

## **Supporting Information**

### **Hepatoprotective Principles and Other Chemical Constituents from the Mycelium of *Phellinus linteus***

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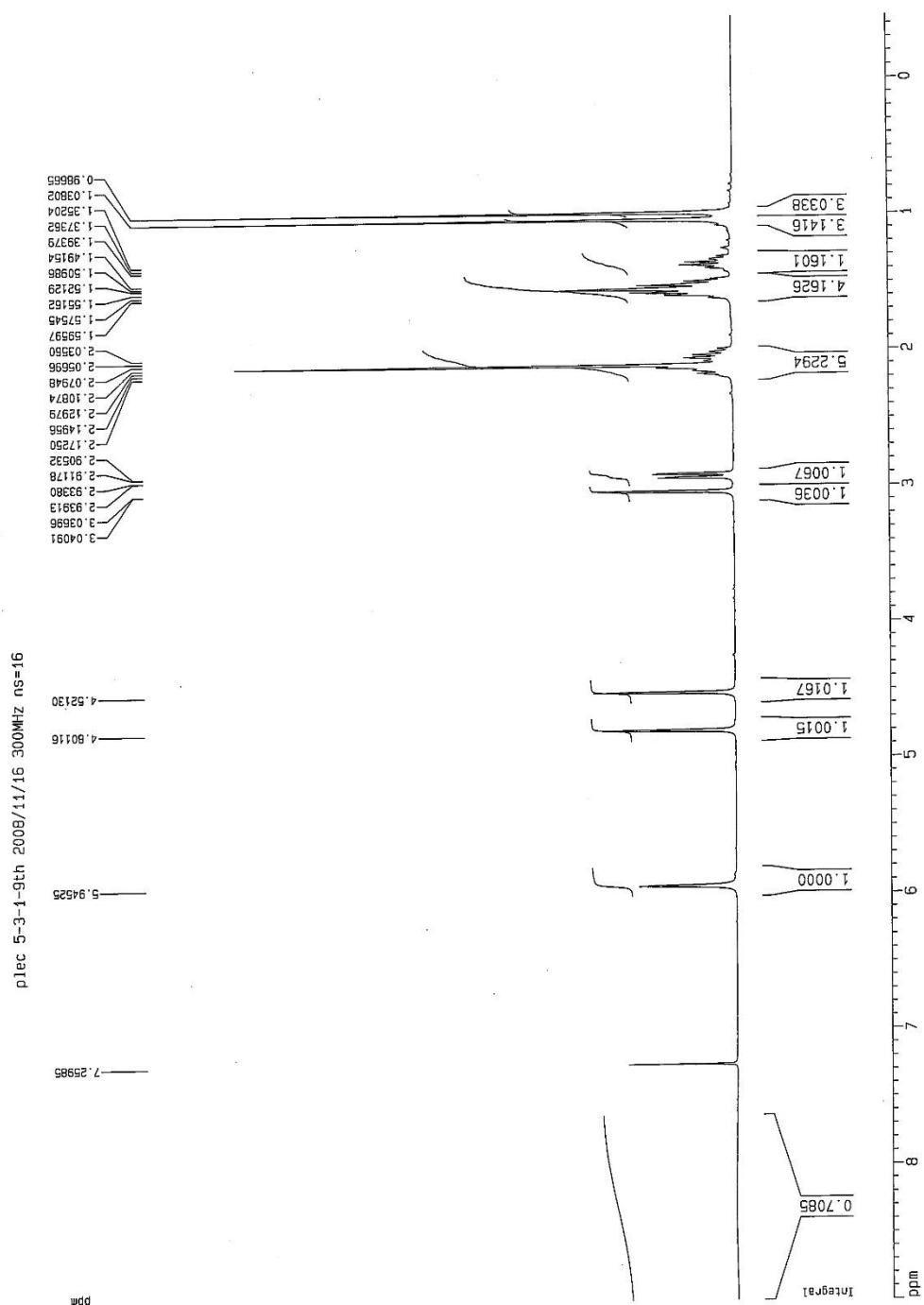
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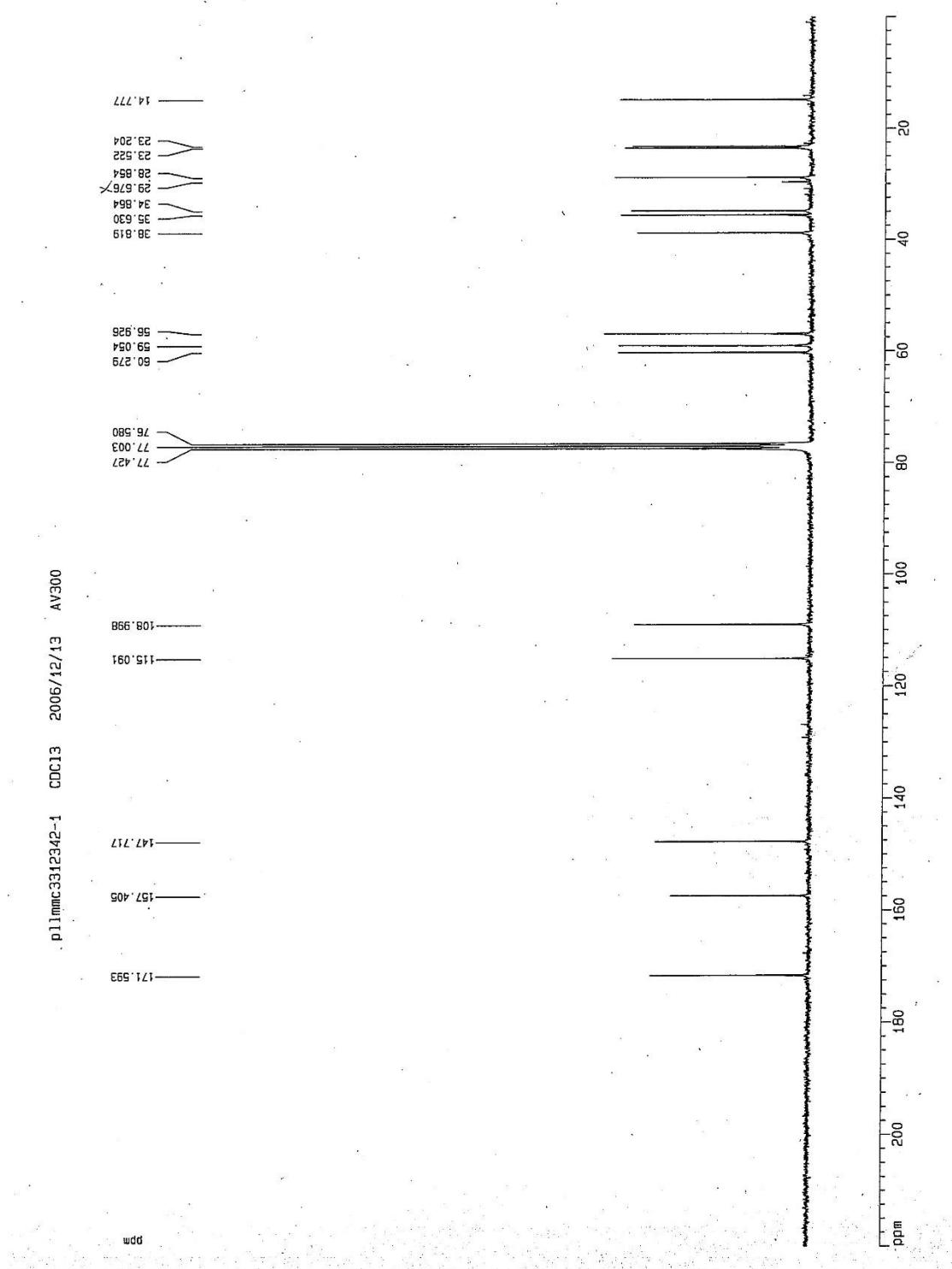


