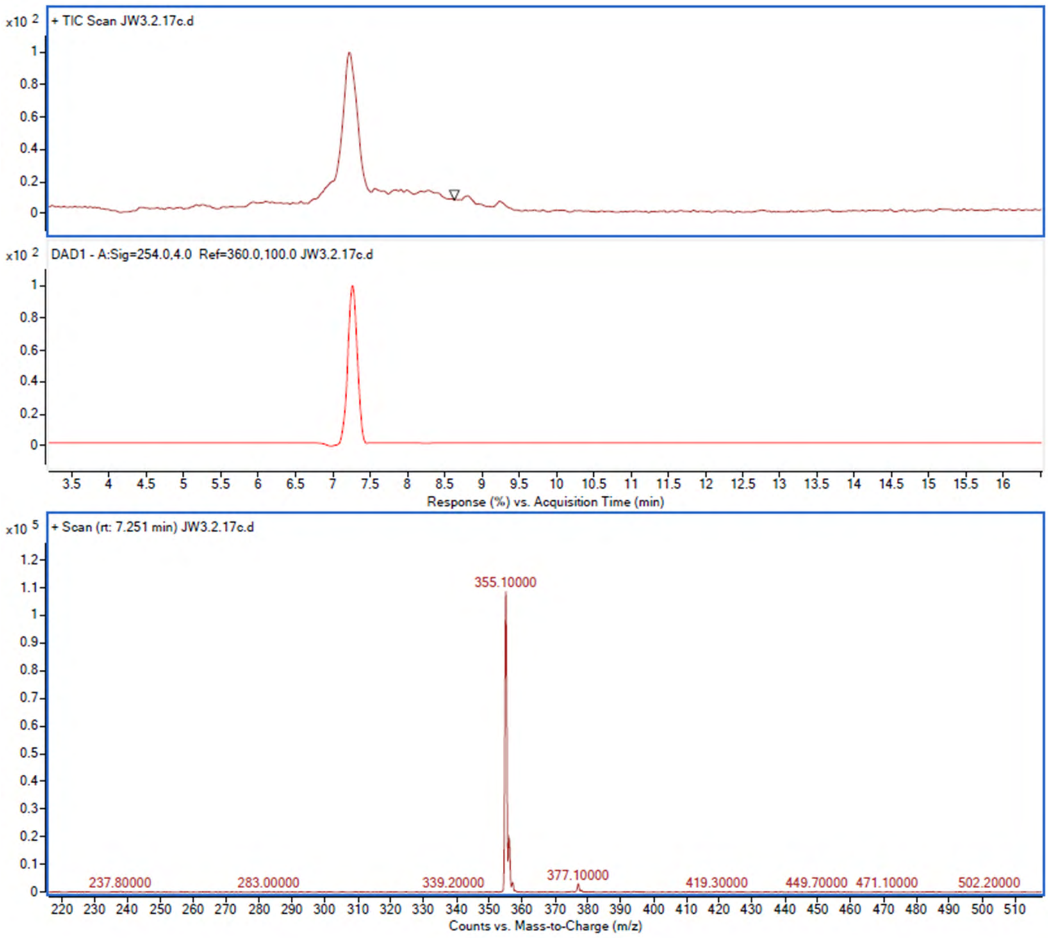


Figure S275. ^{1}H-NMR spectrum of compound **153**.

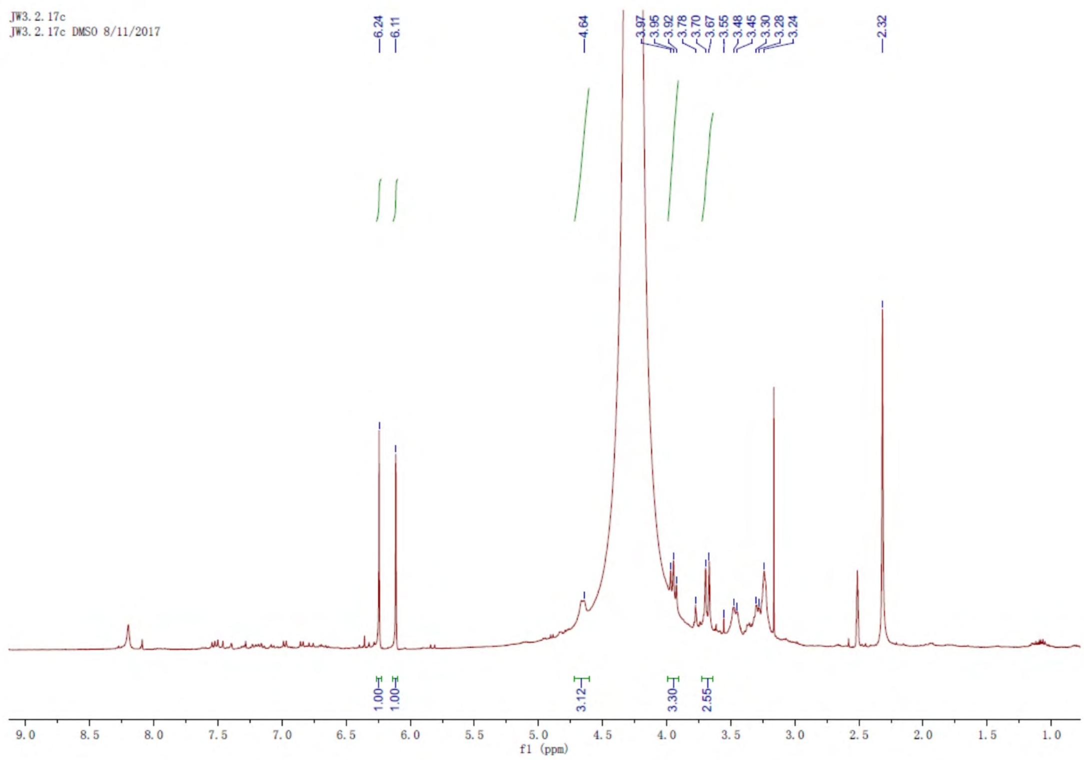


Figure S276. LC-MS spectrum of compound **154**.

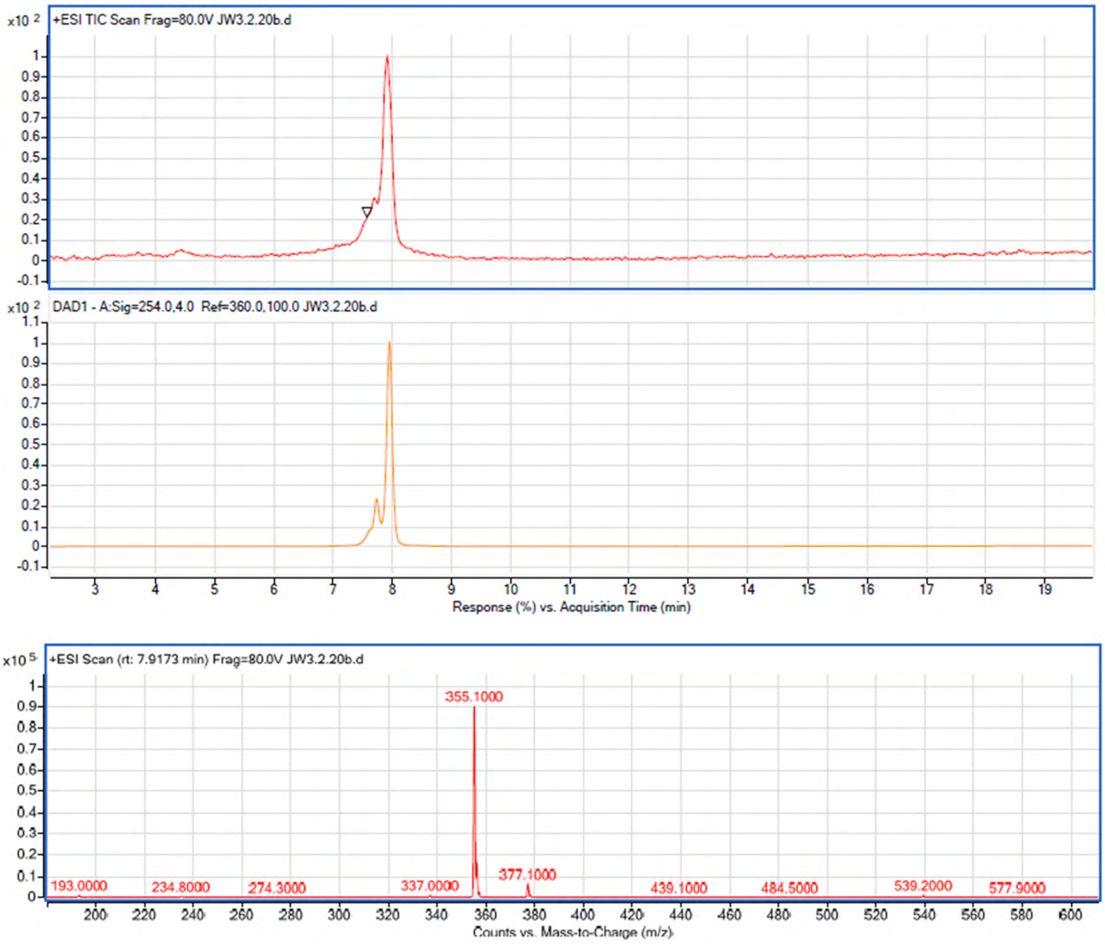


Figure S277. ^{1}H-NMR spectrum of compound **154**.

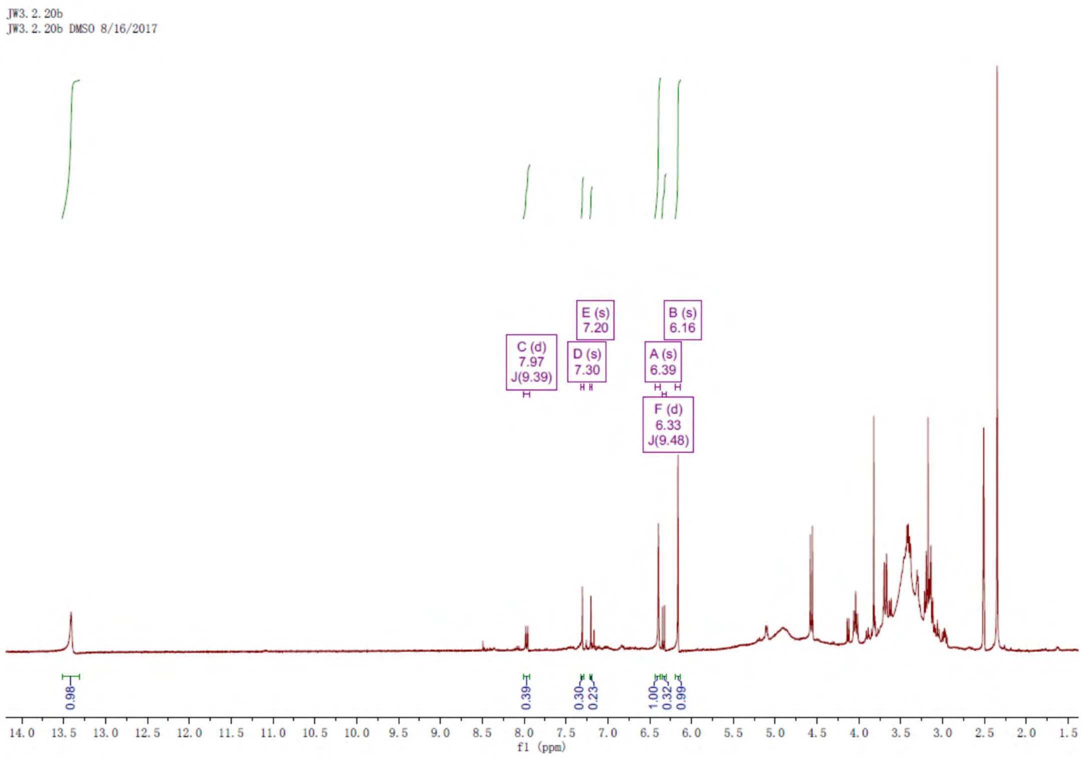


Figure S278. LC-MS spectrum of compound **155**.

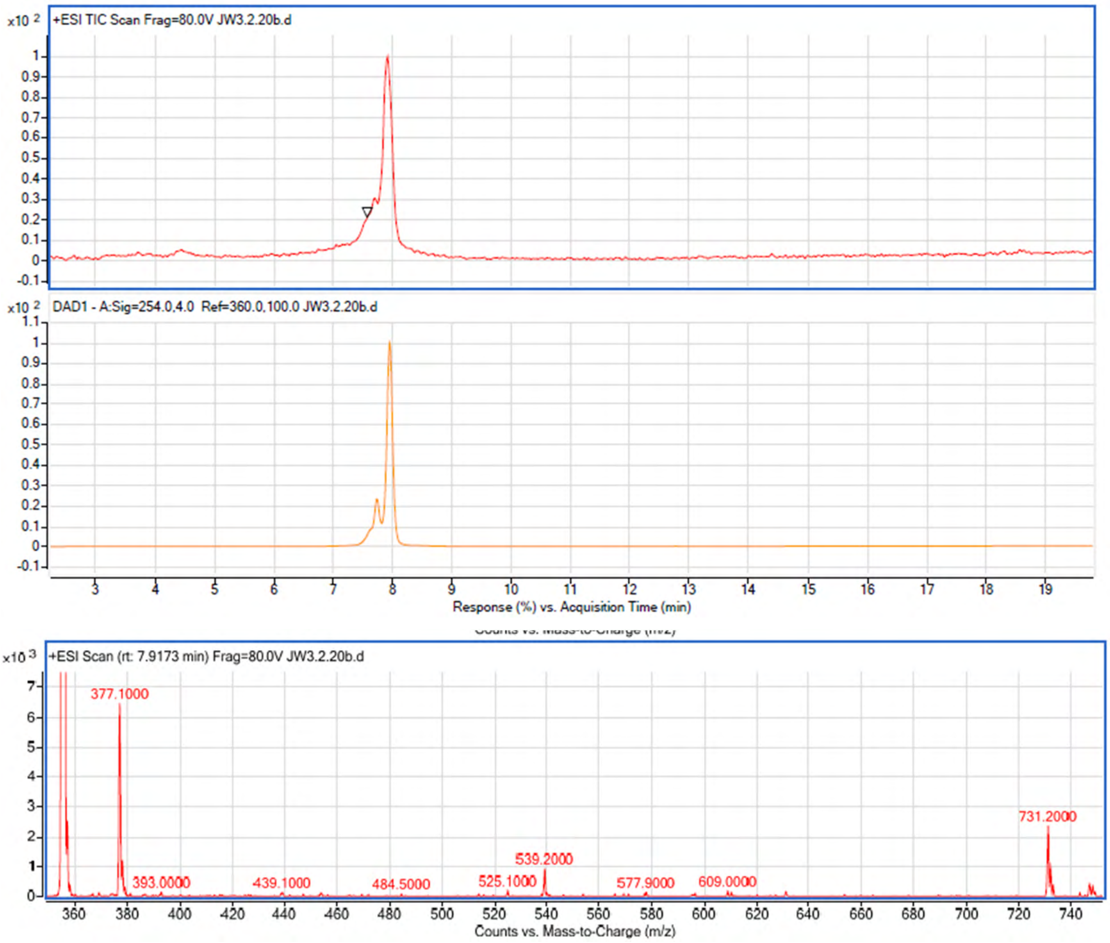


Figure S279. [1]H-NMR spectrum of compound **155**.

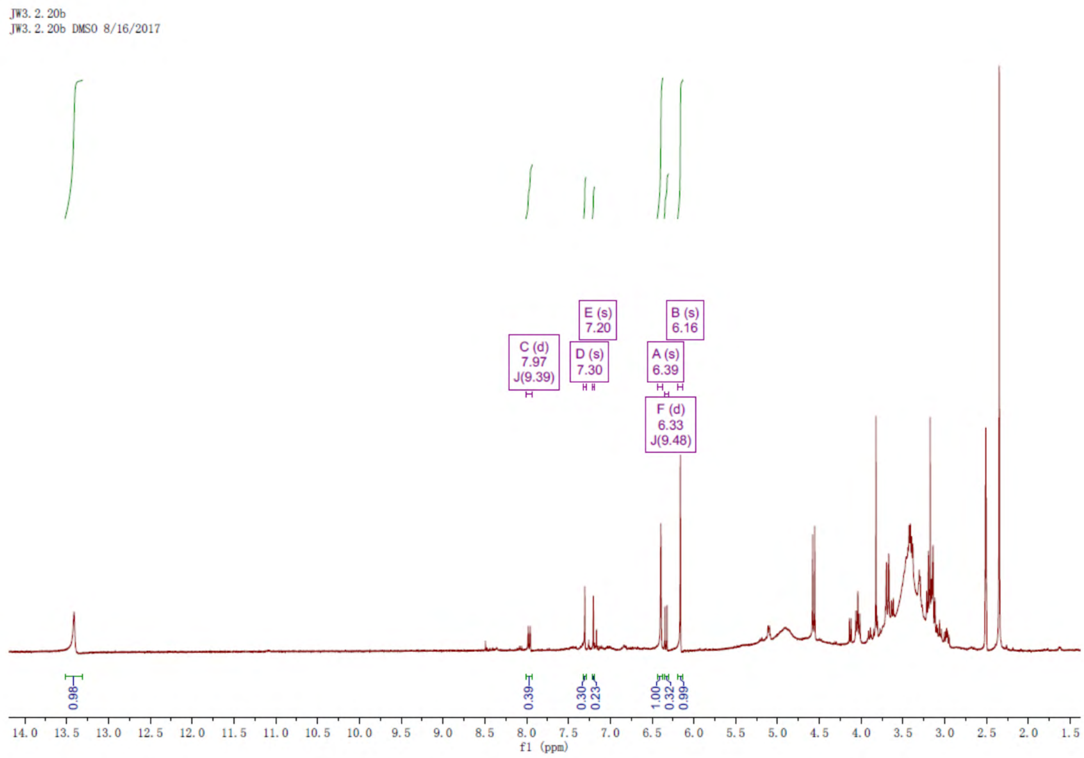


Figure S280. LC-MS spectrum of compound **156**.

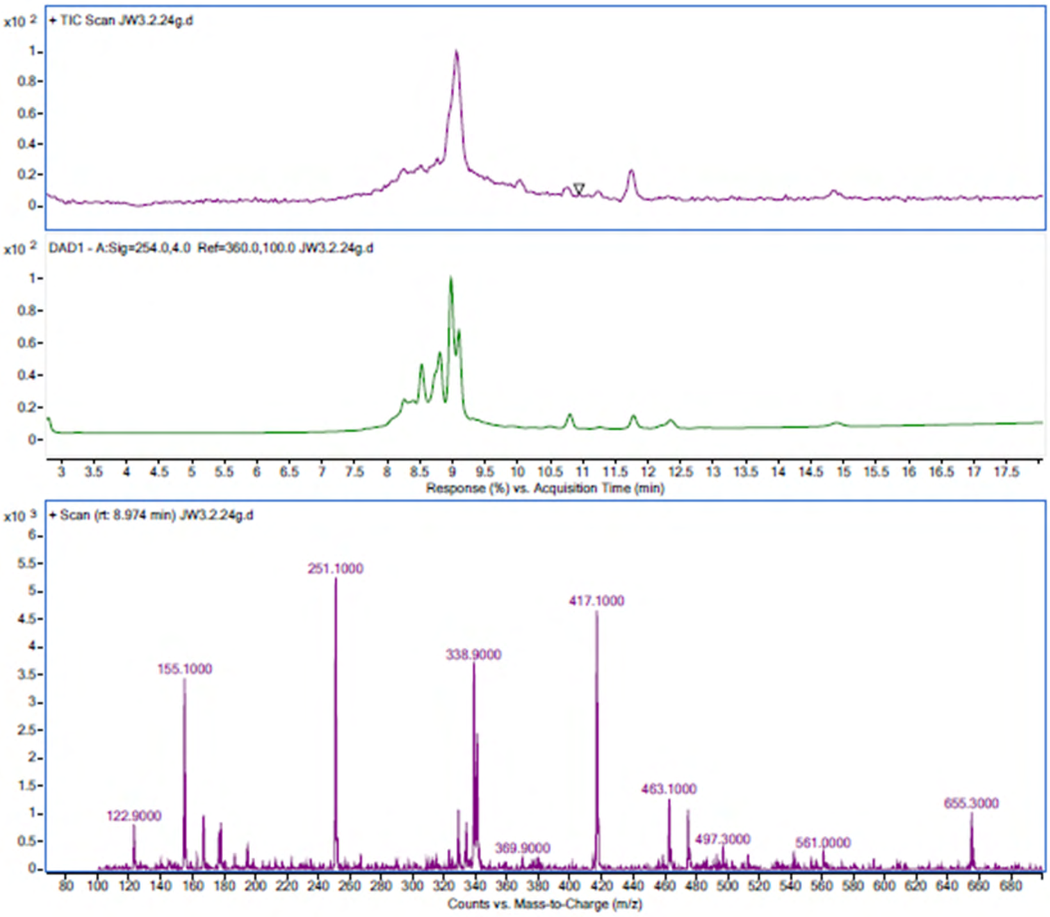


Figure S281. [1]H-NMR spectrum of compound **156**.

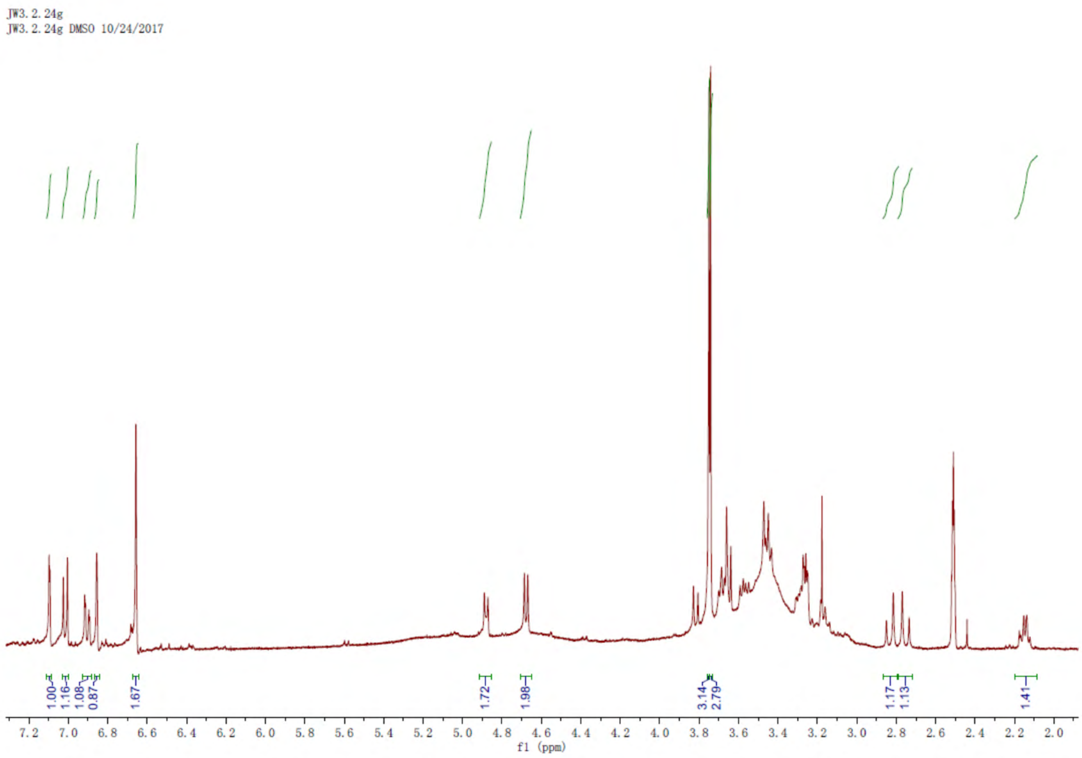


Figure S282. LC-MS spectrum of compound **157**.

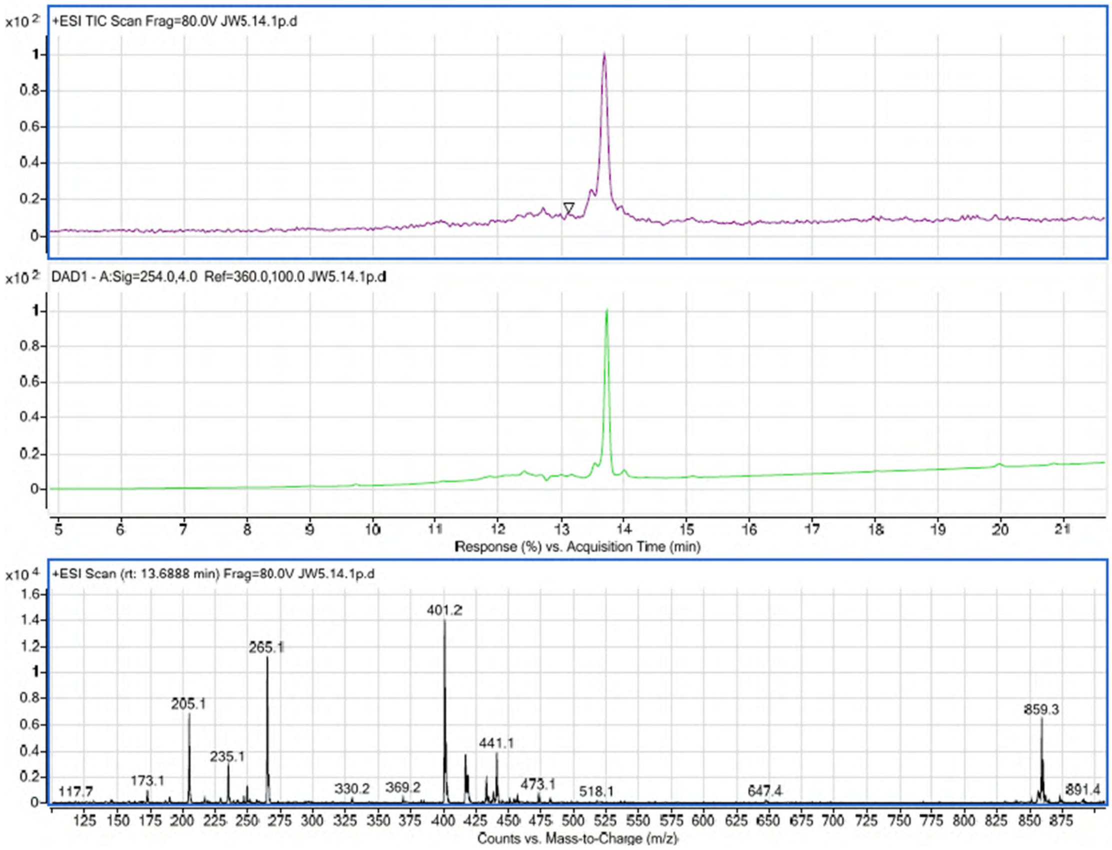
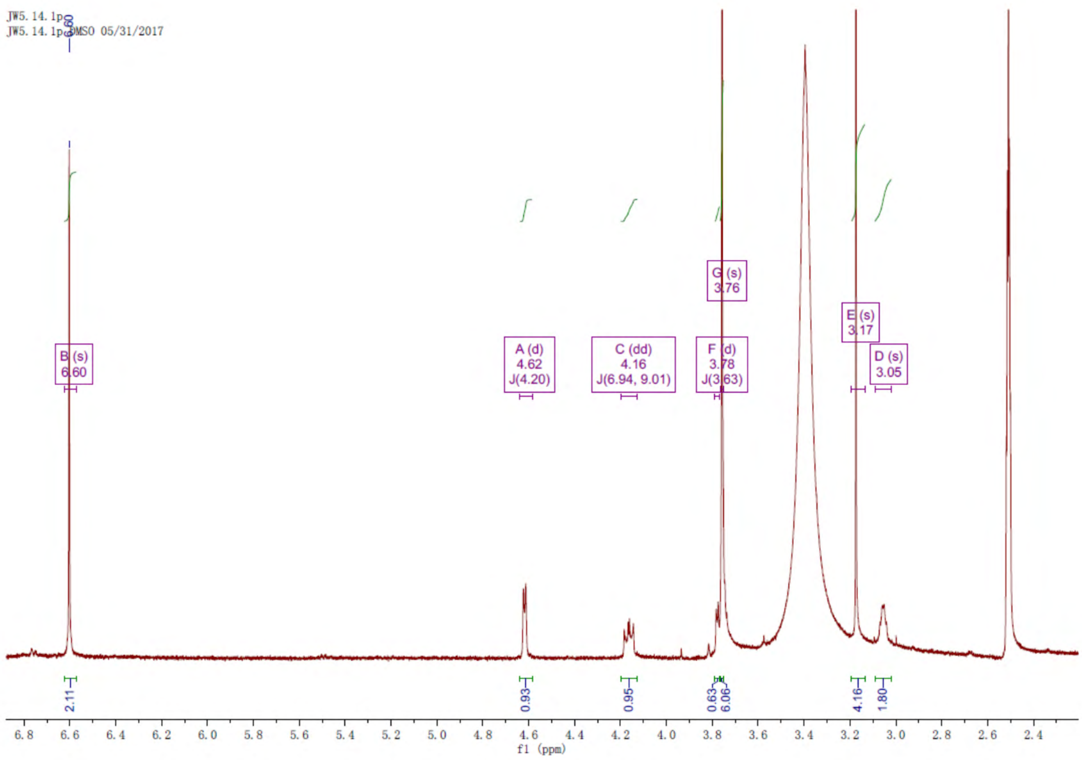


Figure S283. ^{1}H-NMR and HSQC spectrum of compound **157**.



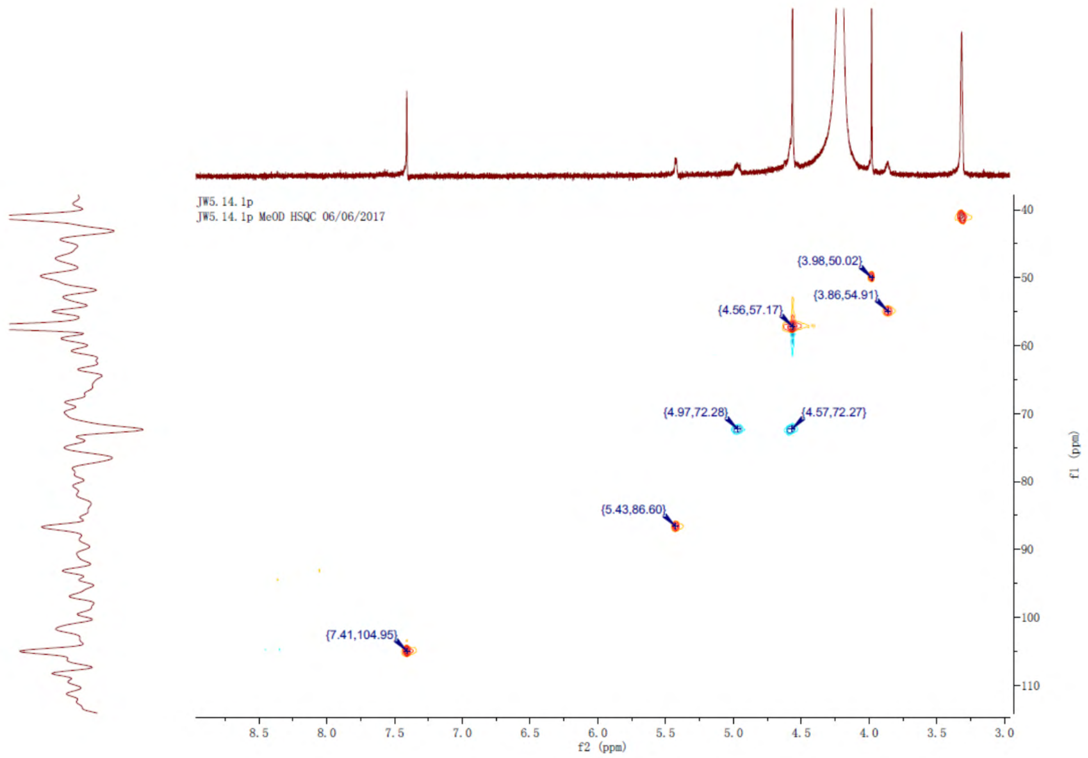


Figure S284. LC-MS spectrum of compound **158**.

