Revised

A Reassignment of (-) Mycothiazole and the Isolation of a Related Diol

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Document = myco-2005_SI_R3_01.doc (11/28/05)

RECEIVED DATE (to be automatically inserted)

FOR JNP NOTE

[Supporting Information]

Experimental Procedure.

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Figure S1. Original ^{1}H-NMR of compound **3** in benzene-d_6 at 300 MHz.

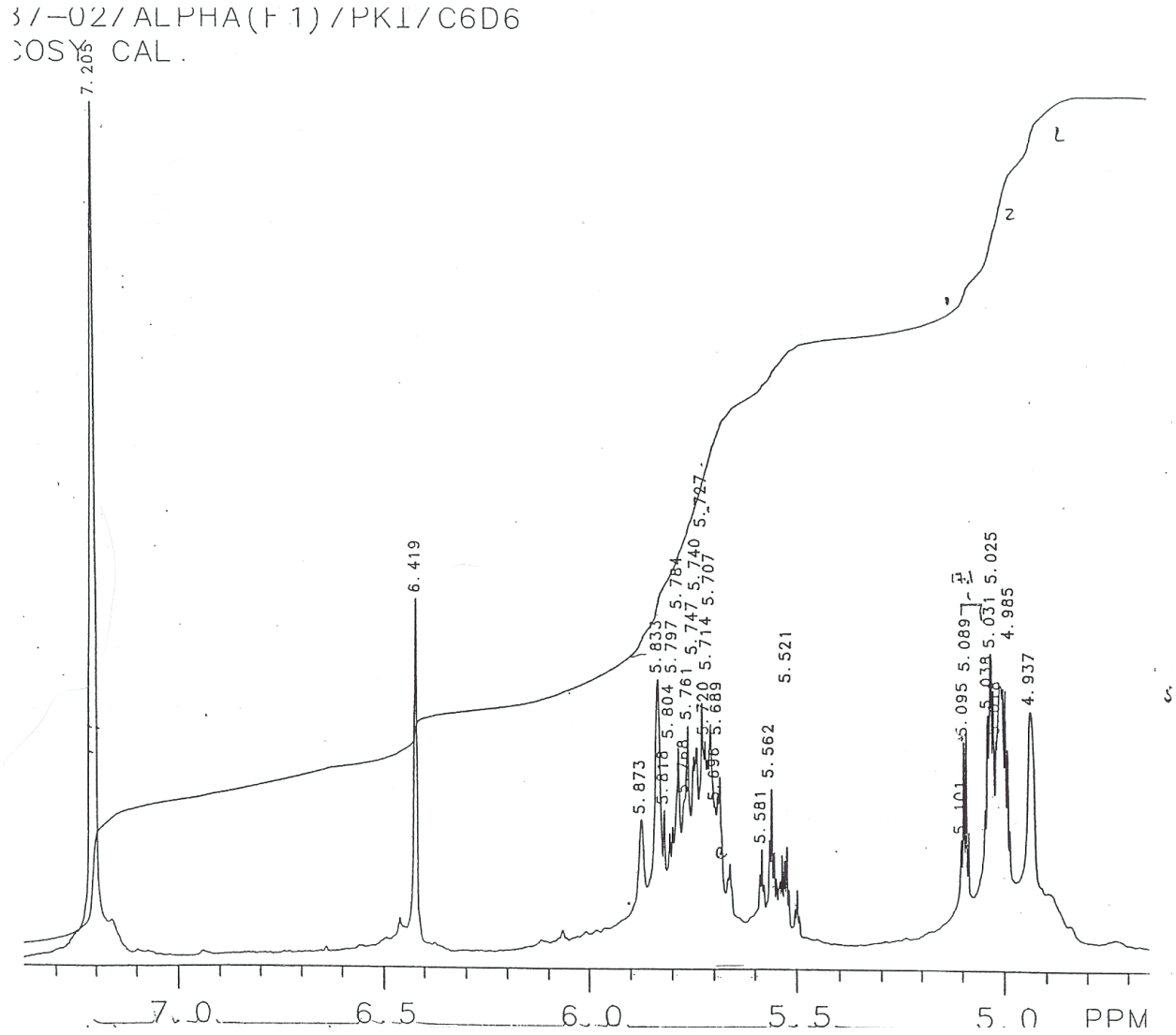

Figure S2. Simulated versus experimental ^{1}H-NMR of H-15 for compound **3** in benzene-d_6.