Fig. S2. <sup>13</sup>C NMR spectrum of 4

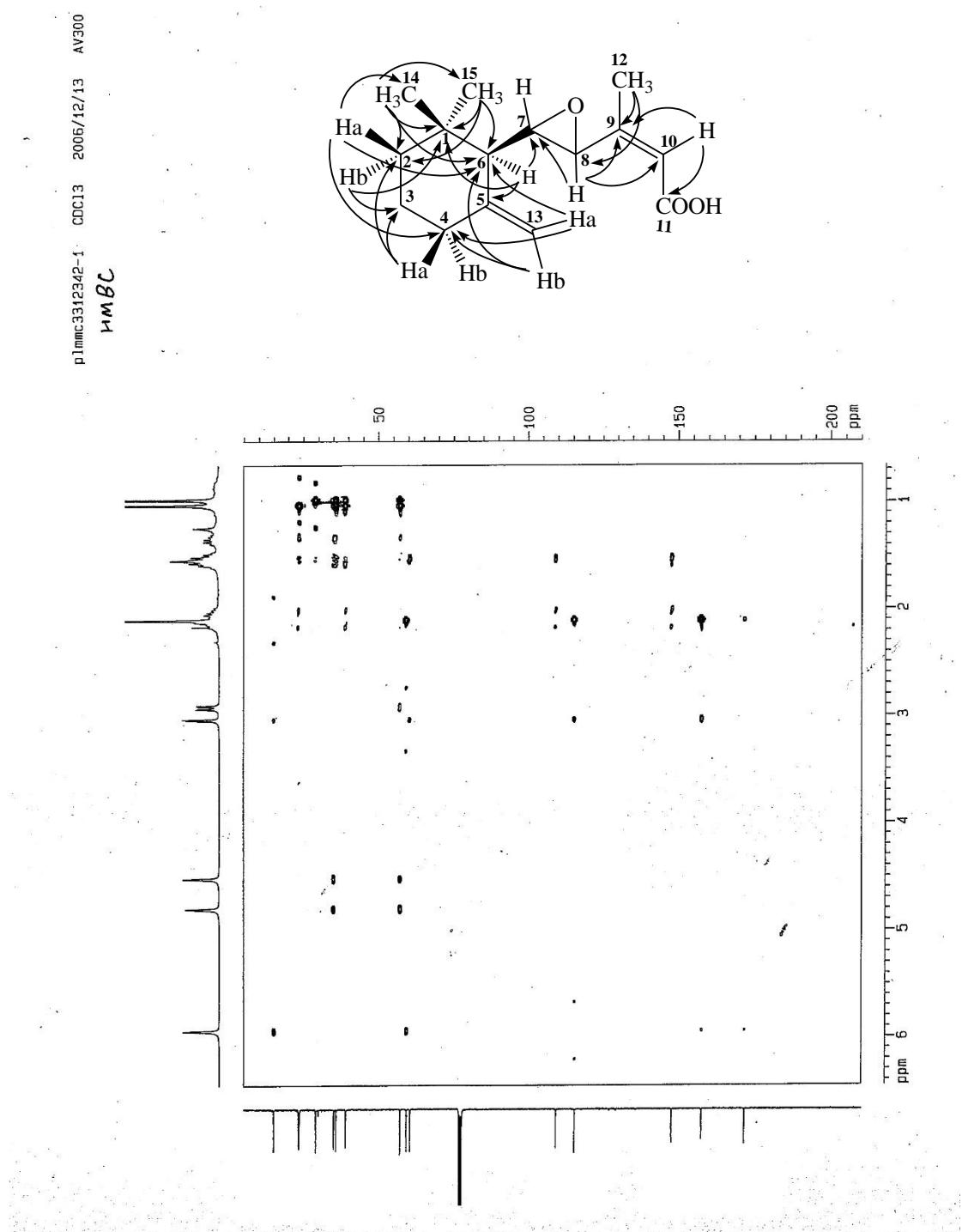


Fig. S3. HMBC spectrum of **4**

PLEC 524221 CDCl<sub>3</sub> 2013/4/7 AVIII400 NOESY

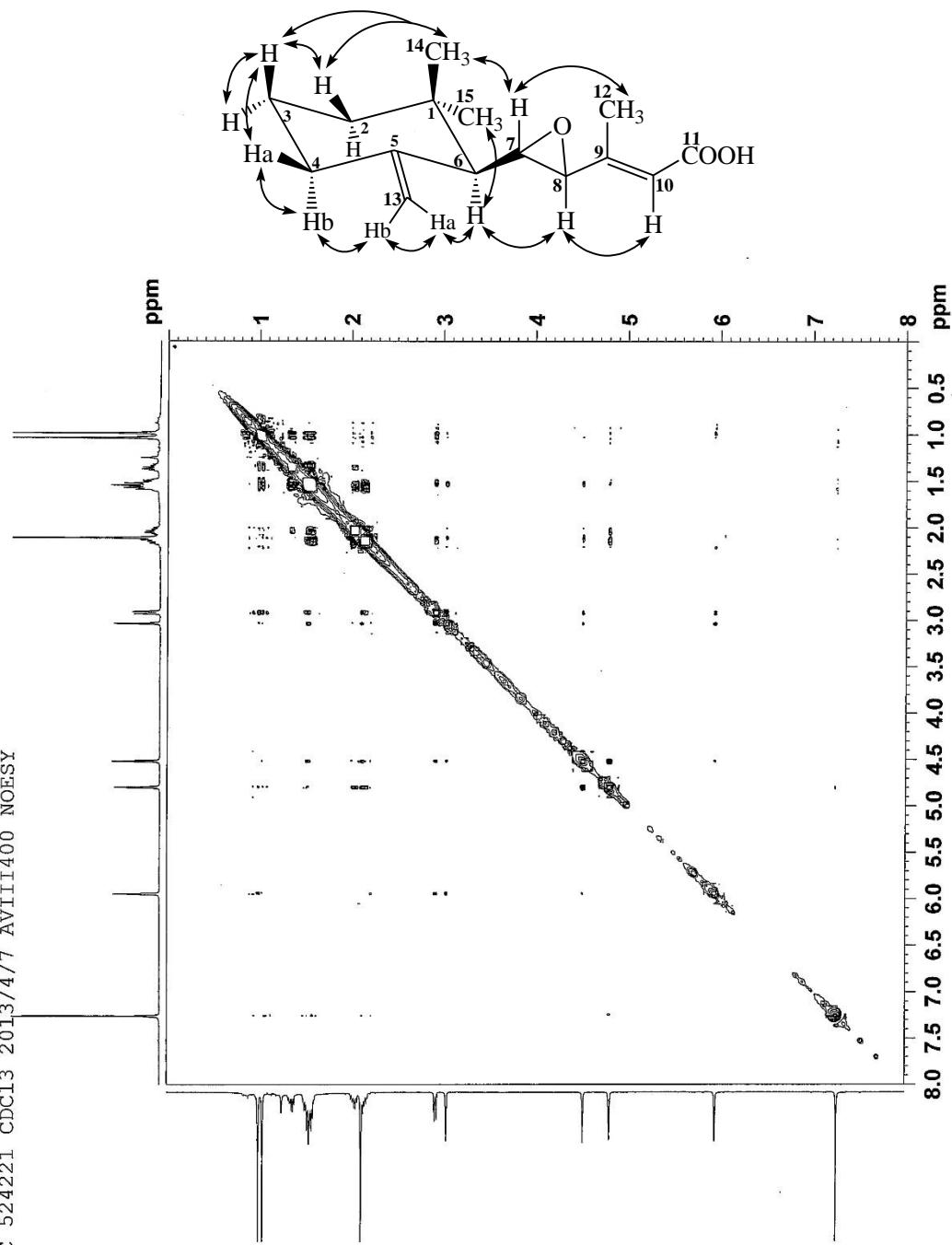


Fig. S4. NOESY spectrum of **4**

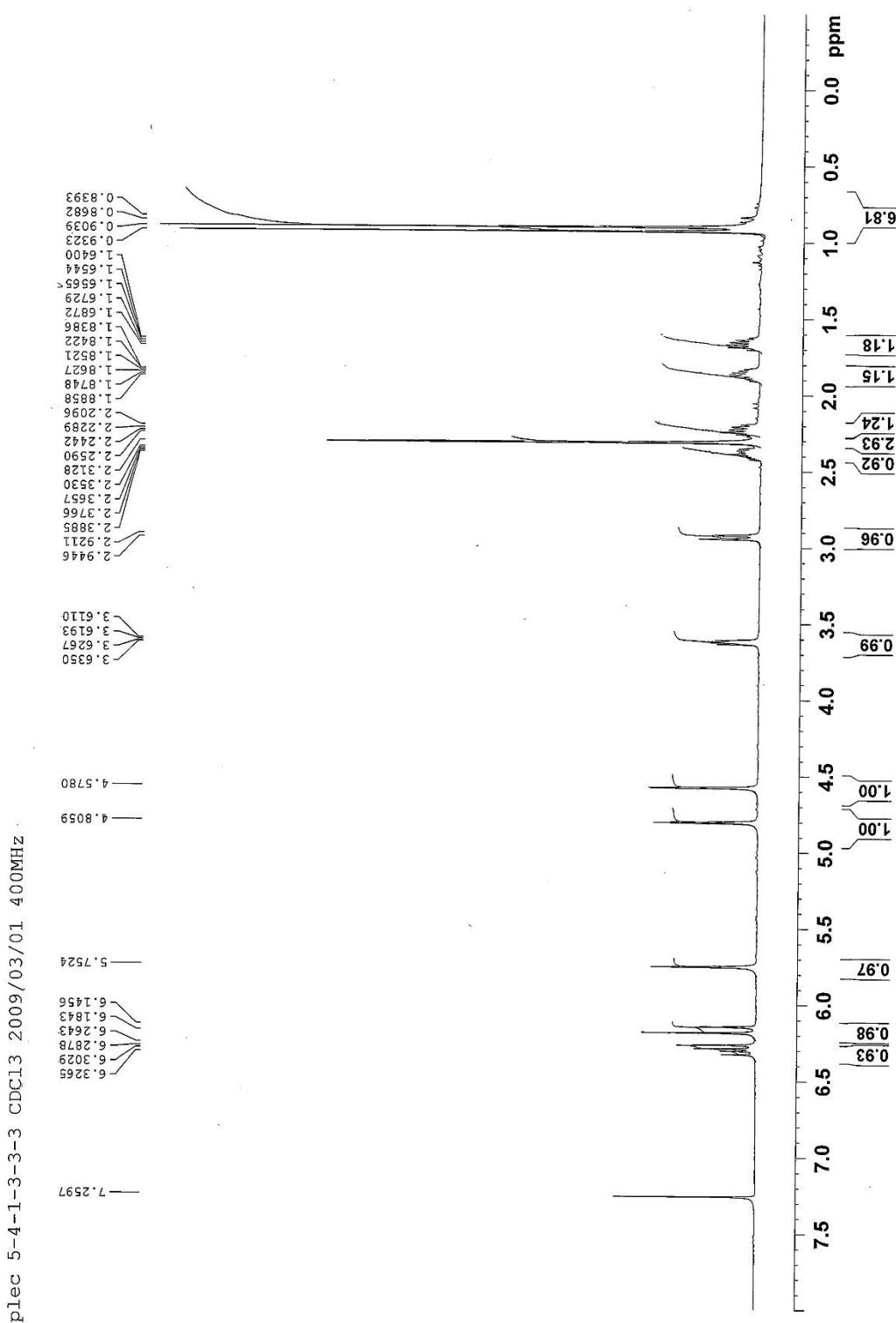


Fig. S5. <sup>1</sup>H NMR spectrum of **5**