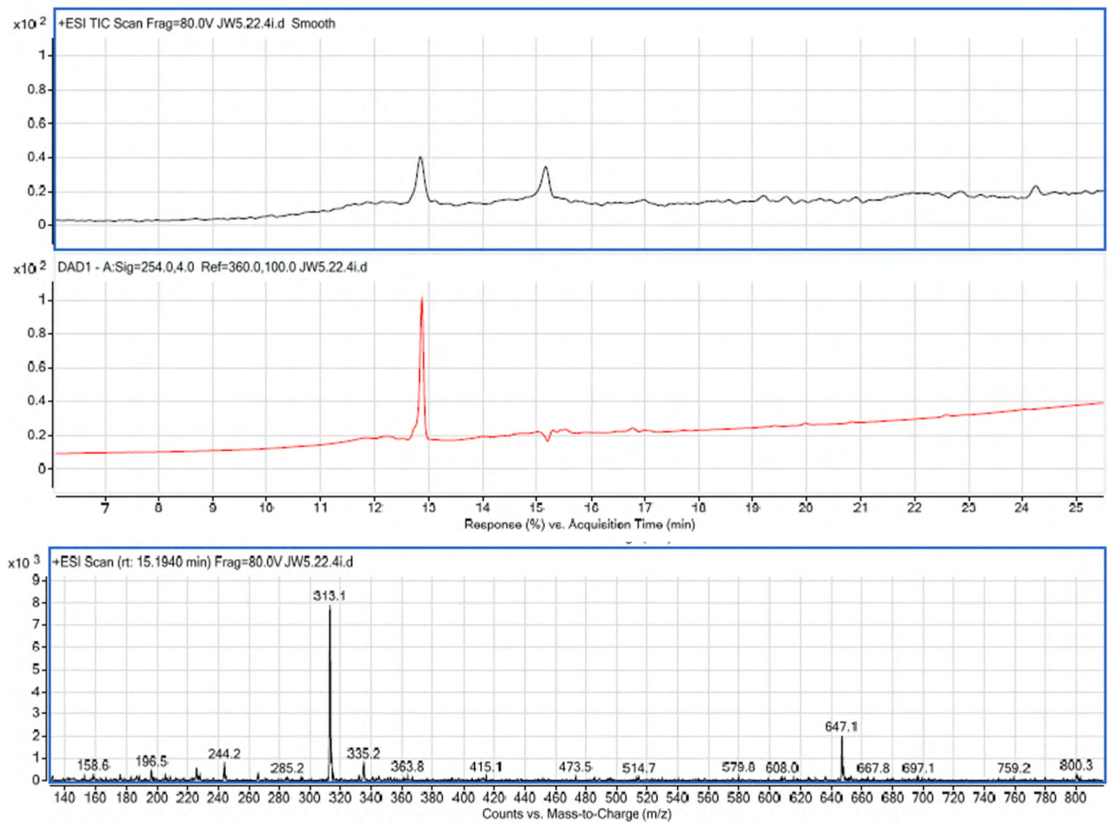


Figure S285. [1]H-NMR spectrum of compound **158**.

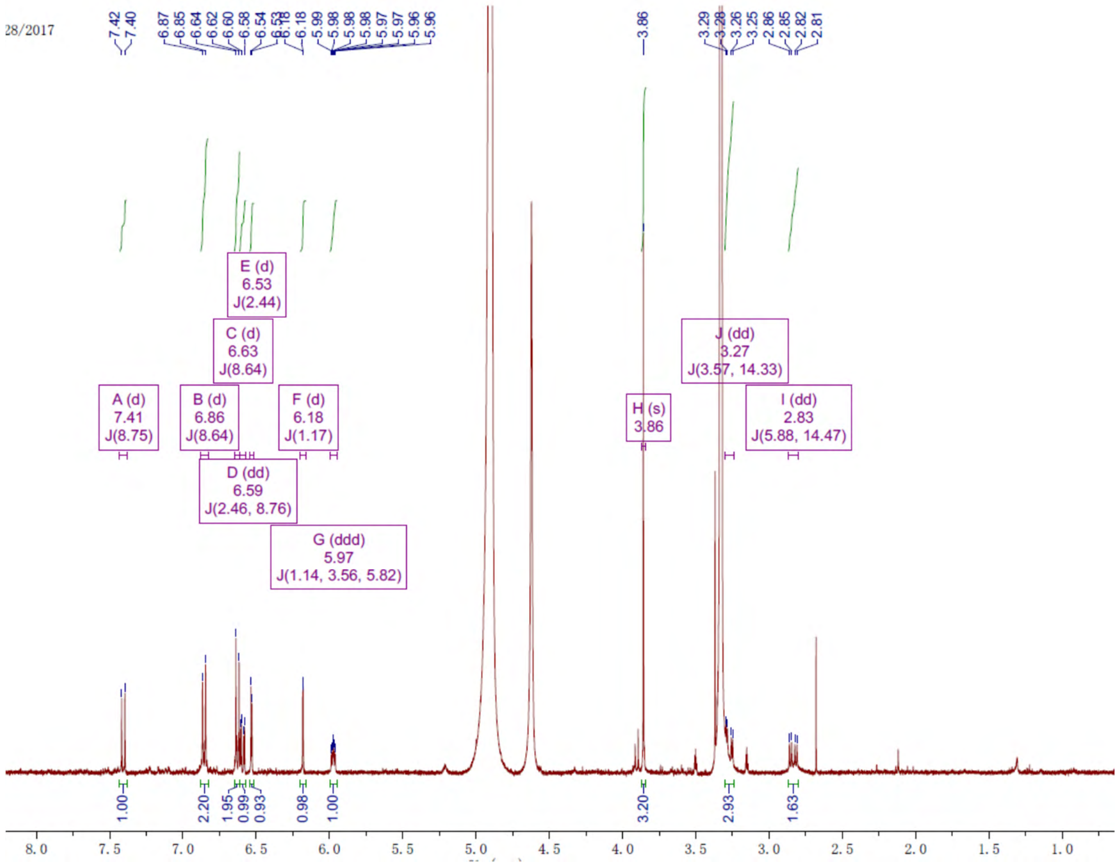


Figure S286. LC-MS spectrum of compound **159**.

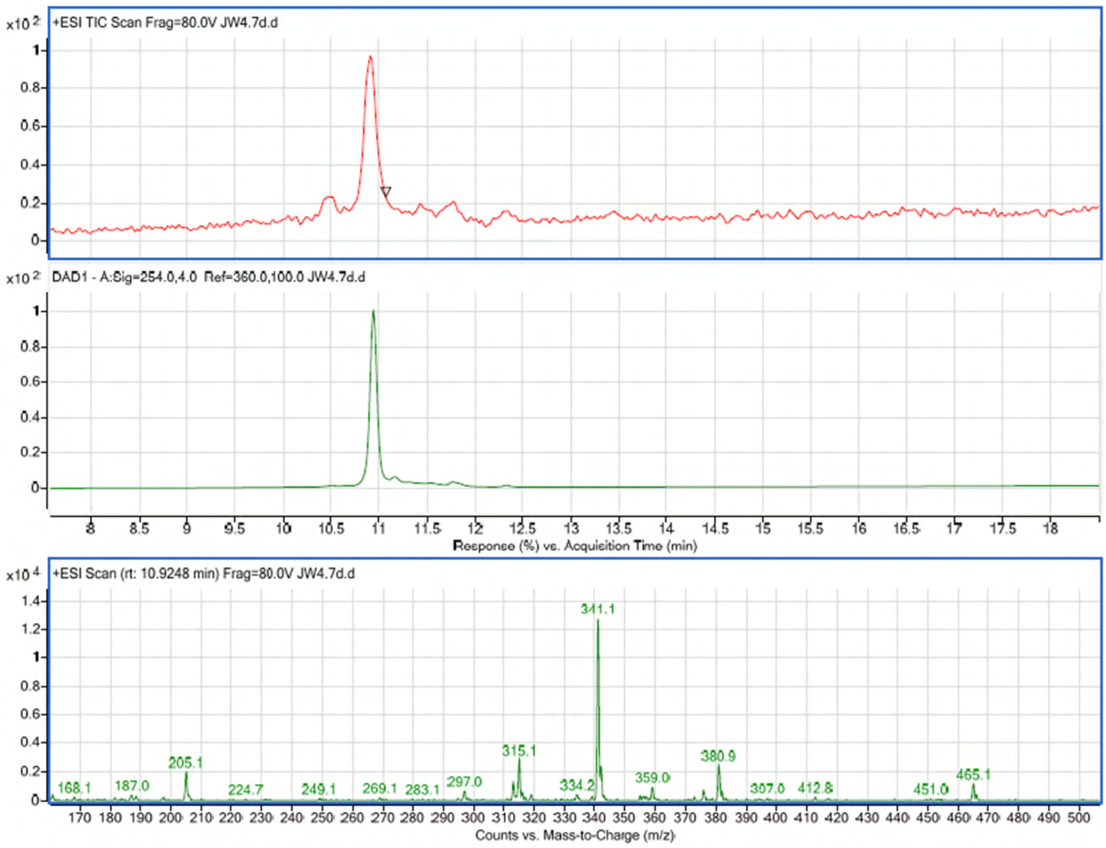


Figure S287. ^{1}H-NMR spectrum of compound **159**.

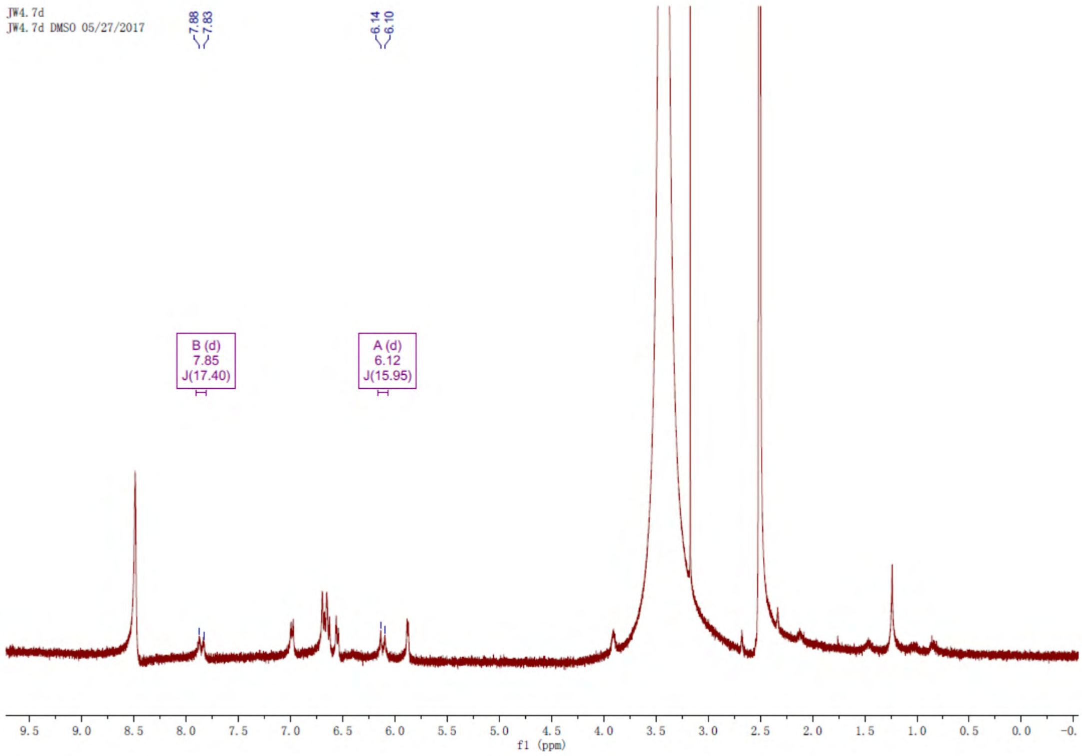
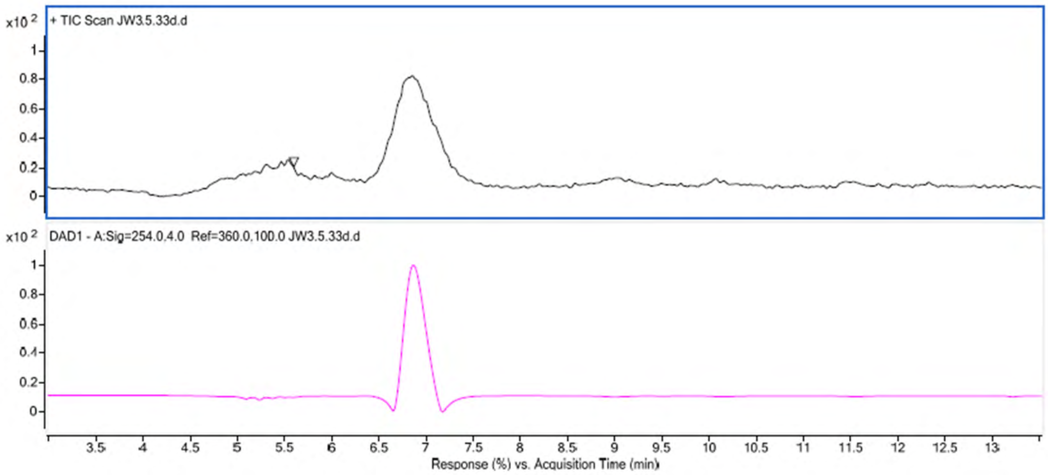


Figure S288. LC-MS spectrum of compound **160**.



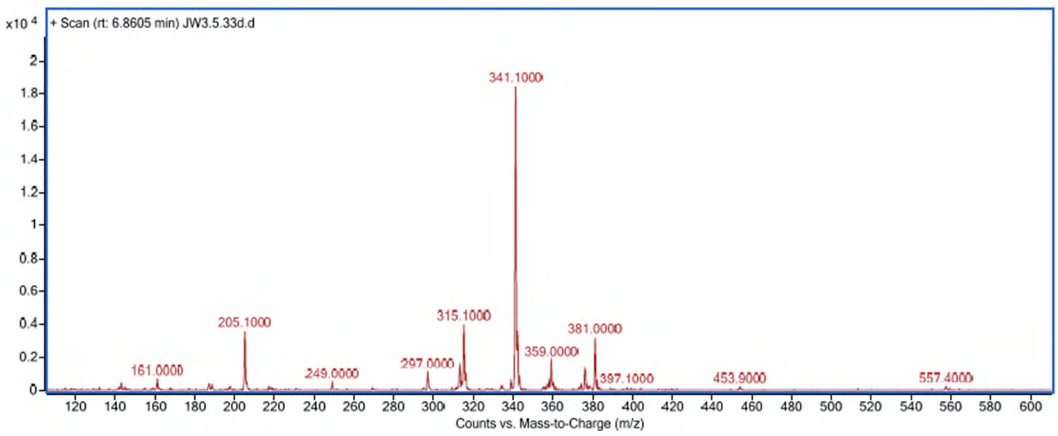
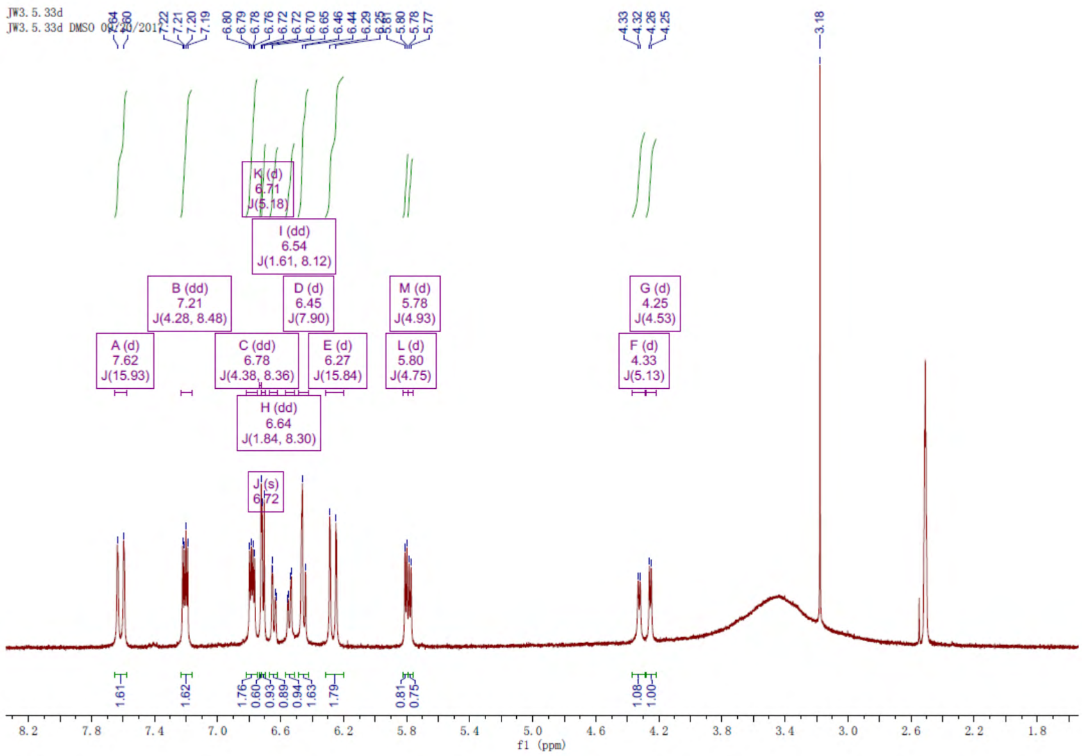


Figure S289. ^{1}H-NMR and HSQC spectra of compound **160**.



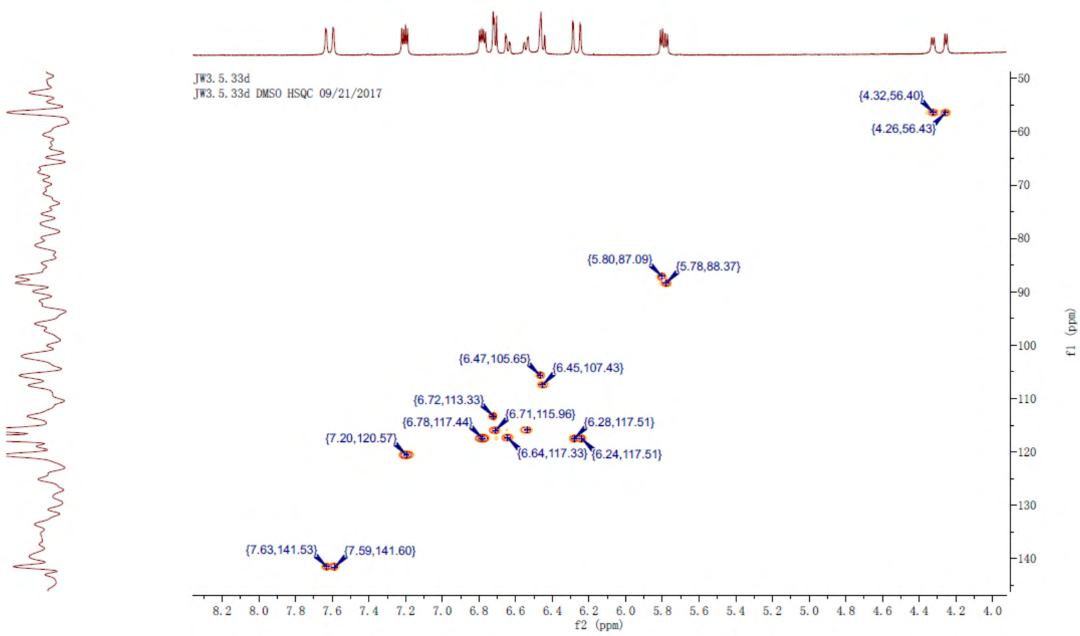
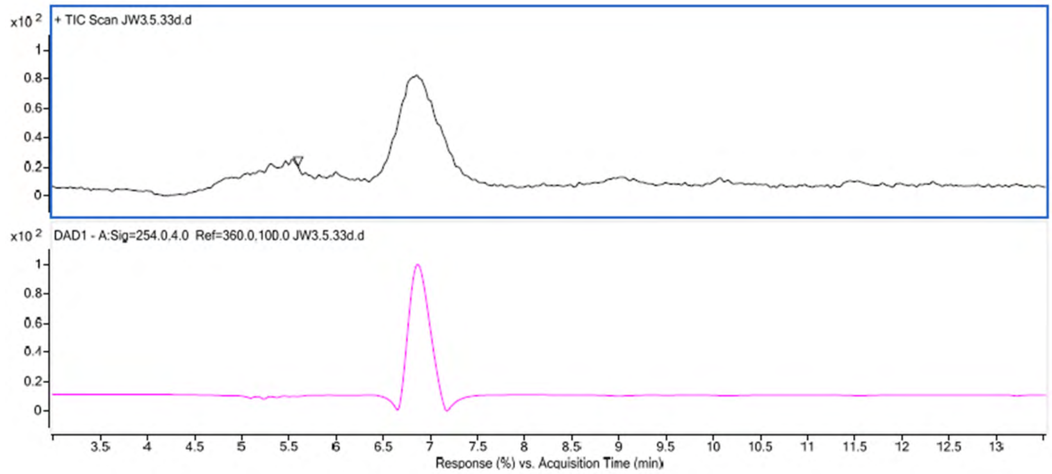


Figure S280. LC-MS spectrum of compound **161**.



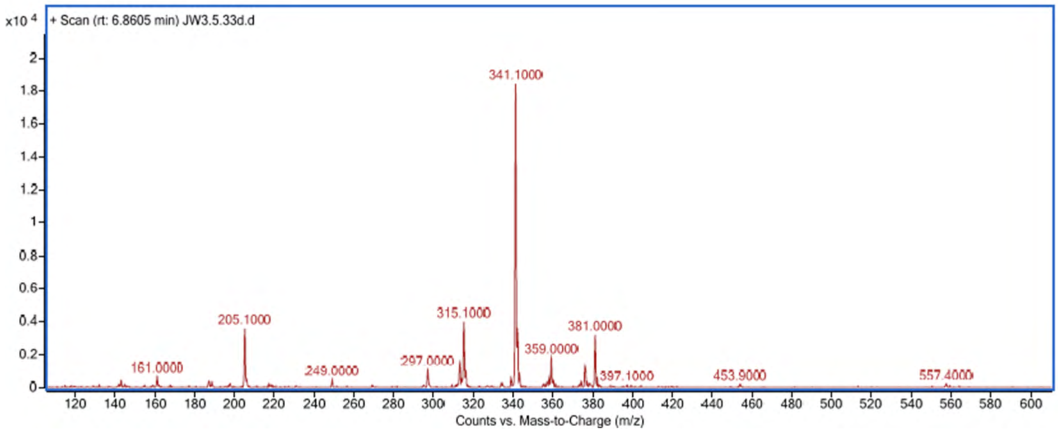


Figure S281. ^{1}H-NMR spectrum of compound **161**.

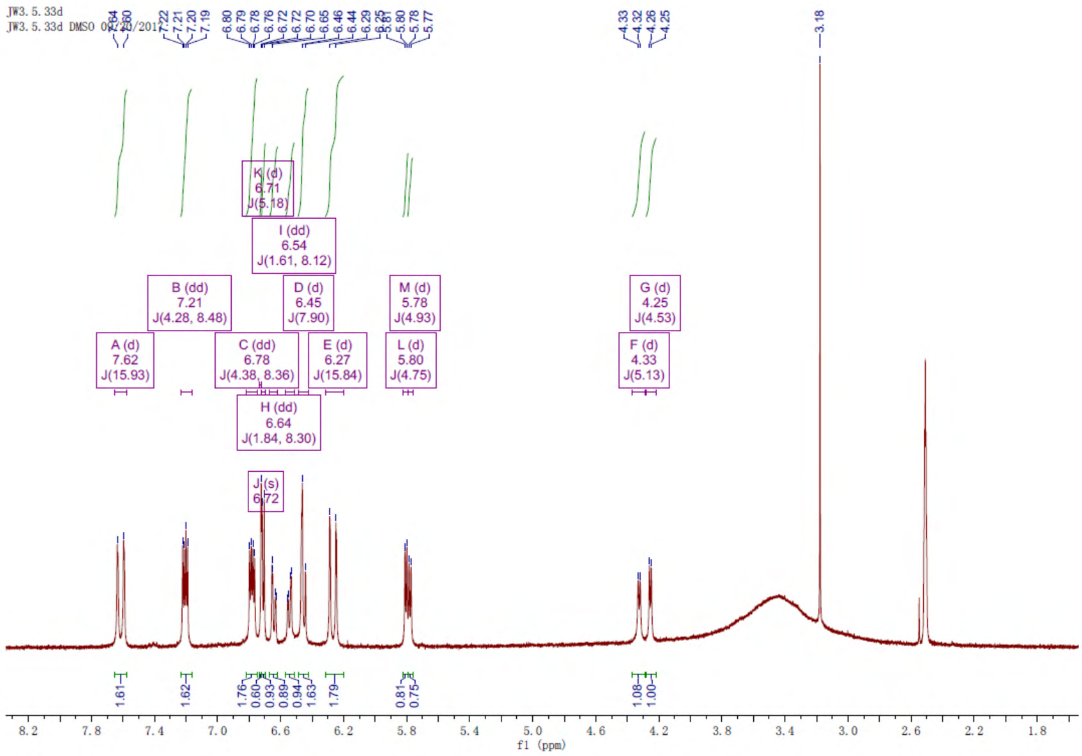


Figure S272. LC-MS spectrum of compound **162**.

Figure S273. [1]H-NMR spectrum of compound **162**.

Figure S274. LC-MS spectrum of compound **163**.

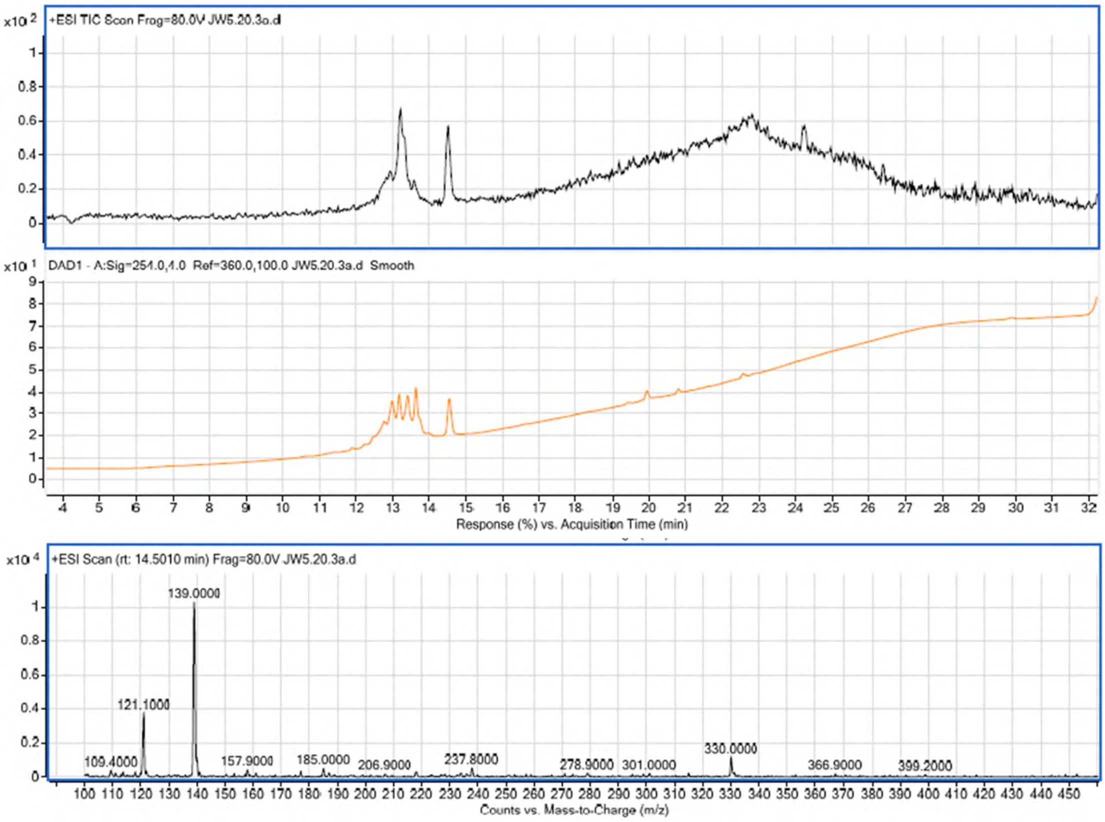


Figure S275. [1]H-NMR spectrum of compound **163**.

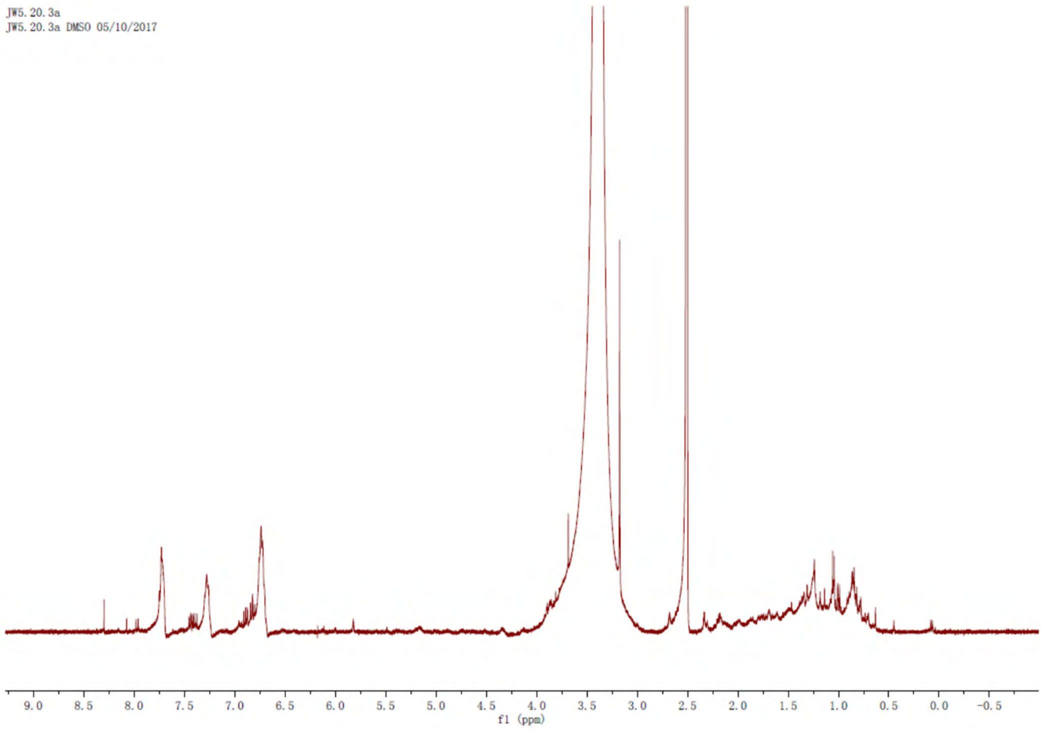


Figure S276. LC-MS spectrum of compound **164**.

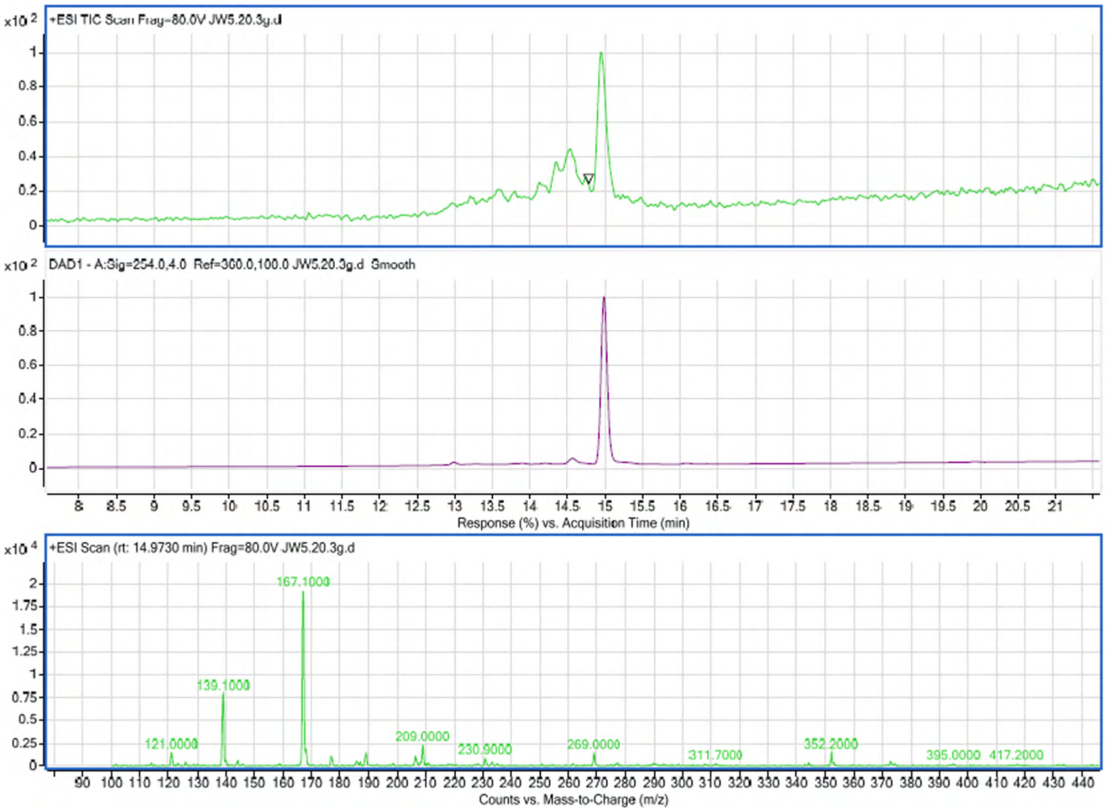


Figure S277. [1]H-NMR spectrum of compound **164**.

