marine drugs

MDPI

Supplementary Materials

Modulation of glial responses by furanocembranolides: leptolide diminishes microglial inflammation in vitro and ameliorates gliosis in vivo in a mouse model of obesity and insulin resistance

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Figure S1. ^{1}H NMR of leptogorgodiol A **1** in $CDCl_3$

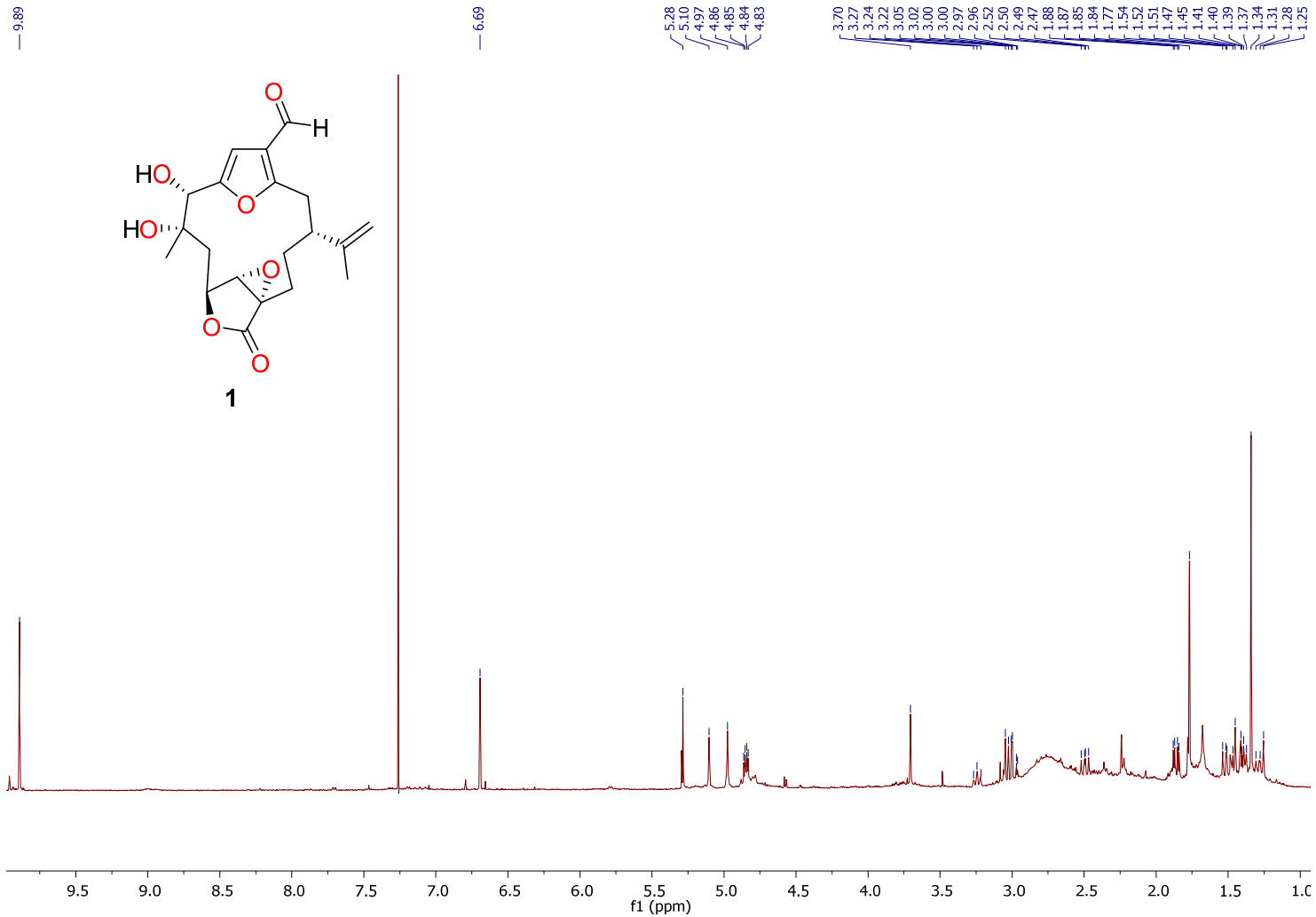
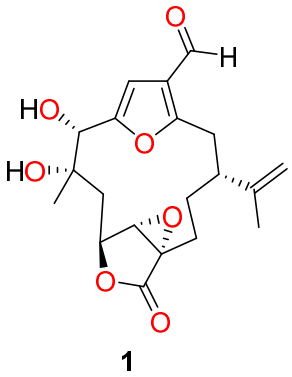


Figure S2. ^{13}C NMR spectrum of leptogorgodiol A **1** in $CDCl_3$



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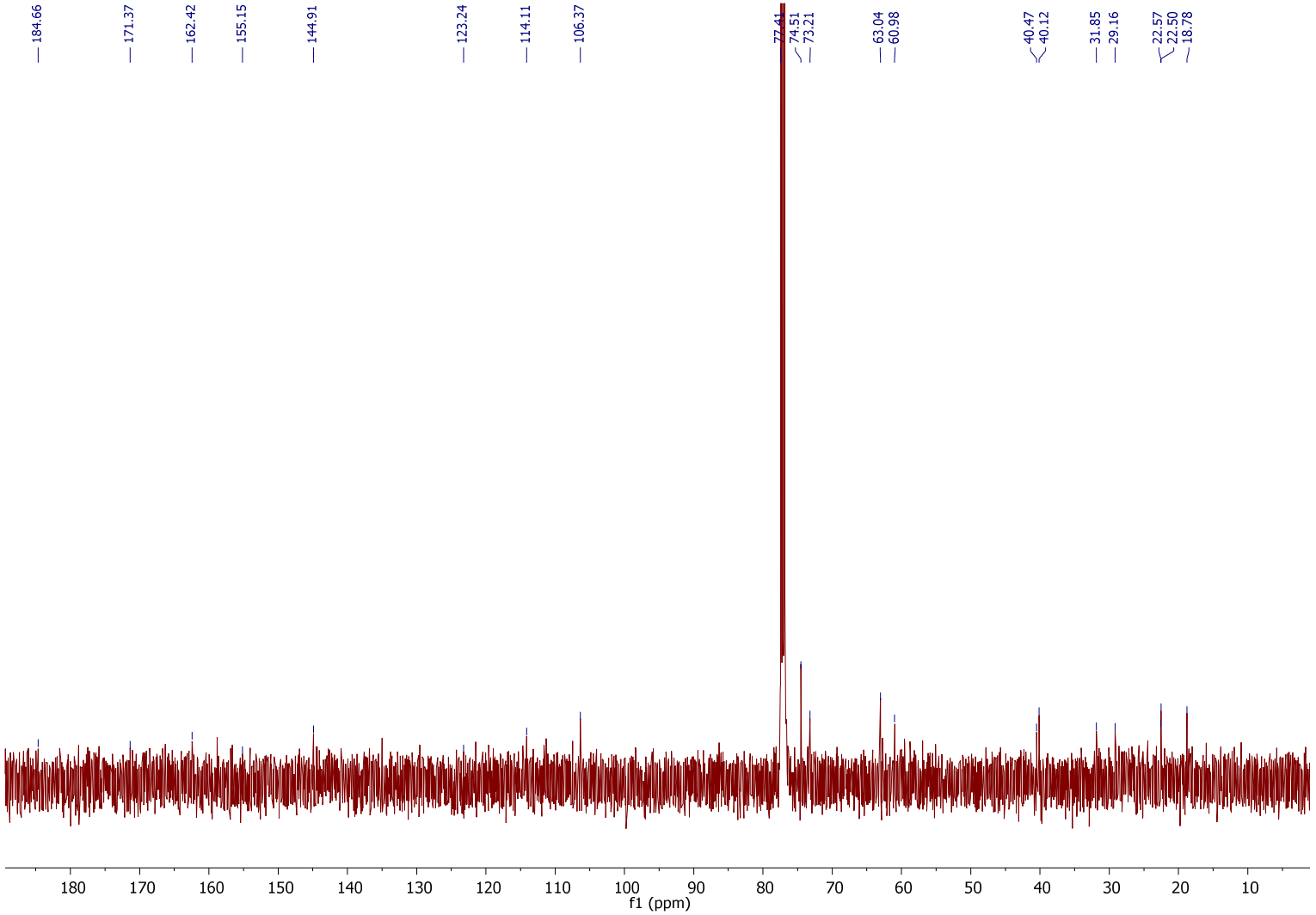