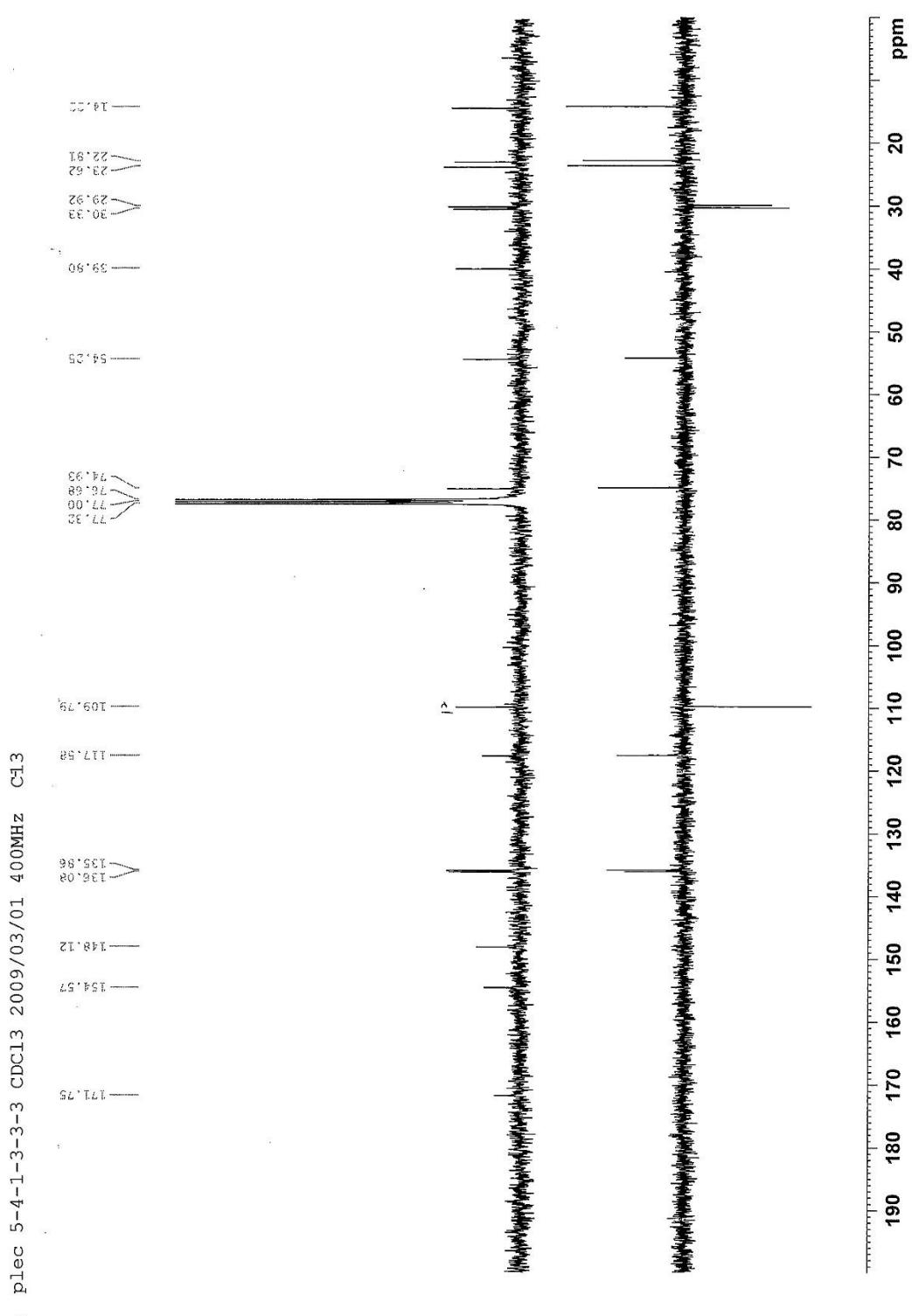


Fig. S6. <sup>13</sup>C NMR spectrum of **5**

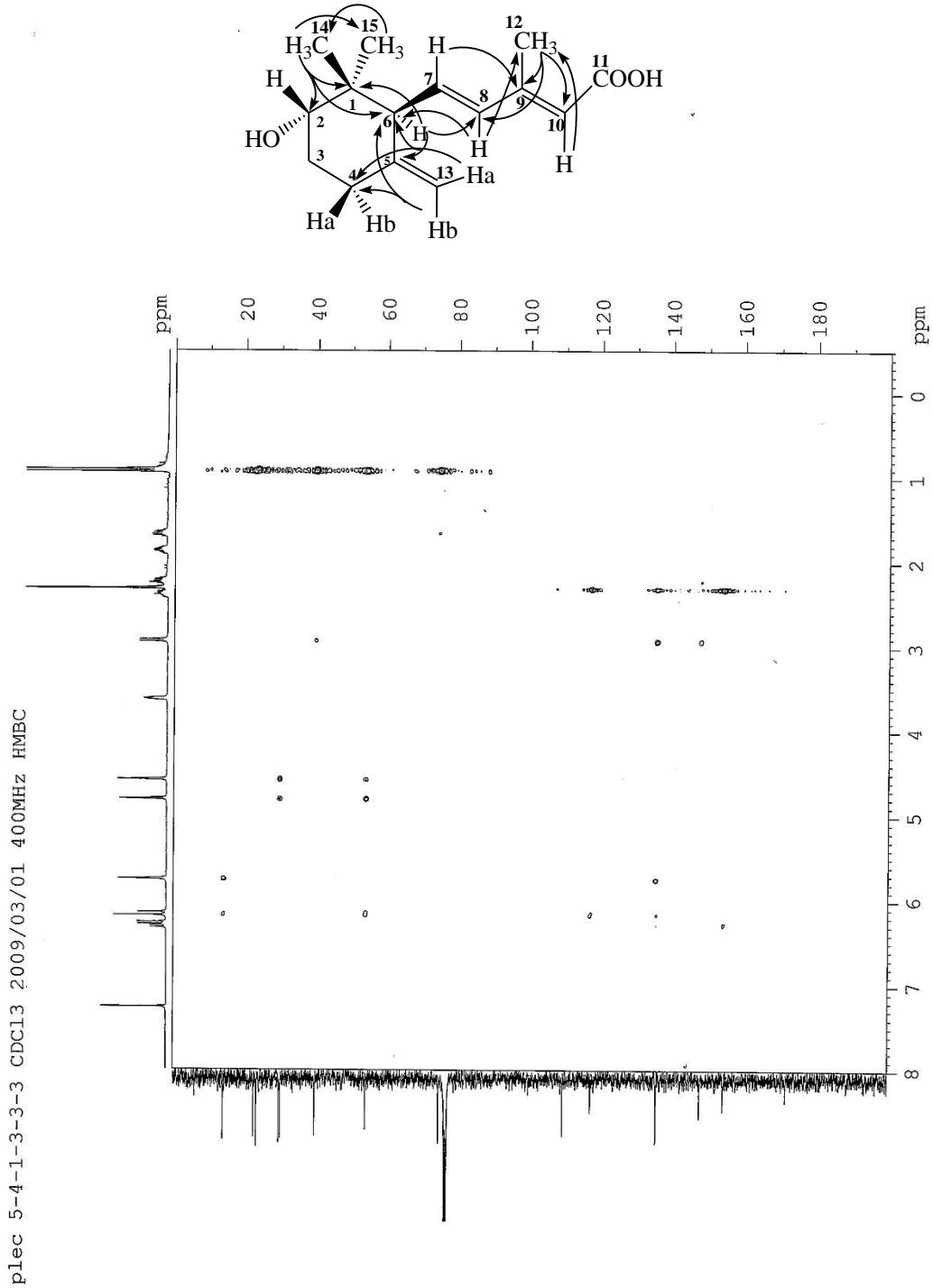


Fig. S7. HMBC spectrum of **5**

plec 5-4-1-3-3-3 CDCl<sub>3</sub> 2009/03/01 400MHz NOESY

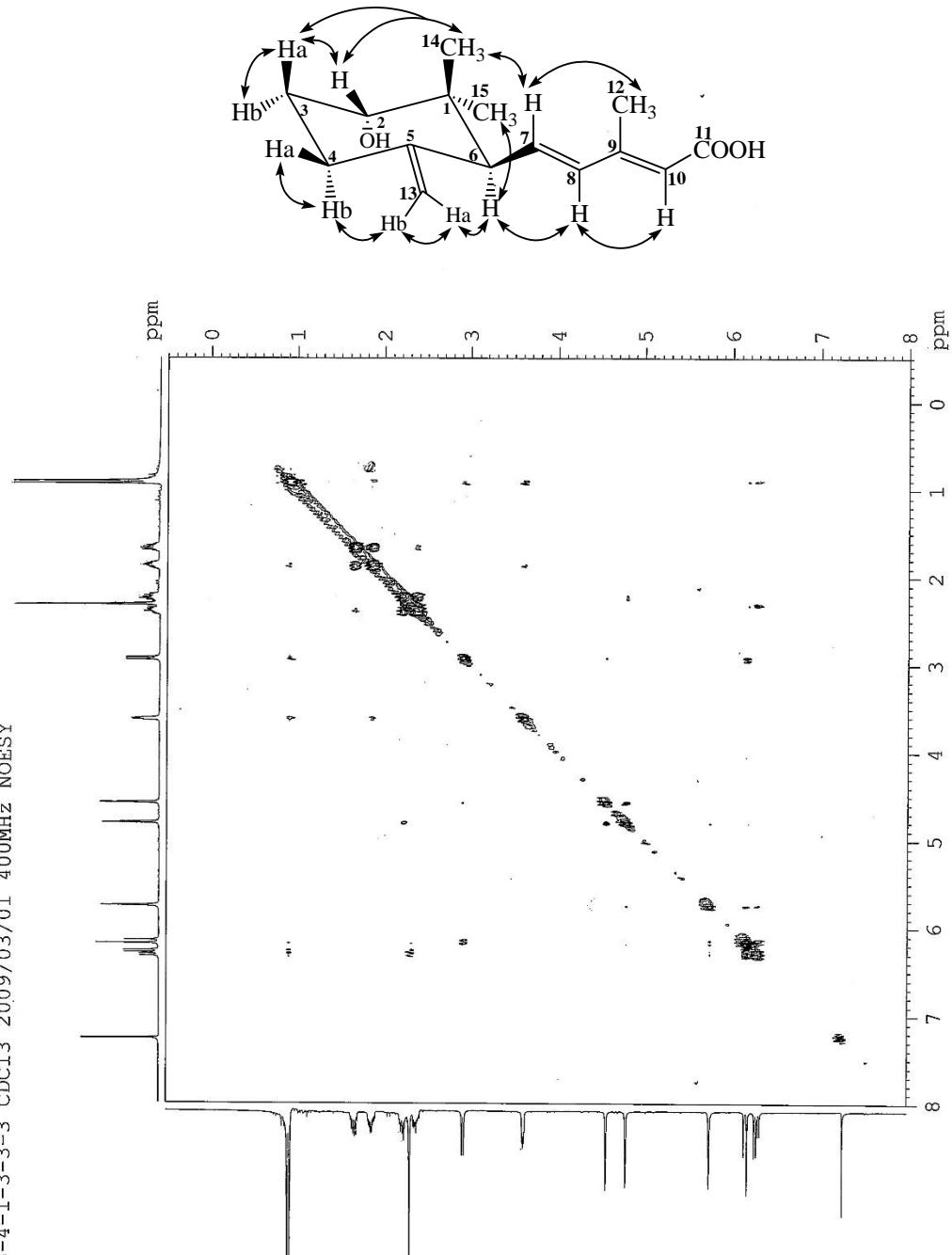
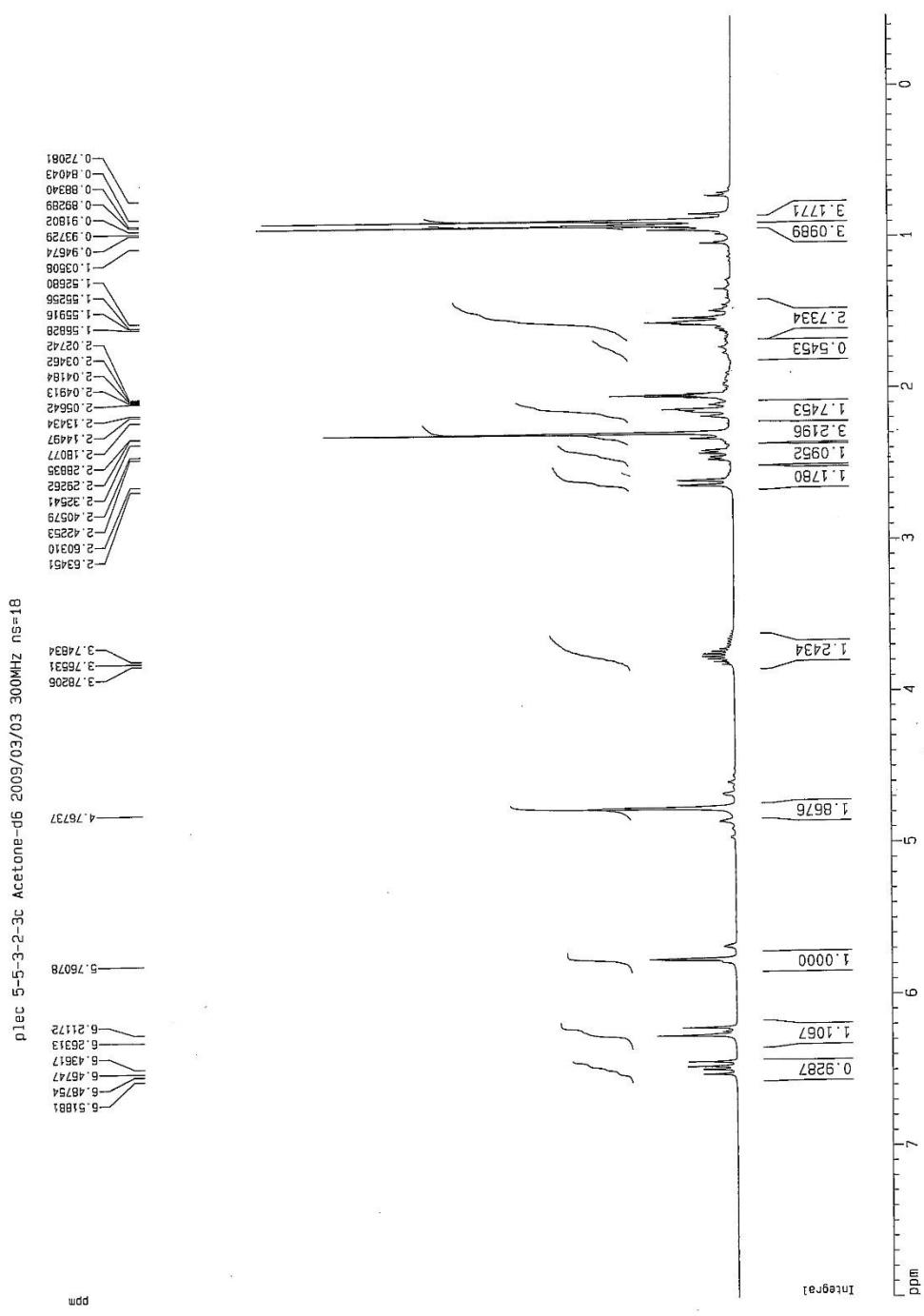