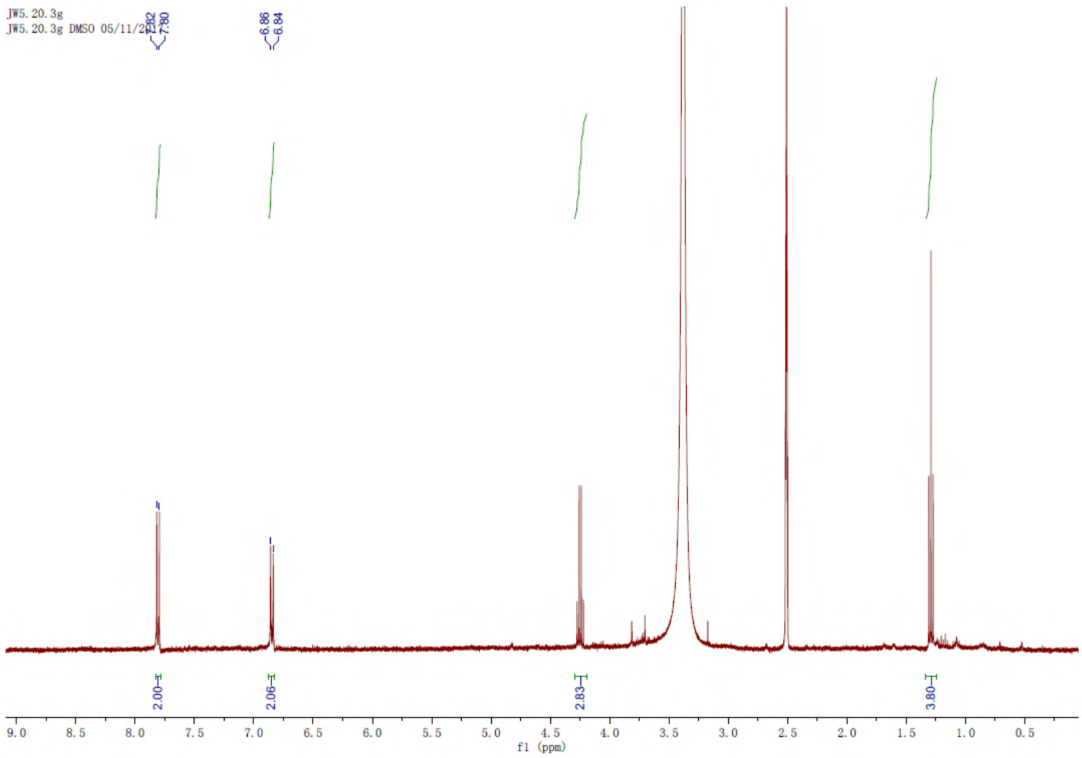


Figure S278. LC-MS spectrum of compound **165**.

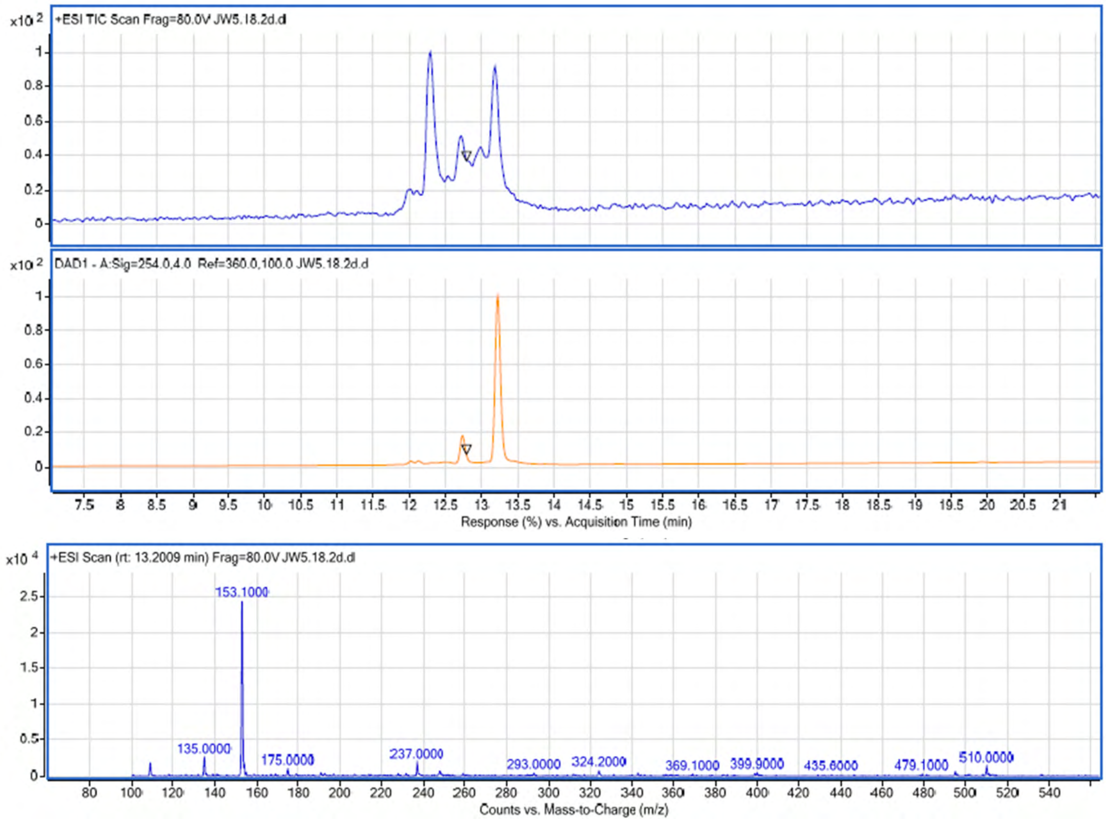


Figure S279. [1]H-NMR spectrum of compound **165**.

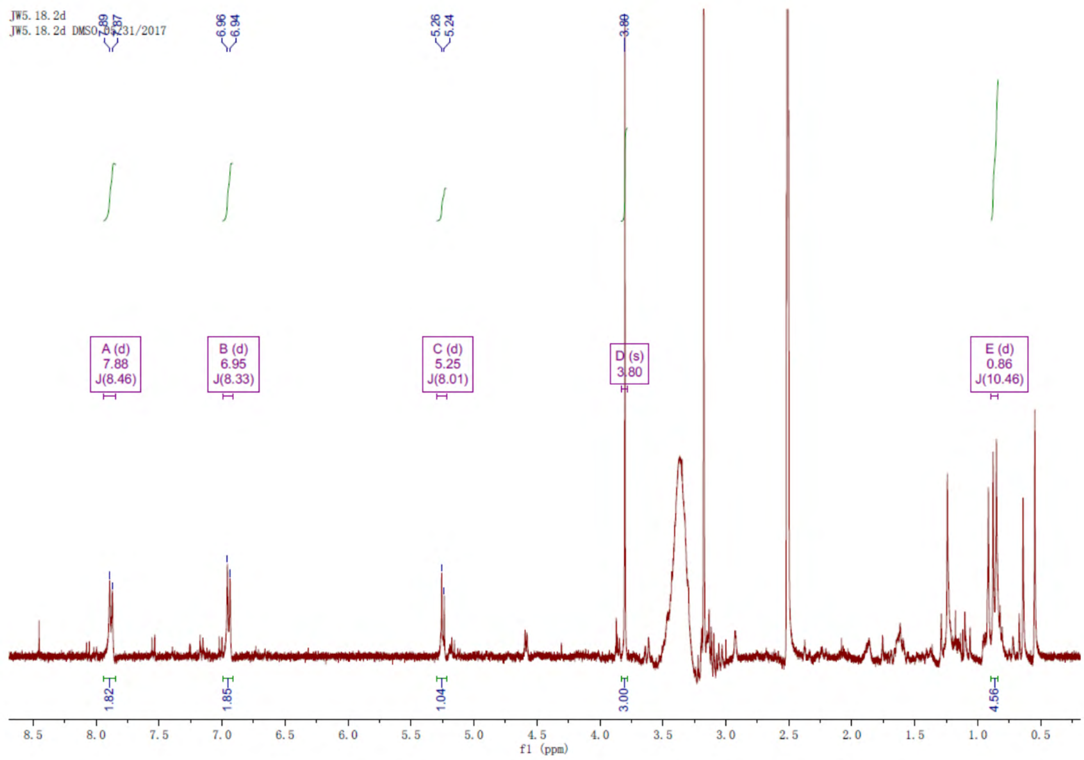


Figure S280. LC-MS spectrum of compound **166**.

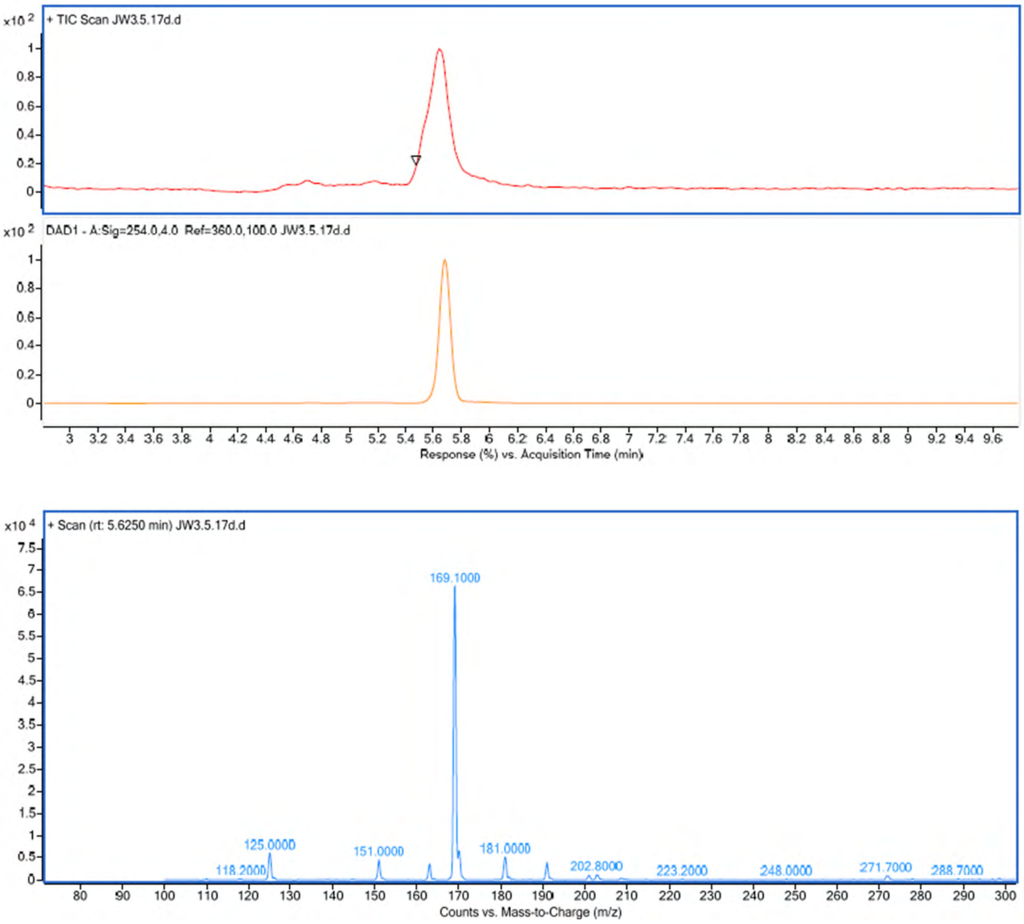


Figure S281. [1]H-NMR spectrum of compound **166**.

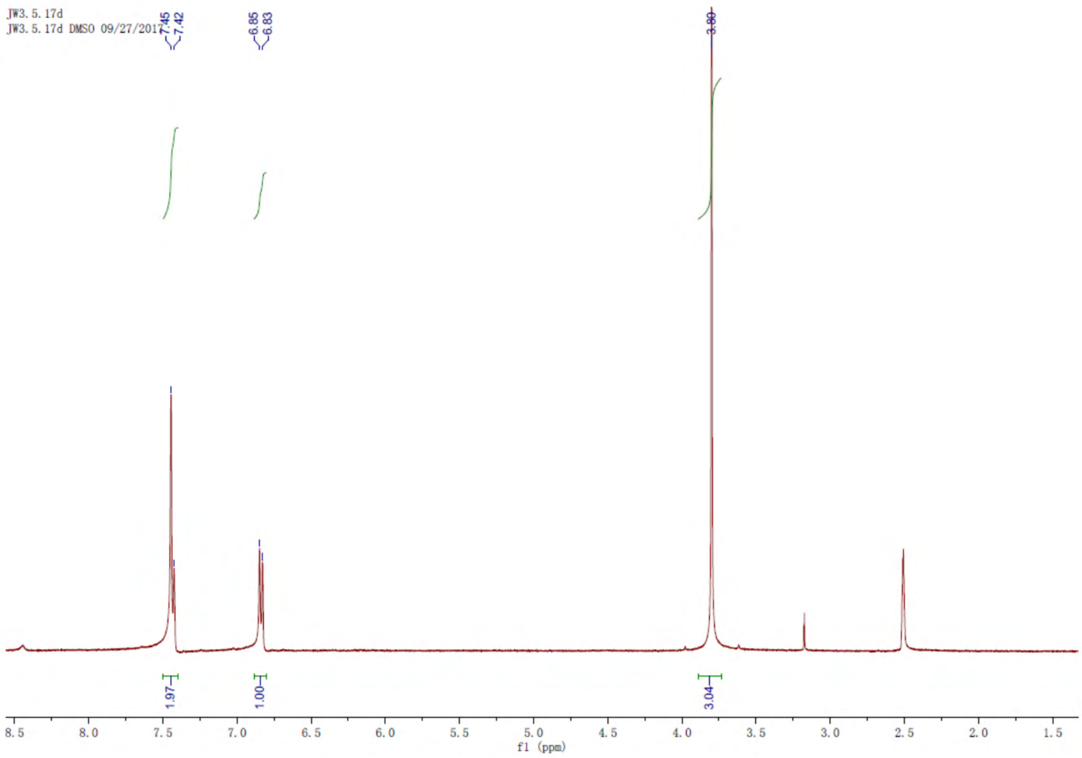


Figure S282. LC-MS spectrum of compound **167**.

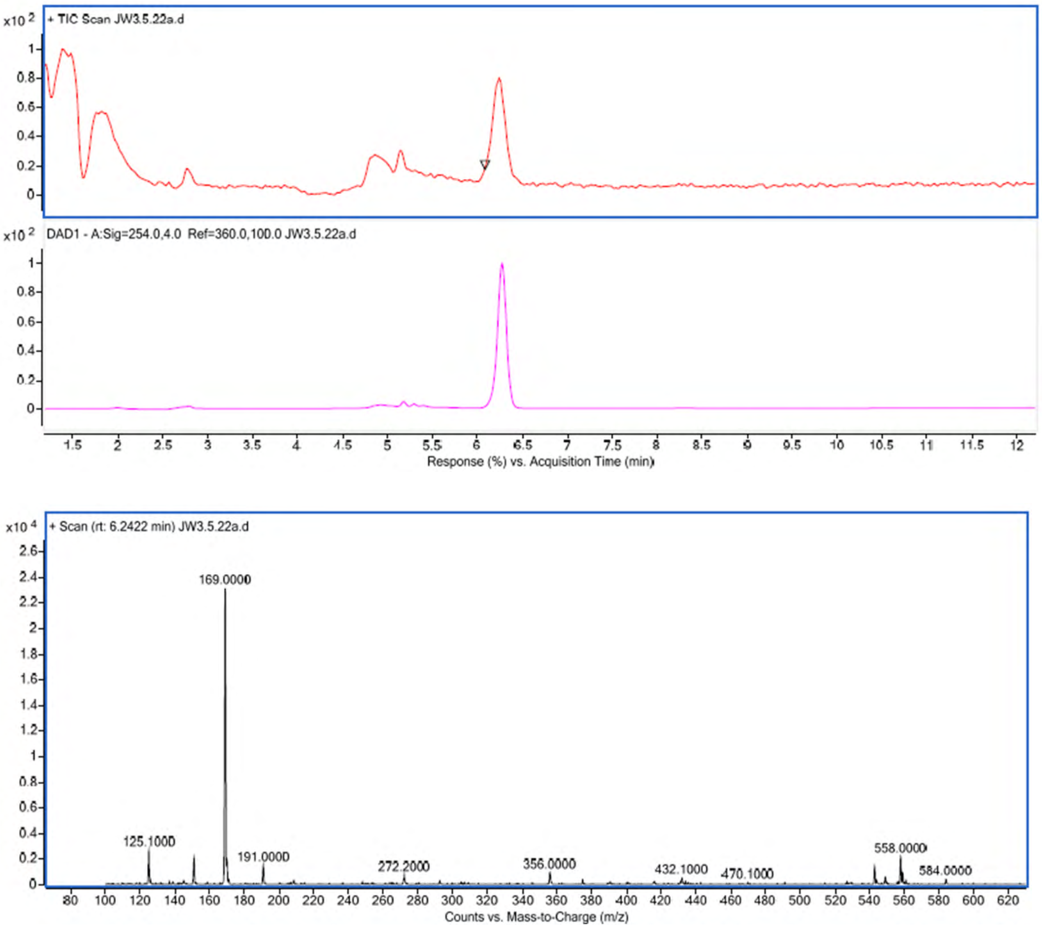


Figure S283. [1]H-NMR spectrum of compound **167**.

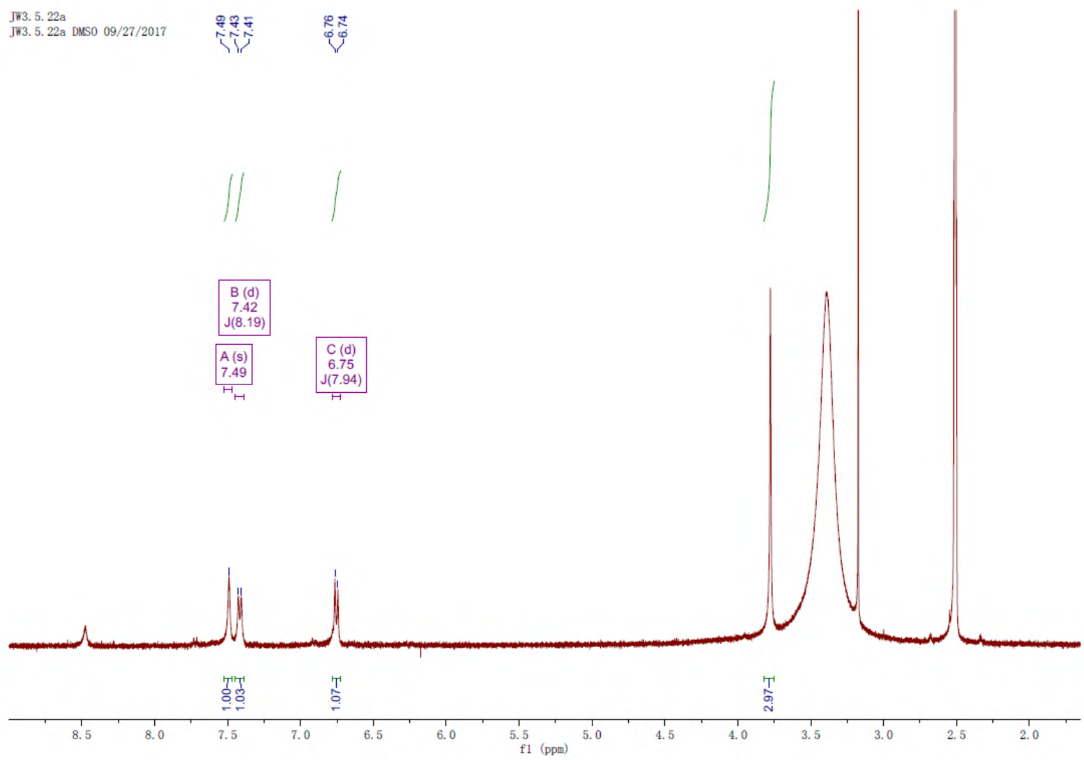


Figure S284. LC-MS spectrum of compound **168**.

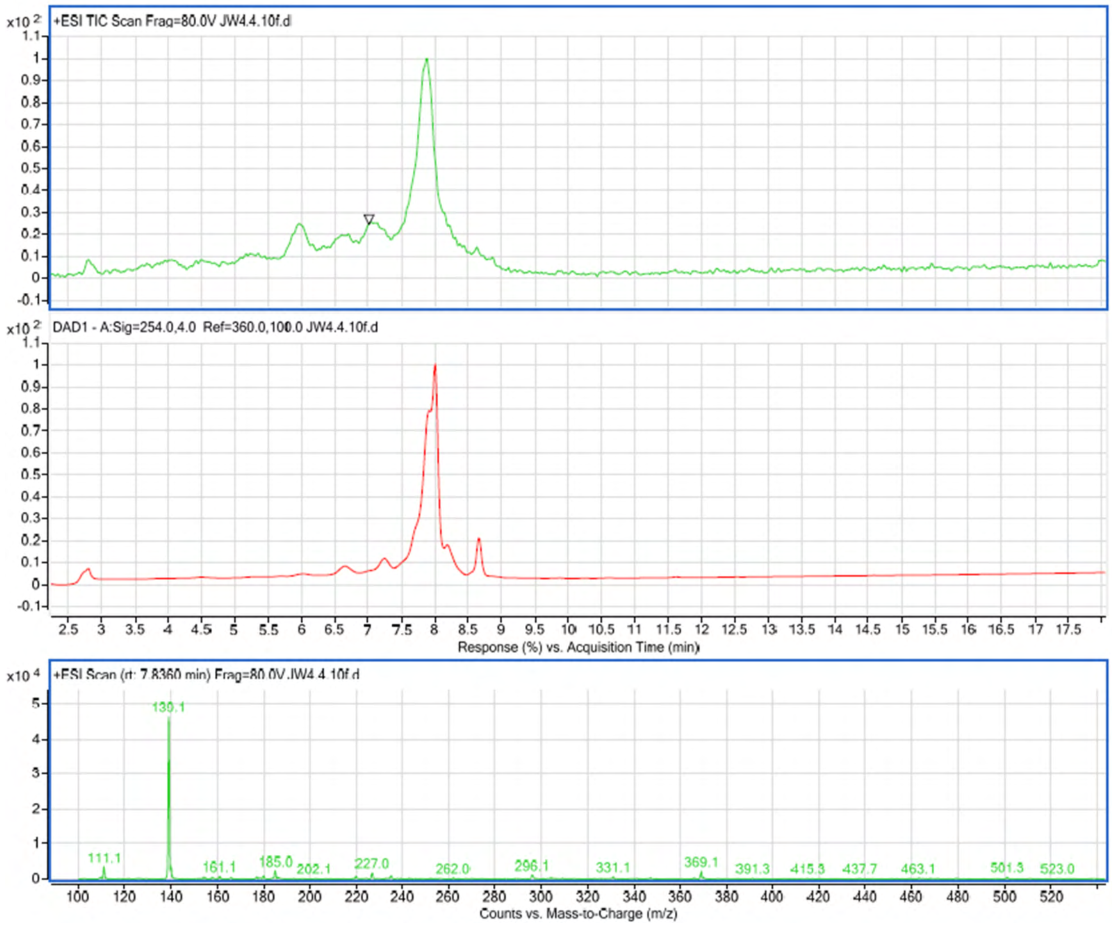


Figure S285. [1]H-NMR spectrum of compound **168**.

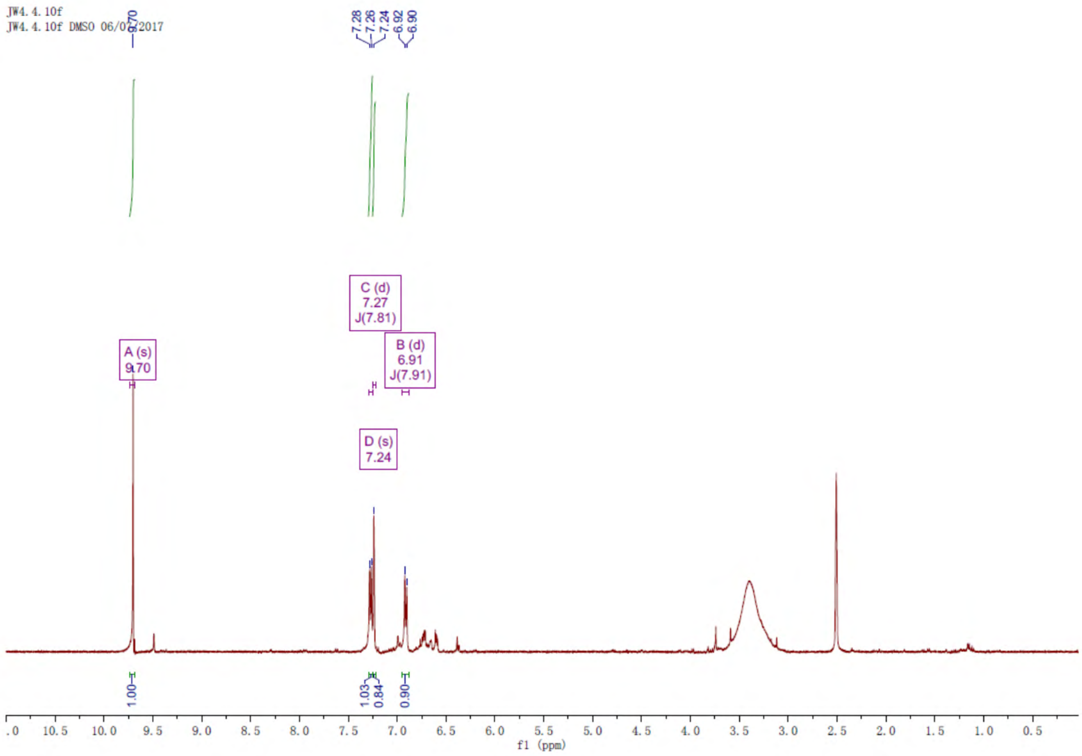


Figure S286. LC-MS spectrum of compound **169**.

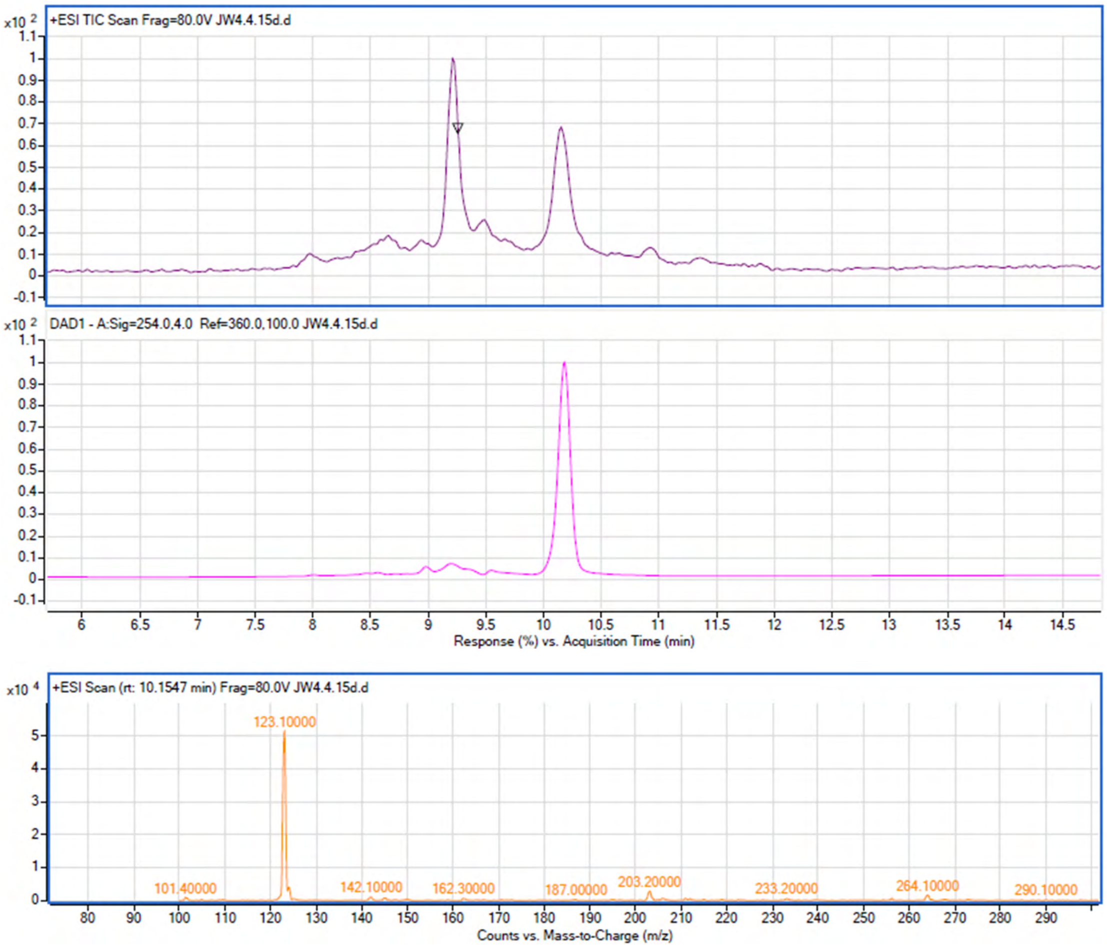


Figure S287. ^{1}H-NMR spectrum of compound **169**.

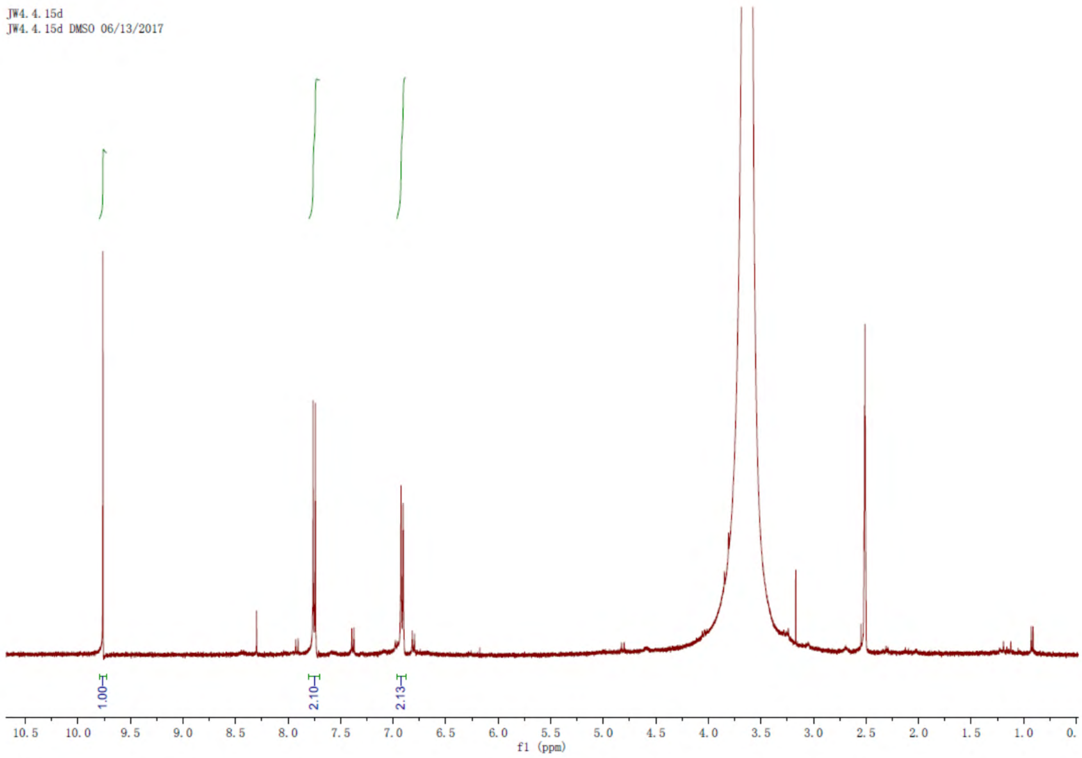


Figure S288. LC-MS spectrum of compound **170**.