184.66
171.37
162.42
155.15
144.91
123.24
114.11
106.37
77.41
74.51
73.21
63.04
60.98
40.47
40.12
31.85
29.16
22.57
22.50
18.78
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
f1 (ppm)

Figure S3. ^{1}H NMR of 7-acetate-leptogorgodiol A **2** in $CDCl_3$

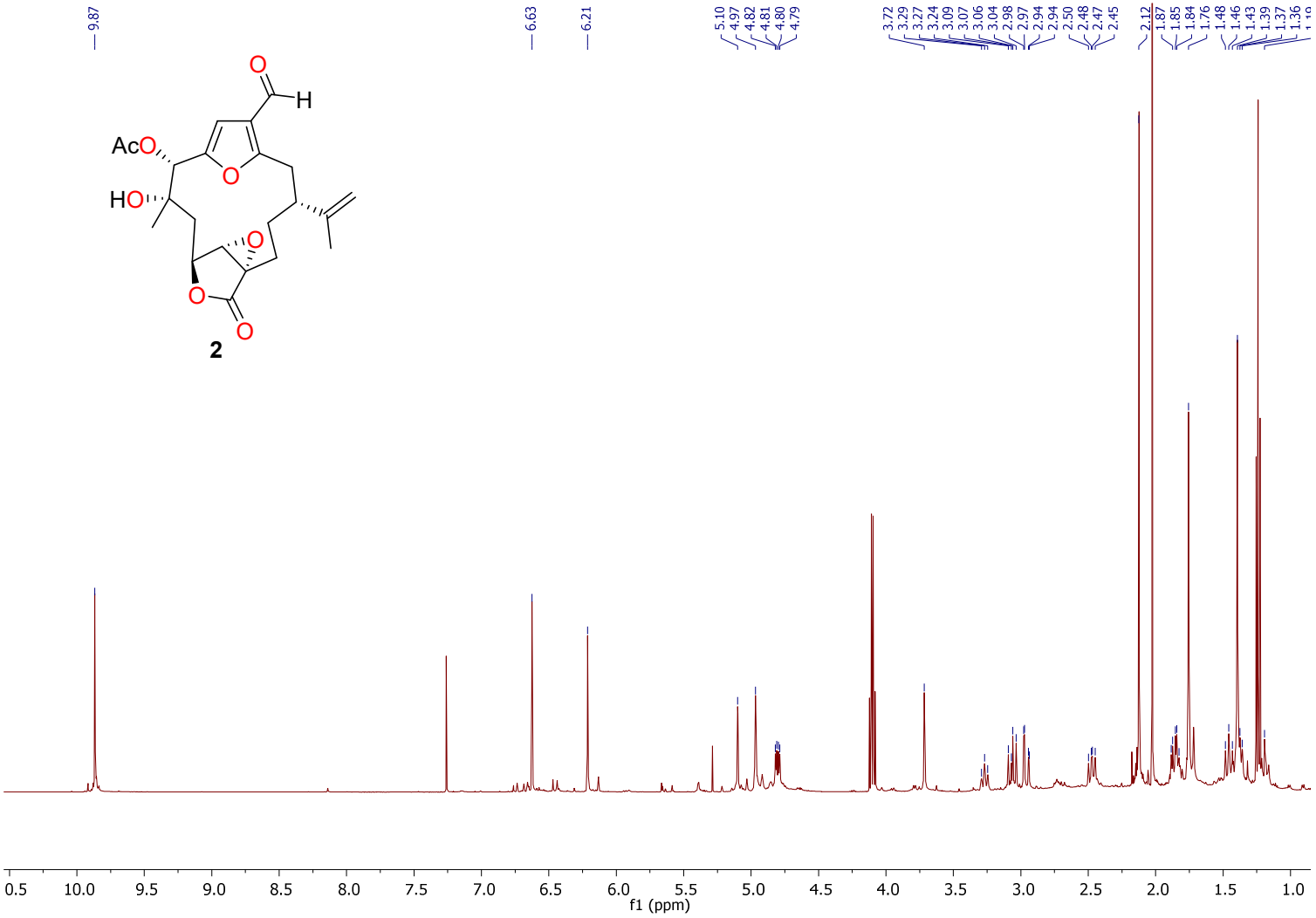


Figure S4. ^{13}C NMR spectrum of 7-acetate-leptogorgodiol A **2** in $CDCl_3$