Fig. S8. NOESY spectrum of **5**



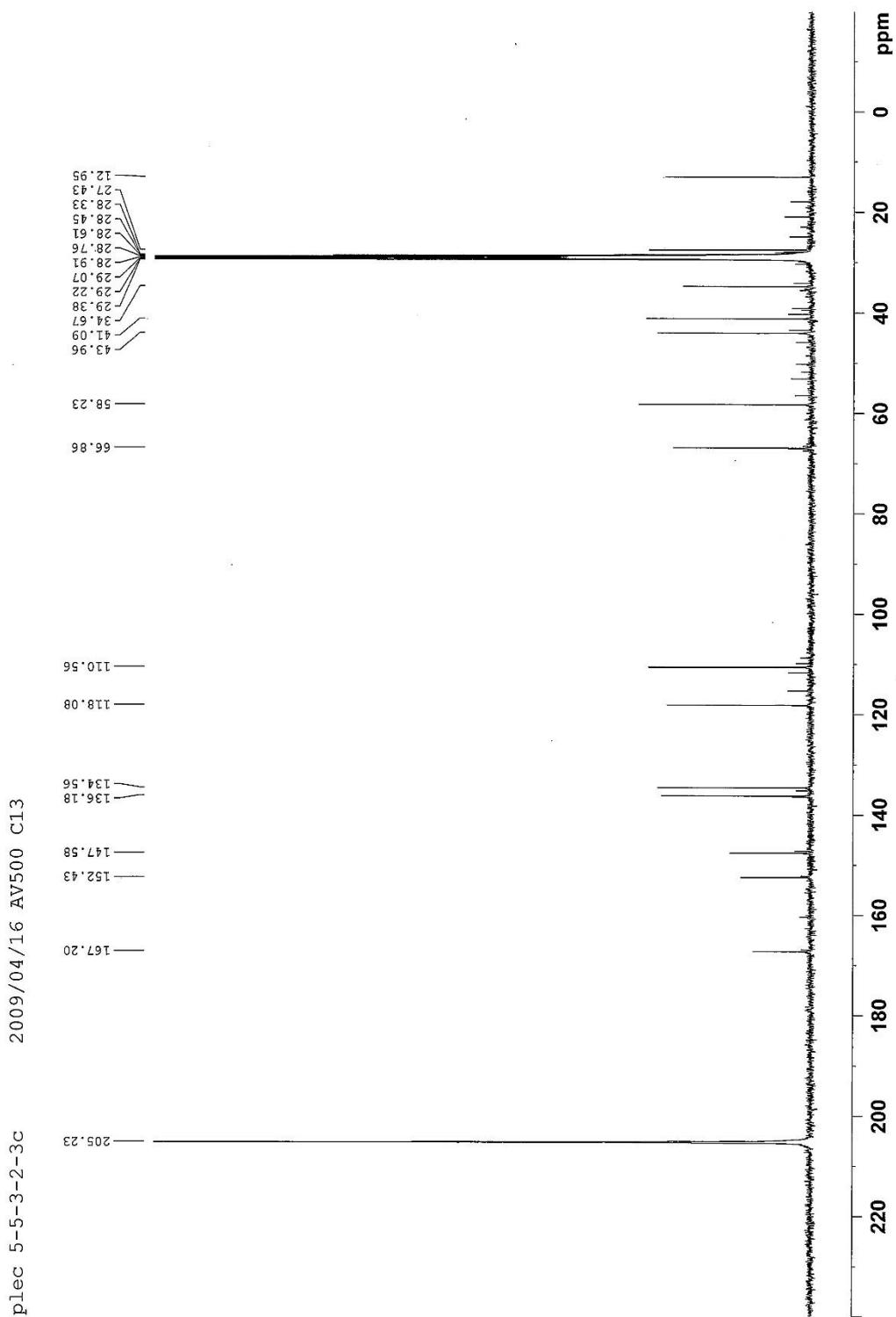


Fig. S10.  $^{13}\text{C}$  NMR spectrum of **6**

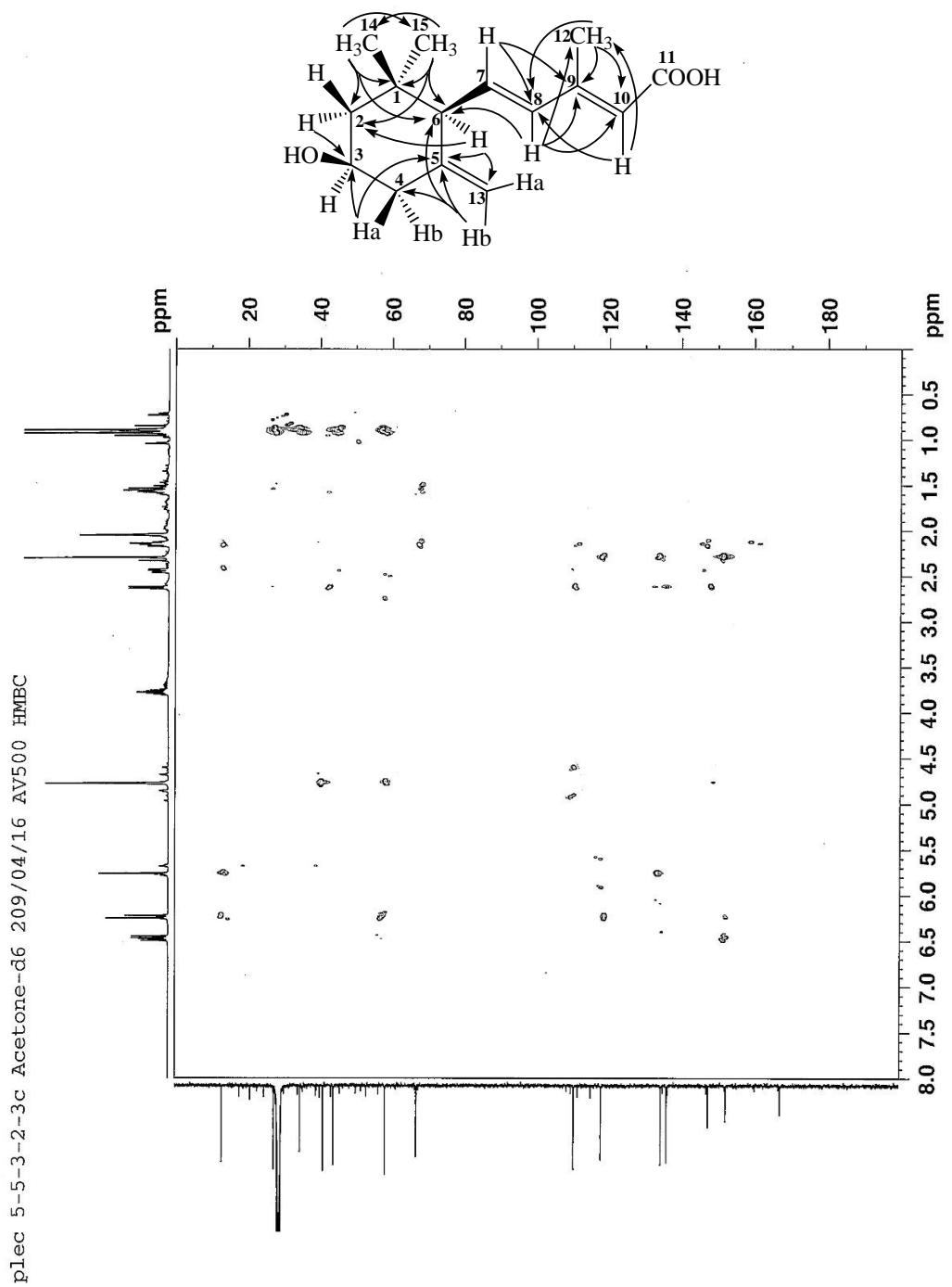


Fig. S11. HMBC spectrum of **6**

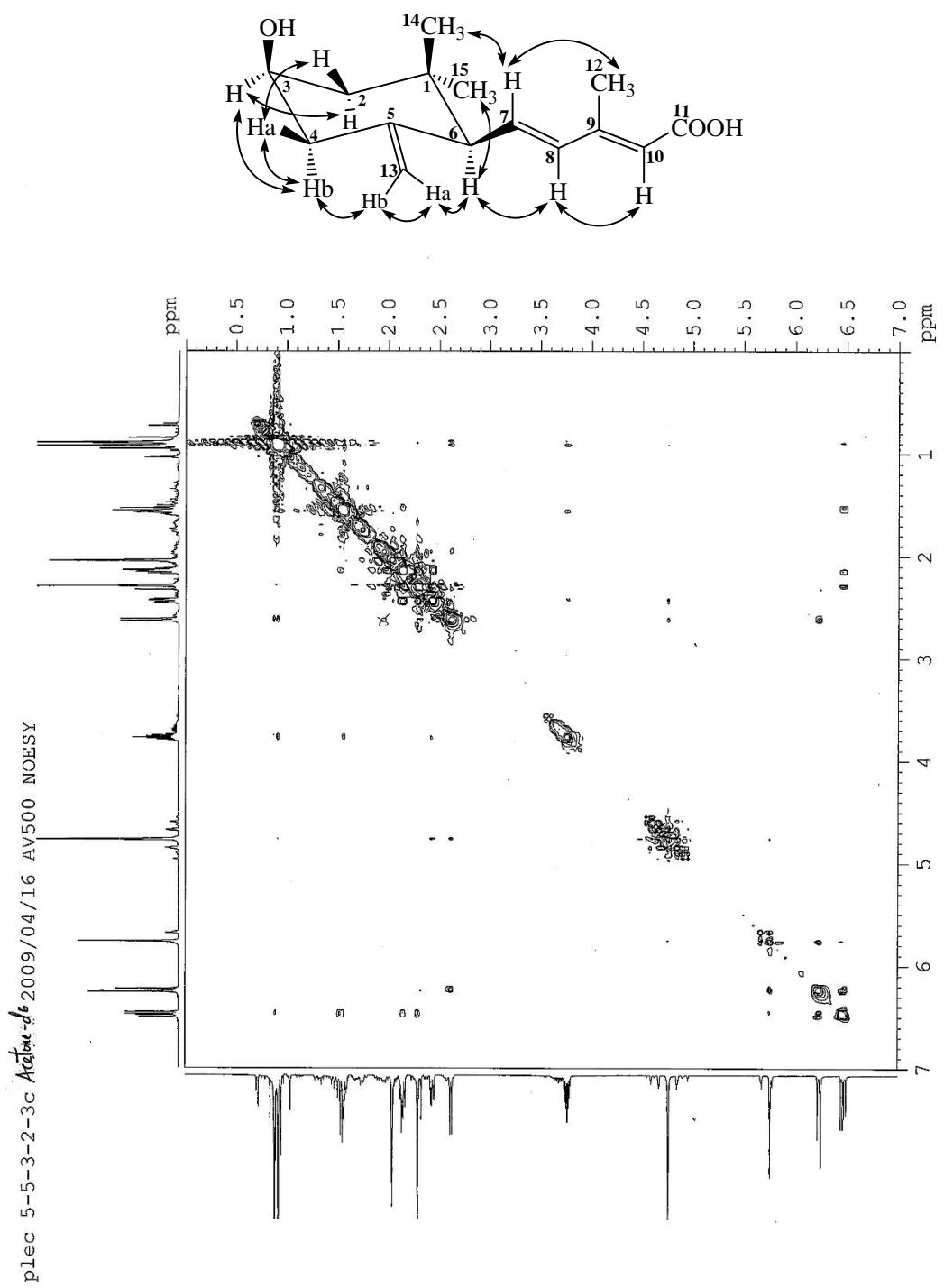