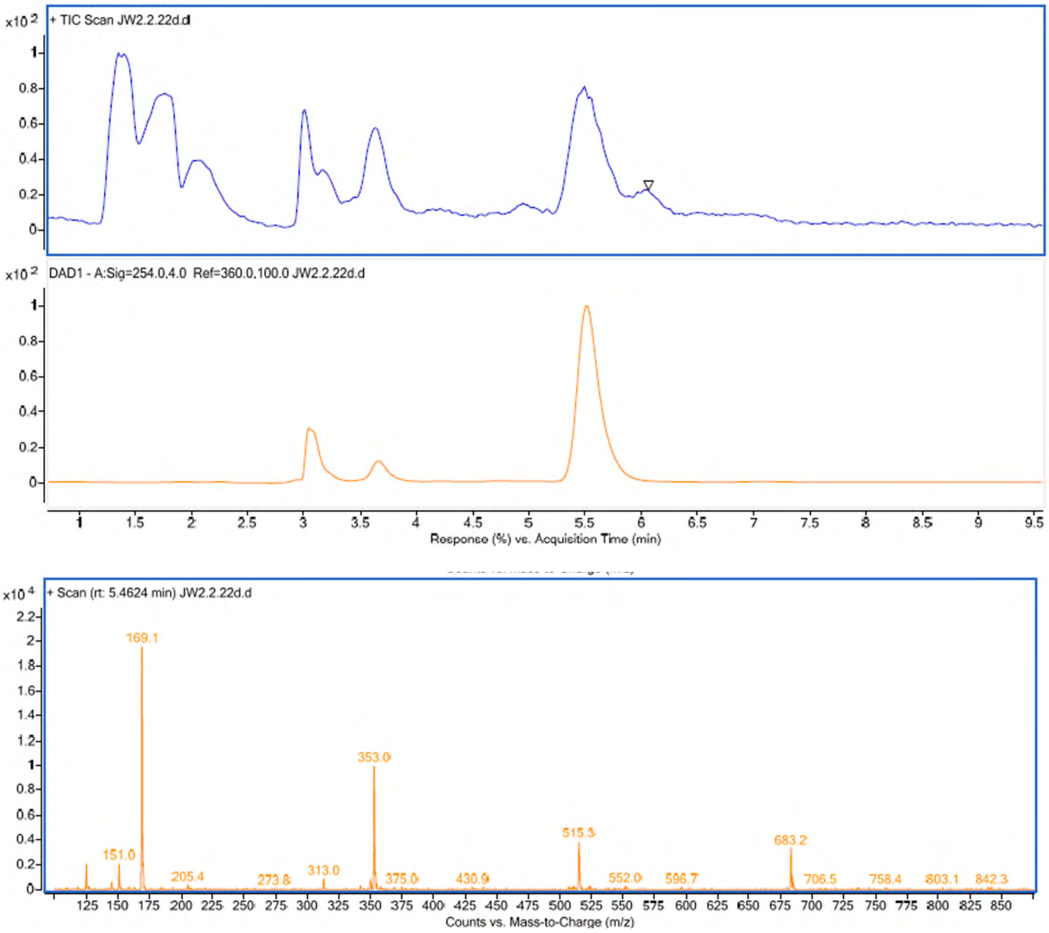


Figure S289. [1]H-NMR spectrum of compound **170**.

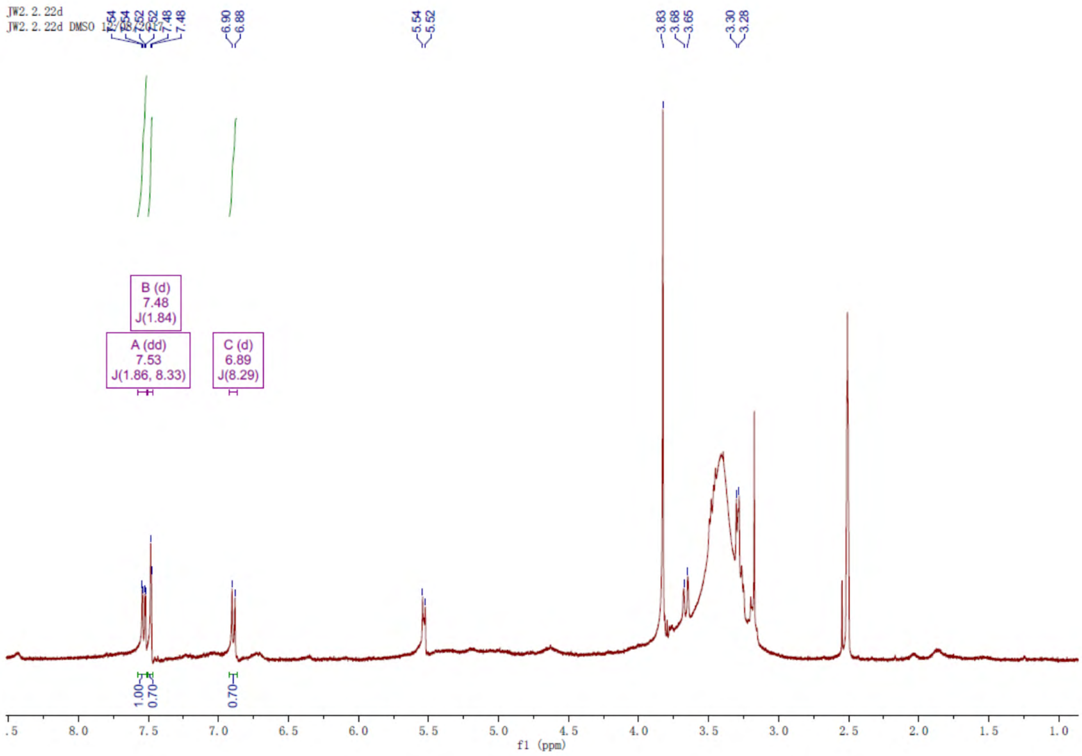


Figure S280. LC-MS spectrum of compound **171**.

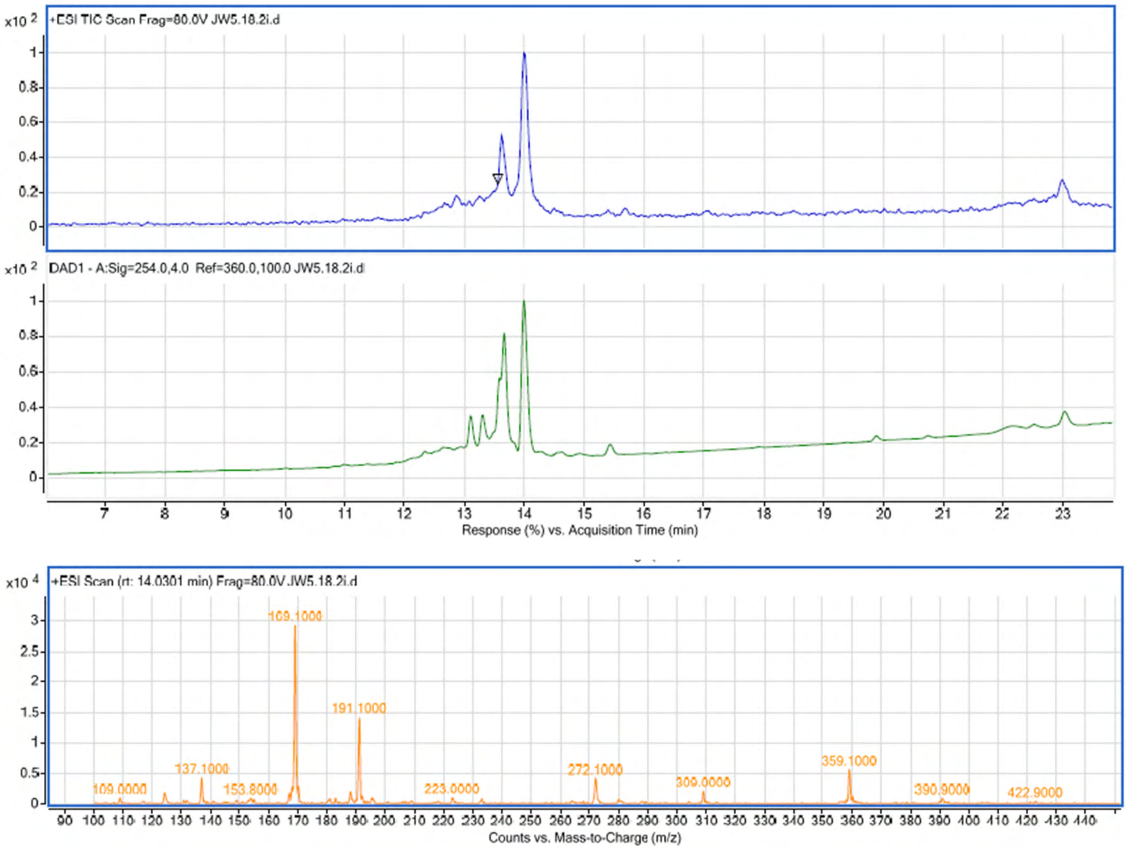


Figure S281. [1]H-NMR spectrum of compound **171**.

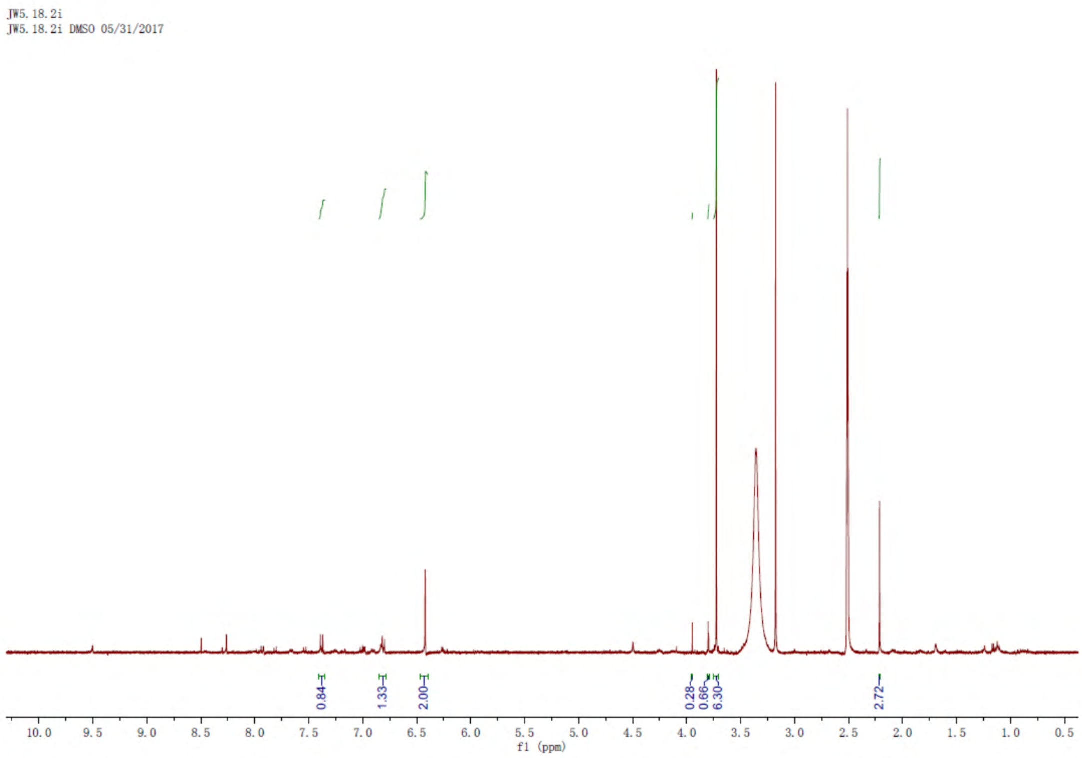


Figure S282. LC-MS spectrum of compound **172**.

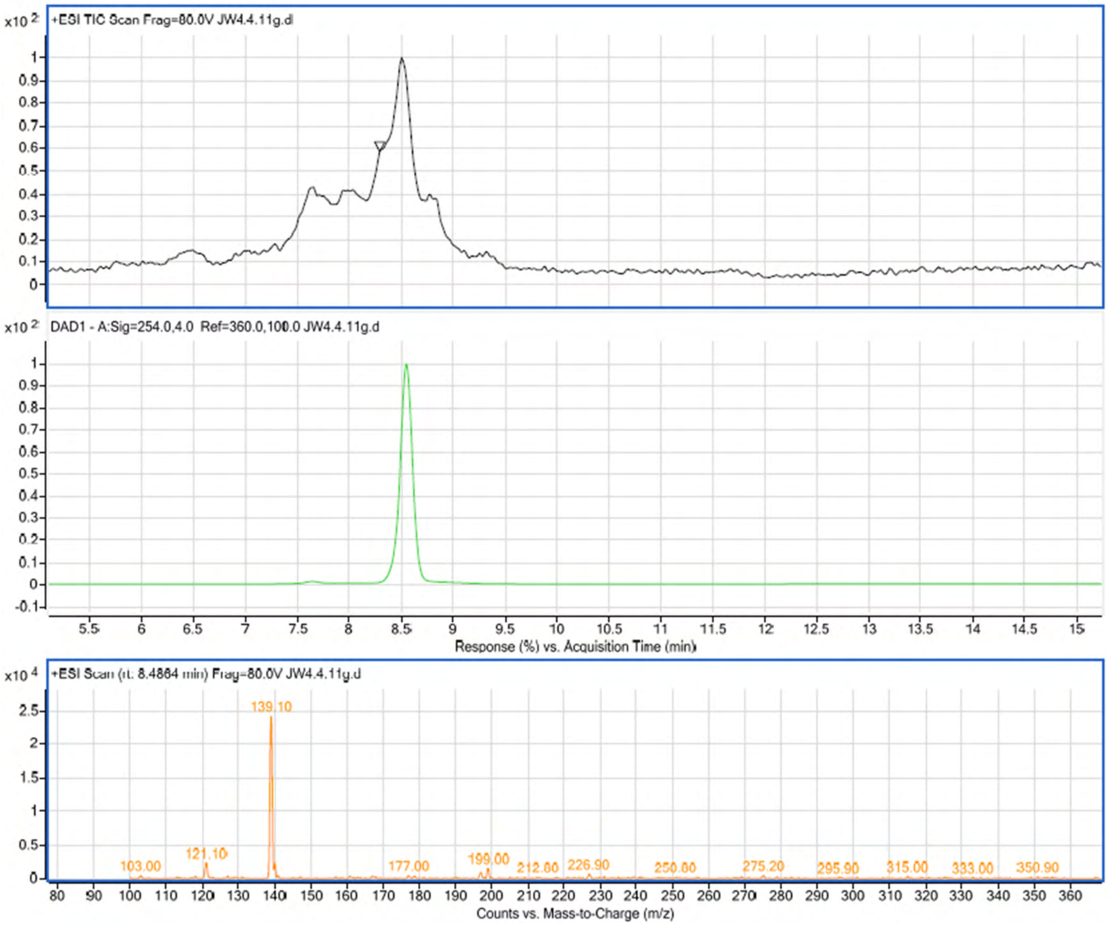


Figure S283. [1]H-NMR spectrum of compound **172**.

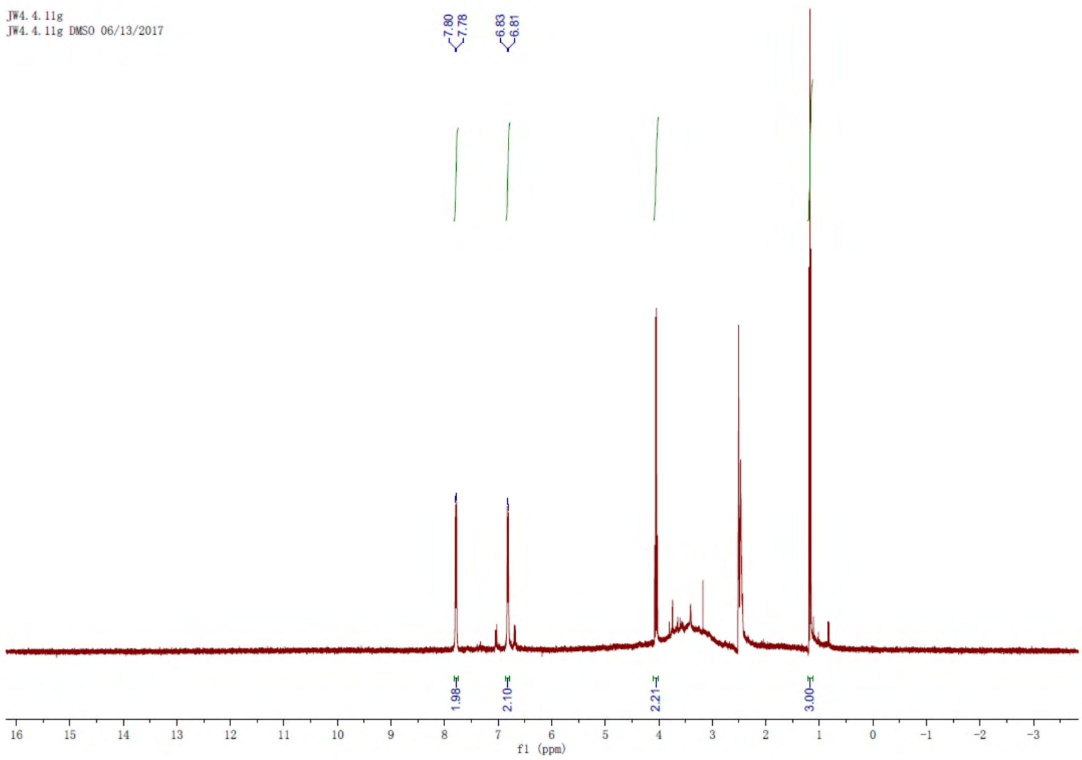


Figure S284. ^{1}H-NMR spectrum of compound **173**.

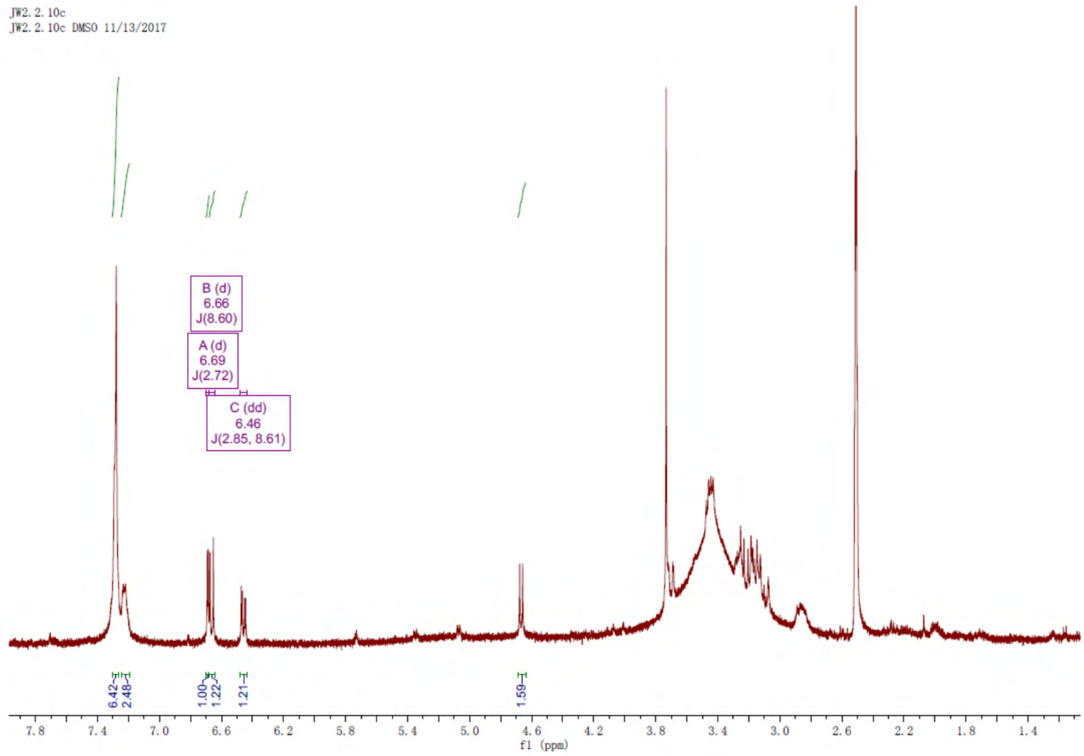


Figure S285. HSQC spectrum of compound **173**.

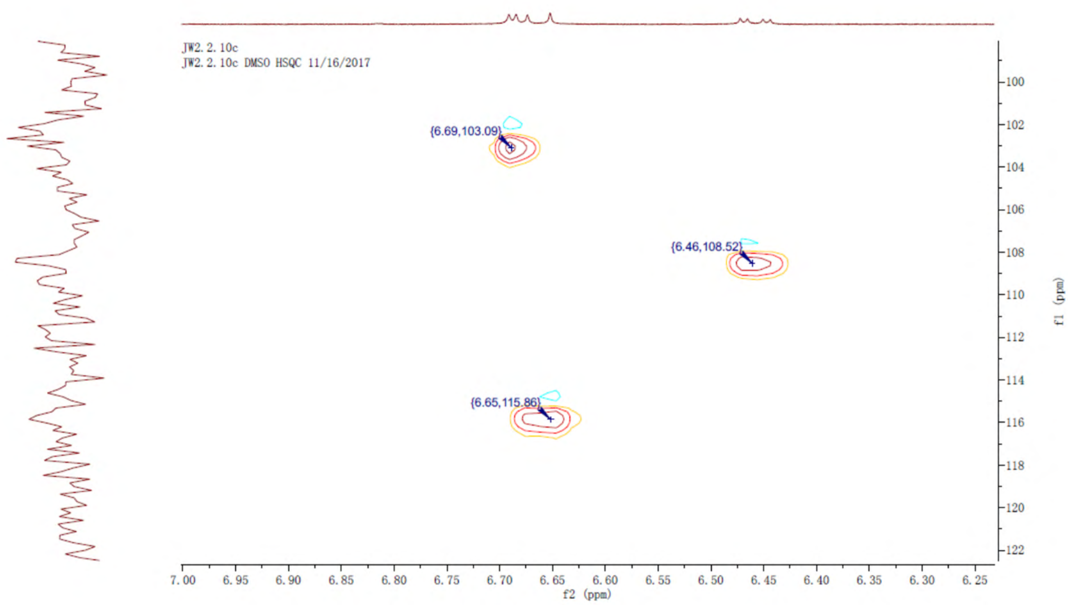


Figure S286. LC-MS spectrum of compound **174**.

Figure S287. [1]H-NMR spectrum of compound **174**.

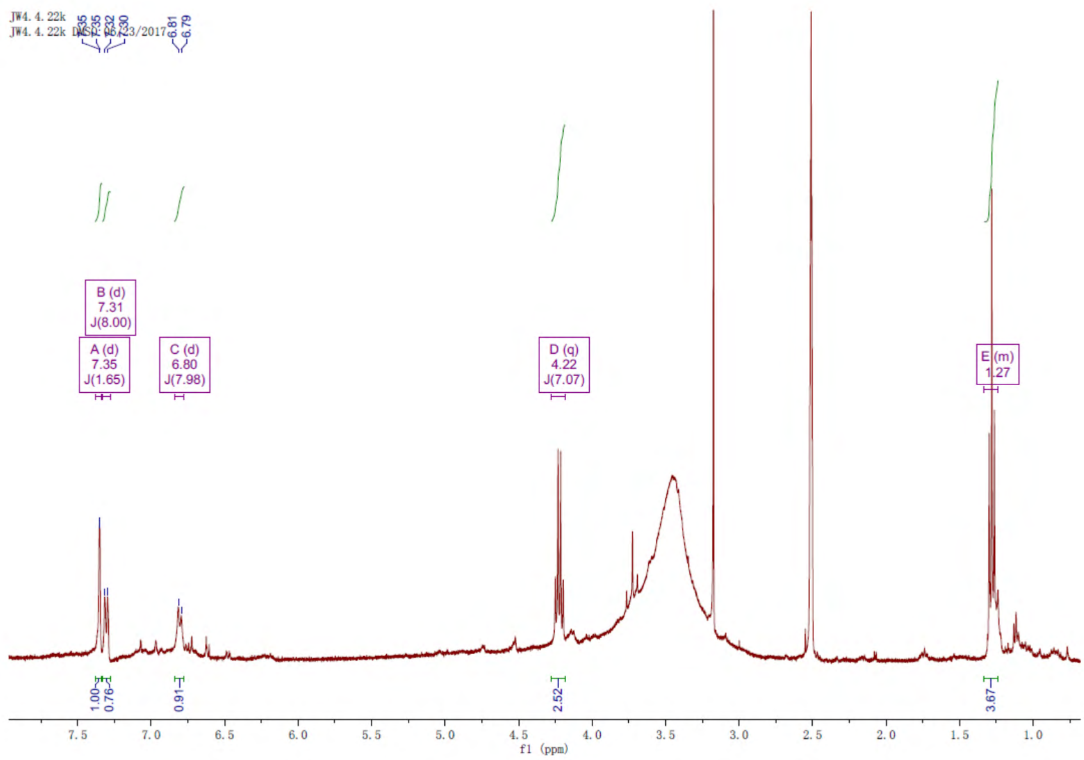


Figure S288. LC-MS spectrum of compound **175**.

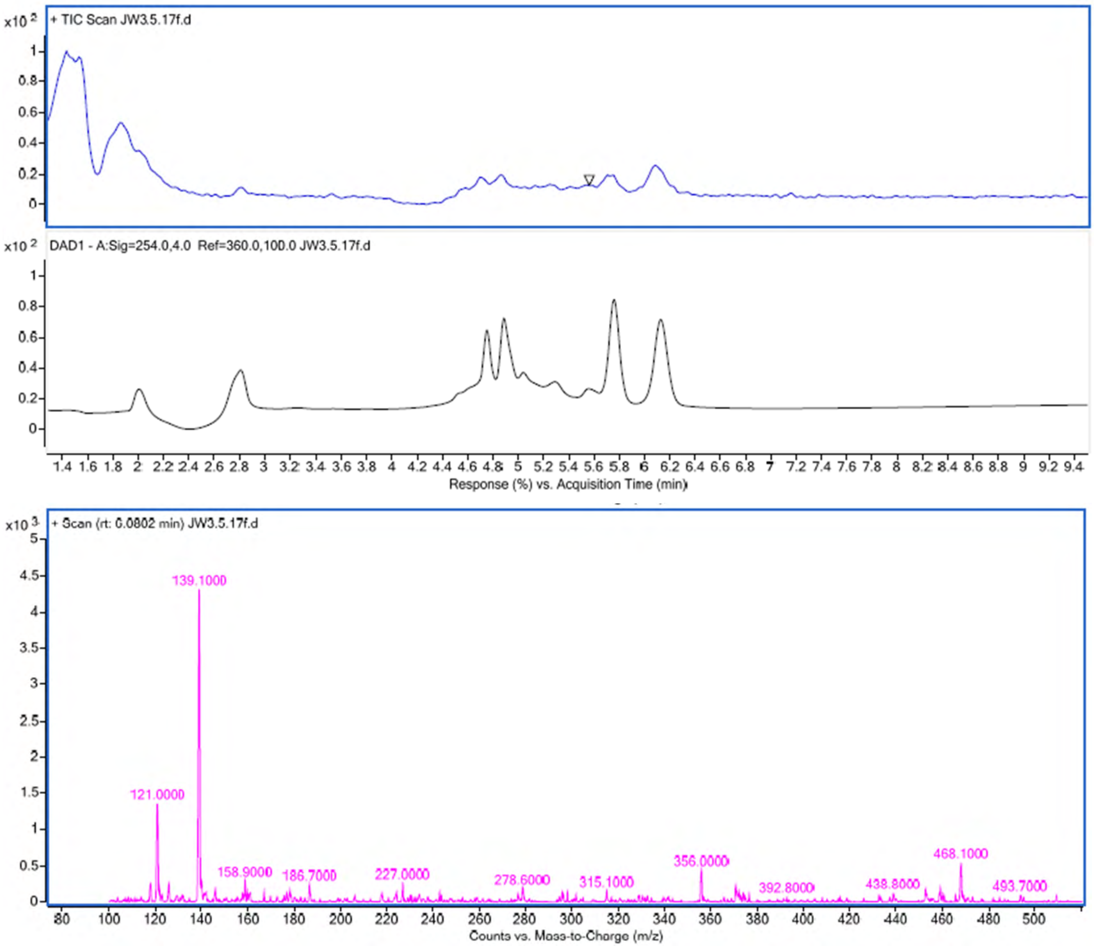


Figure S289. ^{1}H-NMR spectrum of compound **175**.

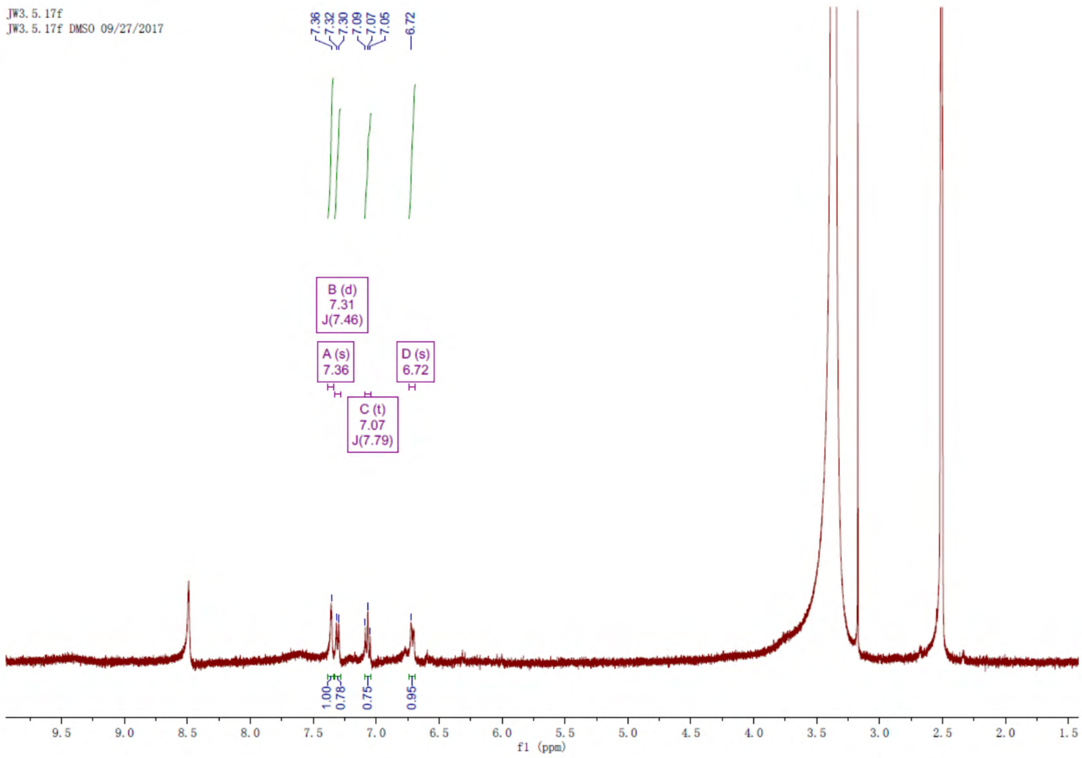


Figure S290. LC-MS spectrum of compound **176**.