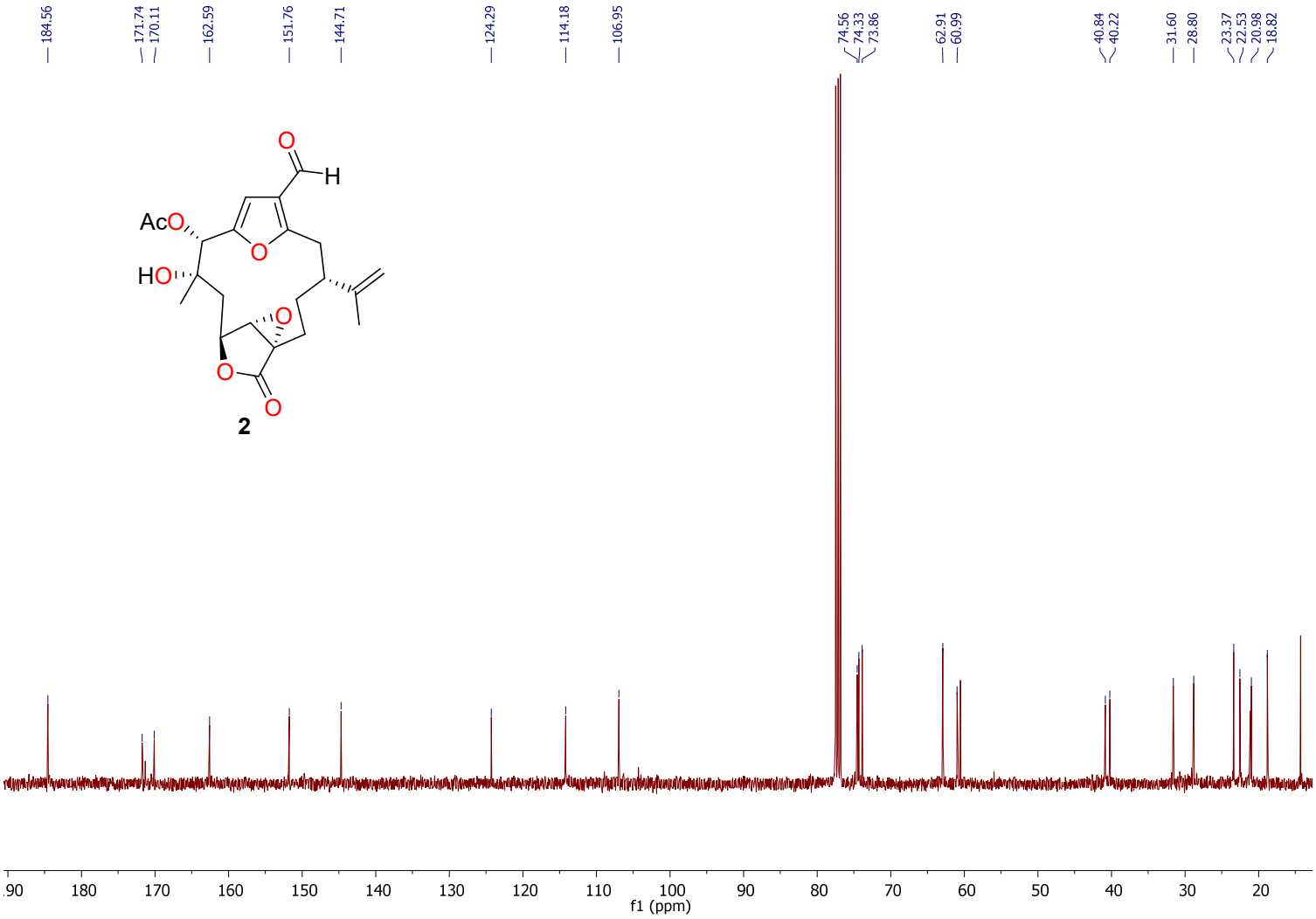


Figure S5. ^{1}H NMR of leptogorgodiol B **3** in $CDCl_3$

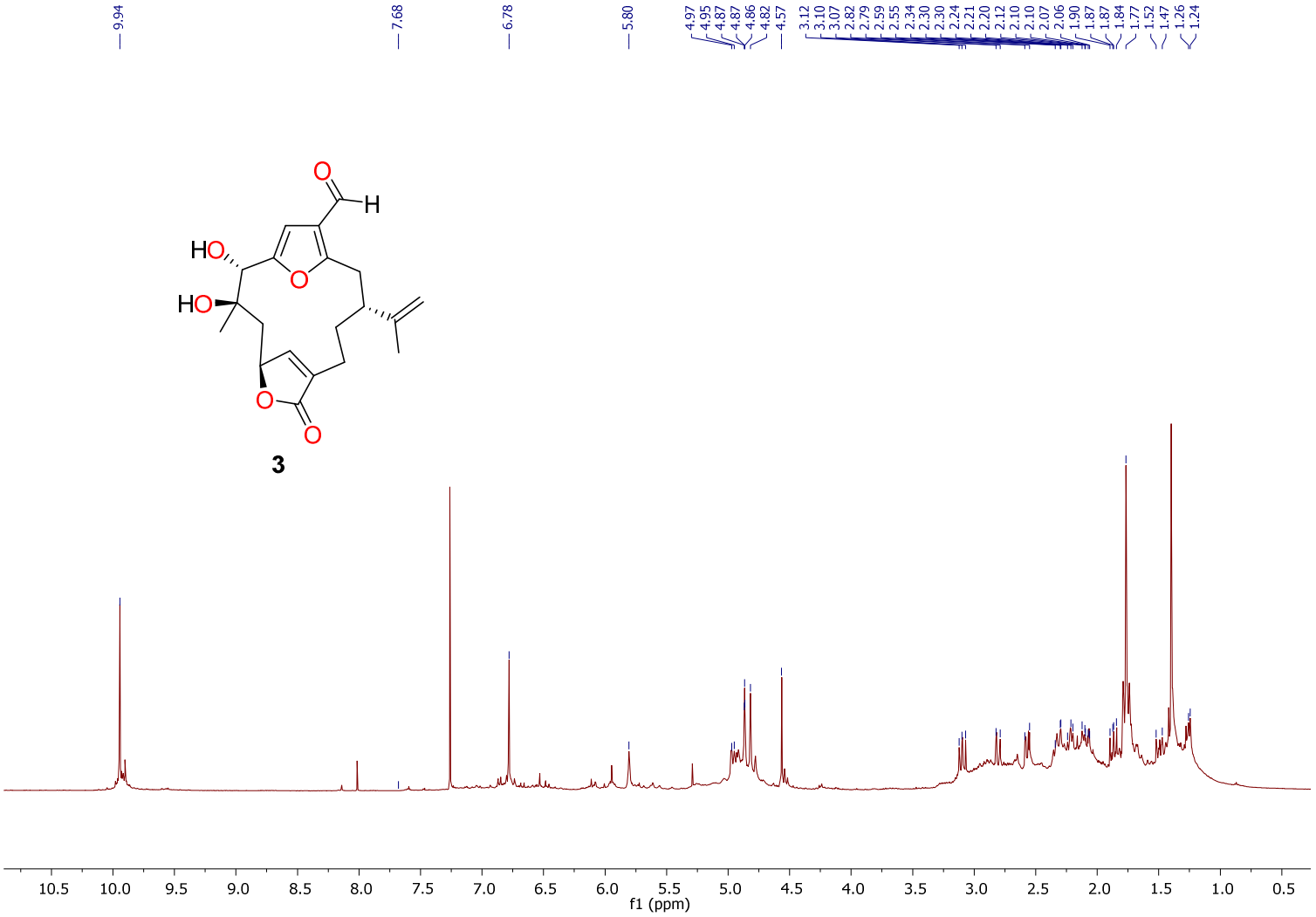


Figure S6. ^{13}C NMR spectrum of leptogorgodiol B **3** in $CDCl_3$

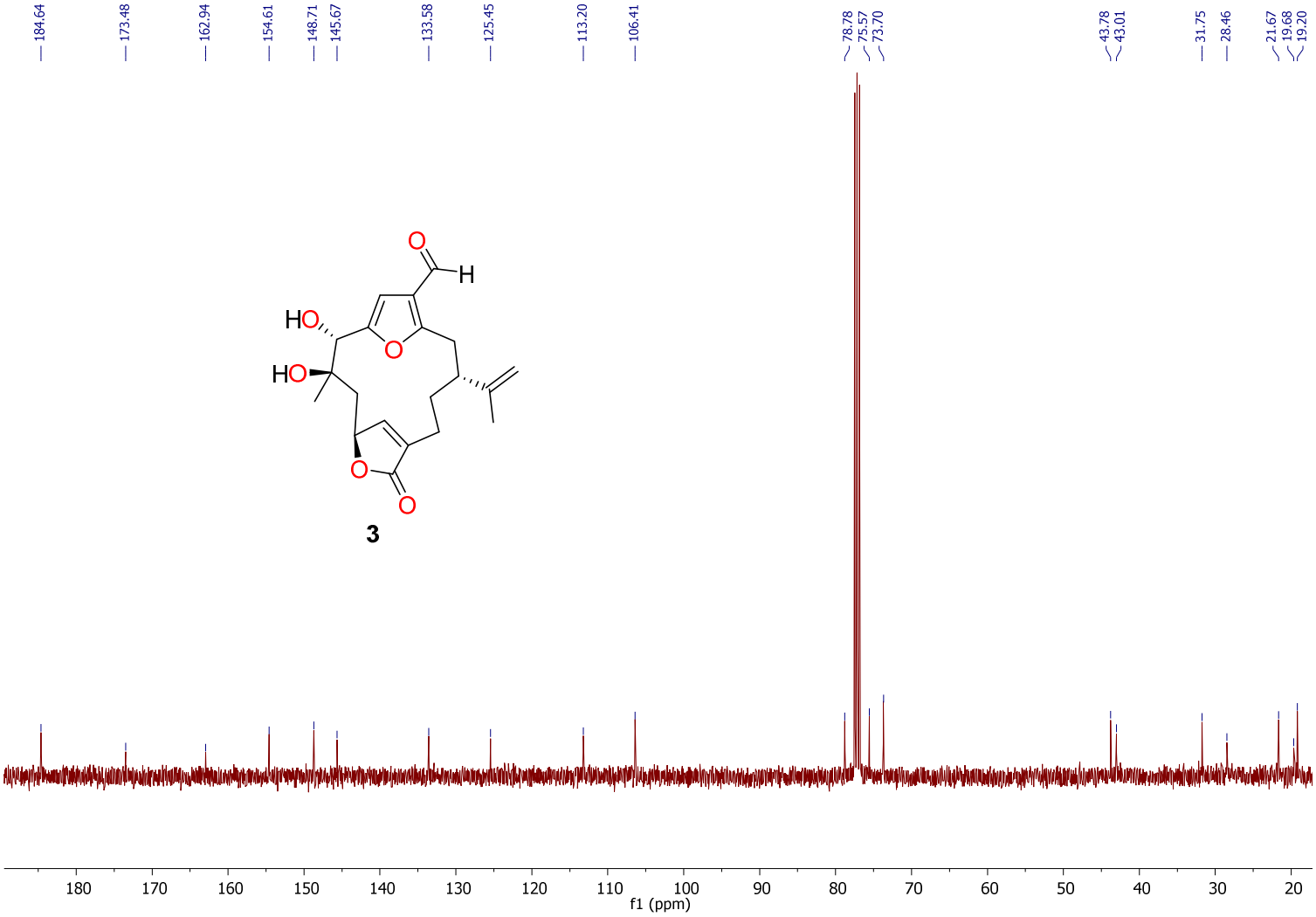


Figure 7. ^{1}H NMR of 7-acetate-leptogorgodiol B **4** in $CDCl_3$.