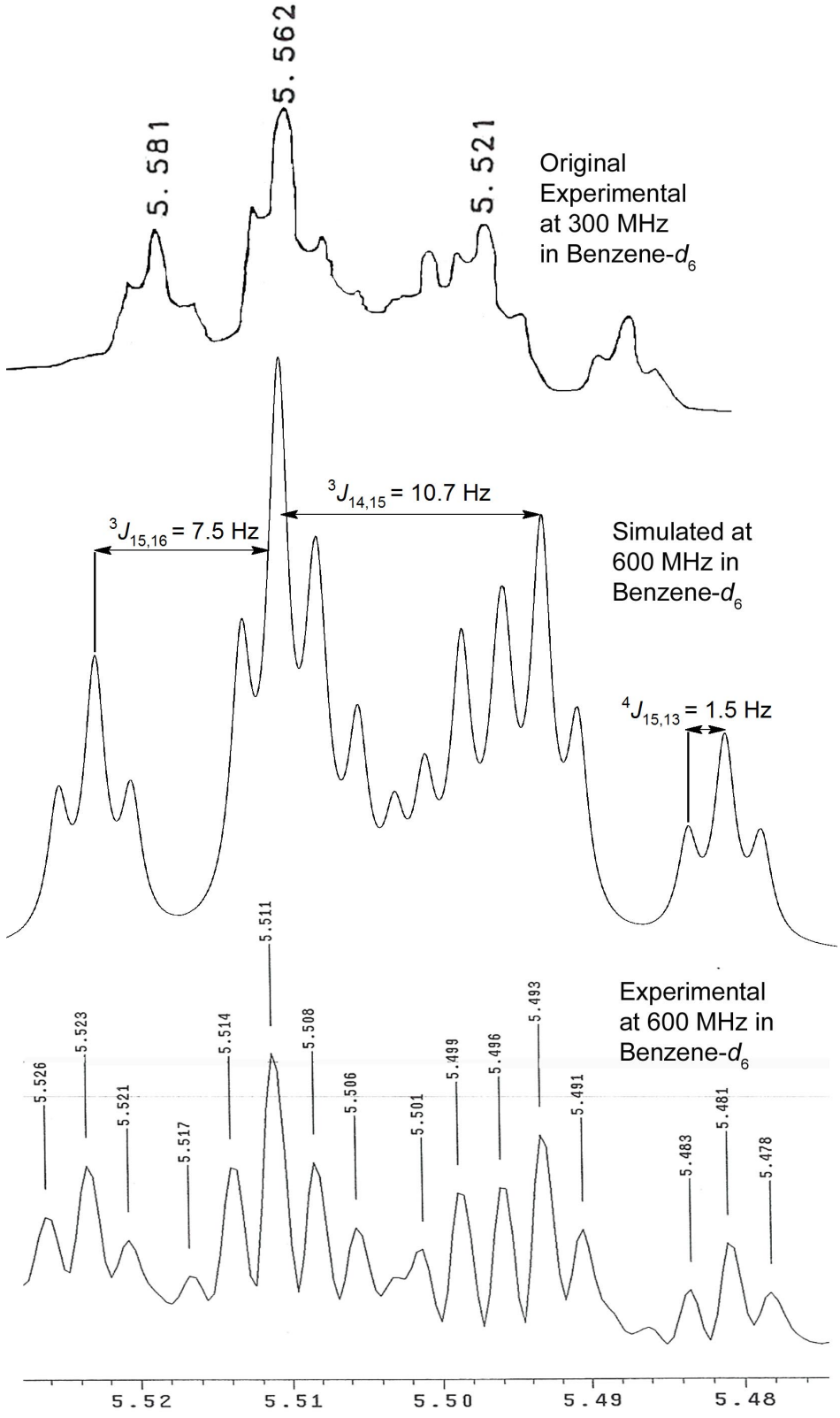

Figure S3. ^{1}H NMR spectrum of **3** in benzene-d_6 at 600 MHz.

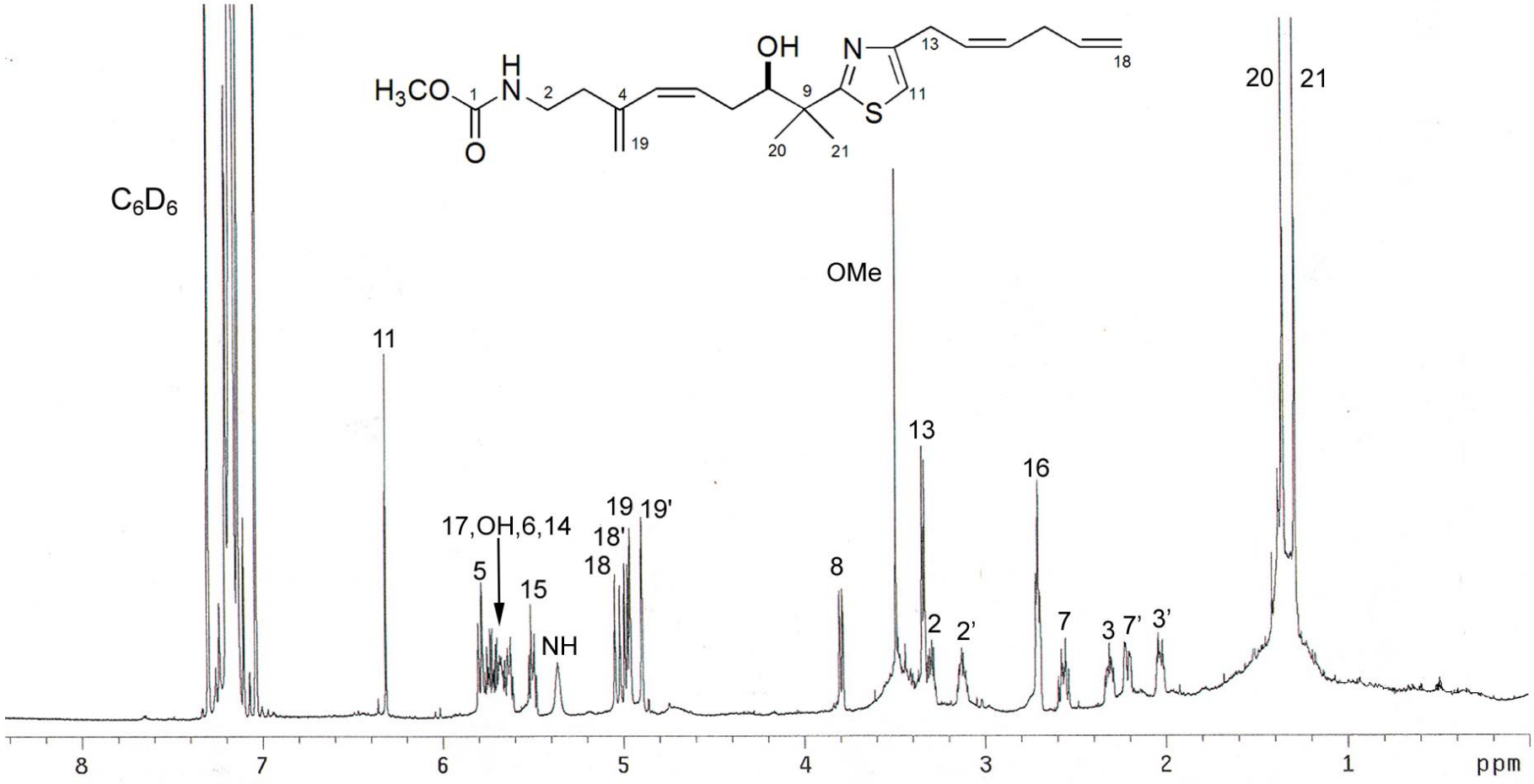

Figure S4. NOE enhancement of H-13 of **3** in benzene-d_6 at 600 MHz.