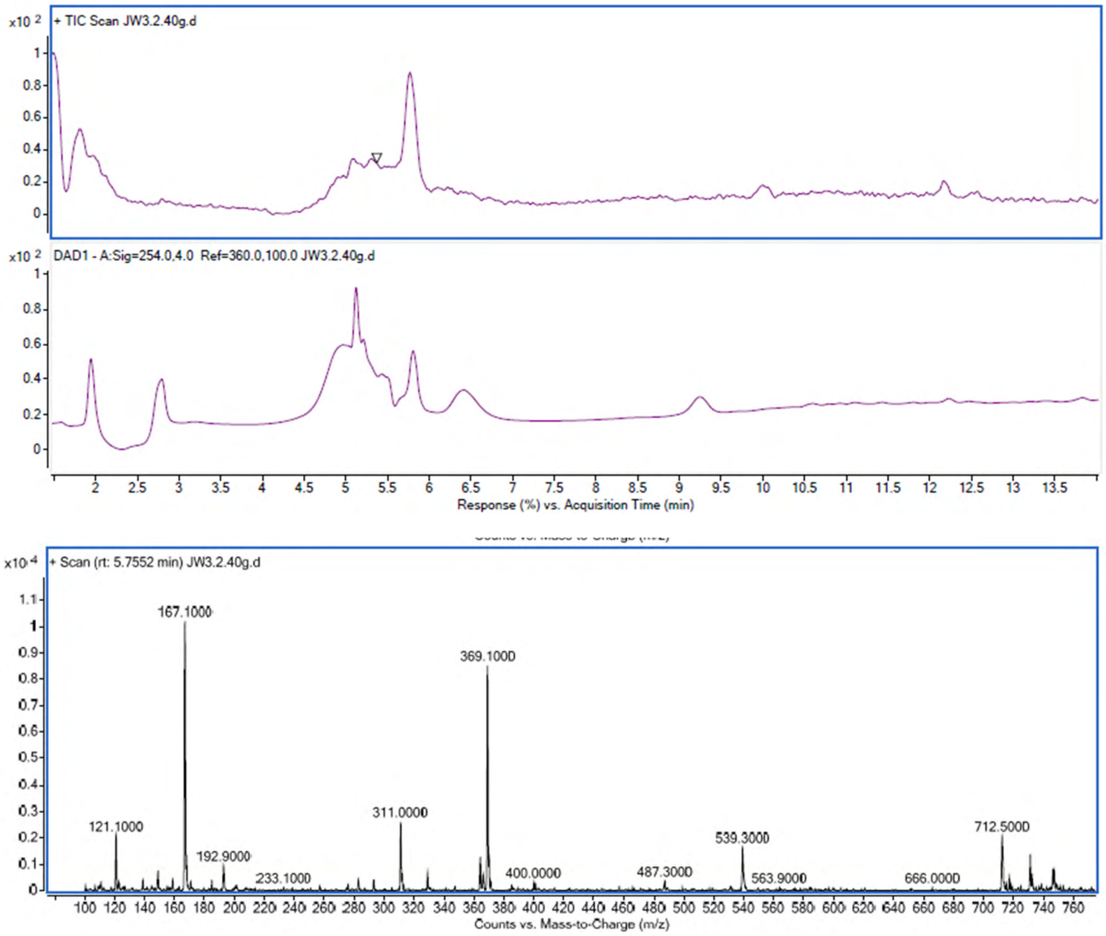
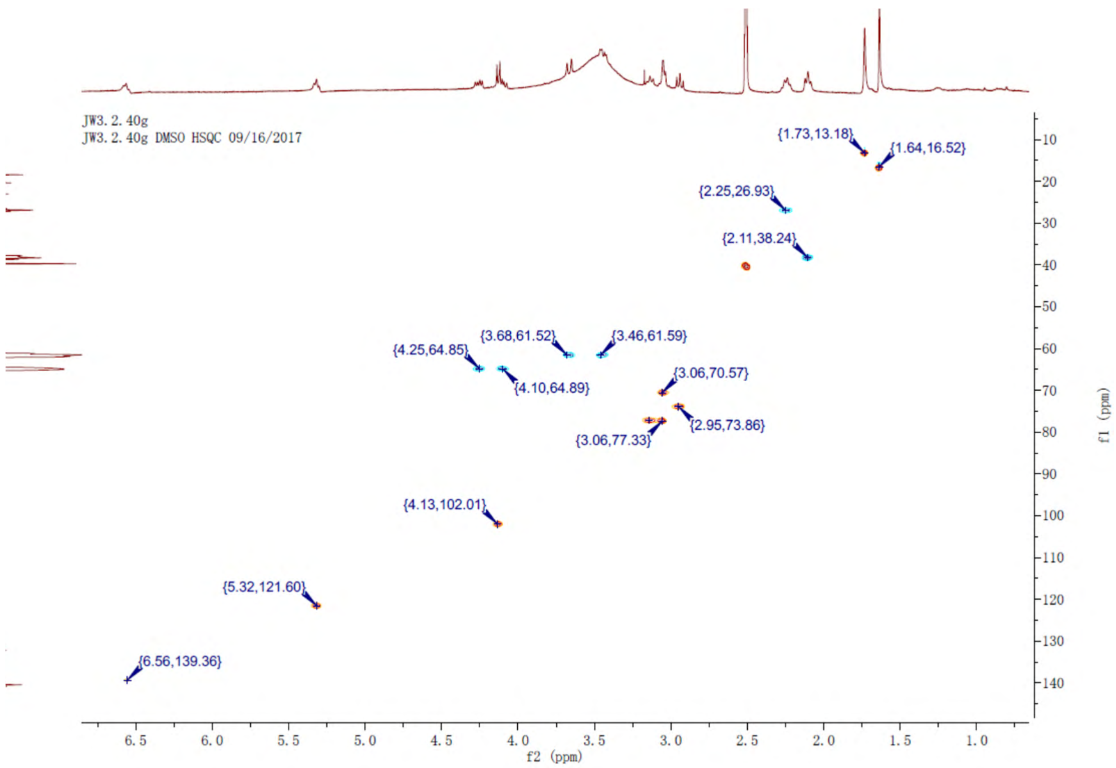


Figure S291. HSQC and HMBC spectra of compound **176**.



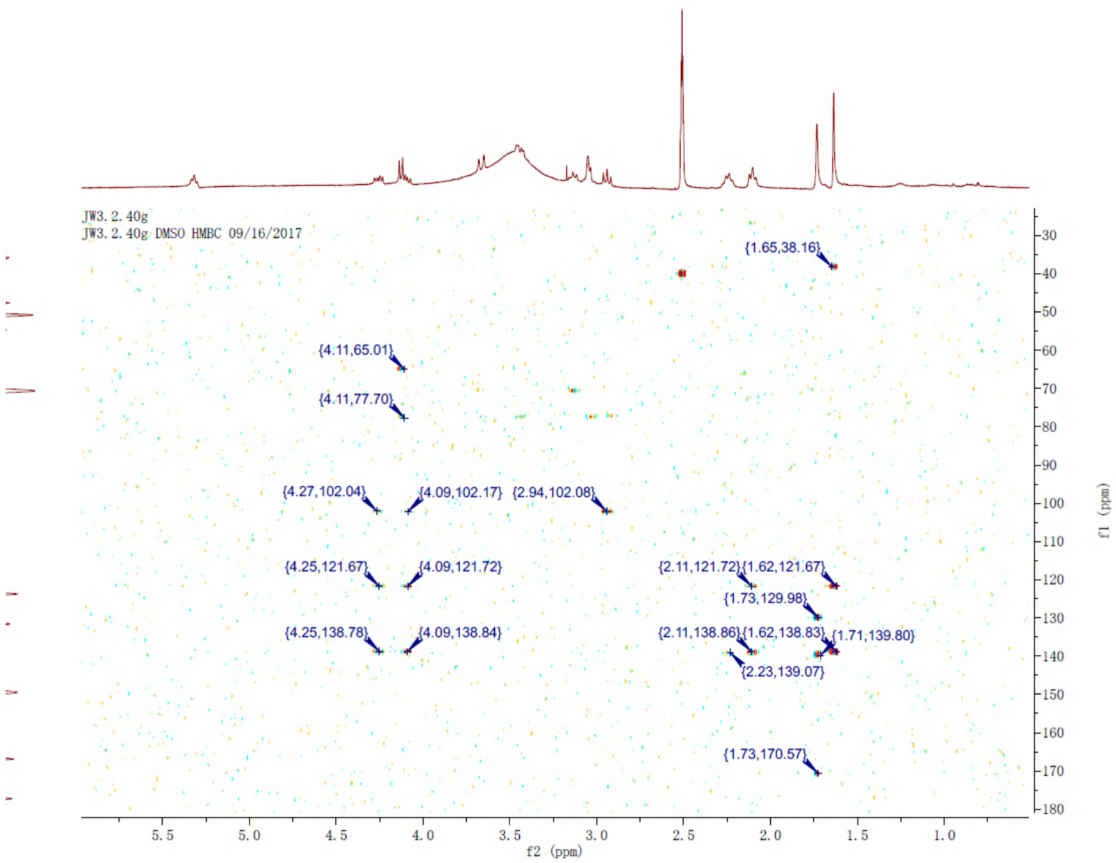


Figure S292. LC-MS spectrum of compound **177**.

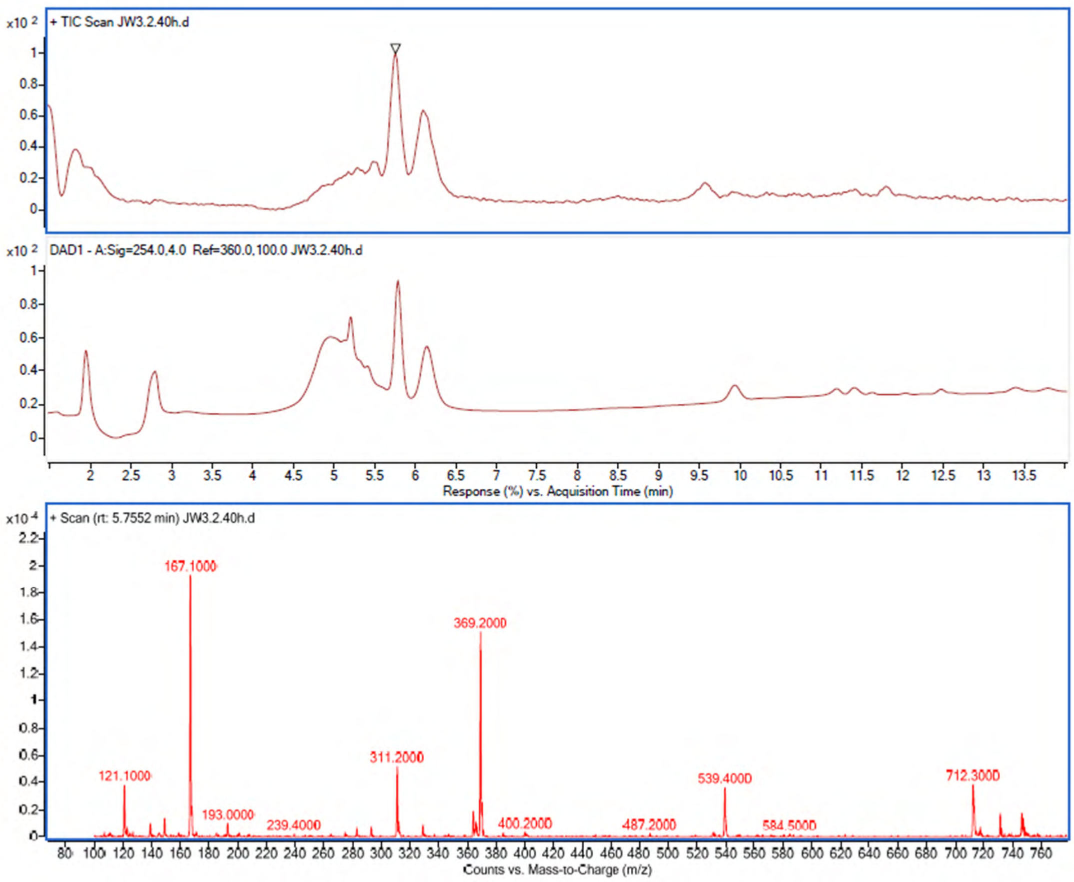


Figure S293. ^{1}H-NMR spectrum of compound **177**.

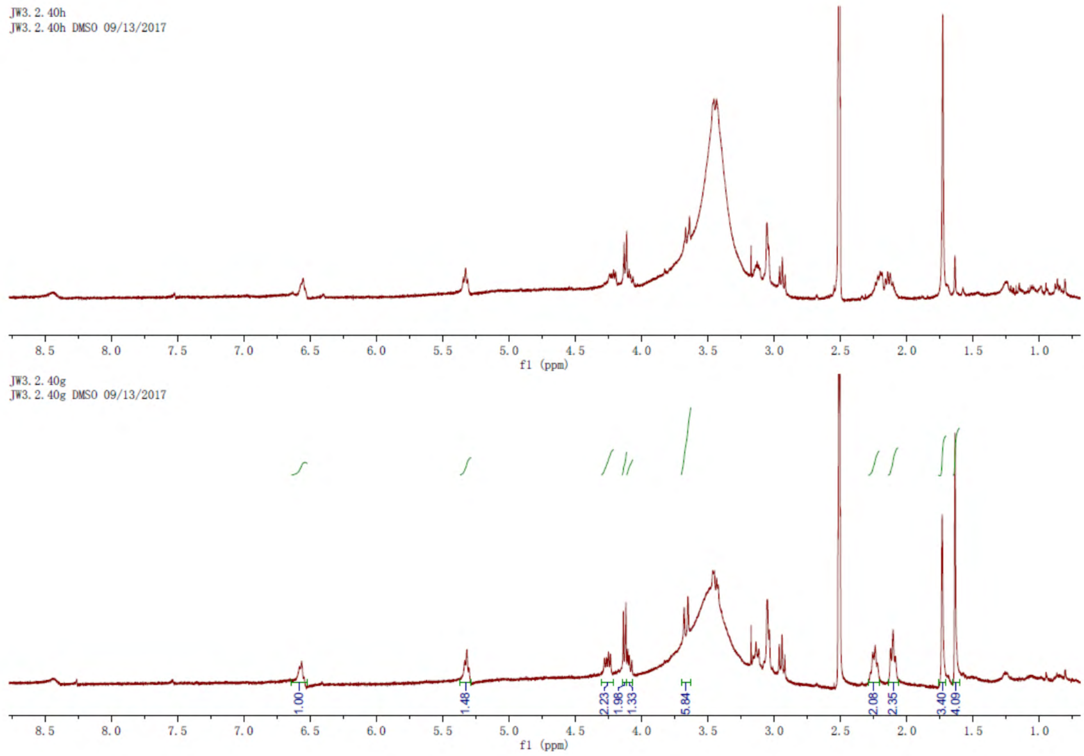


Figure S294. ^{1}H-NMR spectrum of compound **178**.

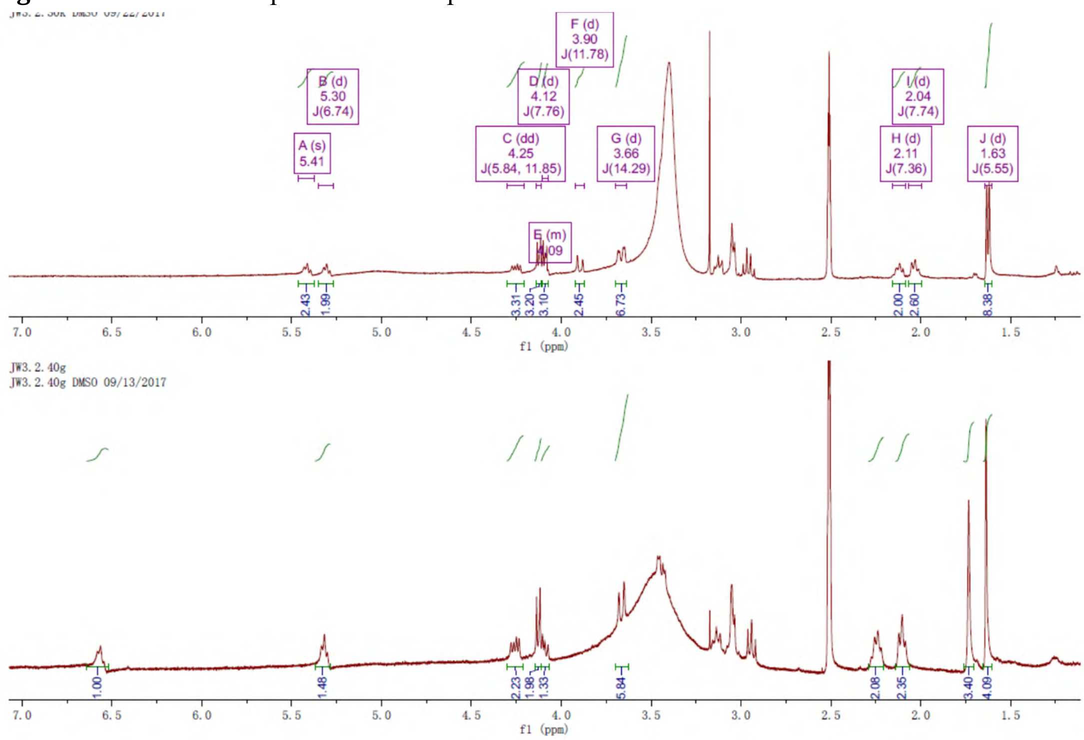


Figure S295. HSQC spectrum of compound **178**.

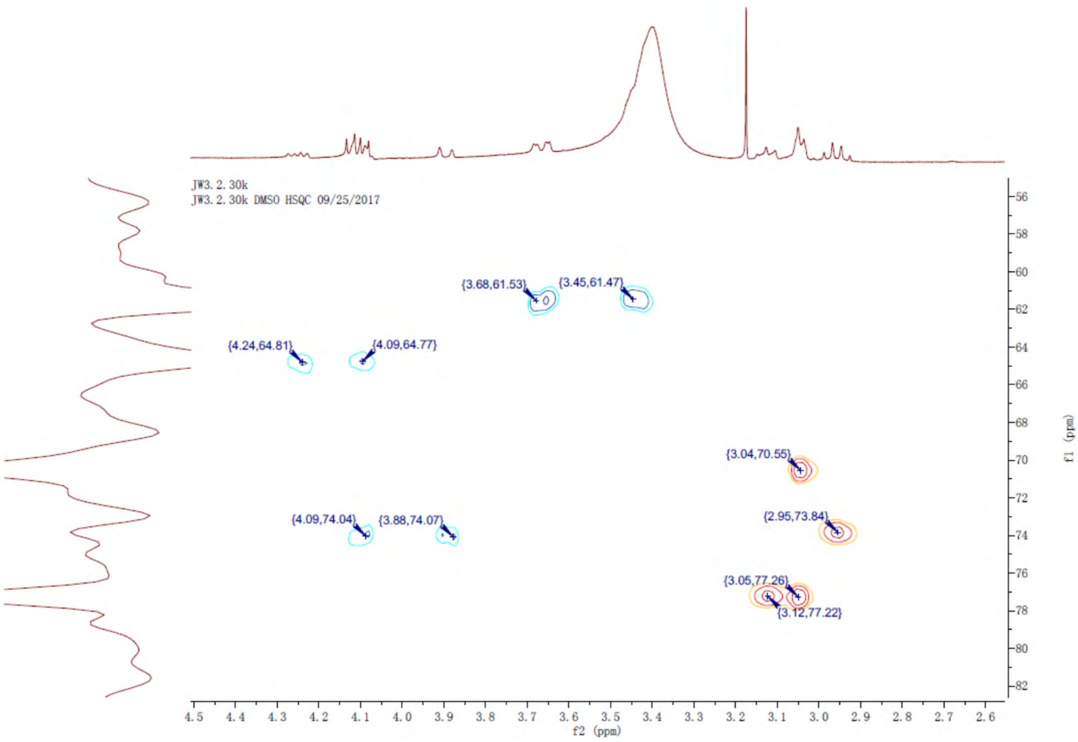


Figure S296. LC-MS spectrum of compound **179**.

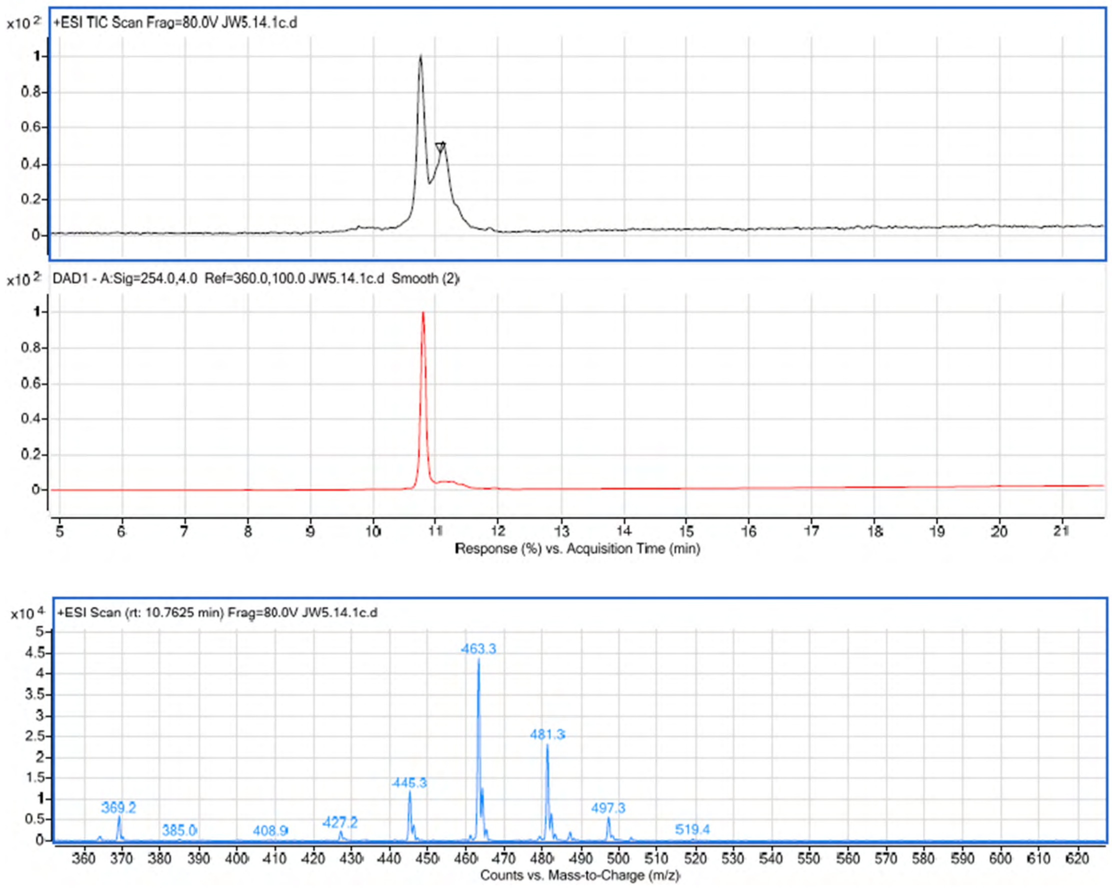


Figure S297. ^{1}H-NMR spectrum of compound **179**.

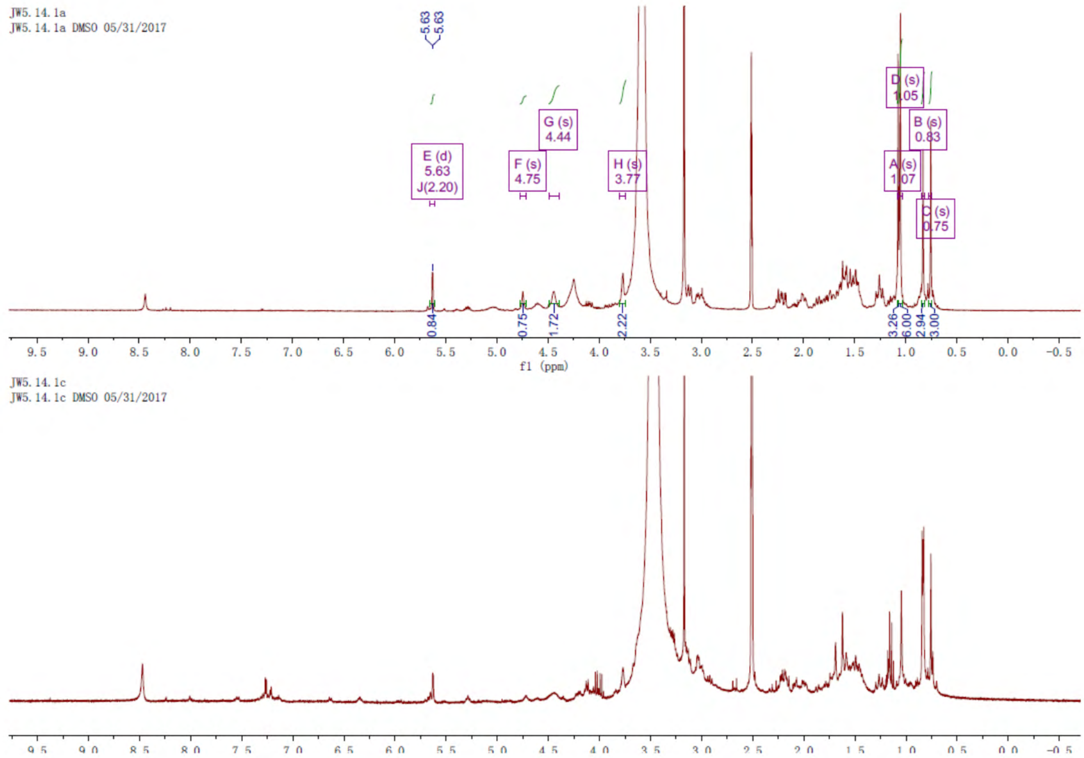


Figure S298. LC-MS spectrum of compound **180**.

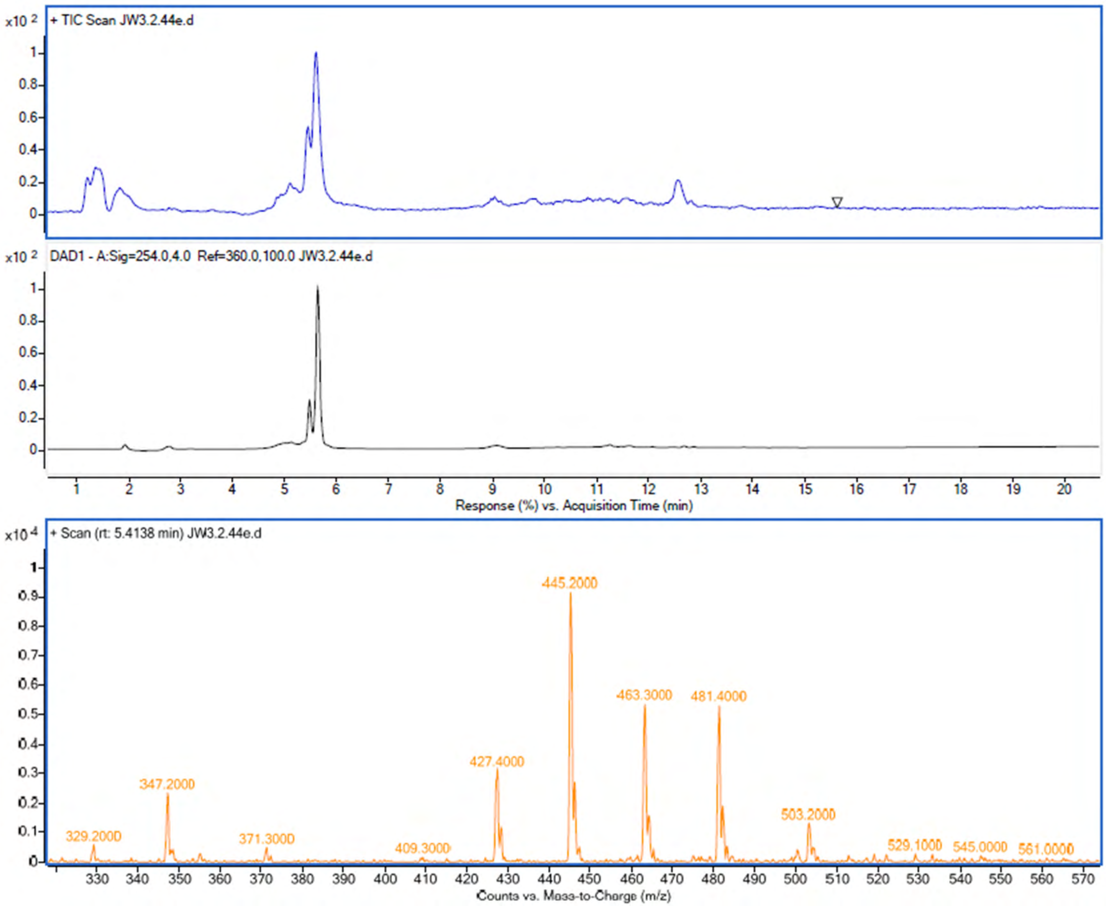


Figure S299. ^{1}H-NMR spectrum of compound **180**.

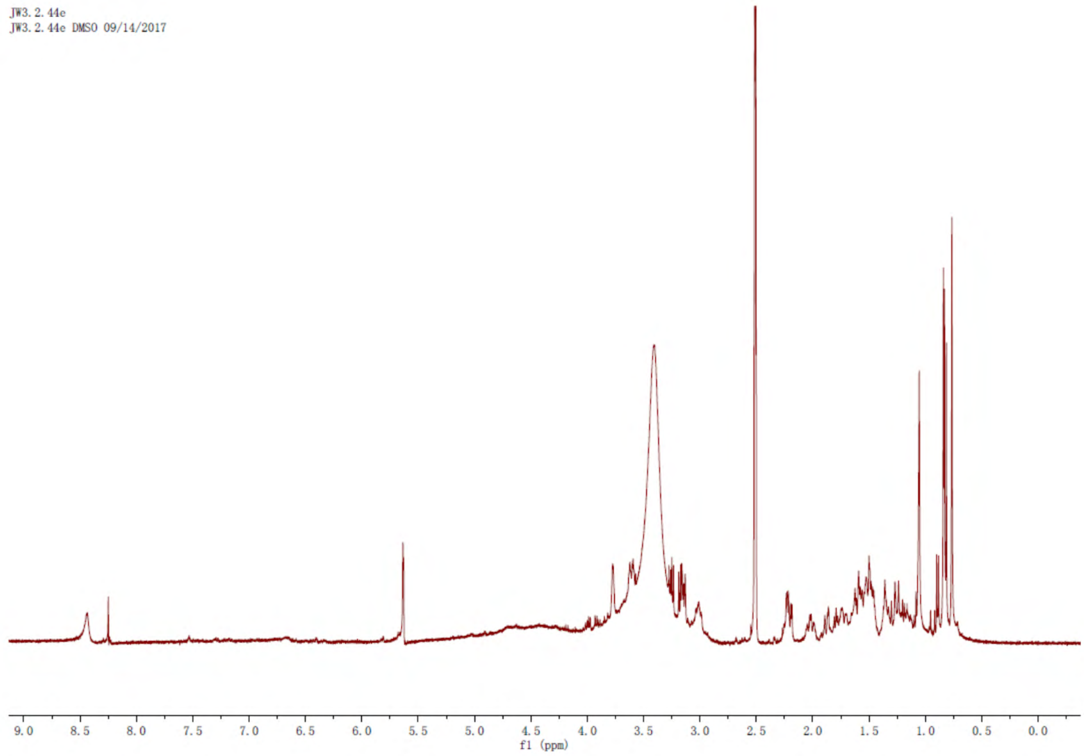


Figure S290. LC-MS spectrum of compound **181**.

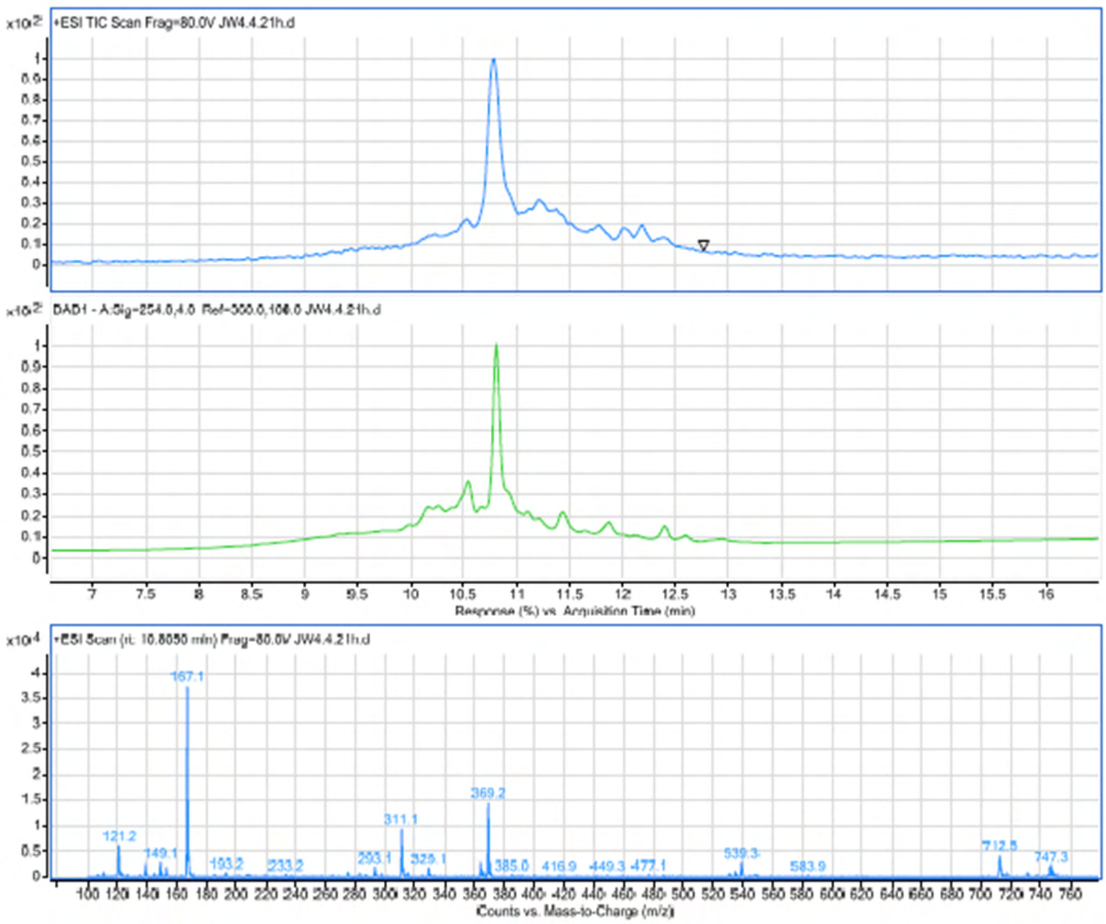


Figure S291. ^{1}H-NMR spectrum of compound **181**.