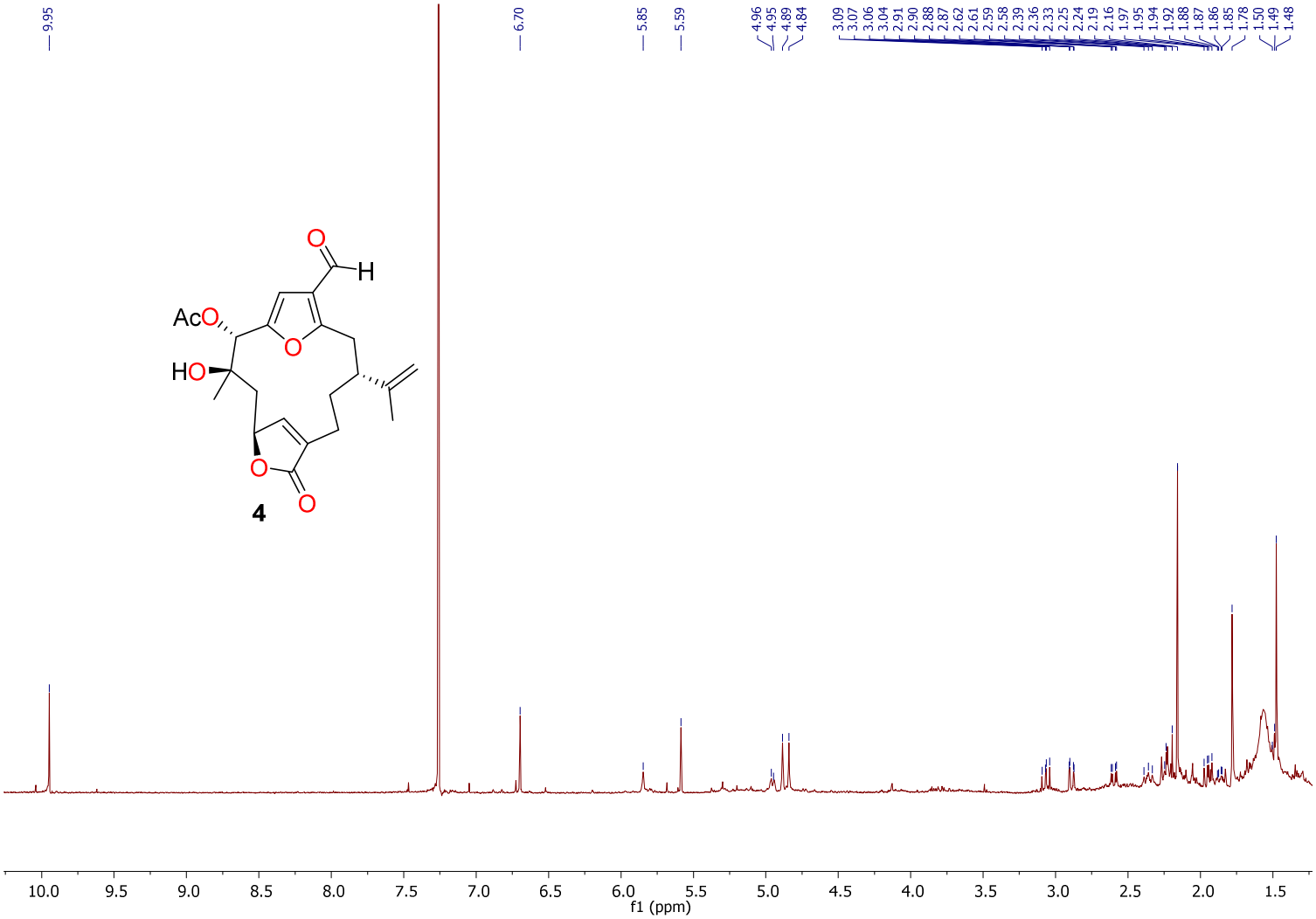


Figure S8. ^{13}C NMR spectrum of 7-acetate-leptogorgodiol B **4** in $CDCl_3$

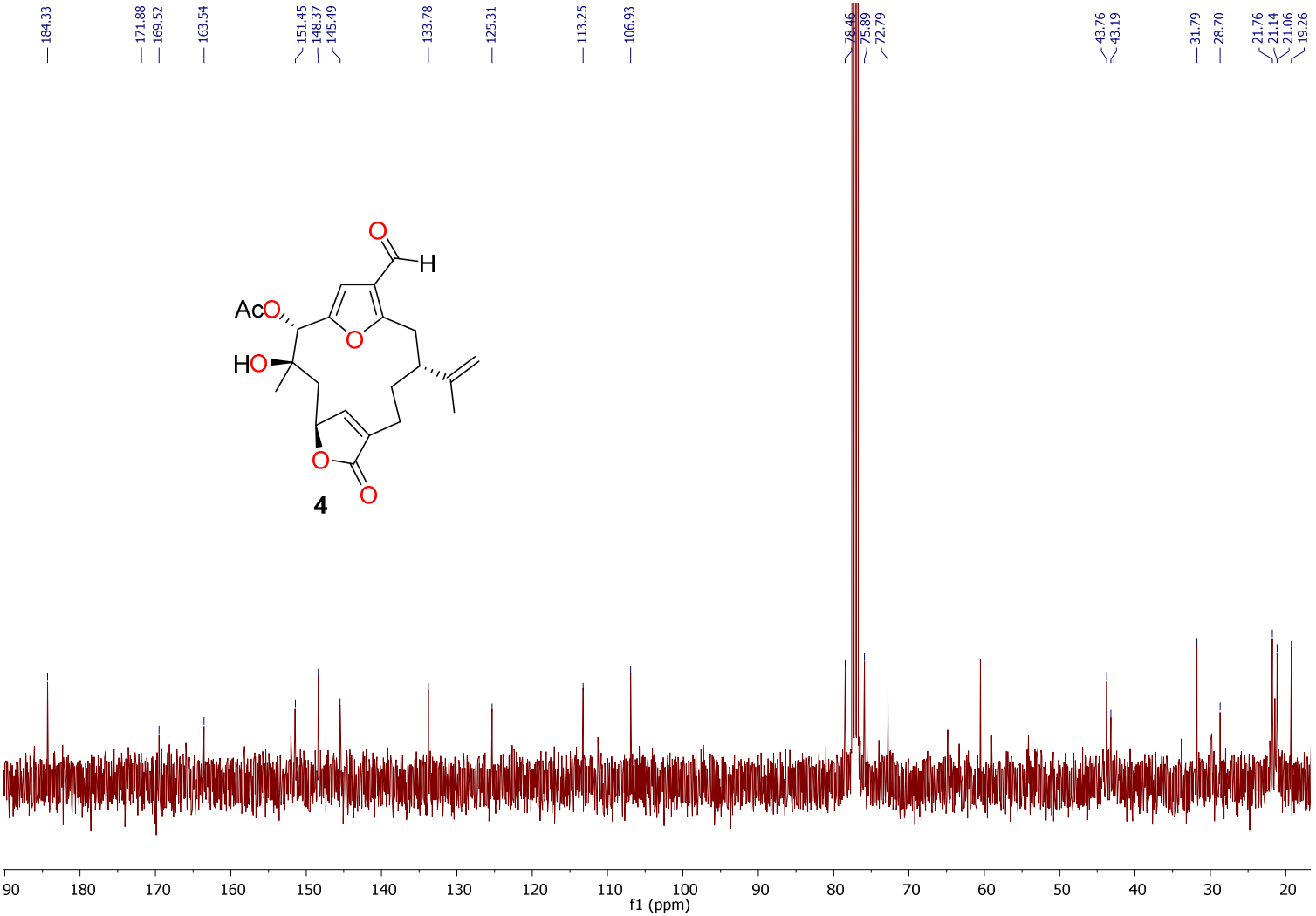


Figure 9. ^{1}H NMR of *Z*-isopukalide **5** in $CDCl_3$.