Fig. S12. NOESY spectrum of **6**

plec 5-4-1-5-2 CDCl<sub>3</sub> 2009/6/19 AV500 H

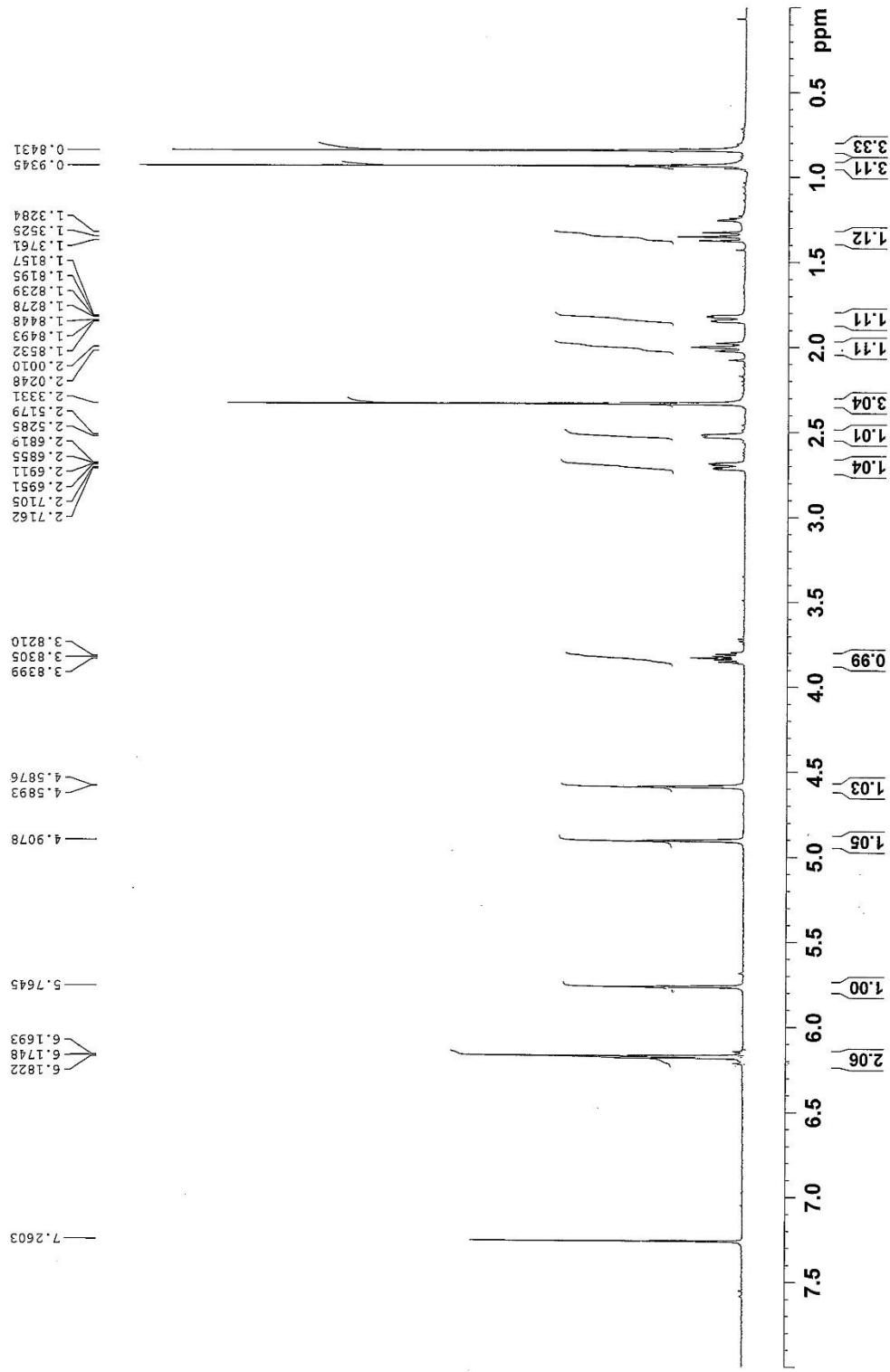


Fig. S13. <sup>1</sup>H NMR spectrum of 7

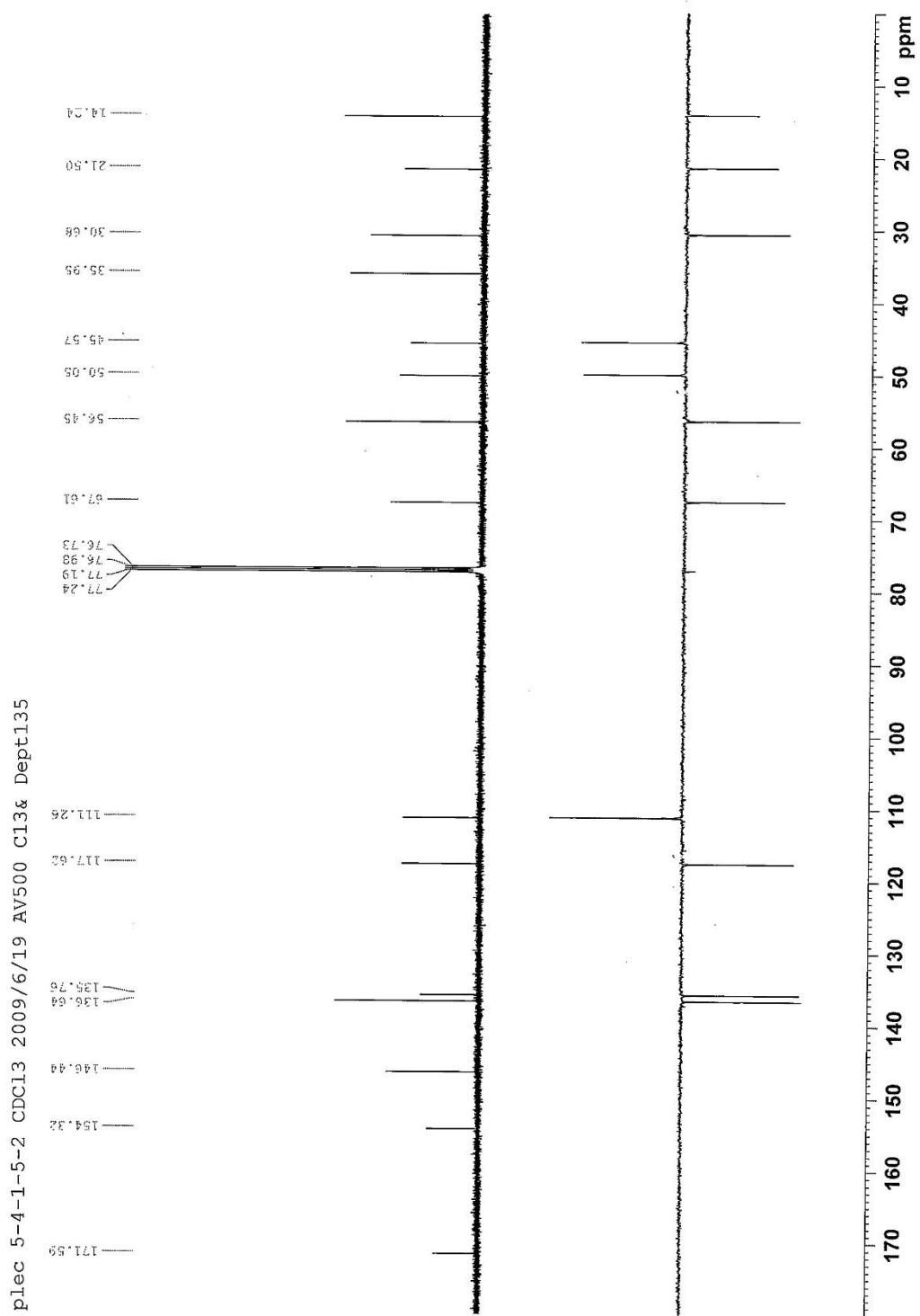