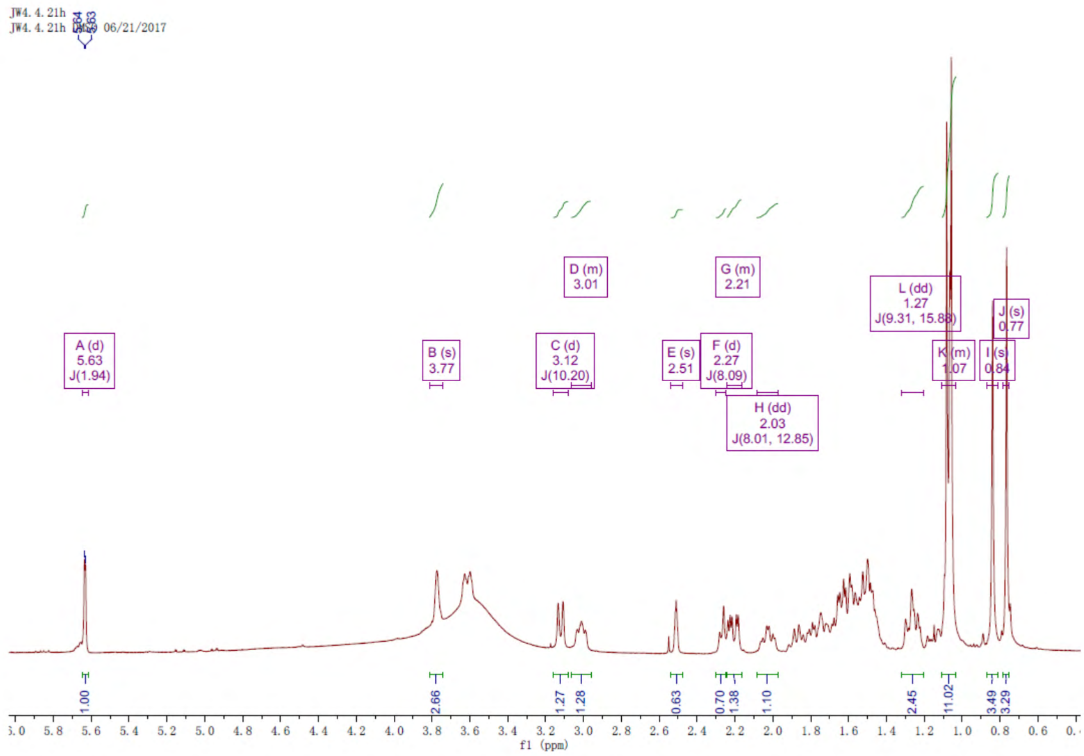
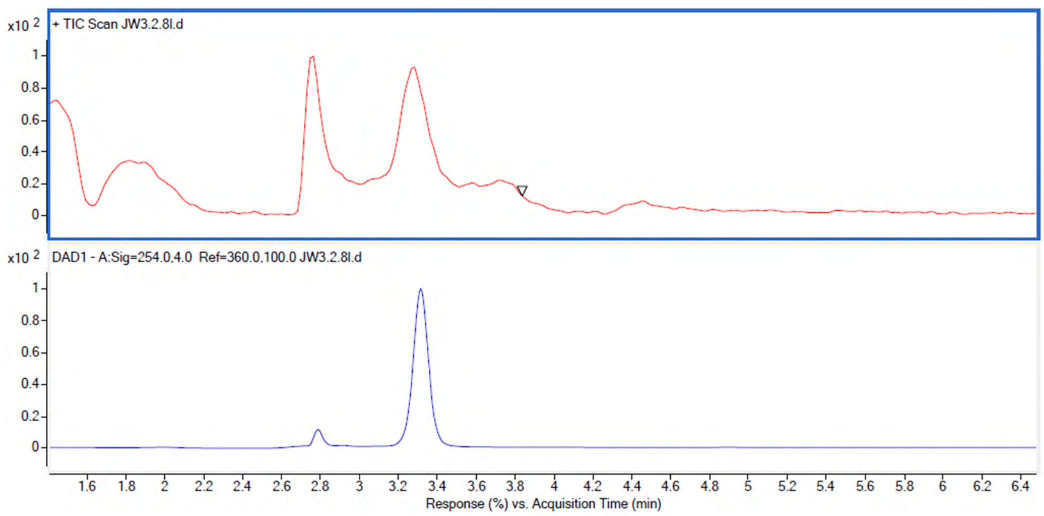


Figure S292. LC-MS spectrum of compound **182**.



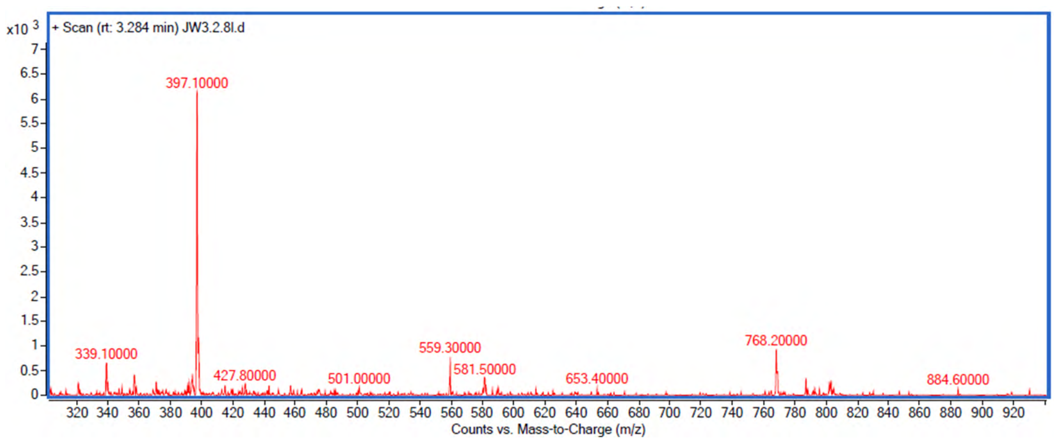


Figure S293. ^{1}H-NMR and HMBC spectra of compound **182**.

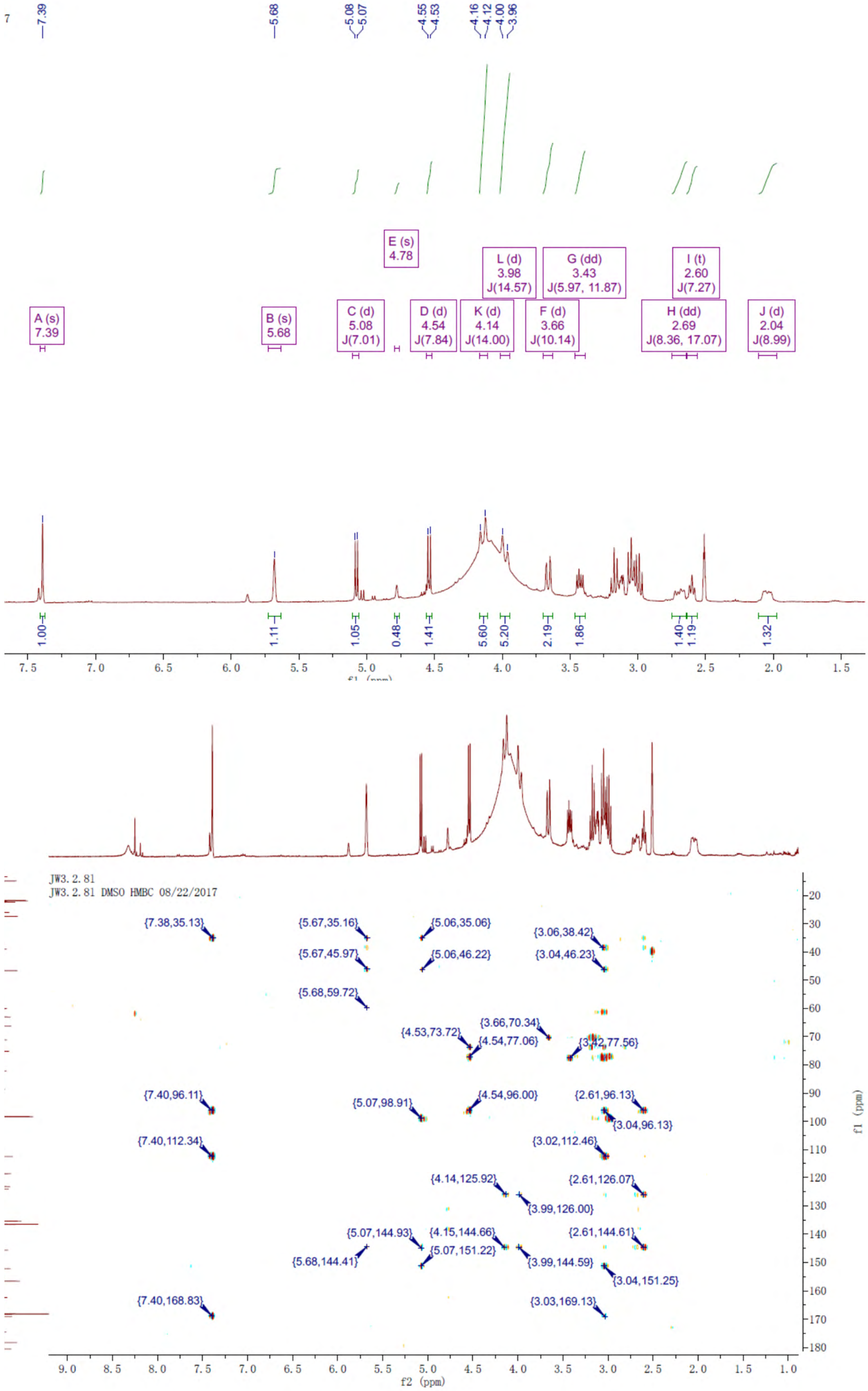


Figure S294. ^{1}H-NMR spectrum of compound **183**.

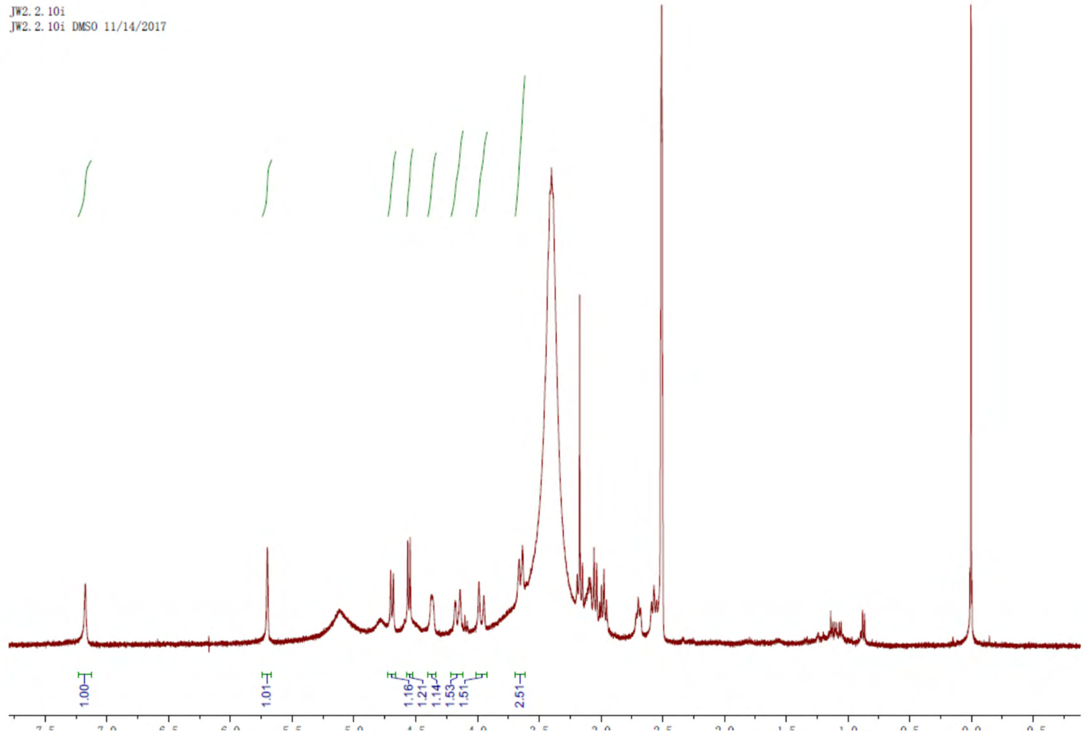


Figure S295. HSQC spectrum of compound **183**.

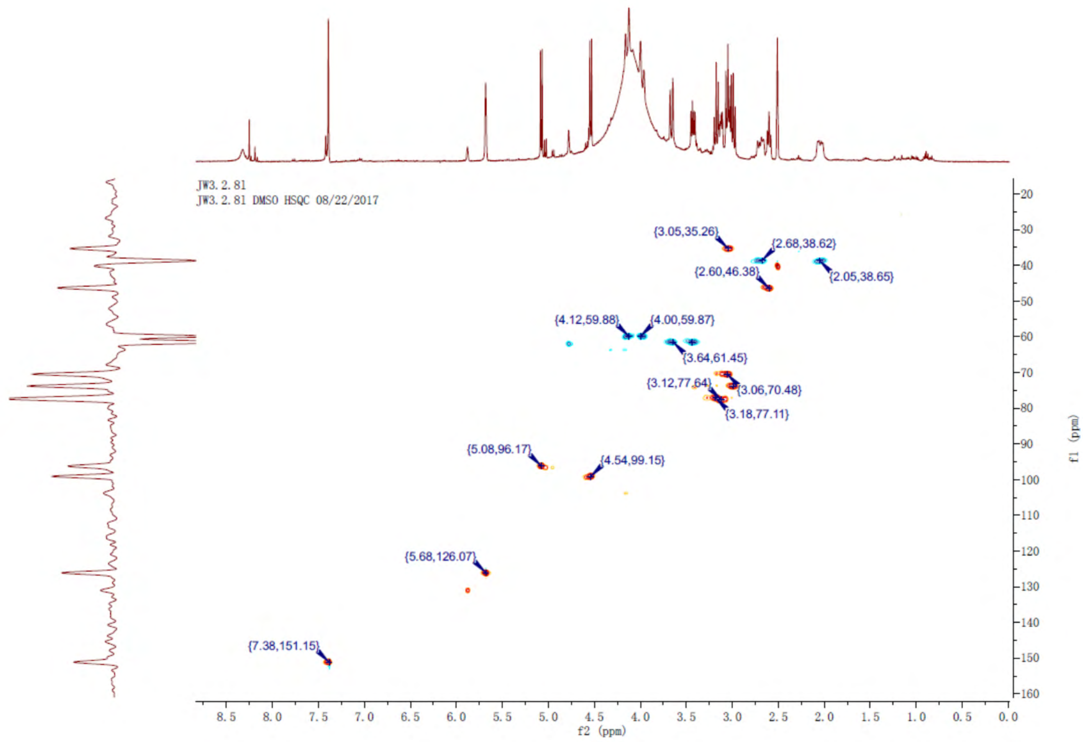


Figure S296. LC-MS spectrum of compound **184**.

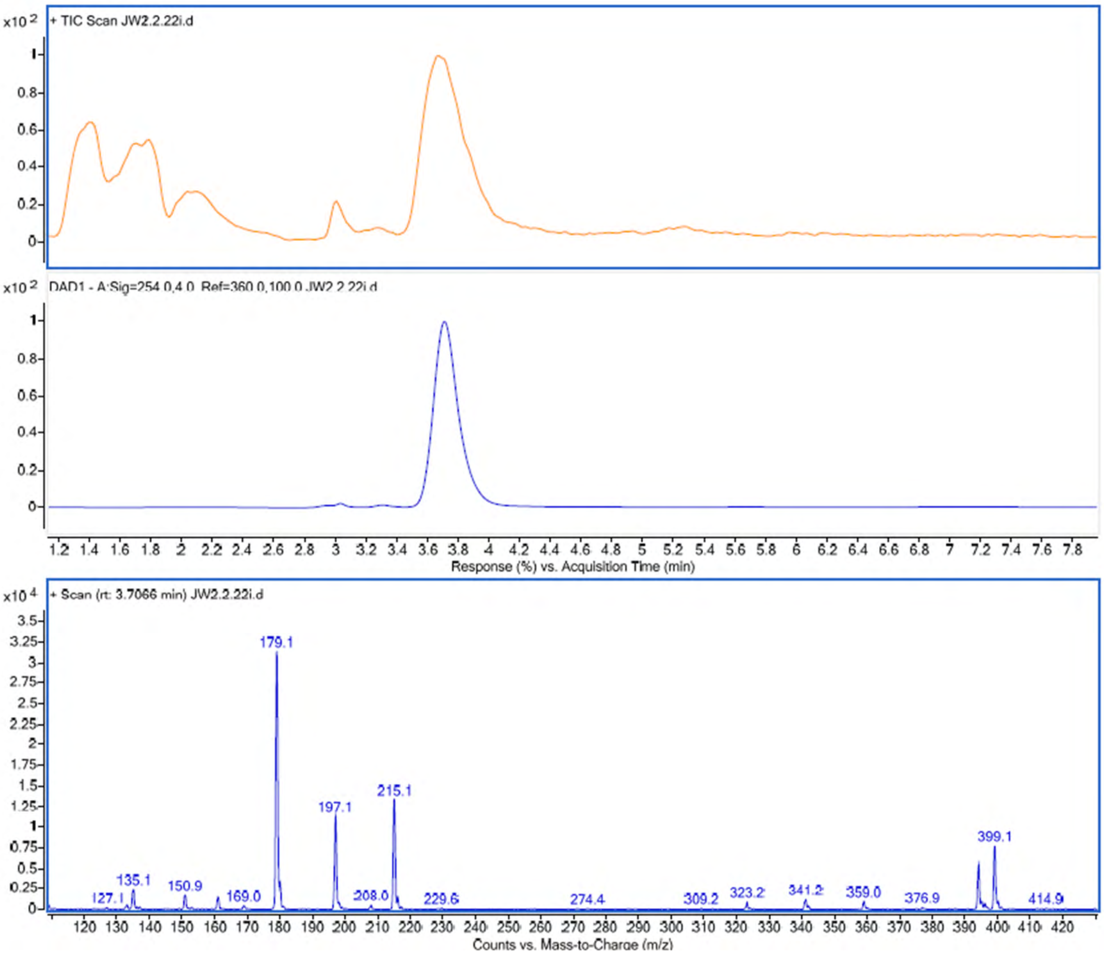
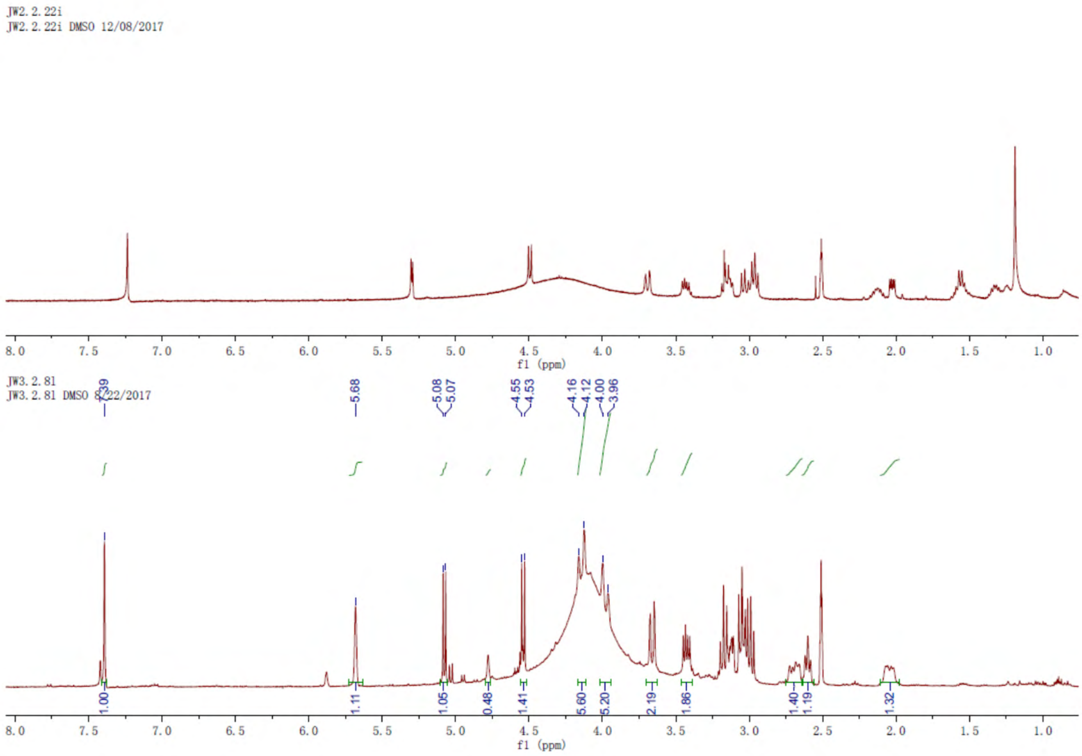


Figure S297. [1]H-NMR and HSQC spectra of compound **184**.



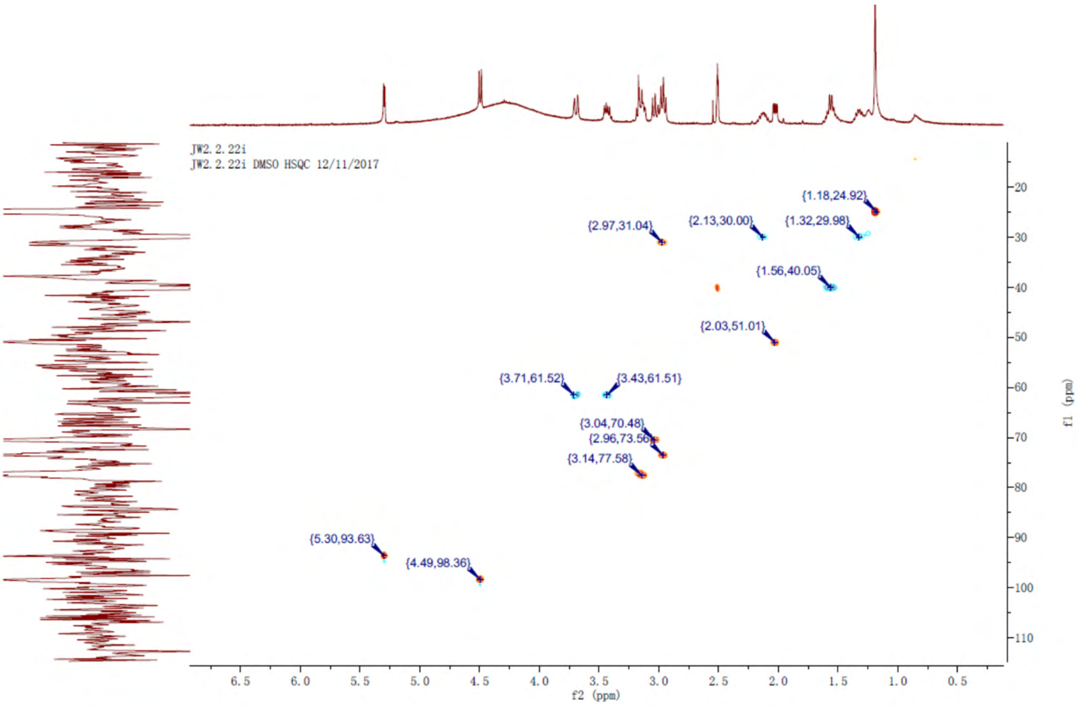


Figure S298. LC-MS spectrum of compound **185**.

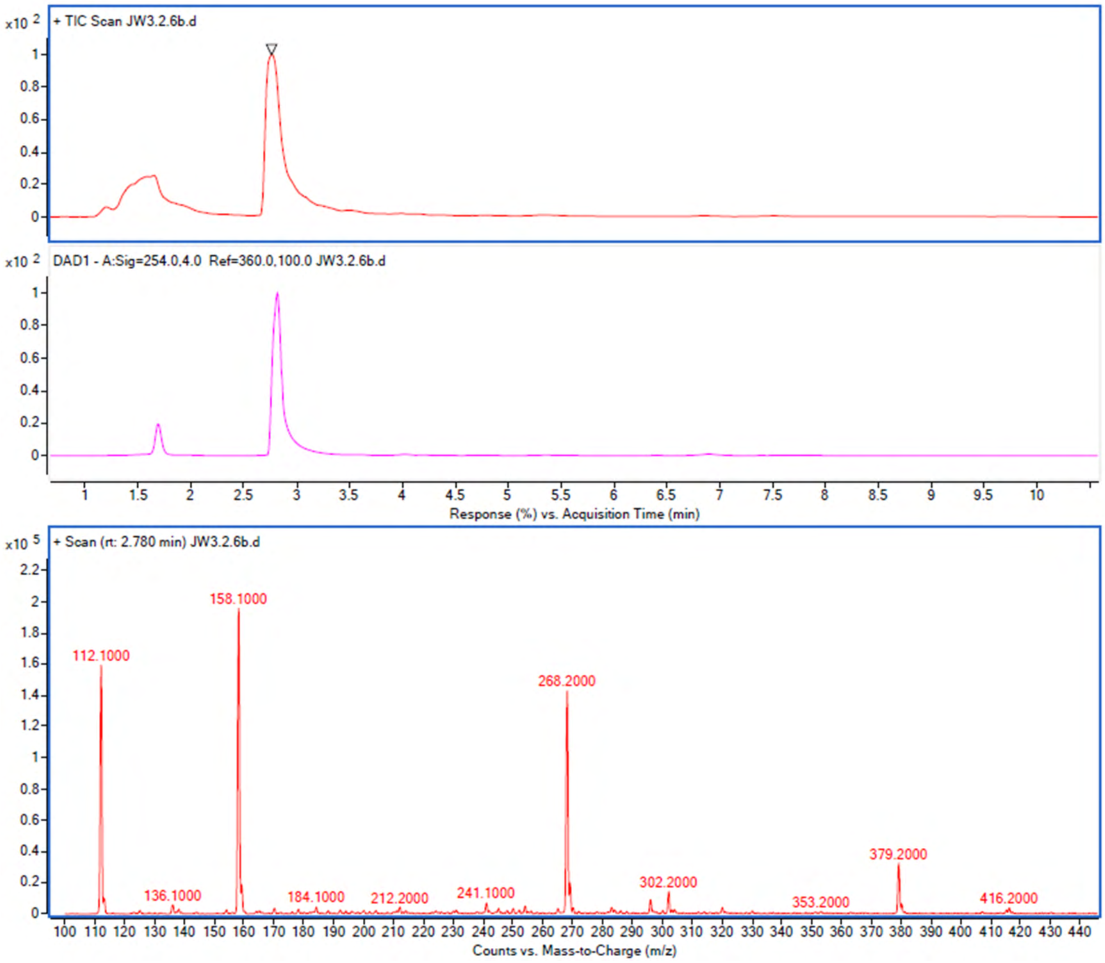


Figure S299. ^{1}H-NMR spectrum of compound **185**.

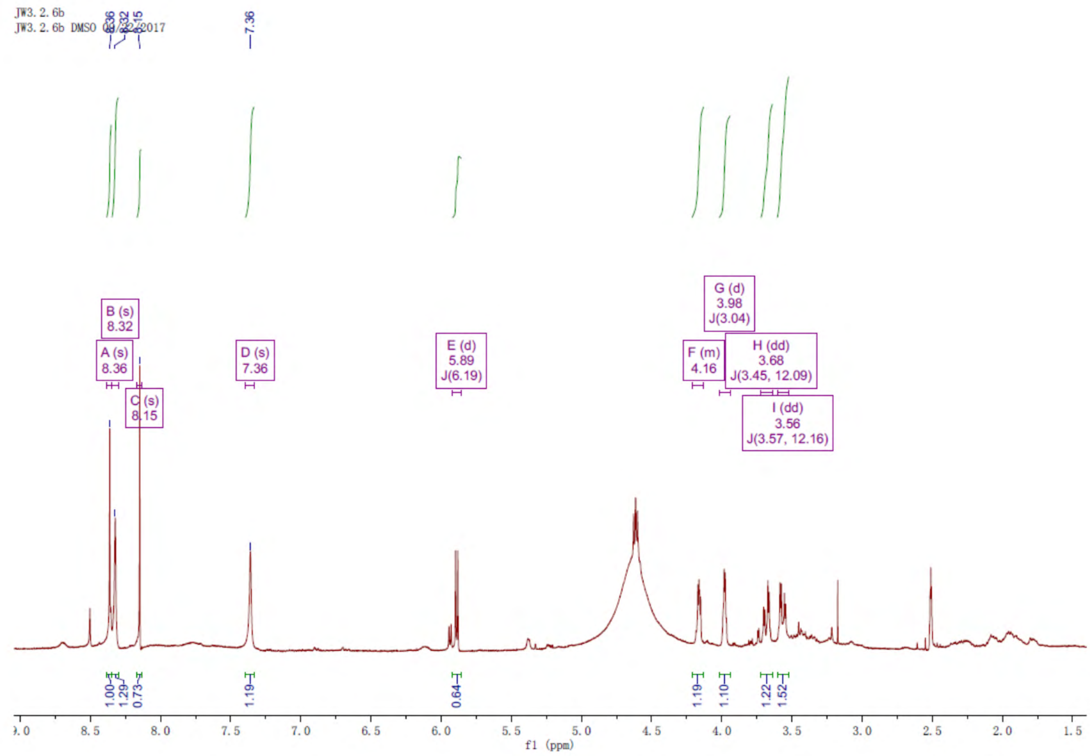


Figure S300. LC-MS spectrum of compound **186**.

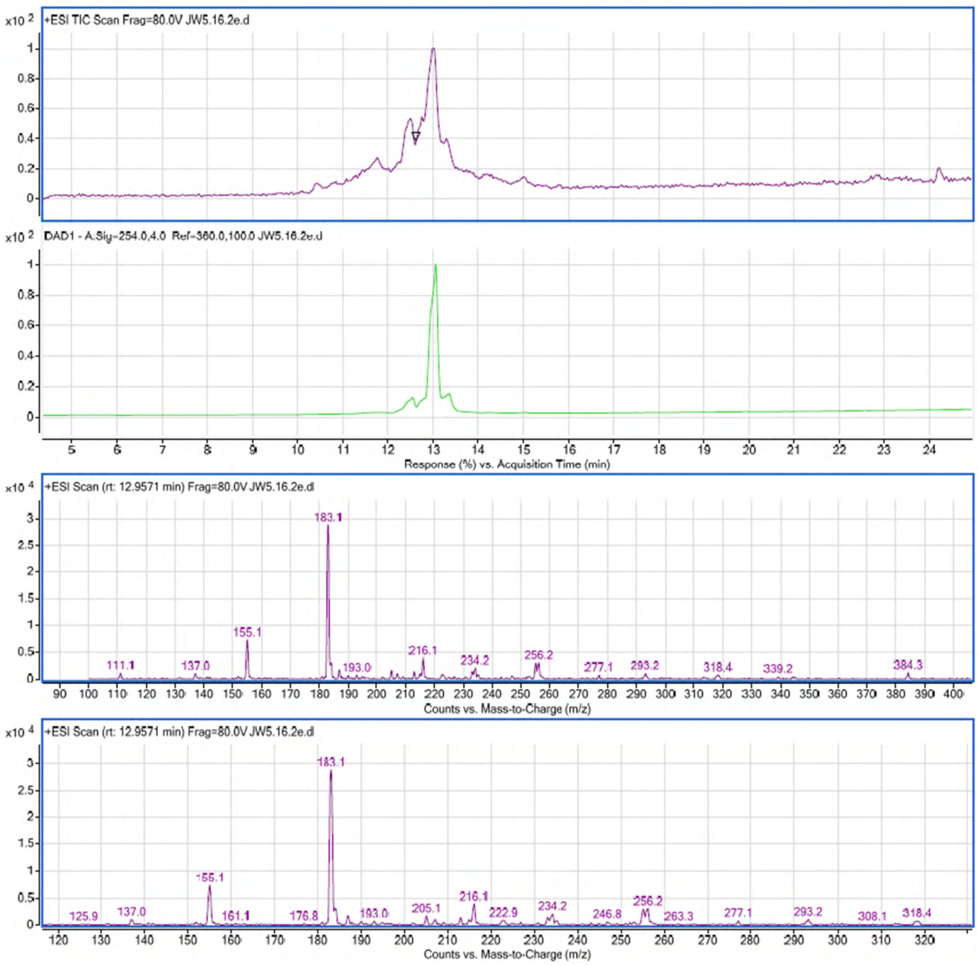


Figure S301. ^{1}H-NMR spectrum of compound **186**.