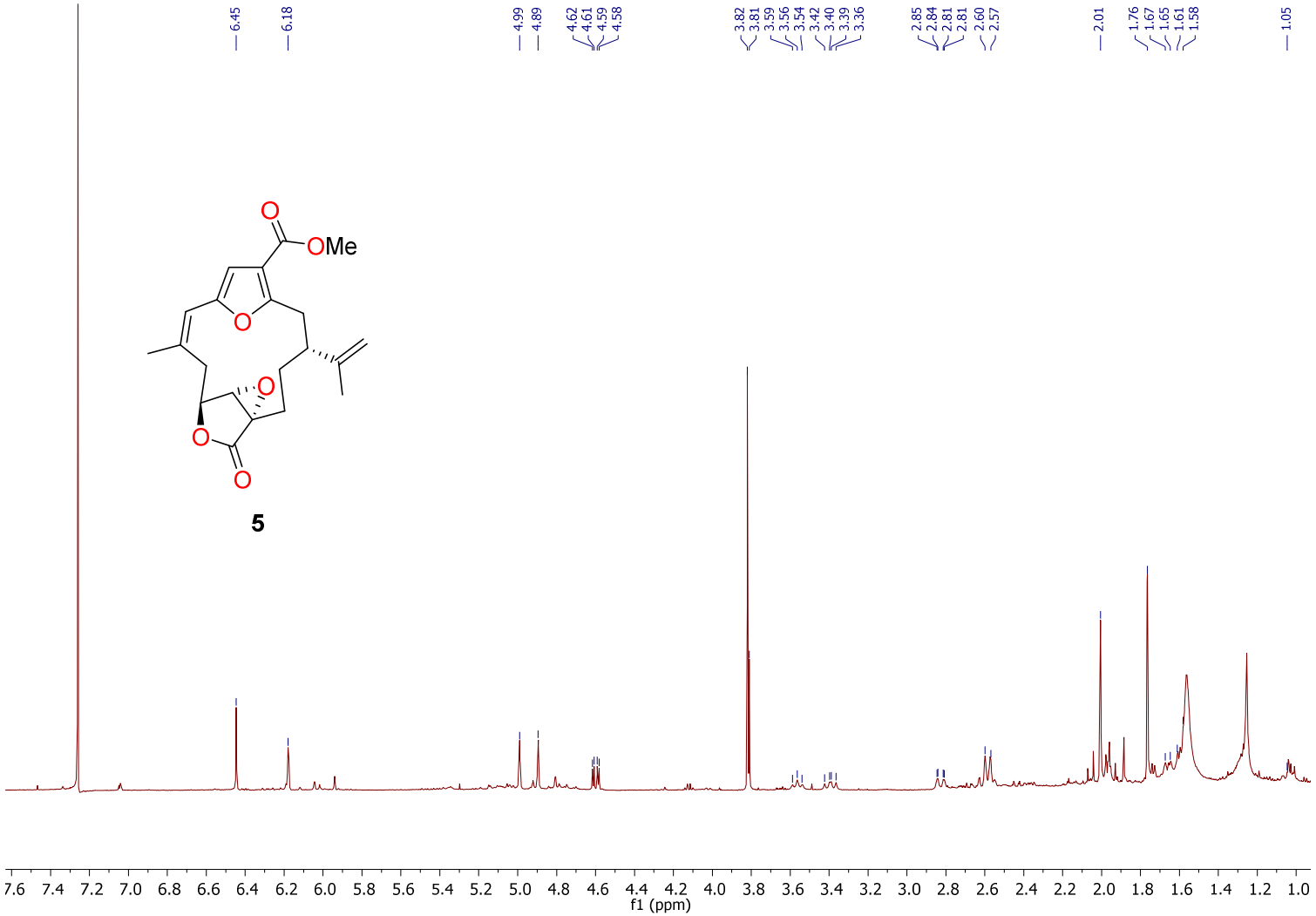


Figure 10. ^{13}C NMR spectrum of *Z*-isopukalide **5** in $CDCl_3$.