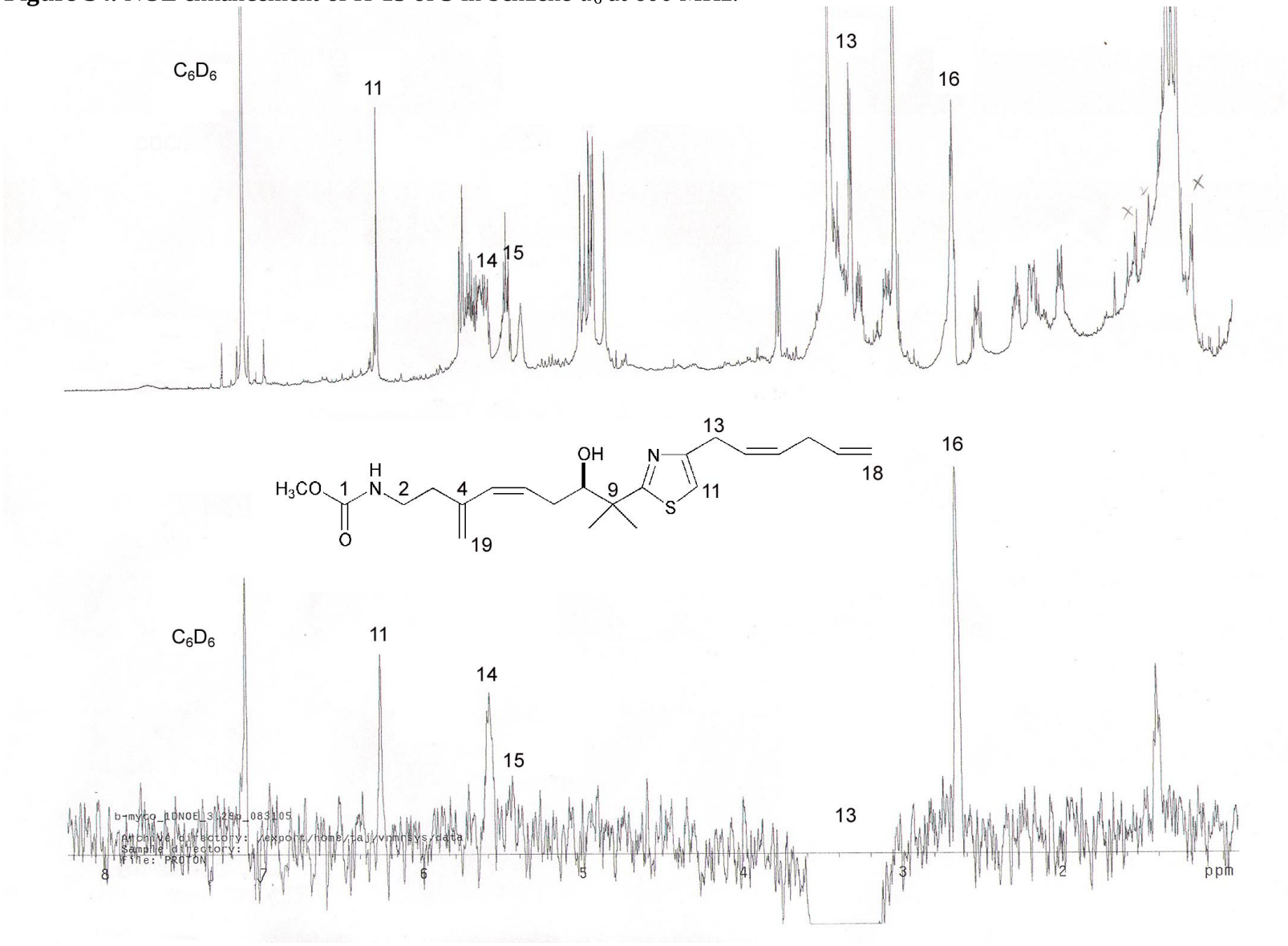

Figure S5. NOE enhancement of H-16 of **3** in benzene-d_6 at 600 MHz.

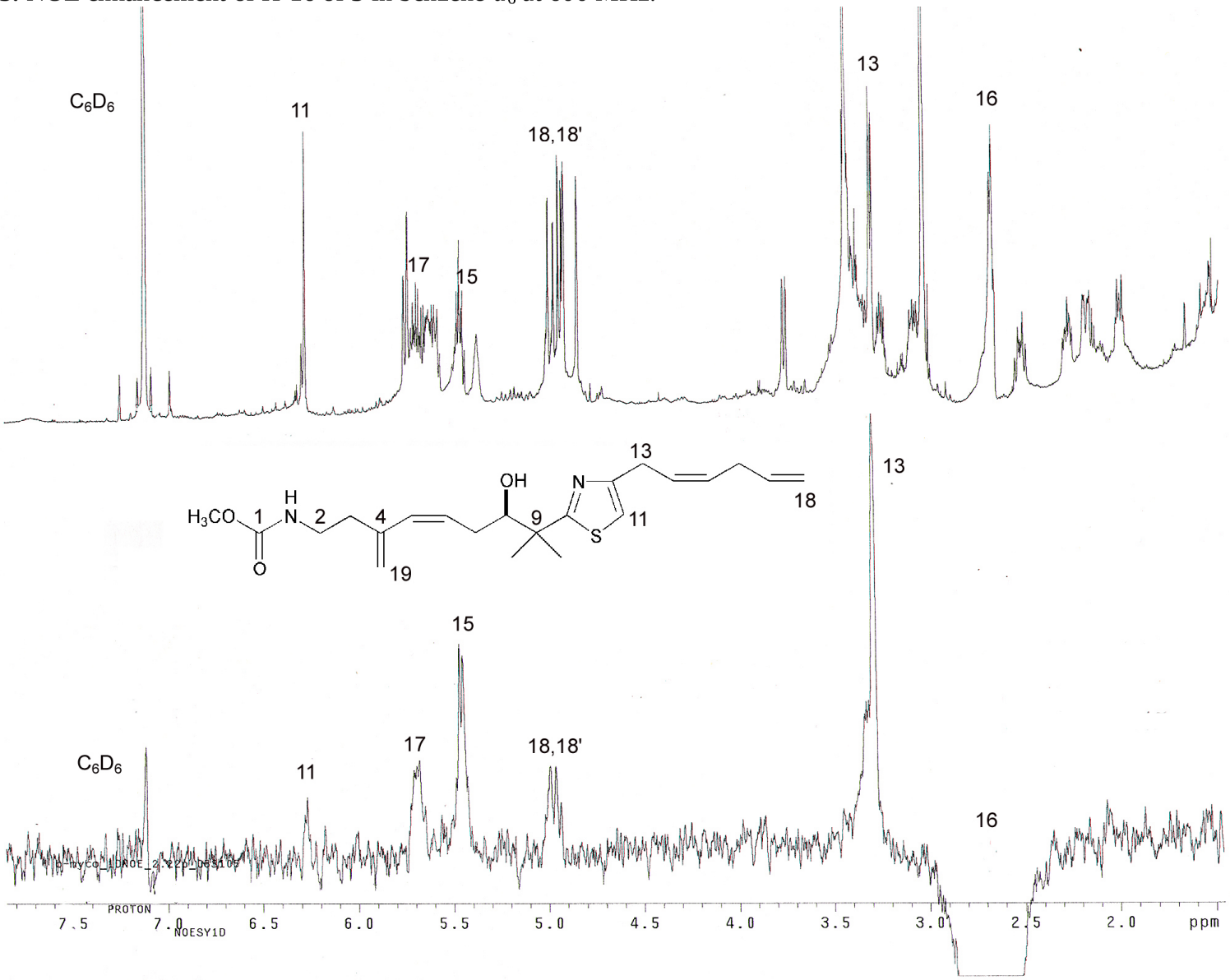

Figure S6. ^{1}H NMR spectrum of **3** in $CDCl_3$ at 500 MHz.