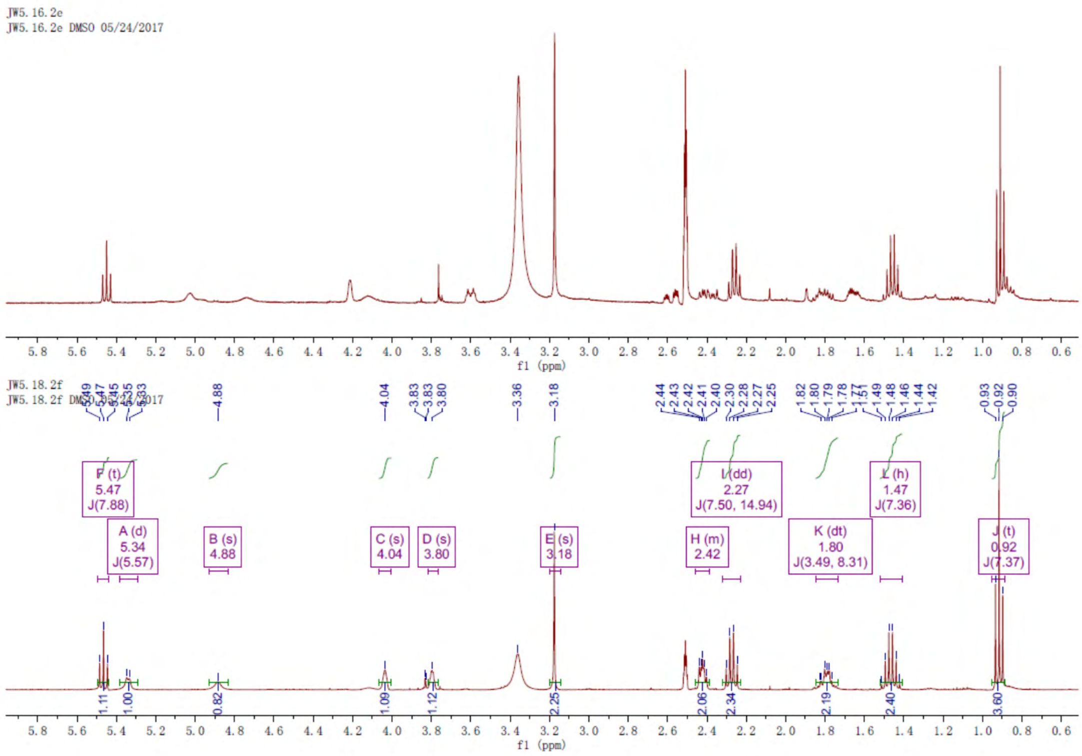


Figure S302. ^{1}H-NMR spectrum of compound **187**.

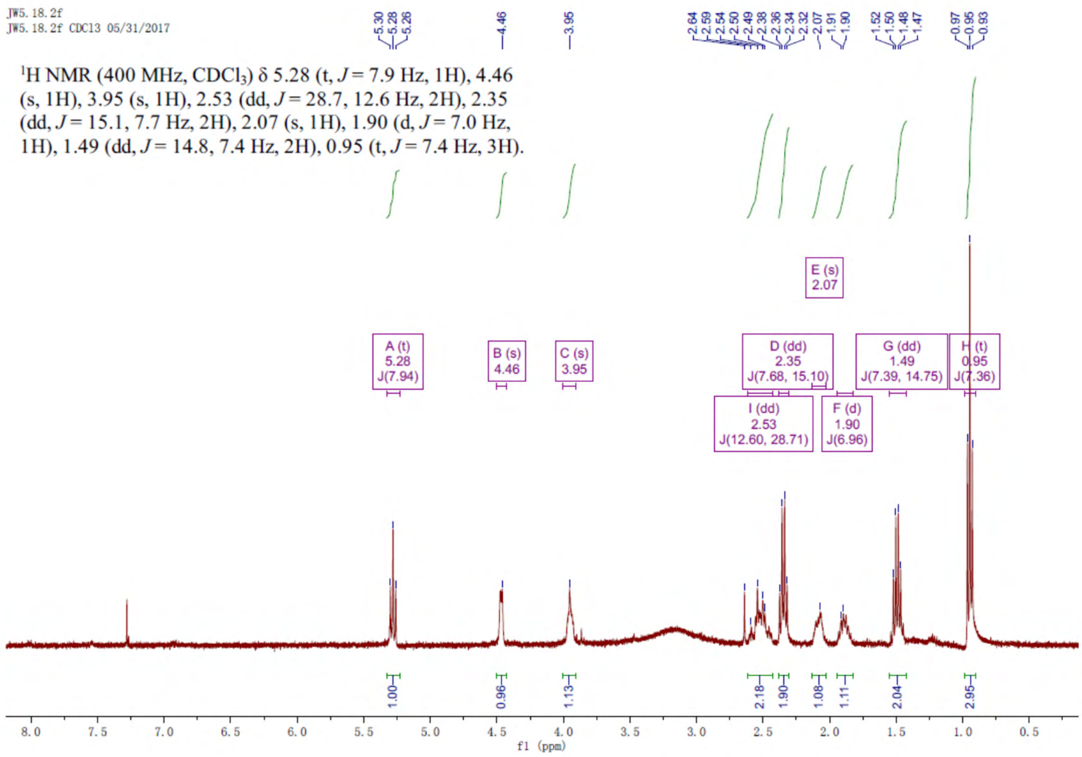


Figure S303. HSQC spectrum of compound **187**.

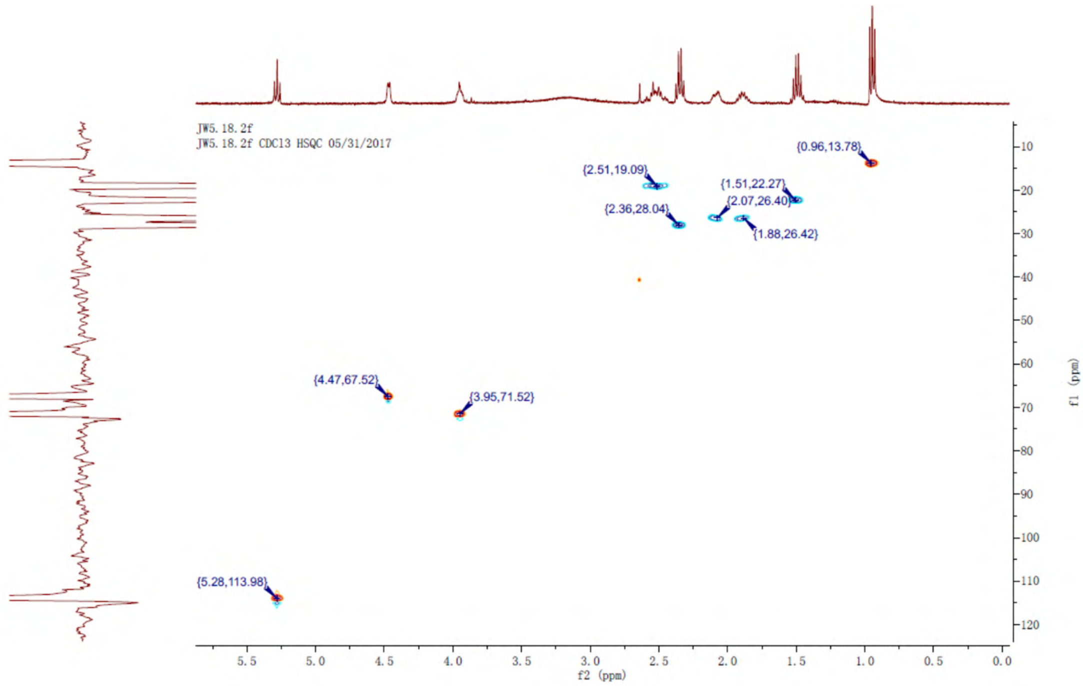


Figure S304. LC-MS spectrum of compound **188**.

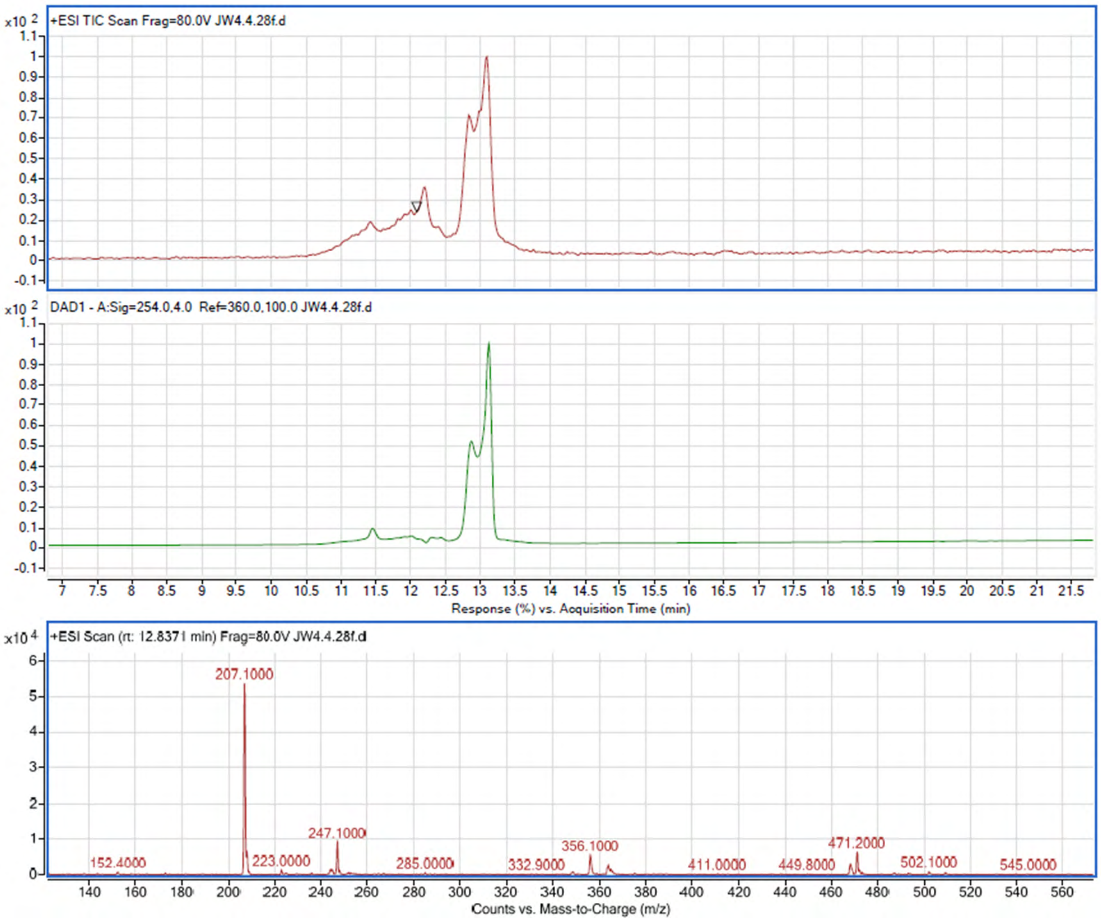
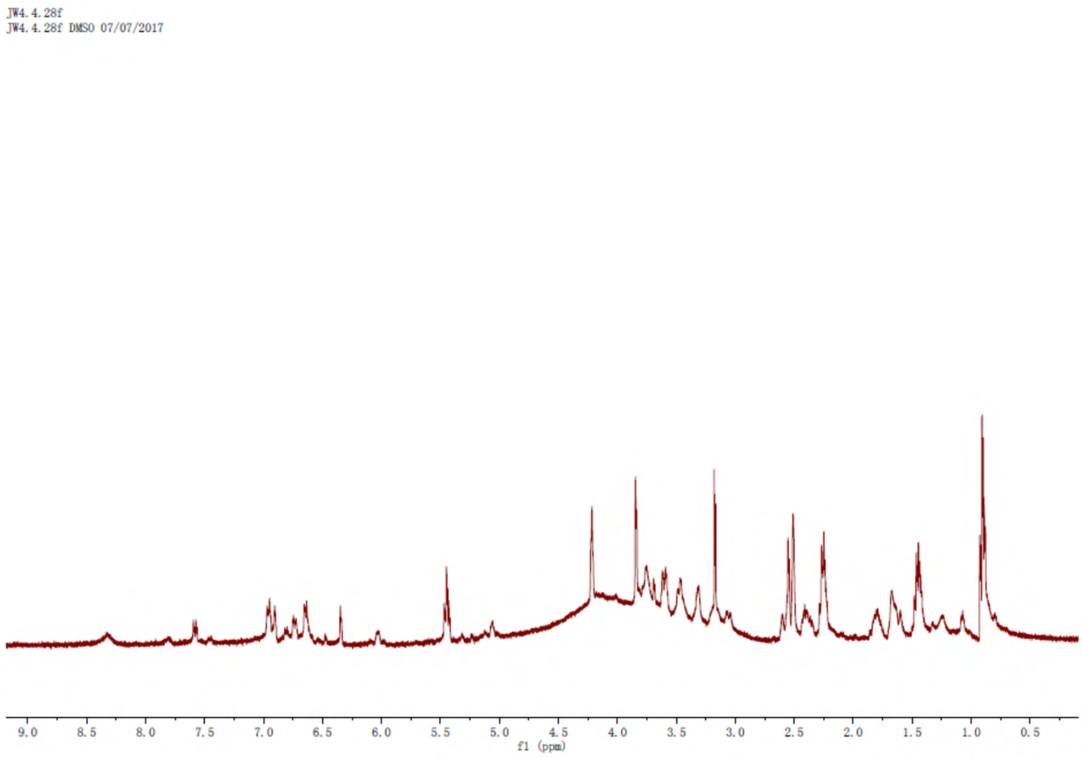


Figure S305. ^{1}H-NMR and HSQC spectra of compound **188**.



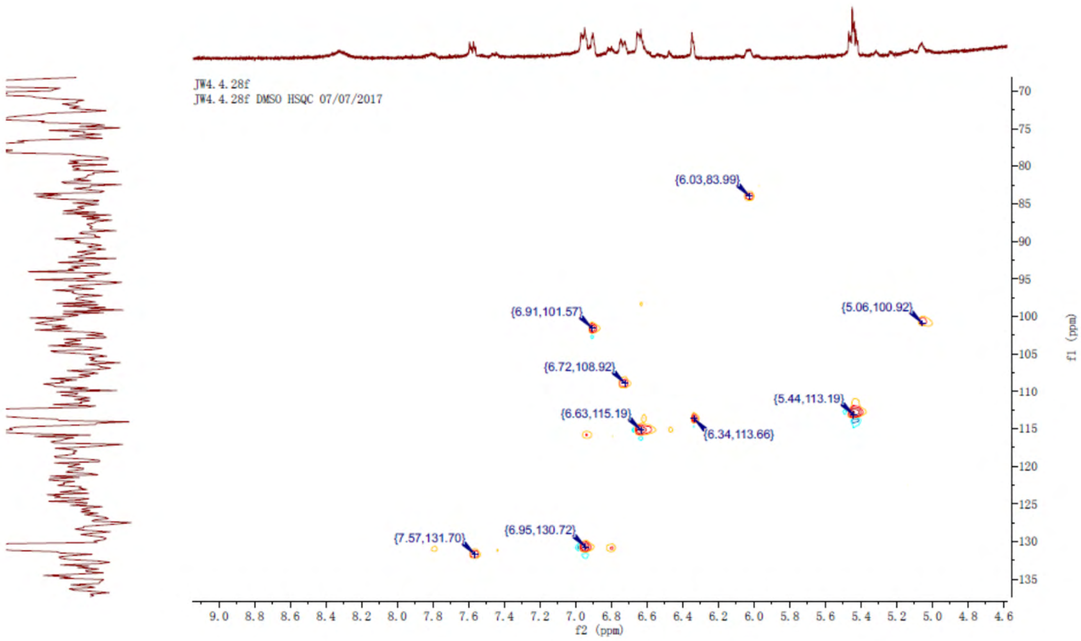


Figure S306. ^{1}H-NMR spectrum of compound **189**.

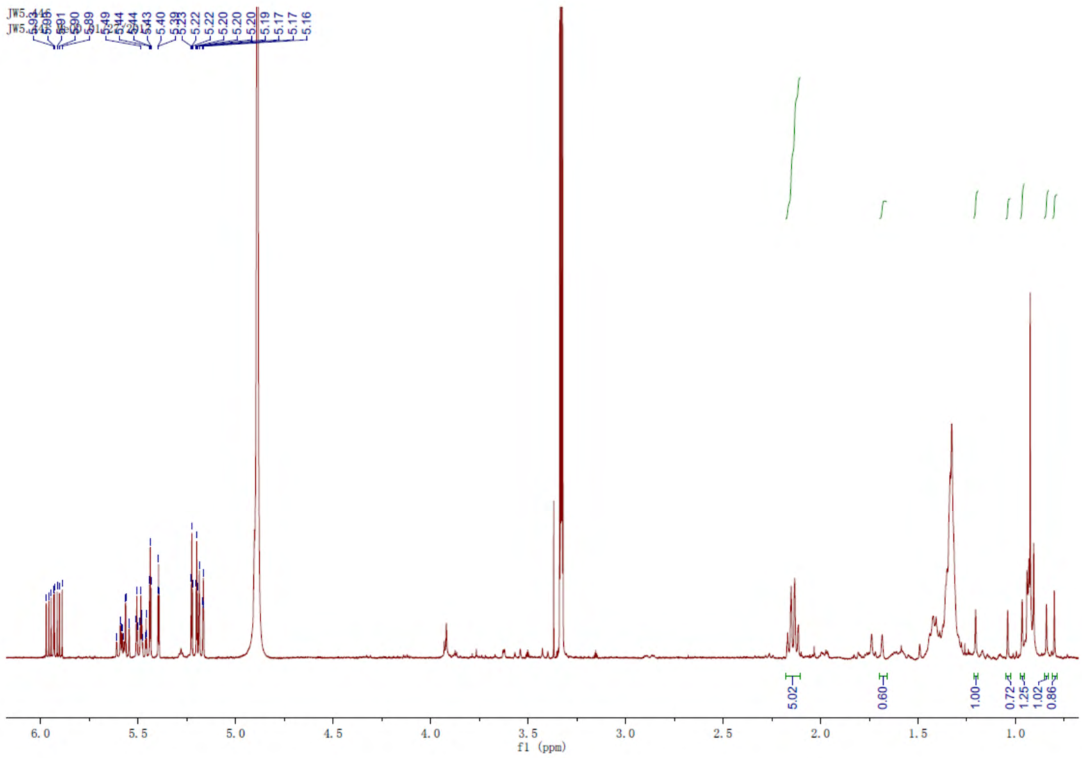
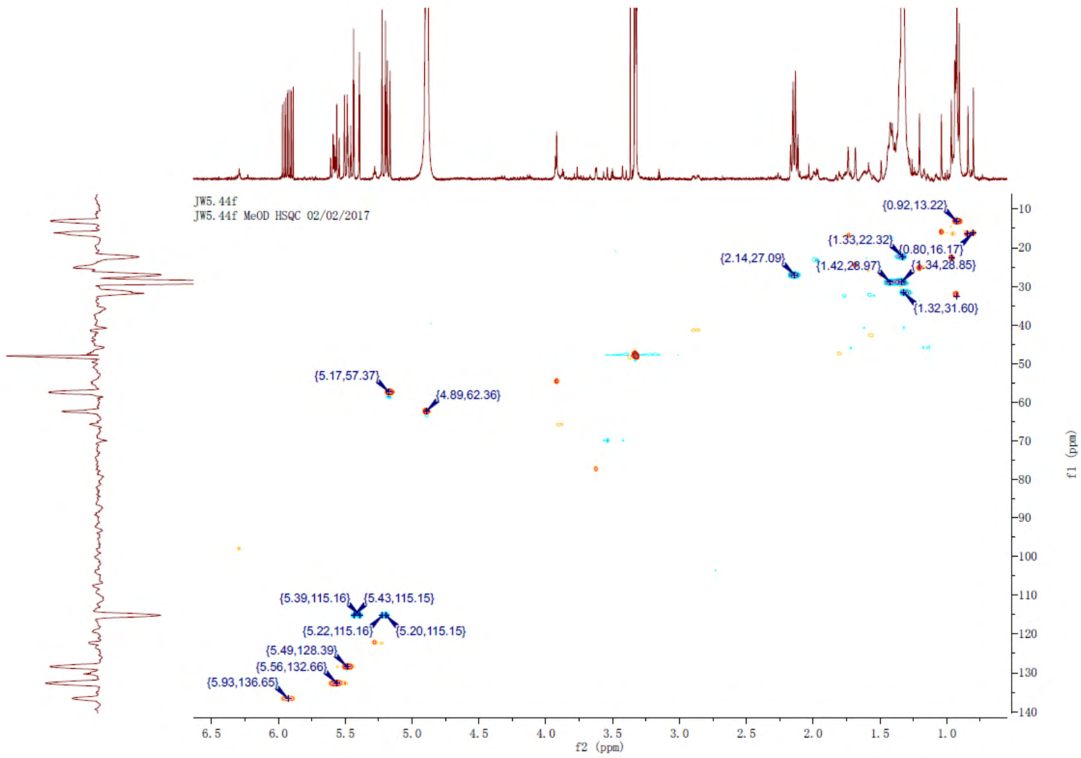
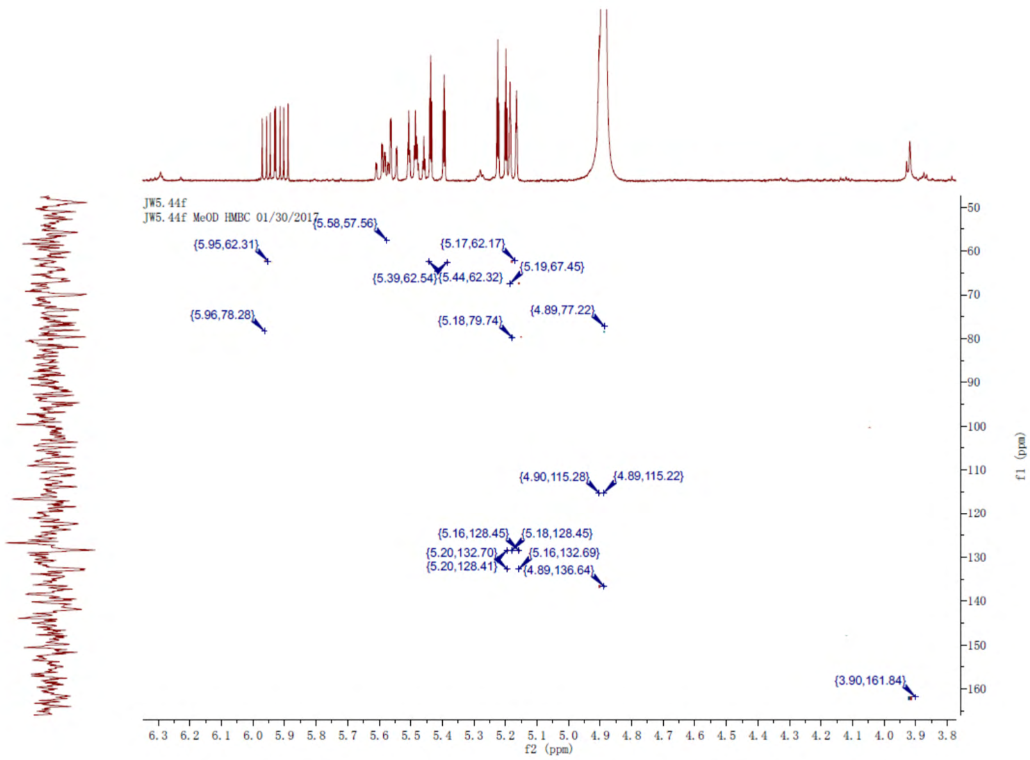


Figure S307. HSQC and HMBC spectrum of compound **189**.




JW5.44f
JW5.44f MeOD HMBC 01/30/2017
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{5.16,132.69}
{5.20,128.41}
{4.89,136.64}
{3.90,161.84}
f2 (ppm)
f1 (ppm)

References S1. (Ref. for all the 189 compounds isolated from Jing Wine.)

Abe, F., & Yamauchi, T. (1987). Trachelospermum. III. Trachelosperosides, glycosides of 19α-hydroxyursane-type triterpenoids from *Trachelospermum asiaticum. Chemical & Pharmaceutical Bulletin, 35*(5), 1748–1754.

Abu Zarga, M. H. (1986). Three new simple indole alkaloids from *Limonia acidissima. Journal of Natural Products, 49*(5), 901–904.

Allain, P., Gautier, M., Cailleux, P., & Bonniot, R. (1980). Effects of liver disease and age on metabolism of trimethoxybenzene (author's transl). *Therapie, 35*(5), 591–595.

Al-Said, M. S., Evans, W. C., & Grout, R. J. (1986). Alkaloids of the genus *Erythroxylum*. Part 6. alkaloids of *Erythroxylum macrocarpum* and *E. sideroxyloides. Phytochemistry, 25*(4), 851–853.

Aripova, S. F. (1996). Tropane alkaloids of two species of the genus *Convolvulus*. *Khimiya Prirodnykh Soedinenii, 5*, 687–689.

Asahina, T., & Yokoyarna, K. (1935). The mutual solubility of flavone and its derivatives. *Bulletin of the Chemical Society of Japan, 10*, 135–138.

Baba, N., Maeda, N., Ito, A., Kishida, Y., Nakajima, S., Iwasa, J., & Miyawaki, H. (1995). Synthesis of sugar and glycerophospholipid derivatives of sulfurol and maltol. *Yukagaku, 44*(1), 23–29.

Baerheim, S. A. (1951). On the occurrence of chlorogenus and caffeic acid in the plant family of Umbelliferae; phytochemical analysis with paper chromatography. *Pharmaceutica Acta Helvetiae, 26*(8), 253–258.

Bao, H., Ren, H., Endo, H., Takagi, Y., & Hayashi, T. (2004). Effects of heating and the addition of seasonings on the anti-mutagenic and anti-oxidative activities of polyphenols. *Food Chemistry, 86*(4), 517–524.

Benecke, I. (1984). Resolution of underivatized 2-hydroxy acids by high-performance liquid chromatography. *Journal of Chromatography, 291*, 155–164.

Best, R. J. (1948). Studies on a fluorescent substance present in plants; the distribution of scopoletin in tobacco plants and some hypotheses on its part in metabolism. *The Australian Journal of Experimental Biology and Medical Science, 26*(Pt 3), 223–230.

Billmann, E. (1909). Isomeric cinnamic acids. *Berichte der Deutschen Chemischen Gesellschaft, 42*, 182–188.

Bistrzycki, A., & Zen-Ruffinen, S. (1920). Derivatives of α-arylphthalidines and their conversion into derivatives of anthracene. *Helvetica Chimica Acta, 3*, 369–391.

Breytenbach, J. C. (1986). Isoflavone glycosides from *Neorautanenia amboensis. Journal of Natural Products, 49*(6), 1003–1009.

Chan, W. R., Sheppard, V., Medford, K. A., Tinto, W. F., Reynolds, W. F., & McLean, S. (1992). Triterpenes from *Miconia stenostachya. Journal of Natural Products, 55*(7), 963–966.

Chen, L., Liu, J., Wang, Q., & Chen, J. (2009). Fingerprint comparison between gegen qinlian preparations of three different pharmaceutical forms including decoction, dispensing granule and pill. *Chromatographia, 69*(1/2), 123–127.

Chin, Y.-W., Lim, S. W., Kim, S.-H., Shin, D.-Y., Suh, Y.-G., Kim, Y.-B., Kim, Y. C., & Kim, J. (2003). Hepatoprotective pyrrole derivatives of *Lycium chinense* fruits. *Bioorganic & Medicinal Chemistry Letters, 13*(1), 79–81.

Clarke, D. B., Barnes, K. A., & Lloyd, A. S. (2004). Determination of unusual soya and non-soya phytoestrogen sources in beer, fish products and other foods. *Food Additives & Contaminants, 21*(10), 949–962.

Dai, J., Sorribas, A., Yoshida, W. Y., & Williams, P. G. (2010). Sebestenoids A-D, BACE1 inhibitors from *Cordia sebestena. Phytochemistry, 71*(17-18), 2168–2173.

Das, C., & Tripathi, A. K. (2002). Some potential drugs from *Sesbania grandiflora*. *Oriental Journal of Chemistry, 18*(1), 167–168.

Dong, X. P., Xiao, C. H., Zhang, R., & Li, W. (1994). Chemical studies of *Epimedium acuminatum* Franch. *The Journal of Chinese Medicine & Traditional Chinese Medicine, 19*(10), 614–615.

Dubois, M. A., Benze, S., & Wagner, H. (1990). New biologically active triterpene saponins from *Randia dumetorum. Planta Medica, 56*(5), 451–455.

Fan, Q.-L., Tan, C.-H., Liu, J., Zhao, M.-M., Han, F.-S., & Zhu, D.-Y. (2011). Iridoid glycosides and glycosidic constituents from *Eriophyton wallichii* Benth. *Phytochemistry, 72*(14-15), 1927–1932.

Fang, S.-C., Shieh, B.-J., Wu, R.-R., & Lin, C.-N. (1995). Isoprenylated flavonols of formosan *Broussonetia papyrifera. Phytochemistry, 38*(2), 535–537.

Fang, S.-Y., He, Z.-S., Fan, G.-J., Wu, H.-M., & Xu, J.-F. (1996). Triterpenoids from *Adina rubella. Journal of Natural Products, 59*(3), 304–307.

Frezza, C., Venditti, A., Di Cecco, M., Ciaschetti, G., Serafini, M., & Bianco, A. (2017). Iridoids and phenylethanoid glycosides from the aerial parts of *Ajuga tenorei*, an endemic Italian species. *Natural Product Research, 31*(2), 218–223.

Fujimatu, E., Ishikawa, T., & Kitajima, J. (2003). Aromatic compound glucosides, alkyl glucoside and glucide from the fruit of anise. *Phytochemistry, 63*(5), 609–616.

Fukai, T., & Nomura, T. (1988). Seven prenylated flavonol glycosides from two *Epimedium* species. *Phytochemistry, 27*(1), 259–266.

Gebauer, S., Knuetter, I., Hartrodt, B., Brandsch, M., Neubert, K., & Thondorf, I. (2003). Three-dimensional quantitative structure-activity relationship analyses of peptide substrates of the mammalian H+/Peptide cotransporter PEPT1. *Journal of Medicinal Chemistry, 46*(26), 5725–5734.

Geissman T. A., & Clinton, R. O. (1946). Flavanones and related compounds, the reduction of luteolin and apigenin trimethyl ether with sodium amalgam. *Journal of the American Chemical Society, 68*, 706–708.

Gonnet, J. F., Kozjek, F., & Favre-Bonvin, J. (1973). Flavonols of *Asclepias syriaca*. *Phytochemistry, 12*(11), 2789–2790.

Guo B.-L., & Xiao P.-G. (2003). Comment on main species of herba epimedii. *China Journal of Chinese Materia Medica, 28*(4), 303–307.

Guo, H., Wang, M., Zheng, J., Zhang, S., & Shen, J. (2006). Studies on chemical constituents of *Epimedium brevicornum. Zhongguo Yaoxue Zazhi, 41*(14), 1060–1062.

Guo, S.-B., Du, X.-M., Jian, L.-Y. (2014). Studies on purification process of total saponins in *Radix Astragali* with resin and structural identification of compounds. *Asian Journal of Chemistry, 26*(15), 4610–4614.

Han, F., & Lee, I.-S. (2017). A new flavonol glycoside from the aerial parts of *Epimedium koreanum* Nakai. *Natural Product Research, 31*(3), 320–325.

He, J.-Y., Zhu, S., Goda, Y., Cai, S.-Q., & Komatsu, K. (2014). Quality evaluation of medicinally-used *Codonopsis* species and *Codonopsis Radix* based on the contents of pyrrolidine alkaloids, phenylpropanoid and polyacetylenes. *Journal of Natural Medicines, 68*(2), 326–339.

Heim, F., Leuschner, F., & Wunderlich, G. (1957). Intermediary behavior of *p*-hydroxybenzoic acid ethyl ester. *Klinische Wochenschrift, 35*(16), 823–825.