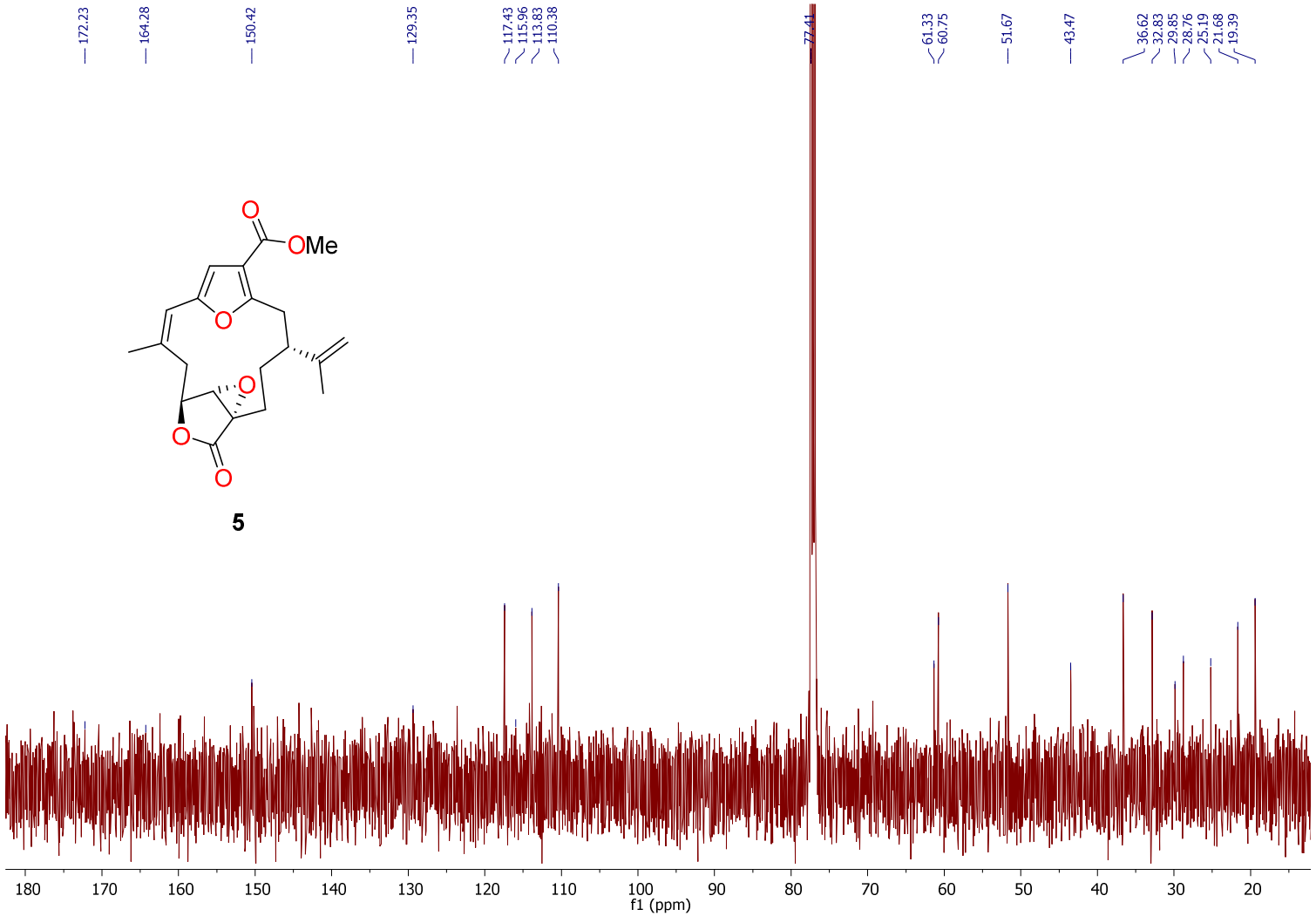


Figure S11. ^{1}H NMR of **6** in $CDCl_3$

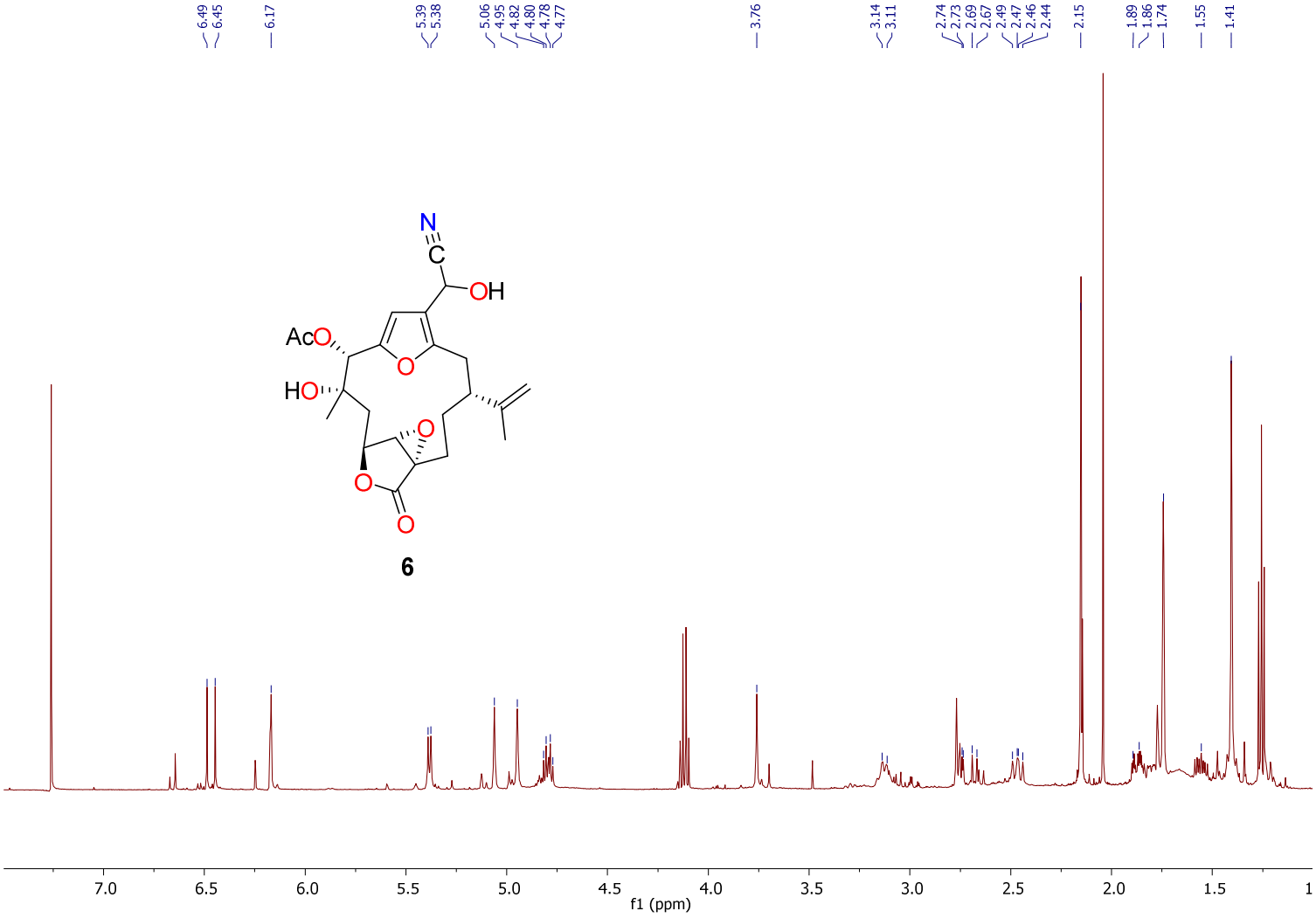


Figure S12. ^{13}C NMR spectrum of **6** in $CDCl_3$

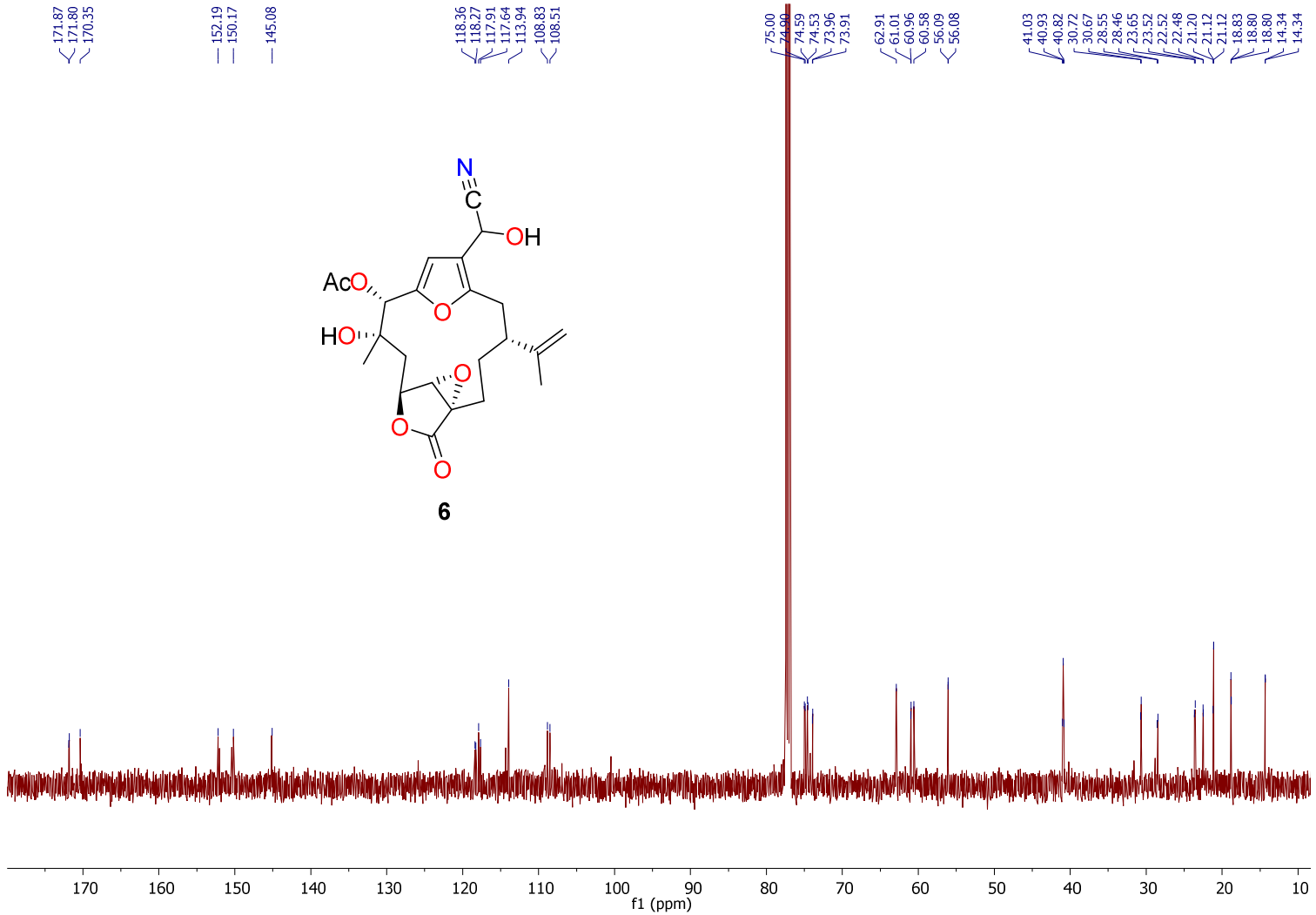
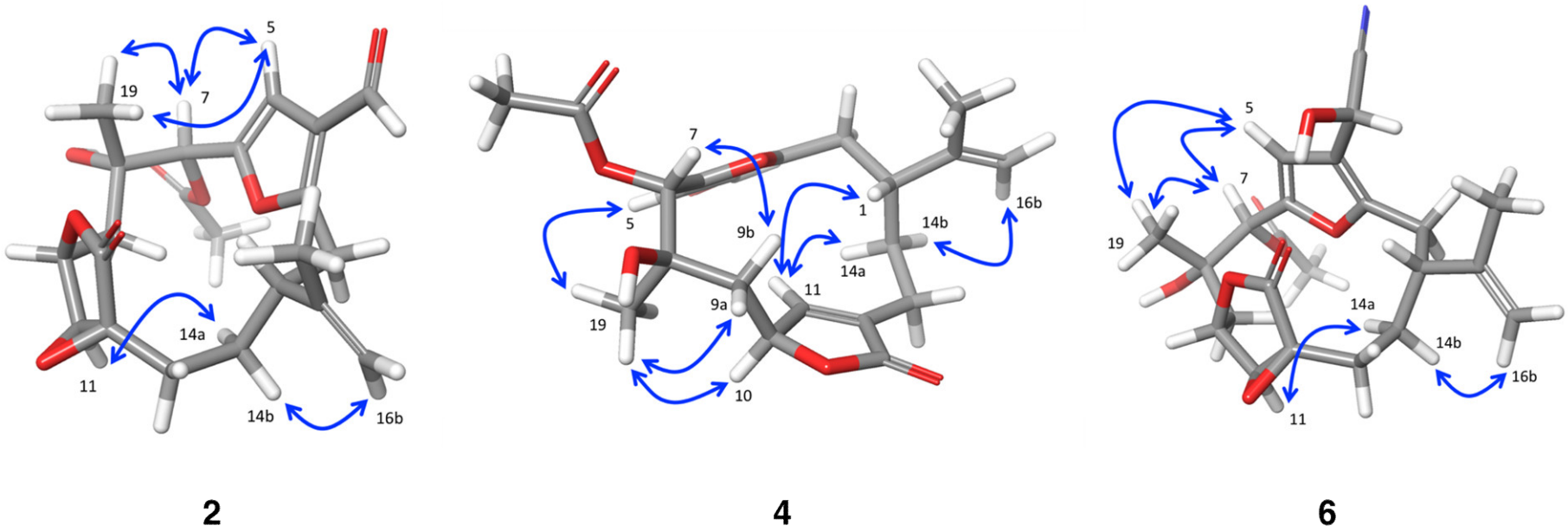


Figure 13. Minimized structures and selected NOE effects (↔) of 2, 4 and 6.