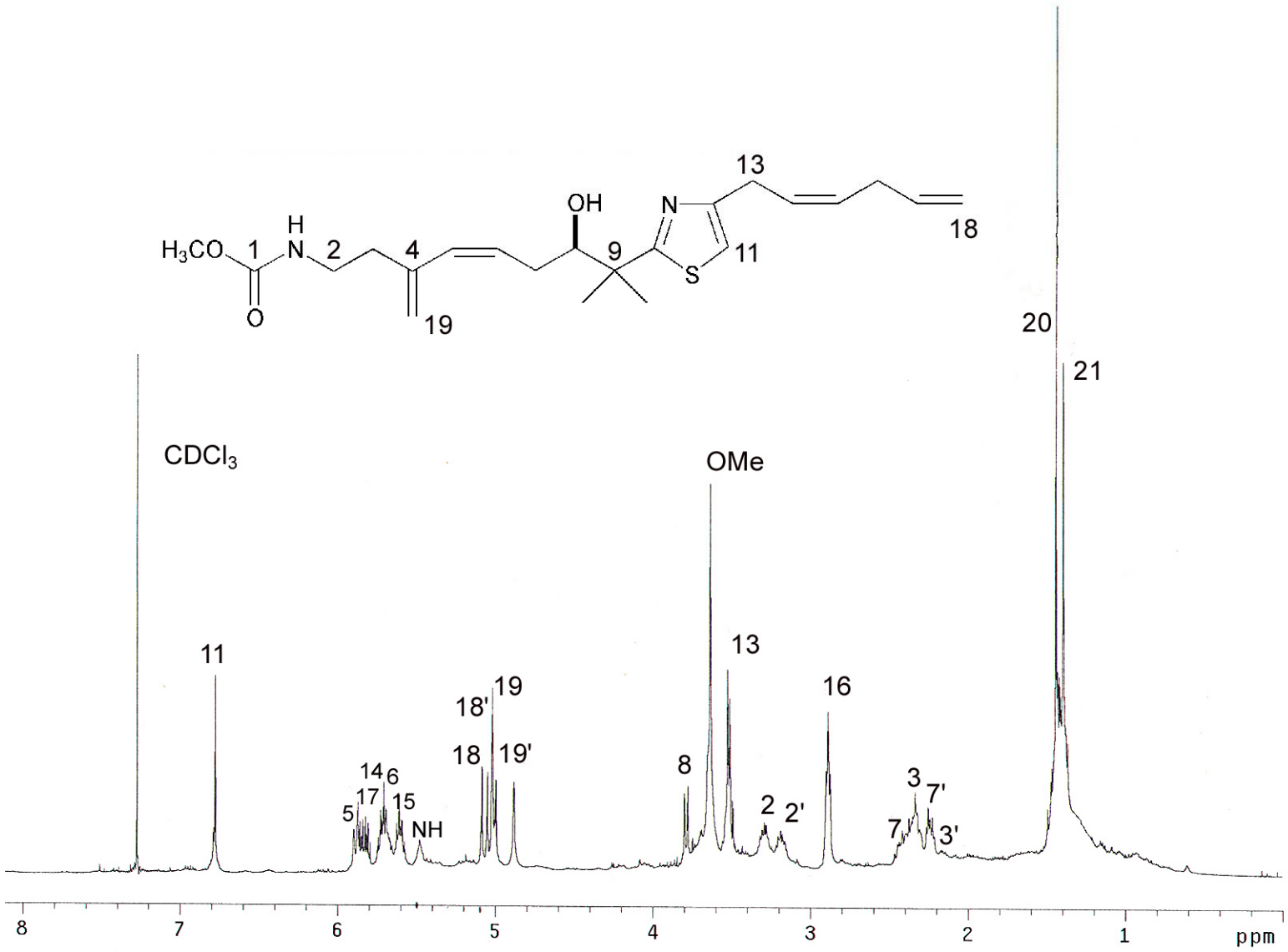

Figure S7.[1]H NMR spectrum of **6** in DMSO-d_6 at 500 MHz.