Fig. S14.  $^{13}\text{C}$  NMR spectrum of **7**

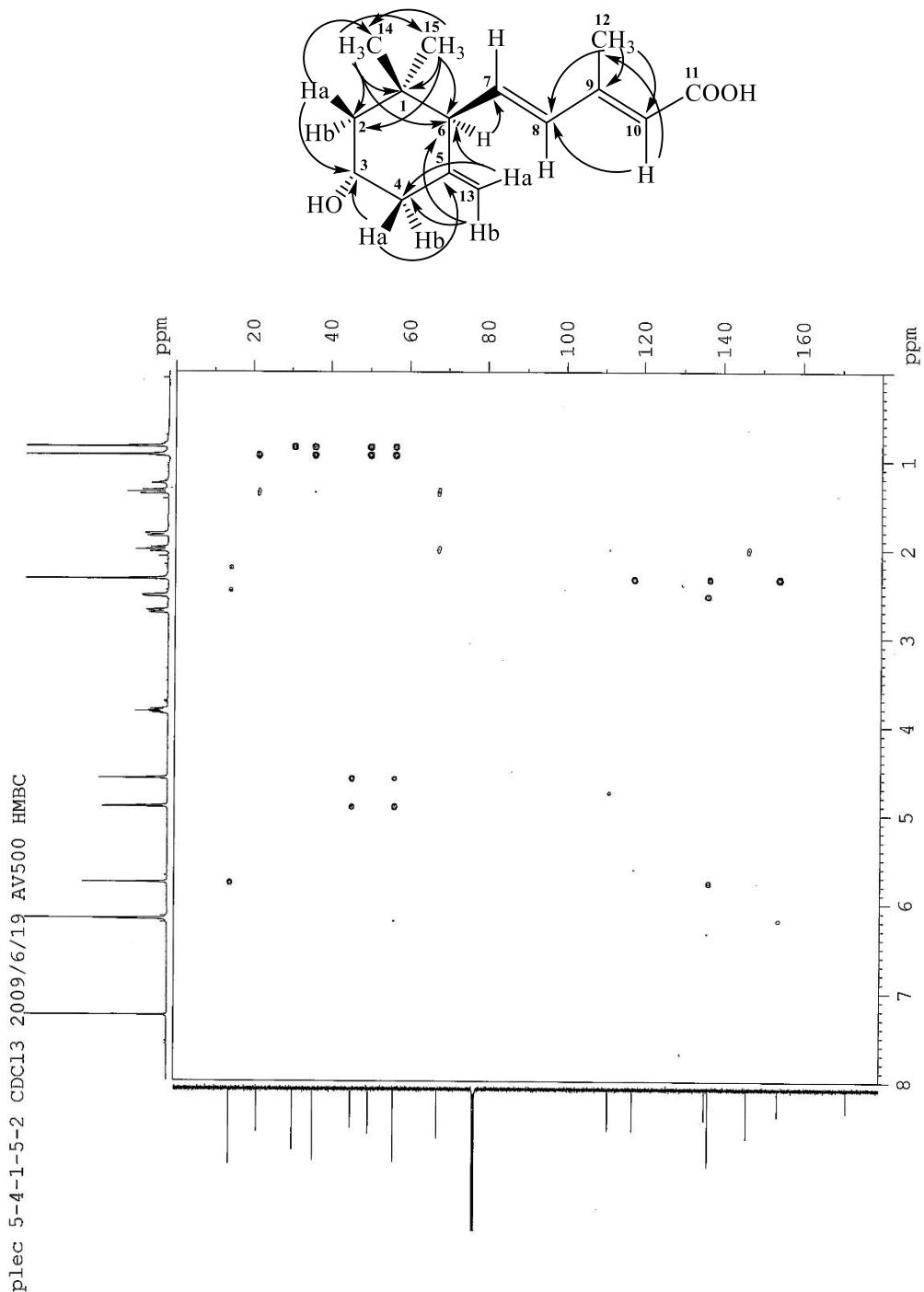


Fig. S15. HMBC spectrum of **7**

p1ec 5-4-1-5-2 CDC13 2009/6/19 AV500 NOESY

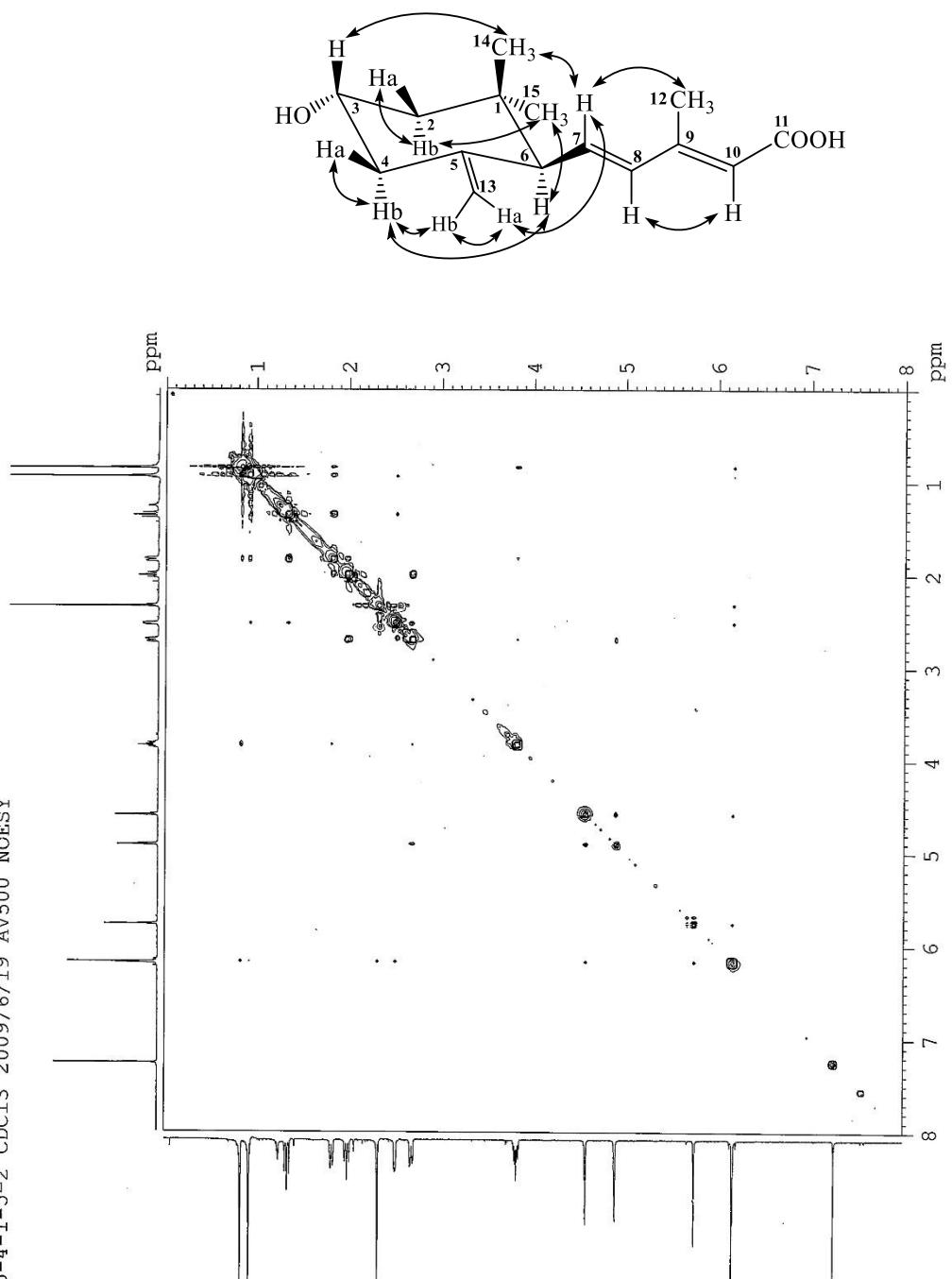
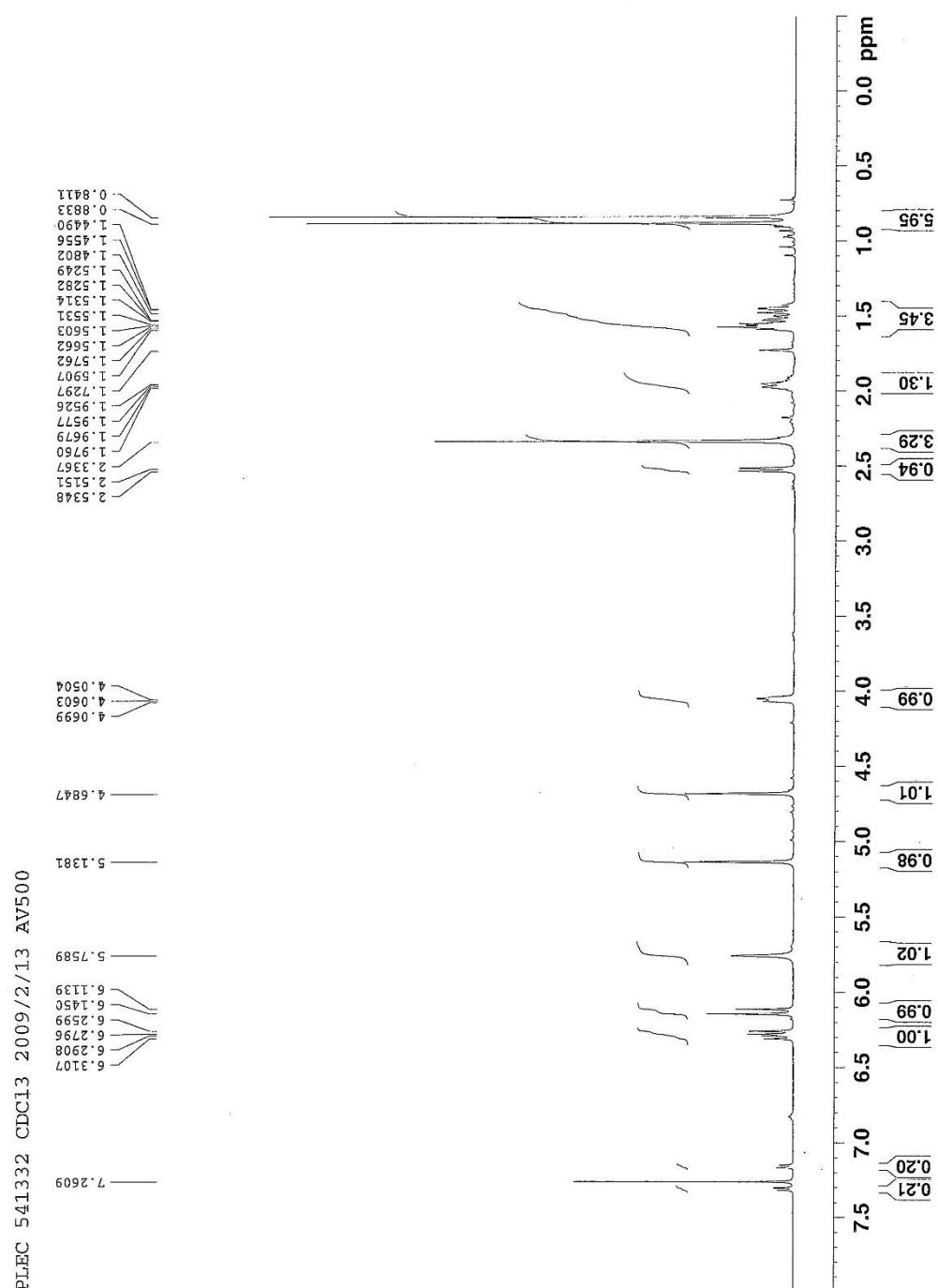