Henderson, M. E., & Farmer, V. C. (1955). Utilization by soil fungi of *p*-hydroxybenzaidehyde, ferulic acid, syringaldehyde and vanillin. *Journal of General Microbiology, 12*(1), 37–46.

Herraiz, T., & Papavergou, E. (2004). Identification and occurrence of tryptamine- and tryptophan-derived tetrahydro-β-carbolines in commercial sausages. *Journal of Agricultural and Food Chemistry, 52*(9), 2652–2658.

Herraiz, T., Huang, Z., & Ough, C. S. (1993). 1,2,3,4-Tetrahydro-β-carboline-3-carboxylic acid and 1-methyl-1,2,3,4-tetrahydro-β-carboline-3-carboxylic acid in wines. *Journal of Agricultural and Food Chemistry, 41*(3), 455–459.

Hiermann, A., Kedwani, S., Schramm, H. W., & Seger, C. (2002). A new pyrrole alkaloid from seeds of *Castanea sativa*. *Fitoterapia, 73*(1), 22–27.

Hirakura, K., Morita, M., Nakajima, K., Sugama, K., Takagi, K., Nitsu, K., Ikeya, Y., Maruno, M., & Okada, M. (1997). Phenolic glucosides from the root of *Pueraria lobate*. *Phytochemistry, 46*(5), 921–928.

Hu, Y. M., Wang, Y. T., Sze, S. C. W., Tsang, K. W., Wong, H. K., Liu, Q., Zhong, L. D., & Tong, Y. (2010). Identification of the major chemical constituents and their metabolites in rat plasma and various organs after oral administration of effective Erxian Decoction (EXD) fraction by liquid chromatography-mass spectrometry. *Biomedical Chromatography, 24*(5), 479–489.

Huang, J., Lu, X.-Q., Zhang, C., Lu, J., Li, G.-Y., Lin, R.-C., & Wang, J.-H. (2013). Anti-inflammatory ligustilides from *Ligusticum chuanxiong* Hort. *Fitoterapia, 91*, 21–27.

Ibrahim, R. K., & Shaw, M. (1970). Phenolic constituents of the oil flax (*Linum usitatissimum*). *Phytochemistry, 9*(8), 1855–1858.

Ichniowski, C. T., & Hueper, W. C. (1946). Pharmacological and toxicological studies on salicylamide. *Journal of the American Pharmaceutical Association, 35*, 225–230.

Ingham, J. L., Markham, K. R., Dziedzic, S. Z., & Pope, G. S. (1986). Puerarin 6''-O-β-apiofuranoside, a C-glycosylisoflavone O-glycoside from *Pueraria mirifica*. *Phytochemistry, 25*(7), 1772–1775.

Inouye, H., Takeda, Y., Uobe, K., Yamauchi, K., Yabuuchi, N., & Kuwano, S. (1974). Purgative activities of iridoid glucosides. *Planta Medica, 25*(3), 285–288.

Itoh, A., Fujii, K., Tomatsu, S., Takao, C., Tanahashi, T., Nagakura, N., & Chen, C.-C. (2003). Six secoiridoid glucosides from *Adina racemosa*. *Journal of Natural Products, 66*(9), 1212–1216.

Jia, X., Wu, J., & Mao, Q. (1998). Chemical constituents of *Epimedium acuminatum* Franch. (II). *China Journal of Chinese Materia Medica, 23*(12), 737–739.

Jiang, Y. T., Xu, S. X., Gu, X. H., Ren, L., Chen, Y. J., Yao, X. S., & Miao, Z. C. (1992). Chemical constituents from *Aralia elata*. *Yaoxue Xuebao, 27*(7), 528–532.

Jin, H., Zhao, J., Zhou, W., Shen, A., Yang, F., Liu, Y., Guo, Z., Zhang, X., Tao, Y., Peng, X., & Liang, X. (2015). Preparative separation of a challenging anthocyanin from *Lycium ruthenicum* Murr. by two-dimensional reversed-phase liquid chromatography/hydrophilic interaction chromatography. *RSC Advances, 5*(76), 62134–62141.

Jin, Y., Wu, C.-S., Zhang, J.-L., & Li, Y.-F. (2013). A new strategy for the discovery of epimedium metabolites using high-performance liquid chromatography with high resolution mass spectrometry. *Analytica Chimica Acta, 768*, 111–117.

King, F. E., Grundon, M. F., & Neill, K. G. (1952). The chemistry of extractives from hardwoods. IX. Constituents of the heartwood of *Ferreirea spectabilis. Journal of the Chemical Society*, 4580–4584.

Kinjo, J., Kurusawa, J., Baba, J., Takeshita, T., Yamasaki, M., & Nohara, T. (1987). Studies on the constituents of Pueraria lobata. III. Isoflavonoids and related compounds in the roots and the voluble stems. *Chemical & Pharmaceutical Bulletin, 35*(12), 4846–4850.

Kobayashi, H., Oguchi, H., Takizawa, N., Miyase, T., Ueno, A., Usmanghani, K., & Ahmad, M. (1987). New phenylethanoid glycosides from *Cistanche tubulosa* (Schrenk) Hook. f. I; *Chemical & Pharmaceutical Bulletin, 35*(8), 3309–3314.

Kohda, H., Tanaka, S., Yamaoka, Y., Yahara, S., Nohara, T., Tanimoto, T., & Tanaka, A. (1989). Studies on lens-aldose-reductase inhibitor in medicinal plants. II. Active constituents of *Monochasma savatierii* Franch. et Maxim. *Chemical & Pharmaceutical Bulletin, 37*(11), 3153–3154.

Komatsu, M., Tomimori, T., Hatayama, K., & Mikuriya, N. (1970). Studies on the constituents of *Sophora* species. 4. Constituents of the root of *Sophora angustifolia*. 1. *Yakugaku Zasshi, 90*(4), 463–468.

Kondo, N., Marumoto, Y., & Shoji, J. (1971). Constituents of *Panacis japonici* Rhizoma. IV. Structure of chikusetsusaponin V. *Chemical & Pharmaceutical Bulletin, 19*(6), 1103–1107.

Koumaglo, K., Gbeassor, M., Nikabu, O., de Souza, C., & Werner, W. (1992). Effects of three compounds extracted from *Morinda lucida* on Plasmodium falciparum. *Planta Medica, 58*(6), 533–534.

Krehl W. A., De La H. K., & Elvehjem, C. A. (1946). Tryptophane studies; the effect of niacin on the utilization of tryptophane. *The Journal of Biological Chemistry, 164*(2), 551–561.

Kuroda, M., Aoshima, T., Haraguchi, M., Young, M. C. M., Sakagami, H., & Mimaki, Y. (2006). New oleanane glycosides from the roots of *Gomphrena macrocephala. Natural Product Communications, 1*(6), 431–439.

Lebreton, P., Markham, K. R., Swift, W. T., & Mabry, T. J. (1967). Flavonoids of *Baptisia australis. Phytochemistry, 6*(12), 1675–1680.

Lechner, D., Stavri, M., Oluwatuyi, M., Pereda-Miranda, R., & Gibbons, S. (2004). The anti-staphylococcal activity of *Angelica dahurica* (Bai Zhi). *Phytochemistry, 65*(3), 331–335.

Lee, S.-W., Kuo, S.-C., Chen, Z.-T., & Liu, Z.-S. (1994). Novel anthraquinones from *Damnacanthus indicus. Journal of Natural Products, 57*(9), 1313–1315.

Letcher, R. M., & Nhamo, L. R. M. (1973). Chemical constituents of the Combretaceae. IV. Phenanthrene derivatives from the heartwood to Combretum hereroense. *Journal of the*

Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry, 11, 1179–1181.

Li, D., Mitsuhashi, S., & Ubukata, M. (2012). Protective effects of hesperidin derivatives and their stereoisomers against advanced glycation end-products formation. *Pharmaceutical Biology, 50*(12), 1531–1535.

Li, F., & Liu, Y. L. (1988). Isolation and structures of baohuoside-II, III, IV, and V. *Yaoxue Xuebao, 23*(9), 672–681.

Li, F., & Liu, Y. L. (1988). Studies on the isolations and structures of baohuosides-I, VI, VII and baohuosu. *Acta pharmaceutica Sinica, 23*(10), 739–748.

Li, H.-M., Zhou, C., Chen, C.-H., Li, R.-T., & Lee, K.-H. (2015). Flavonoids isolated from heat-processed Epimedium koreanum and their anti-HIV-1 activities. *Helvetica Chimica Acta, 98*(8), 1177–1187.

Li, N., Song, S., & Luo, F. (2006). Studies of the chemical constituents of *Epimedium koreanum* Nakai. *Asian Journal of Traditional Medicines, 1*(3-4), 117–120.

Li, W.-K., Xiao, P.-G., Liao, M.-C., & Zhang, R.-Y. (1995). Caohuoside-C from the aerial parts of *Epimedium koreanum* Nakai. *Gaodeng Xuexiao Huaxue Xuebao, 16*(2), 230–233.

Li, X.-P., Yu, J., Luo, J.-Y., Li, H.-S., Han, F.-J., Chen X.-G., & Hu Z.-D. (2004). Simultaneous determination of chlorogenic acid, caffeic acid, ferulic acid, protocatechuic acid and protocatechuic aldehyde in Chinese herbal preparation by RP-HPLC. *Chemical & Pharmaceutical Bulletin, 52*(10), 1251–1254.

Li, Y., & Liu, Y. (1990). Flavonol glycosides from *Epimedium pubescens. Journal of Natural Products, 53*(5), 1337–1339.

Li, Y., & Liu, Y. (1990). Flavonol glycosides from *Epimedium wushanense. Phytochemistry, 29*(10), 3311–3314.

Li, Y., Metori, K., Koike, K., Che, Q.M., & Takahashi, S. (1999). Improvement in the turnover rate of the stratum corneum in false aged model rats by the administration of geniposidic acid in *Eucommia ulmoides* Oliver Leaf. *Biological & Pharmaceutical Bulletin, 22*(6), 582–585.

Li, Y., Warren, J. T., Boysen, G., Gilbert, L. I., Gold, A., Sangaiah, R., Ball, L. M., & Swenberg, J. A. (2006). Profiling of ecdysteroids in complex biological samples using liquid chromatography/ion trap mass spectrometry. *Rapid Communications in Mass Spectrometry, 20*(2), 185–192.

Li, Y.-F., Ren, Q., Jin, Y., Wu, C.-S., Wang, C.-H., Jia, Z.-X., & Zhang, J.-L. (2014). Metabolic studies of four soy isoflavones in rats by HPLC-HR-MS. *Journal of Asian Natural Products Research, 16*(5), 497–510.

Liang, H. R., Yan, W. M., Li, J. S., & Yang, C. S. (1988). Chemical studies of *Epimedium wushanense* T. S. Ying. *Acta pharmaceutica Sinica, 23*(1), 34–37.

Liu M.-C., Luo M.-Z., Mozdziesz D. E., Dutschman G. E., Gullen E. A., Cheng Y.-C. & Sartorelli A. C. (2005). Synthesis and biological evaluation of 2',3'-didehydro-2',3'-dideoxy-9-deazaguanosine, a monophosphate prodrug and two analogues, 2',3'-dideoxy-9-deazaguanosine and 2',3'-didehydro-2',3'-dideoxy-9-deazainosine. *Nucleosides, Nucleotides & Nucleic Acids, 24*(2), 135–145.

Liu, H.-X., Lin, W.-H., Wang, X.-L., & Yang, J.-S. (2005). Flavonoids from preparation of traditional Chinese medicines named Sini-Tang. *Journal of Asian Natural Products Research, 7*(2), 139-143.

Liu, W., Chen, J., Zuo, W. J., Li, X., & Wang, J. H. (2007). A new isoflavane from processed *Astragalus membranaceus*. *Chinese Chemical Letters, 18*(9), 1092–1094.

Liu, Y.-F., Shi, G.-R., Wang, X., Zhang, C.-L., Wang, Y., Chen, R.-Y., & Yu, D.-Q. (2016). Nine new compounds from the whole plants of *Rehmannia chingii*. *Journal of Asian Natural Products Research, 18*(6), 509–519.

Ma, B., Zou, Y., Xie, X., Zhao, J., Piao, X., Piao, J., Yao, Z., Quinto, M., Wang, G., & Li, D. (2017). A high throughput mass spectrometry screening analysis based on two-dimensional carbon microfiber fractionation system. *Journal of Chromatography A, 1501*, 1–9.

Mao, Y.-W. Tseng, H.-W., Liang, W.-L., Chen, I.-S., Chen S.-T., & Lee M.-H. (2011). Anti-inflammatory and free radial scavenging activities of the constituents isolated from *Machilus zuihoensis*. *Molecules, 16*(11), 9451–9466.

Markham, K. R., Mabry, T. J., & Swift, T. W. (1968). New isoflavones from the genus *Baptisia*. *Phytochemistry, 7*(5), 803–808.

Maruyama, T., Abbaskhan, A., Choudhary, M. I., Tsuda, Y., Goda, Y., Farille, M., & Reduron, J.-P. (2009). Botanical origin of Indian celery seed (fruit). *Journal of Natural Medicines, 63*(3), 248–253.

Matos, M. E. O., & Tomassini, T. C. B. (1983). Wedelin, a saponin from Wedelia scaberrima. *Journal of Natural Products, 46*(6), 836–840.

Matsuda, H., Samukawa, K., & Kubo, M. (1990). Anti-inflammatory activity of ginsenoside ro. *Planta Medica, 56*(1), 19–23.

Mitsuhashi, H., & Nomura, M. (1966). Constituents of umbelliferous plants. XII. Biogenesis of 3-butylphthalide. *Chemical & Pharmaceutical Bulletin, 14*(7), 777–778.

Mizuno, M., Hanioka, S., Suzuki, N., Iinuma, M., Tanaka, T., Liu, X., & Min, Z. (1987). Flavonol glycosides from *Epimedium sagittatum*. *Phytochemistry, 26*(3), 861–863.

Mizuno, M., Kanie, Y., Iinuma, M., Tanaka, T., & Lang, F. A. (1991). Two flavonol glycosides, hexandrasides C and D, from the underground parts of *Vancouveria hexandra*. *Phytochemistry, 30*(8), 2765–2768.

Mizuno, M., Sakakibara, N., Hanioka, S., Iinuma, M., Tanaka, T., Liu, X., & Shi, D. (1988). Flavonol glycosides from *Epimedium sagittatum*. *Phytochemistry, 27*(11), 3641–3643.

Morita, T., Tanaka, O., & Kohda, H. (1985). Saponin composition of rhizomes of *Panax japonicus* collected in south Kyushu, Japan, and its significance in oriental traditional medicine. *Chemical & Pharmaceutical Bulletin, 33*(9), 3852–3858.

Morton, R. A., & Earlam, W. T. (1941). Absorption spectra in relation to quinones:1,4-naphthoquinone, anthraquinone and their derivatives. *Journal of the Chemical Society*, 159–169.

Mshvildadze, V., Elias, R., Faure, R., Debrauwer, L., Dekanosidze, G., Kemertelidze, E., Balansard, G. (2001). Triterpenoid saponins from berries of *Hedera colchica*. *Chemical & Pharmaceutical Bulletin, 49*(6), 752–754.

Muratake, H., Amano, Y., Toda, T., Sugiyama, K., & Shudo, K. (2013). Synthesis of Am80 (Tamibarotene) prodrug candidates, congeners and metabolites. *Chemical & Pharmaceutical Bulletin, 61*(8), 846–852.

Nakayama, T., Yamada, M., Osawa, T., & Kawakishi, S. (1996). Inhibitory effects of caffeic acid ethyl ester on H_2O_2-induced cytotoxicity and DNA single-strand breaks in Chinese hamster V79 cells. *Bioscience, Biotechnology, and Biochemistry, 60*(2), 316–318.

Newman, M. S., & Yu, Y. T. (1952). Bicyclo[3.2.1]octan-2-ol. *Journal of the American Chemical Society, 74*, 507–509.

Nilsson, A. (1961). Demethylation of the plant oestrogen biochanin A in the rat. *Nature, 192*, 358.

Ohshima, Y., Okuyama, T., Takahashi, K., Takizawa, T., & Shibata, S. (1988). Isolation and high performance liquid chromatography (HPLC) of isoflavonoids from the *Pueraria* root. *Planta Medica, 54*(3), 250–254.

Ohta, N., Kuwata, G., Akahori, H., & Watanabe, T. (1979). Isoflavonoid constituents of soybeans and isolation of a new acetyl daidzin. *Agricultural and Biological Chemistry, 43*(7), 1415–1419.

Oonuma, H., Nishizawa, Y., Jokura, H., Kobayashi, T., & Imokawa, G. (1993). Preparation of trans-2,4-dihydroxycinnamic acid esters and skin-lightening cosmetics containing them. *Kokai Tokkyo Koho*, JP 05105621 A 19930427.

Parham, W. E., De, L., & Dale, M. (1954). Protection of hydroxyl groups. II. Preferential pyranylation. *Journal of the American Chemical Society, 76*, 4962–4964.

Peng, J.-B., Jia, H.-M., Liu, Y.-T., Zhang, H.-W., Dong, S., & Zou, Z.-M. (2011). Qualitative and quantitative characterization of chemical constituents in Xin-Ke-Shu preparations by liquid chromatography coupled with a LTQ Orbitrap mass spectrometer. *Journal of Pharmaceutical and Biomedical Analysis, 55*(5), 984–995.

Perrin, C. L., Engler, R. E., & Young, D. B. (2000). Bifunctional catalysis and apparent stereoelectronic control in hydrolysis of cyclic imidatonium ions. *Journal of the American Chemical Society, 122*(20), 4877–4881.

Pham, H. C., Koffi, Y., & Pham, H. C. (1988). Comparative effects on TXA2 biosynthesis of products extracted from *Lippia multiflora* Moldenke leaves. *Prostaglandins, Leukotrienes, and Essential Fatty Acids, 34*(2), 83–88.

Pistelli, L., Bertoli, A., Giachi, I., & Manunta, A. (1998). Flavonoids from *Genista ephedroides*. *Journal of Natural Products, 61*(11), 1404–1406.

Qiao, Z., & Chen, R. (1991). Isolation and identification of antibiotic constituents of propolis from Henan. *China Journal of Chinese Materia Medica, 16*(8), 481–482.

Reiners, W. (1966). 7-hydroxy-4'-methoxy-isoflavone (formononetin) from liquorice root. On substances contained in liquorice root. II. *Experientia, 22*(6), 359.

Reitberg, D. P., & Schentag, J. J. (1983). Liquid-chromatographic assay of cefmenoxime in serum and urine. *Clinical Chemistry, 29*(7), 1415–1418.

Rivers R. P. (1947). The oxidation of diiodotyrosine; 3:5-diiodo-4-hydroxybenzaldehyde as a possible intermediate in thyroxine formation. *The Biochemical Journal, 41*(3), xxxix.

Rosenwald, R. H., & Chenicek, J. A. (1951). Alkylhydroxyanisoles as antioxidants. *Journal of the American Oil Chemists' Society, 28*, 185–188.

Rukachaisirikul, V., Sukpondma, Y., Jansakul, C., & Taylor, W.C. (2002). Isoflavone glycosides from *Derris scandens*. *Phytochemistry, 60*(8), 827–834.

Runeckles, V. C., & Woolrich, K. (1963). Tobacco polyphenols. I. The biosynthesis of O-glucosides and O-glucose esters of hydroxycinnamic acids. *Phytochemistry, 2*, 1–6.

Sager, E. E., & Schooley, M. R. (1945). Ultraviolet spectra and dissociation constants of *p*-hydroxybenzoic acid, methyl, ethyl, *n*-butyl, and benzyl *p*-hydroxybenzoate and potassium *p*-phenolsulfonate. *Journal of Research of the National Bureau of Standards, 35*, 521–538.

Sakakibara, J., Kaiya, T., Fukuda, H., & Ohki, T. (1983). 6β-Hydroxyursolic acid and other triterpenoids of *Enkianthus cernuus*. *Phytochemistry, 22*(11), 2553–2555.

Sammons, H. G., & Williams, R. T. (1946). Studies in detoxication; the metabolism of veratraldehyde and veratric acid in the rabbit. *The Biochemical Journal, 40*(2), 223–-227.

Sano, K., Sanada, S., Ida, Y., & Shoji, J. (1991). Studies on the constituents of the bark of Kalopanax pictus Nakai. *Chemical & Pharmaceutical Bulletin, 39*(12), 3381–3382.

Shi, R., Wang, Y., Liu, B., Xu, Q., & Wang, Y. (2007). Method for separating and identifying pueroside A. *Faming Zhuanli Shenqing*, CN 1935823 A 20070328.

Singer, A. W., & McElvain, S. M. (1935). Relative reactivities of certain 2-and 2,6-substituted piperidines. *Journal of the American Chemical Society, 57*, 1135–1137.

Sosa, A., Rosquete, C., Rojas, L., Pouysegu, L., Quideau, S., Paululat, T., Mitaine-Offer, A.-C., & Lacaille-Dubois, M.-A. (2011). New triterpenoid and ergostane glycosides from the leaves of *Hydrocotyle umbellata* L.. *Helvetica Chimica Acta, 94*(10), 1850–1859.

Suksamrarn, A., Yingyongnarongkul, B.-E., & Promrangsan, N. (1998). Naturally occurring 20, 26-dihydroxyecdysone exists as two C-25 epimers which exhibit different degrees of molting hormone activity. *Tetrahedron, 54*(48), 14565–14572.

Takeda, Y., Hayashi, T., Masuda, T., Honda, G., Takaishi, Y., Ito, M., Otsuka, H., Matsunami, K., Khodzhimatov, O. K., & Ashurmetov, O. A. (2007). Chemical constituents of an Uzbek medicinal plant, *Perovskia scrophularifolia*. *Journal of Natural Medicines, 61*(1), 84–85.

Tan, N., Kaloga, M., Radtke, O. A., Kiderlen, A. F., Oksuz, S., Ulubelen, A., & Kolodziej, H. (2002). Abietane diterpenoids and triterpenoic acids from *Salvia cilicica* and their antileishmanial activities. *Phytochemistry, 61*(8), 881–884.

Tanaka, T., Orii, Y., Nonaka, G., & Nishioka, I. (1993). Tannins and related compounds. CXXIII. Chromone, acetophenone and phenylpropanoid glycosides and their galloyl and/or hexahydroxydiphenoyl esters from the leaves of *Syzygium aromaticum* Merr. et Perry. *Chemical & Pharmaceutical Bulletin, 41*(7), 1232–1237.

Thompson, M. J., Kaplanis, J. N., Robbins, W. E., Dutky, S. R., & Nigg, H. N. (1974). 3-Epi-20-Hydroxyecdysone from meconium of the tobacco hornworm. *Steroids, 24*(3), 359–366.

Tsuchiya, H., Sato, M., & Watanabe, I. (1999). Antiplatelet activity of soy sauce as functional seasoning. *Journal of Agricultural and Food Chemistry, 47*(10), 4167–4174.

Tu, F., Dai, Y., Yao, Z., Wang, X., Yao, X., Ueda, & Qin, L. (2011). Flavonol glycosides from *Epimedium pubescens*. *Chemical & Pharmaceutical Bulletin, 59*(11), 1317–1321.

Ueda, T., Nakajima, K., Chin, M., & Mihashi, H. (1992). Flavonoid glycosides from plants as 5-lipoxygenase inhibitors for inflammation treatment. *Jpn. Kokai Tokkyo Koho*, JP 04159295A 19920602.

Varbanov, H., Valiahdi, S. M., Legin, A. A., Jakupec, M. A., Roller, A., Galanski, M., & Keppler, B. K. (1986). Synthesis and characterization of novel bis(carboxylato)dichloridobis(ethylamine)platinum(IV) complexes with higher cytotoxicity than cisplatin. *European Journal of Medicinal Chemistry, 21*(5), 385–390.

Vidal-Ollivier, E., Balansard, G., Faure, R., & Babadjamian, A. (1989). Revised structures of triterpenoid saponins from the flowers of *Calendula officinalis*. *Journal of Natural Products, 52*(5), 1156–1159.

Wada, H., Kido, T., Tanaka, N., Murakami, T., Saiki, Y., & Chen, C. M. (1992). Chemical and chemotaxonomical studies of ferns. LXXXI. Characteristic lignans of blechnaceous ferns. *Chemical & Pharmaceutical Bulletin, 40*(8), 2099–2101.

Wang, D. D., Liu, S. Q., Chen, Y. J., Wu, L. J., Sun, J. Y., & Zhu, T. R. (1982). Studies on the active constituents of *Syringa oblata* Lindl. *Acta pharmaceutica Sinica, 17*(12), 951–954.

Wang, G. J., Tsai, T. H., & Lin L. C. (2007). Prenylflavonol, acylated flavonol glycosides and related compounds from *Epimedium sagittatum*. *Phytochemistry, 68*(19), 2455–2464.

Wang, J., Yang, X., Di, Y., Wang, Y., Shen, Y., Hao, X. (2006). Isoflavone diglycosides from *Glycosmis pentaphylla*. *Journal of Natural Products, 69*(5), 778–782.

Wang, K., Li, M.-M., Chen, X.-Q., Peng, L.-Y., Cheng, X., Li, Y., & Zhao, Q.-S. (2010). Phenolic constituents from *Brainea insignis*. *Chemical & Pharmaceutical Bulletin, 58*(6), 868–871.

Wang, L., Li, Y., Lai, X., Feng, F., & Zhou, Y. (2011). Active anti-aging constituents from *Morinda officinalis* How. (II). *Zhongnan Yaoxue, 9*(7), 495–498.

Wang, X., Feng, X., Wang, M., Chen, Y., Dong, Y., Zhao, Y., & Sun, H. (2011). Studies on the chemical constituents of *Salicornia europaea*. *Zhongyaocai, 34*(1), 67–69.

Wang, Y., Guo, Z., Jin, Y., Zhang, X., Wang, L., Xue, X., & Liang, X. (2010). Identification of prenyl flavonoid glycosides and phenolic acids in *Epimedium koreanum* Nakai by Q-TOF-MS combined with selective enrichment on "click oligo (ethylene glycol)" column. *Journal of Pharmaceutical and Biomedical Analysis, 51*(3), 606–616.

Wende, G., & Fry, S. C. (1997). 2-O-β-D-xylopyranosyl-(5-O-feruloyl)-L-arabinose, a widespread component of grass cell walls. *Phytochemistry, 44*(6), 1019–1030.

Wong, K. H., Li, G. Q., Li, K. M., Razmovski-Naumovski, V., & Chan, K. (2017). Optimisation of *Pueraria* isoflavonoids by response surface methodology using ultrasonic-assisted extraction. *Food Chemistry, 231*, 231–237.

Wu, T.-S., Lin, D.-M., Shi, L.-S., Damu, A. G., Kuo, P.-C., & Kuo, Y.-H. (2003). Cytotoxic anthraquinones from the stems of *Rubia wallichiana* Decne. *Chemical & Pharmaceutical Bulletin, 51*(8), 948–950.

Xiao, W., Zhang, Q., Chen, C., Zhang, Q.-H., Hu, Y.-J., Xia, Z.-N., & Yang, F.-Q. (2016). Analysis of eight isoflavones in radix puerariae by MEEKC: comparison on three different oil phases. *Journal of Chromatographic Science, 54*(9), 1678–1686.

Xie, H., Morikawa, T., Matsuda, H., Nakamura, S., Muraoka, O., & Yoshikawa, M. (2006). Monoterpene constituents from Cistanche tubulosa-chemical structures of kankanosides A-E and kankanol. *Chemical & Pharmaceutical Bulletin, 54*(5), 669–675.

Xu, L. N., Wang, Q., Wu M. X., & Li, G. (1979). A comparison of compositus yiqi huoxue. Huang Qi (*Astragalus monogholicus* Bunge) and daidzein on acute mountain sickness (author's transl). *Acta Academiae Medicinae Sinicae, 1*(3), 274–277.

Yan, X.-G., Jia, J.-M., Tang, L., Shi, L.-Y., Wang, Y.-Q., & Feng, B.-M. (2008). New chemical constituents of roots of *Urtica triangularis* Hand-Mass. *Chemical & Pharmaceutical Bulletin, 56*(10), 1463–1465.

Yang, P., Shi, Y., & Pan, Q. (1995). Chemical constituents of *Hemsleya pengxianensis* W.J. Chang. *China Journal of Chinese Materia Medica, 20*(9), 551–553.

Yang, Y. J., Shu, H. Y., & Min, Z. D. (1992). Anthraquinones from *Morinda officinalis* and *Damnacanthus indicus*. *Yaoxue Xuebao, 27*(5), 358–364.

Yang, Y., Wang, H.-J., Yang, J., Brantner, A. H., Lower-Nedza, A. D., Si, N., Song, J.-F., Bai, B., Zhao, H.-Y., & Bian, B.-L. (2013). Chemical profiling and quantification of Chinese medicinal formula Huang-Lian-Jie-Du decoction, a systematic quality control strategy using ultra high performance liquid chromatography combined with hybrid quadrupole-orbitrap and triple quadrupole mass spectrometers. *Journal of Chromatography A, 1321*, 88–99.

Yoshikawa, M., Harada, E., Matsuda, H., Murakami, T., Yamahara, J., & Murakami, N. (1993). Elatosides A and B, potent inhibitors of ethanol absorption in rats from the bark of *Aralia elata* seem.: the structure-activity relationships of oleanolic acid oligoglycosides. *Chemical & Pharmaceutical Bulletin, 41*(11), 2069–2071.

Yuan, D., Pan, Y., Chen, Y., Uno, T., Zhang, S., & Kano, Y. (2008). An improved method for basic hydrolysis of isoflavone malonylglucosides and quality evaluation of Chinese soy materials. *Chemical & Pharmaceutical Bulletin, 56*(1), 1–6.

Zhang, H. J., Yang, X. P., & Wang, K. W. (2009). Two new C-glucofuranosyl isoflavones in puerarin injection. *Chinese Chemical Letters, 20*(6), 720–723.

Zhang, H. Y., Zhao, T. Z., Yin, W. P., & Wu, M. J. (2006). A new flavone glycoside from *Epimedium koreanum*. *Chinese Chemical Letters, 17*(10), 1328–1330.

Zhang, H., & Yang, X. (2009). Profiling and quantification of isoflavone-C-glycosides impurities in puerarin injection by liquid chromatography coupled to ESI-ion trap mass spectrometry. *Journal of Pharmaceutical and Biomedical Analysis, 49*(3), 843–847.

Zhang, J.-X., Tian, Y., Zhong, X.-M., Sun, G.-B., Sun, X.-B., & Xu, X.-D. (2013). Study on Saponins Chemical Components from *Aralia elata. China Pharmacy, 24*(15), 1380–1382.

Zhang, Y., & Chen, Y. (1997). Isobiflorin, a chromone C-glucoside from cloves (*Eugenia caryophyllata*). *Phytochemistry, 45*(2), 401–403.

Zhao, B.-J., Wang, J., Song, J., Wang, C.-F., Gu, J.-F., Yuan, J.-R., Zhang, L., Jiang, J., Feng, L., & Jia, X.-B. (2016). Beneficial effects of a flavonoid fraction of herba *Epimedii* on bone metabolism in ovariectomized rats. *Planta Medica, 82*(4), 322–329.

Zhao, H., Fan, M., Fan, L., Sun, J., & Guo, D. (2010). Liquid chromatography-tandem mass spectrometry analysis of metabolites in rats after administration of prenylflavonoids from *Epimediums*. *Journal of Chromatography. B, Analytical Technologies in the Biomedical and Life Sciences, 878*(15-16), 1113–1124.

Zhao, T., Zhang, H., Dong, J., Guo, W., Zhang, P., Xue, Q., & Fan, Y. (2008). Chinese medicine containing flavones and icariin and others extracted from *Epimedium* as antifatigue agent. *Faming Zhuanli Shenqing*, CN 101264120 A 20080917.

Zhou, Q.-L., Wang, Y.-F., Yang, D.-H., Xu, F., Zhao, X., Zhang, L., Liang, J., & Yang, X.-W. (2013). Identification of the absorptive constituents and their metabolites in vivo of Puerariae Lobat*ae* Radix decoction orally administered in WZS-miniature pigs by HPLC-ESI-Q-TOFMS. *Biomedical Chromatography, 27*(9), 1208–1218.

Zhou, Z.-Q., Fan, H.-X., He, R.-R., Xiao, J., Tsoi, B., Lan, K.-H., Kurihara, H., So, K.-F., Yao, X.-S., & Gao, H. (2016). Lycibarbarspermidines A-O, new dicaffeoylspermidine derivatives from wolfberry, with activities against Alzheimer's Disease and oxidation. *Journal of Agricultural and Food Chemistry, 64*(11), 2223–2237.