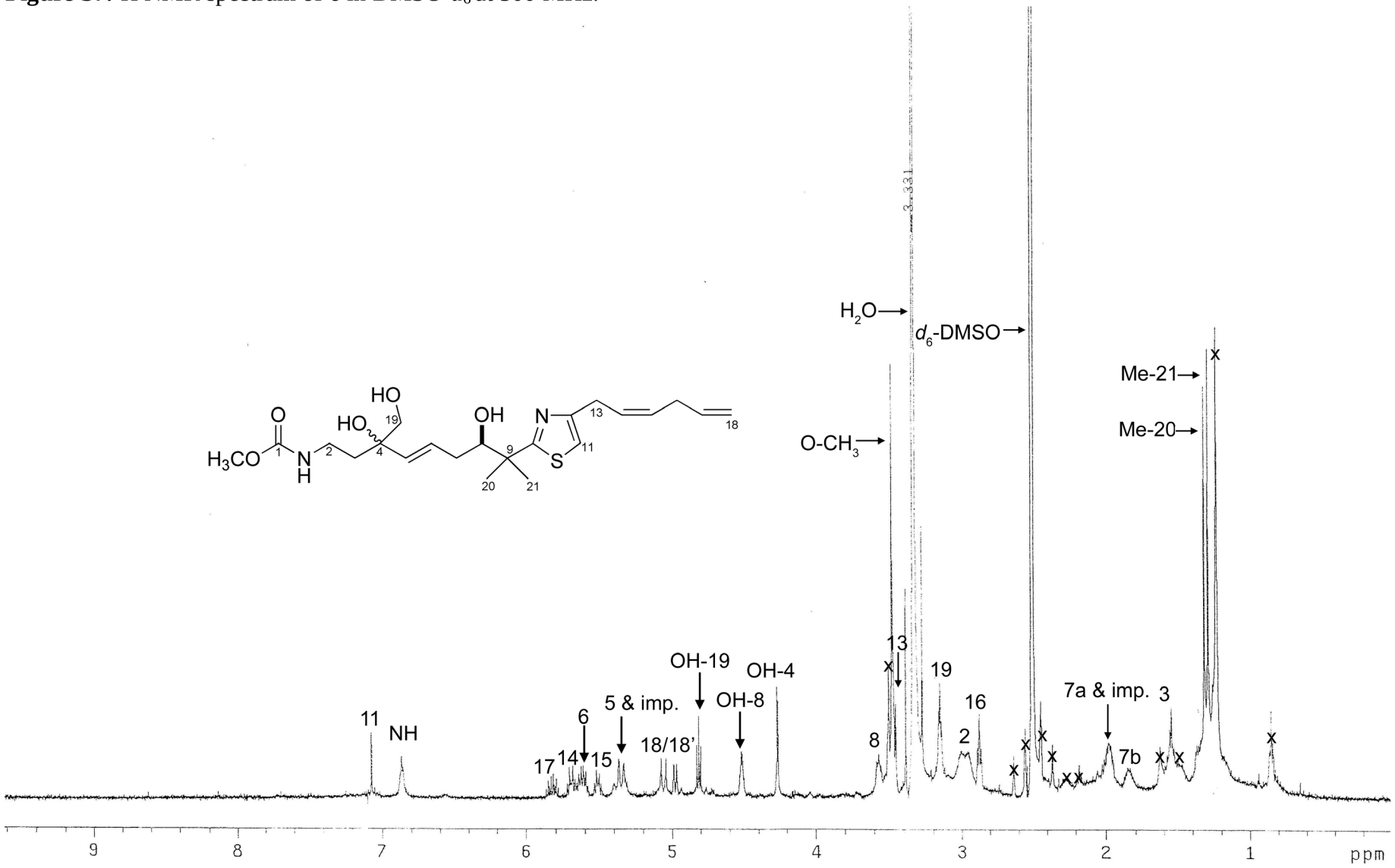

Figure S8. ^{13}C NMR spectrum of **6** in DMSO-d_6 at 125 MHz.

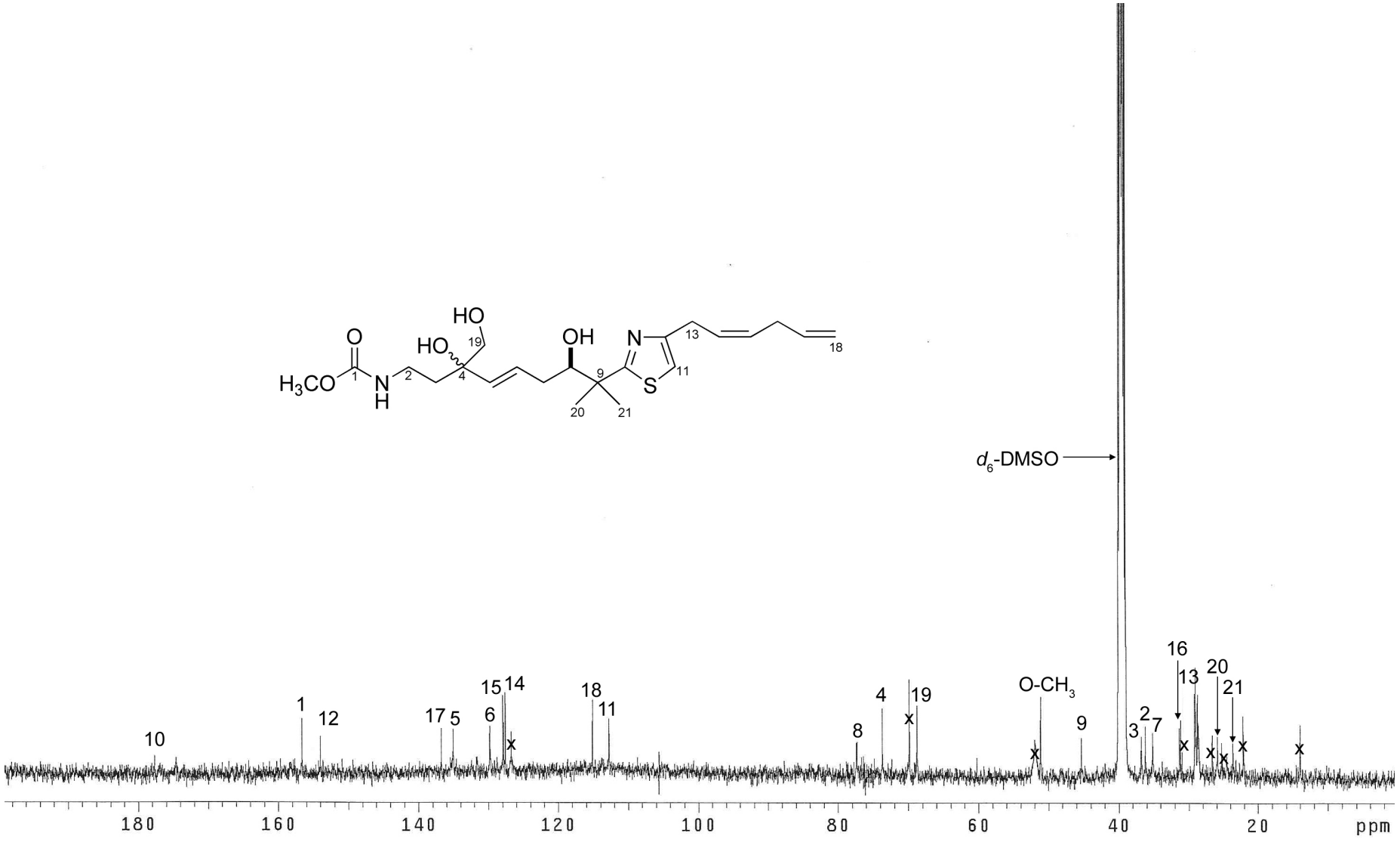

Figure S9. Isolation scheme.