Fig. S16. NOESY spectrum of **7**



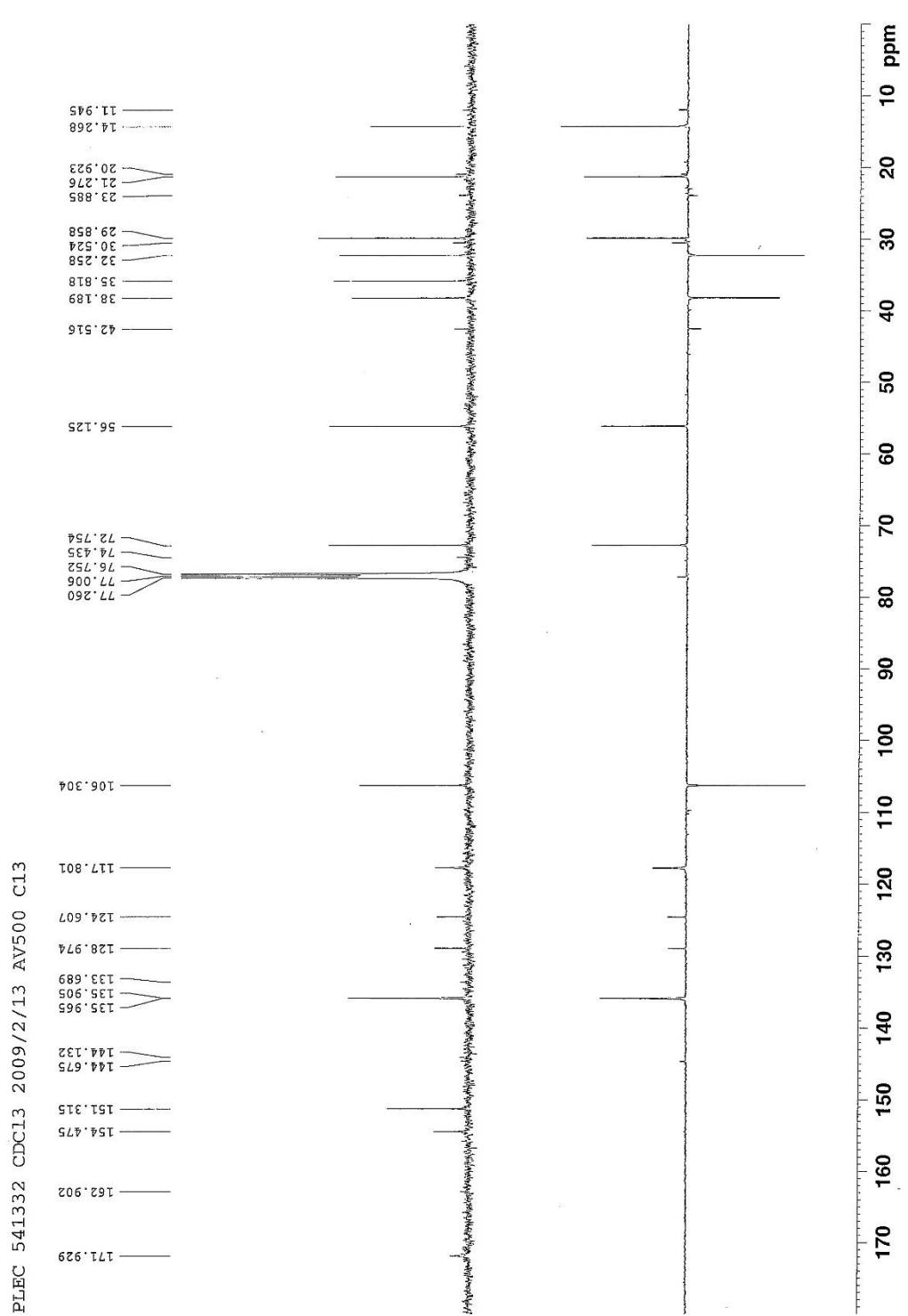


Fig. S18.  $^{13}\text{C}$  NMR spectrum of **8**

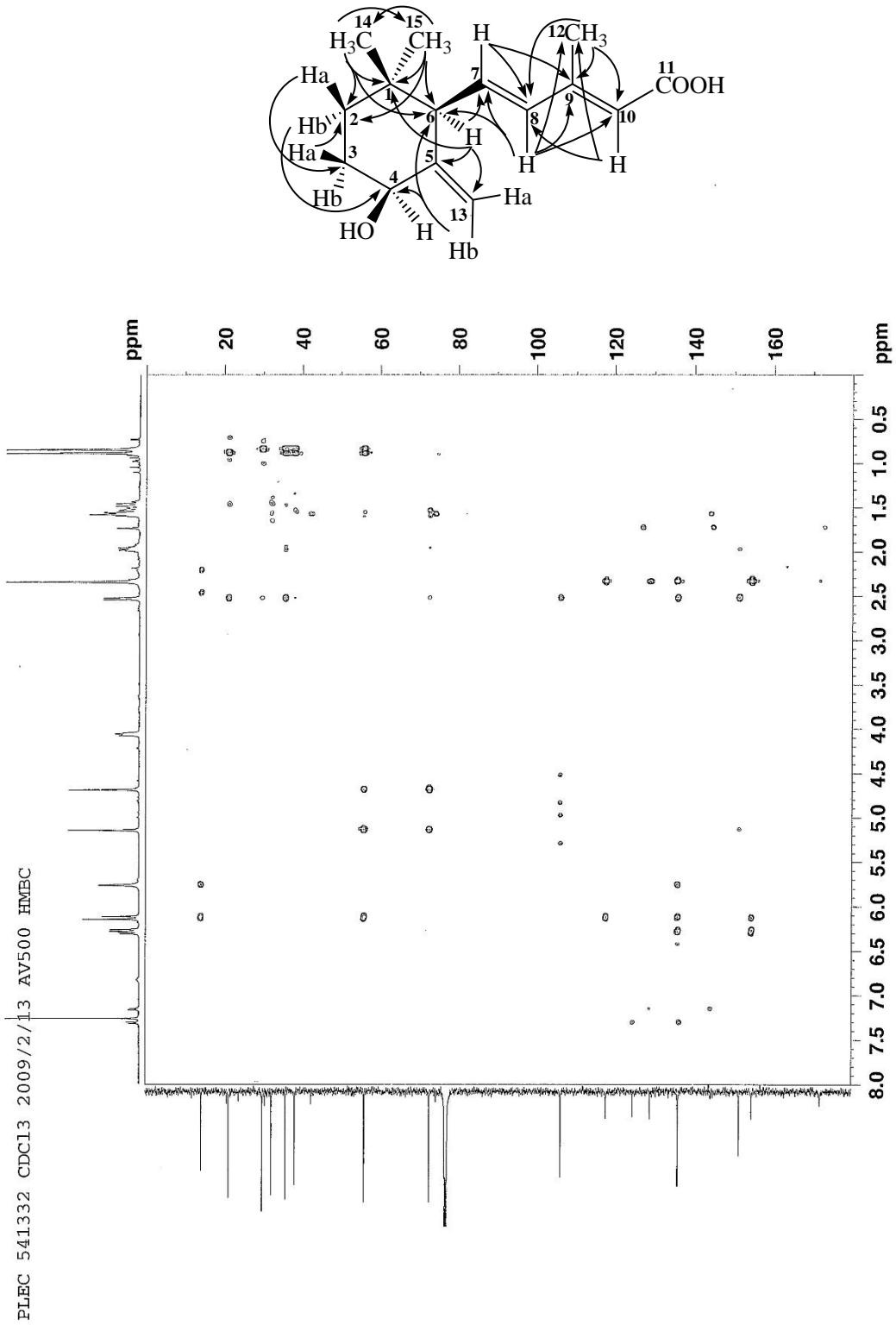


Fig. S19. HMBC spectrum of **8**

PLEC 541332 CDC13 2009/2/13 AV500 NOESY

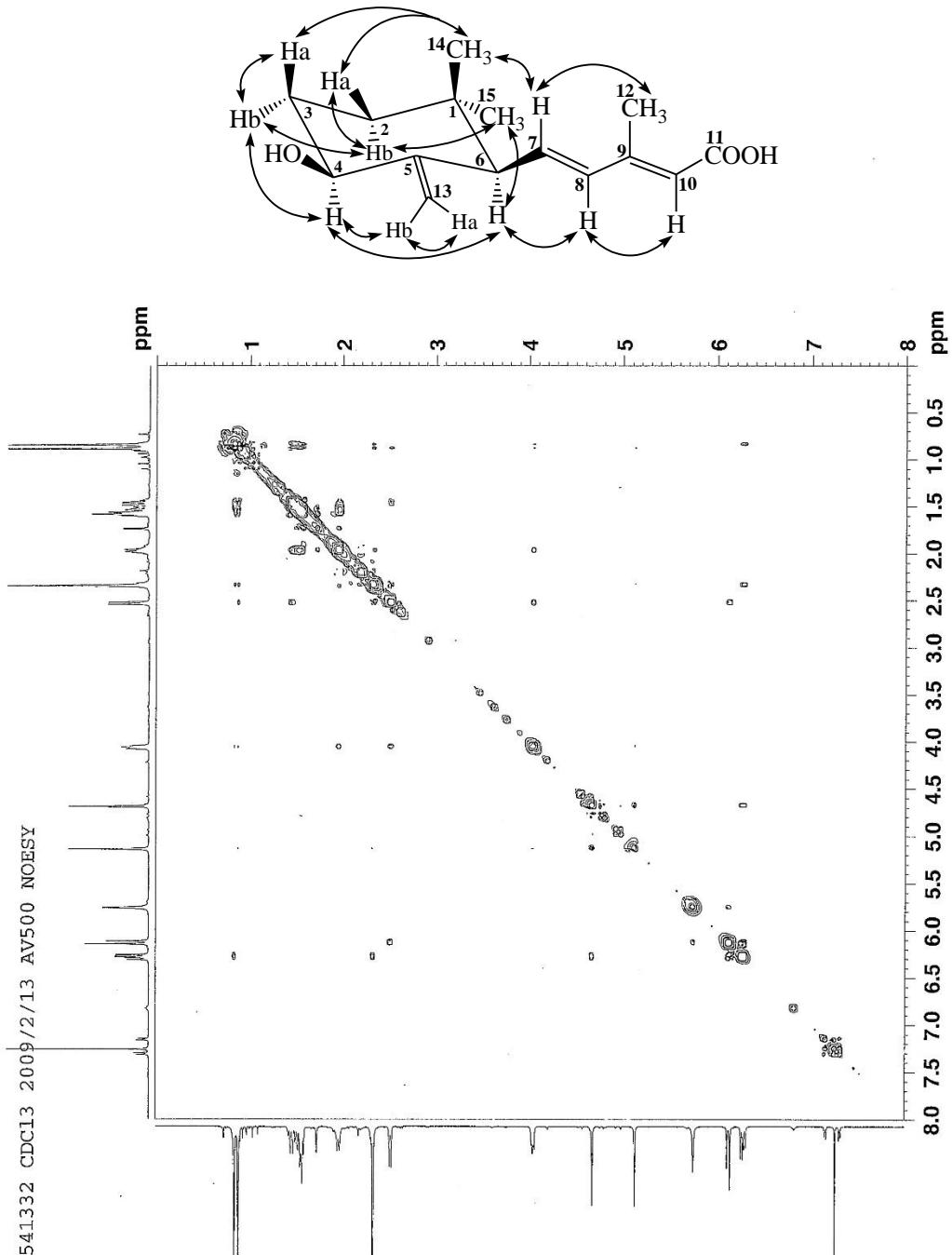