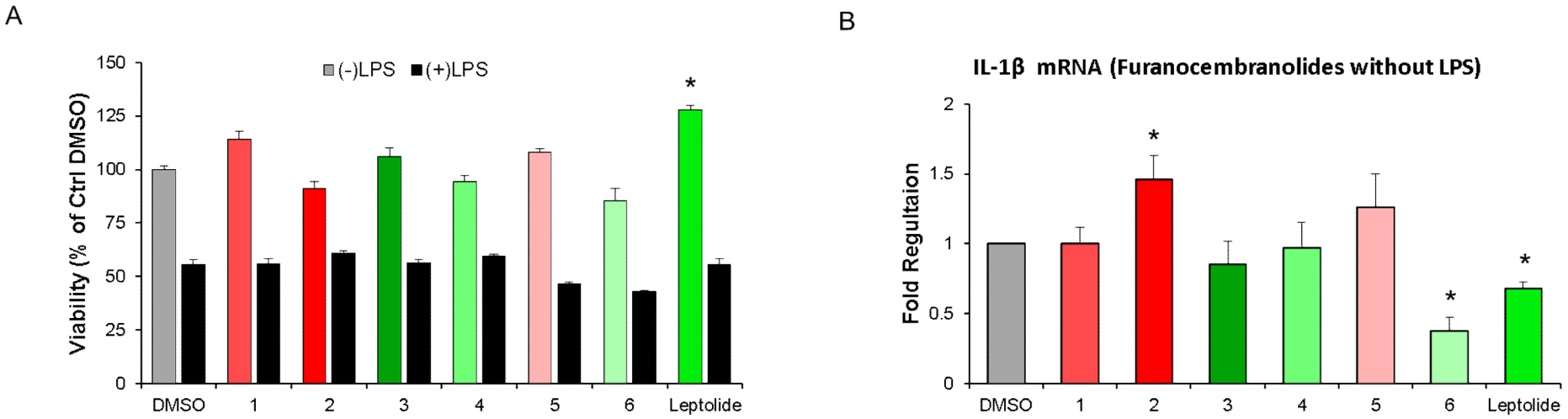


Figure S14. Effects of furanocembranolides on microglial cell viability and inflammation. A) Cell viability results measured by MTT, normalized to the Control DMSO group (termed as 100% viability). The bars show the mean value for quadruplicates, and error bars show the standard error mean. B) Total fold change of IL-1β mRNA production in BV2 cells treated only with furanocembranolides in the absence of LPS. Statistical differences were analyzed by one-way ANOVA followed by all pairwise multiple comparisons by Bonferroni t-test. Only biologically significant differences are shown.