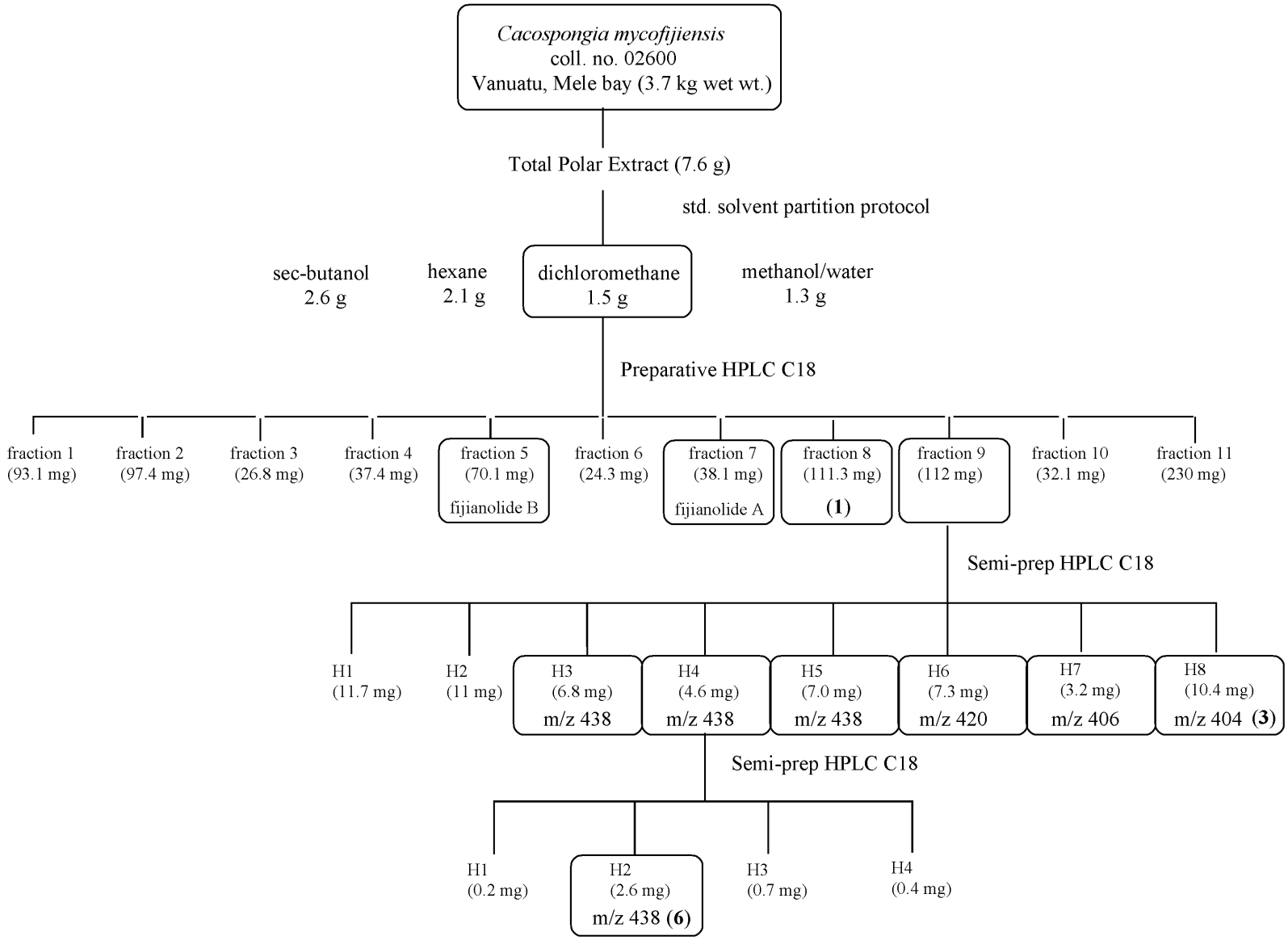

Figure S10. NCI 60 cell line GI_{50} mean graph for **3**.

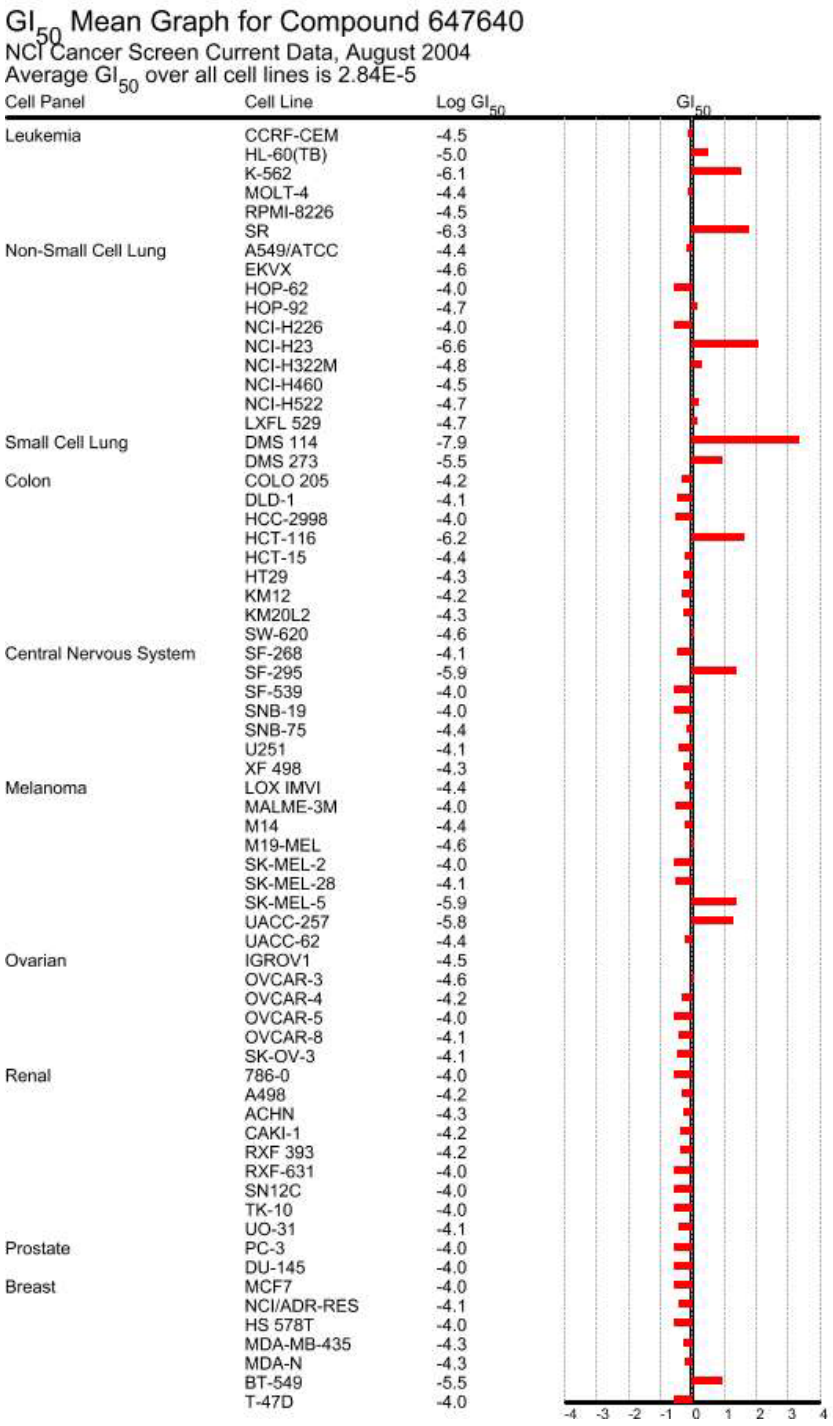

Figure S11. gHMQC spectrum of **6** in DMSO-d_6 at 500 MHz.

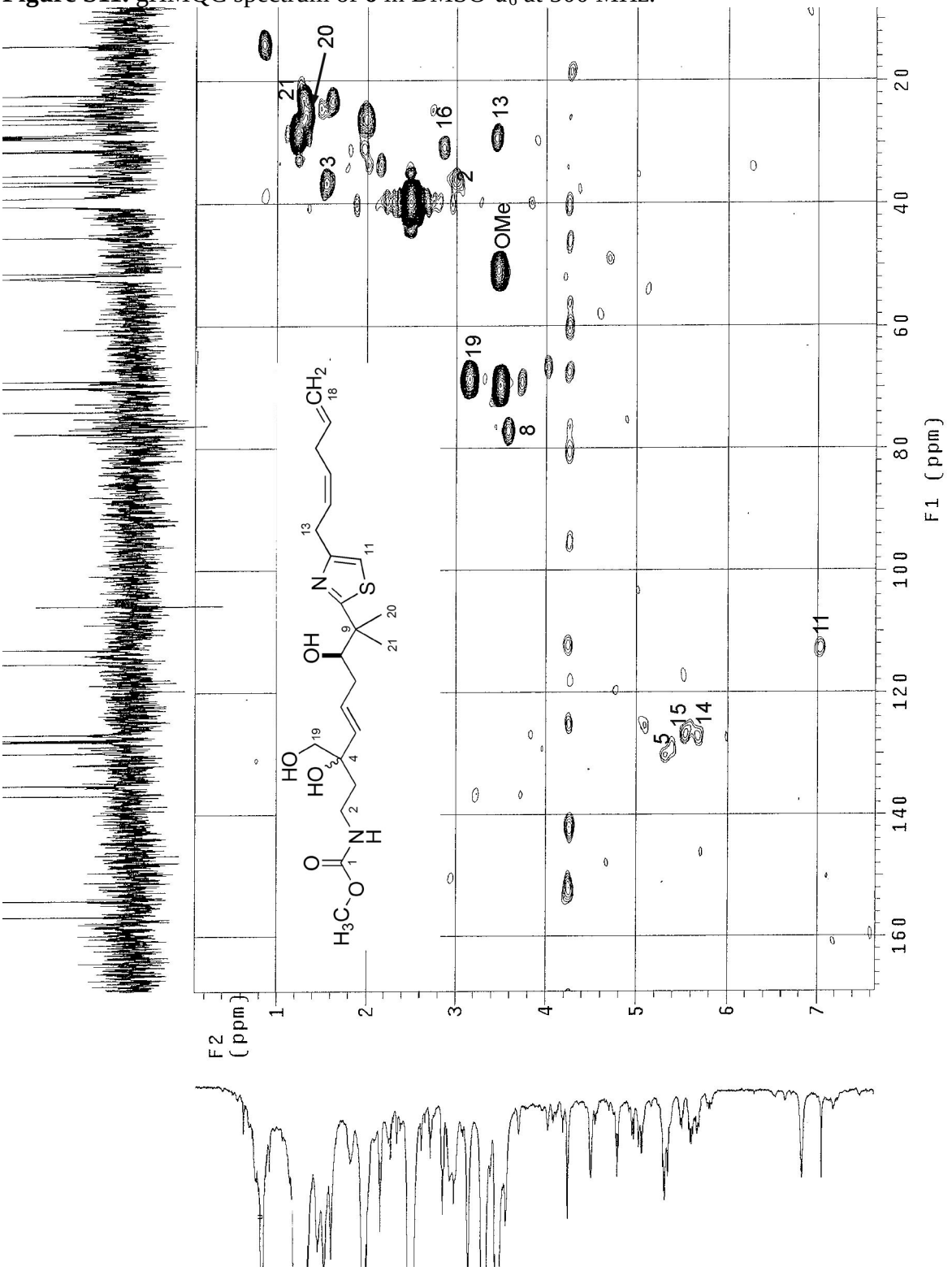

Figure S12. gHMBC spectrum of **6** in DMSO-d_6 at 500 MHz.

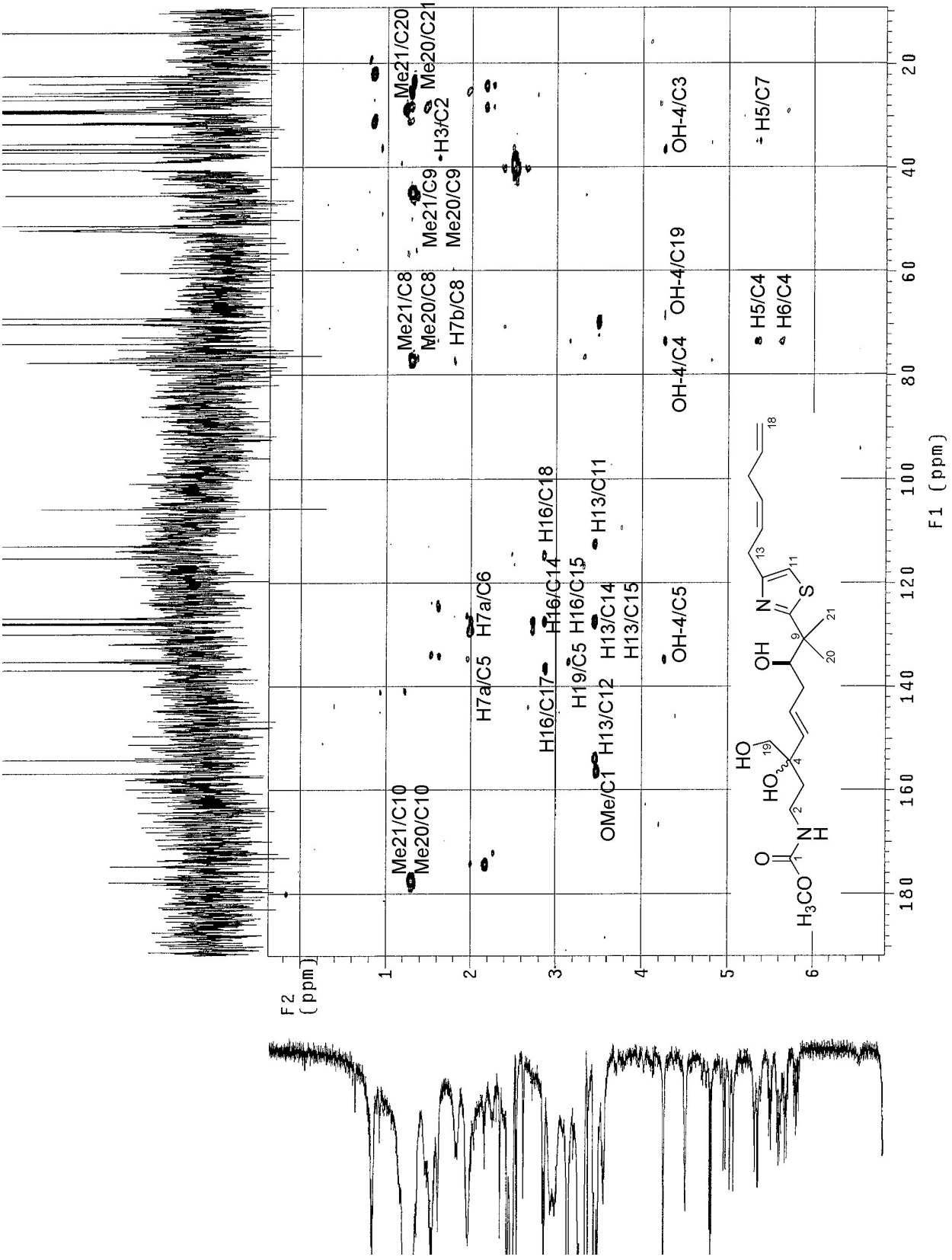

Figure S13 Expansion of gHMBC spectrum of **6** in DMSO-d_6 at 500 MHz.

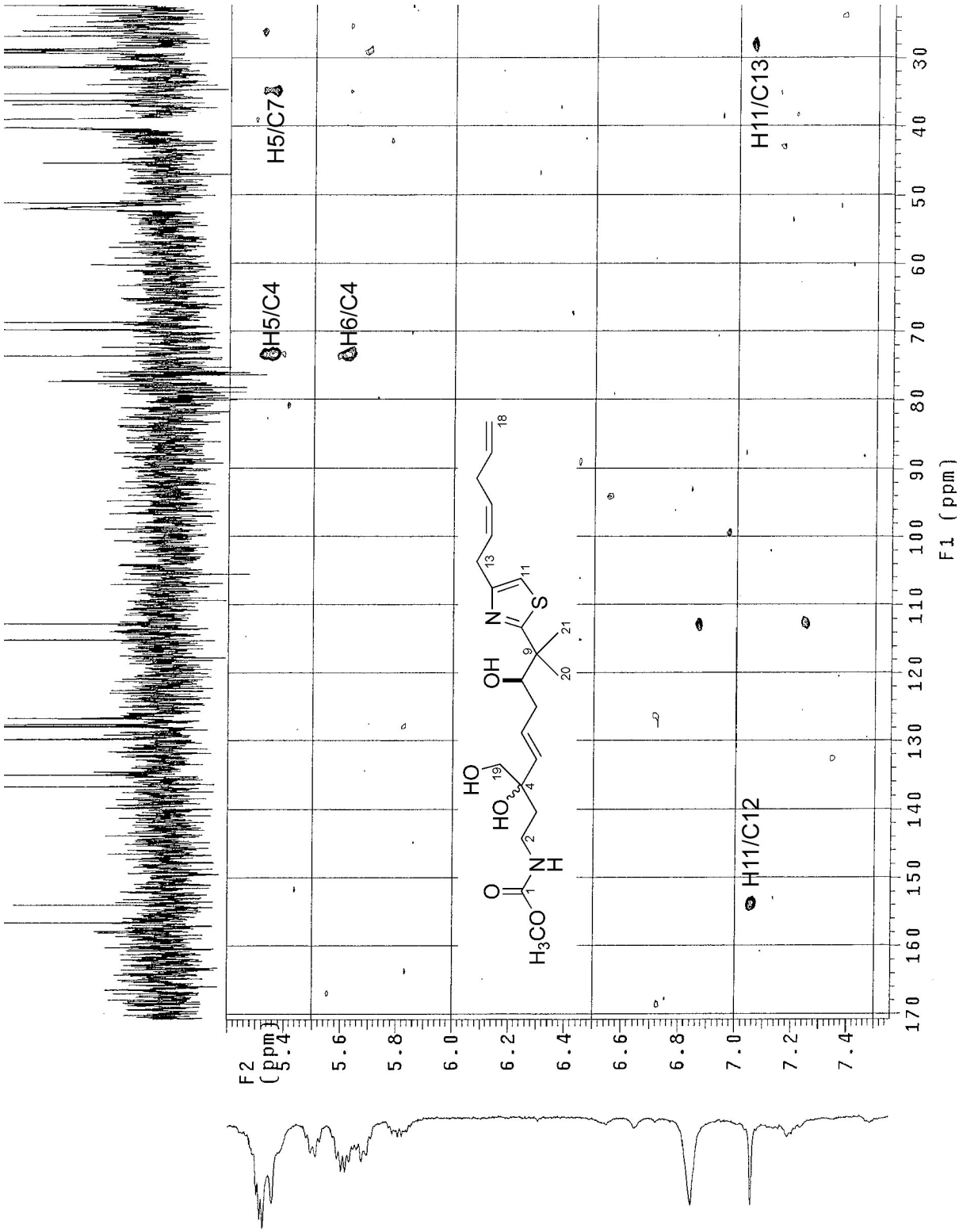

Table S1. Comparison of ^{13}C-NMR of Synthetic Mycothiazole with Natural Mycothiazole (**3**) and Mycothiazole-4,19-diol (**6**).

	synthetic (-)-mycothiazole[a]	synthetic (-)-mycothiazole[b]	natural mycothiazole (**3**)[c]	mycothiazole-4,19- diol (**6**)[d]
Position	δ_C	δ_C	δ_C	δ_C
1	157.2	157.1	157.1	156.6
2	39.4	39.4	39.4	36.1
3	37.1	37.1	37.1	36.7
4	*	142.5	142.4	73.7
5	130.9	130.9	130.8	135.0
6	130.6	130.6	130.8	129.8
7	30.6	30.6	30.6	35.2
8	78.1	78.1	78.1	77.3
9	44.6	44.5	44.5	45.3
10	*	179.4	179.4	177.7
11	112.0	112	111.8	112.8
12	155.4	155.4	154.9	154.0
13	34.7	34.7	29.4	29.2
14	127.6	127.6	126.7	127.6
15	130.5	130.4	128.8	127.9
16	36.6	36.6	31.5	31.3
17	136.8	136.8	136.4	136.7
18	115.2	115.2	115	115.1
19	115.9	115.8	115.8	68.8
20	26.7	26.7	26.6	25.9
21	23.9	23.9	23.9	23.6
O-Me	51.8	51.8	51.8	51.1
	[a] Data from Le Flohic *et. al Org. Lett.* **2005**, *7*, 339-342. Obtained in $CDCl_3$	[b] Data from Sugiyama *et. al Tetrahedron* **2003**, *59*, 6579-6593 Obtained in $CDCl_3$	[c] Data from Crews *et. al J.A.C.S.* **1988**, *110*, 4365-4368. Obtained in $CDCl_3$	[d] Obtained in DMSO-d_6
	* The corresponding signals could not be assigned			