Fig. S20. NOESY spectrum of **8**

plec 5-5-3-3c Acetone-d6 2009/04/17 AV500 H

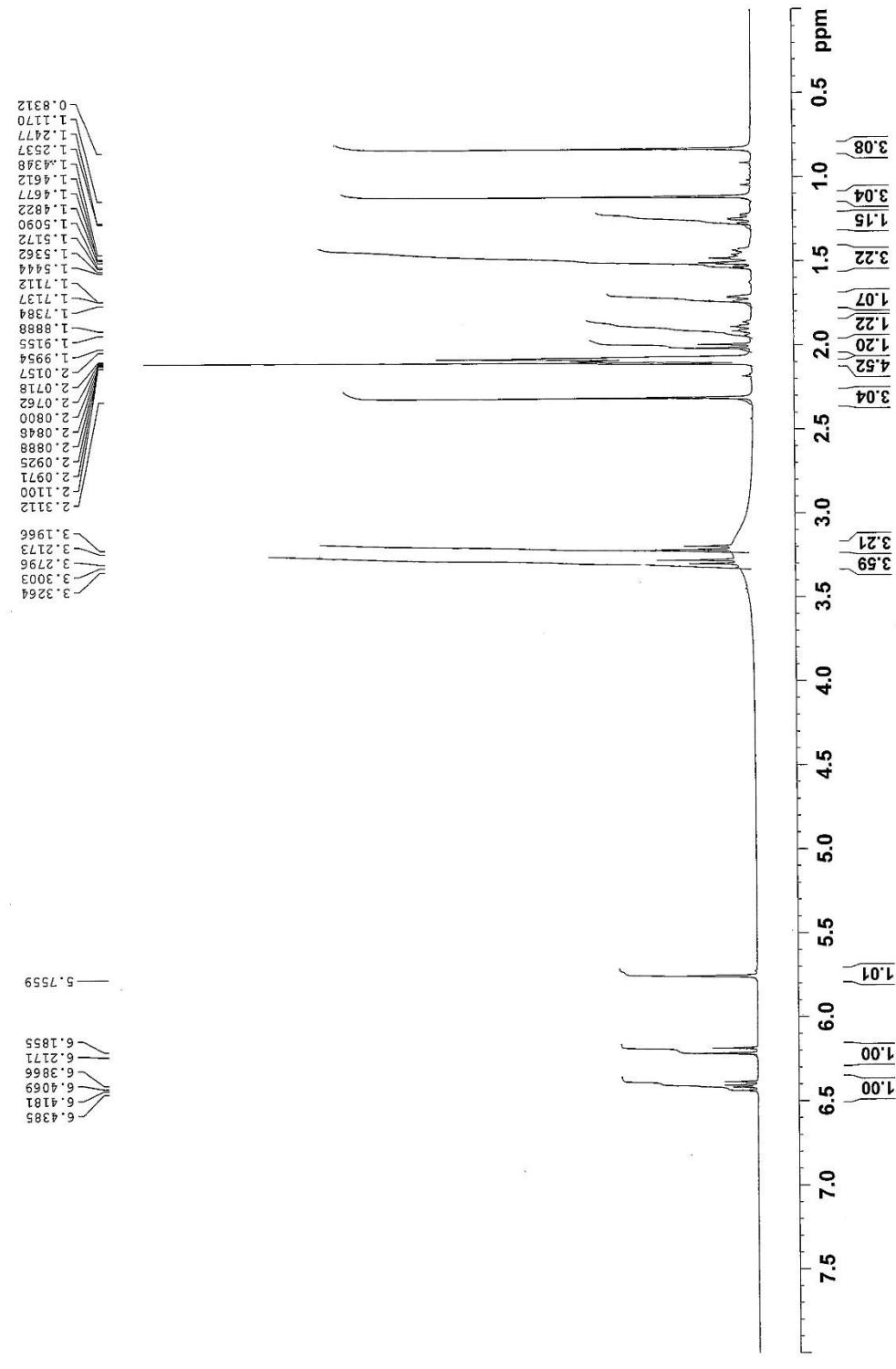


Fig. S21. <sup>1</sup>H NMR spectrum of **9**

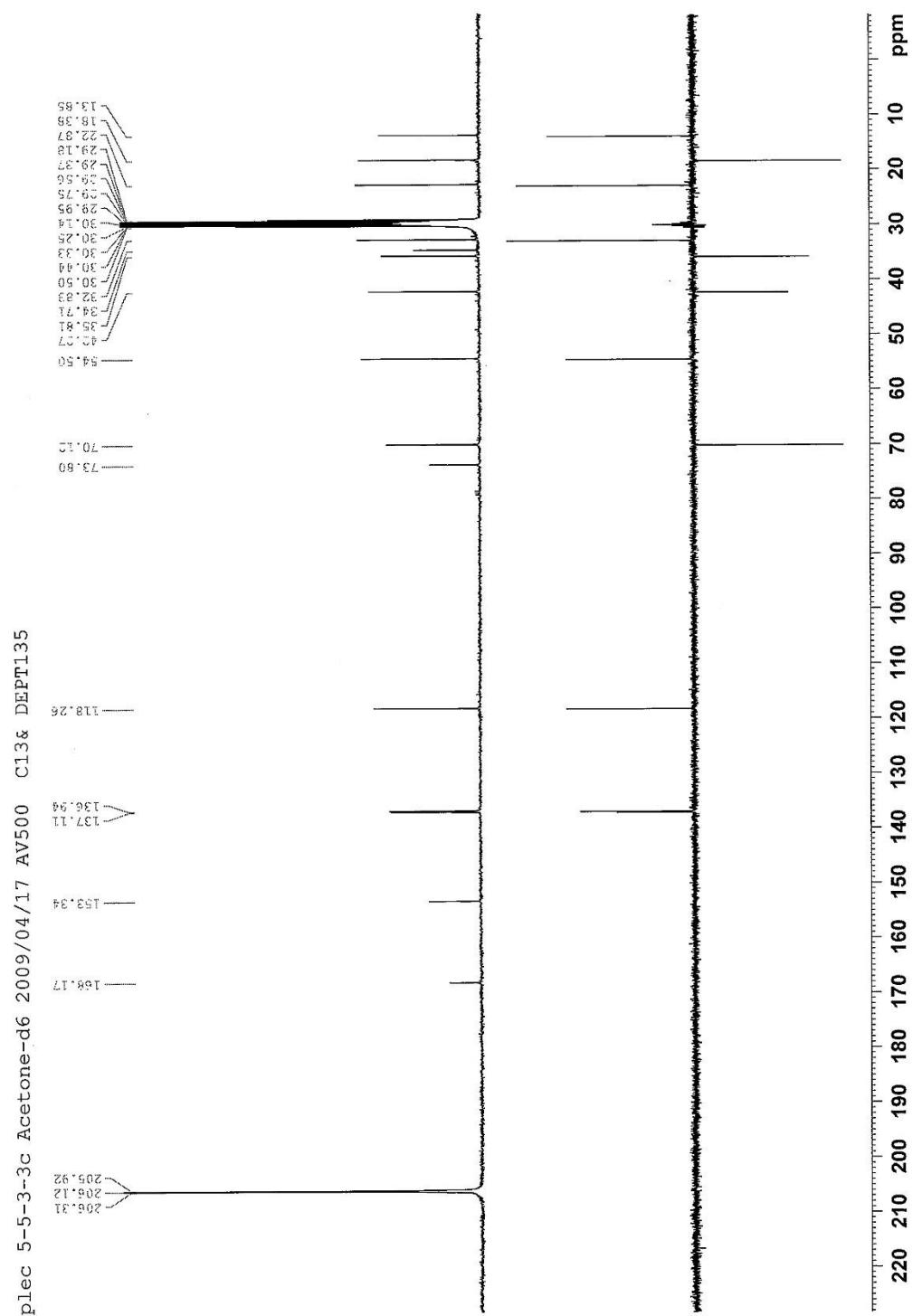


Fig. S22. <sup>13</sup>C NMR spectrum of **9**

plec 5-5-3-3c Acetone-d<sub>6</sub> 2009/04/17 AV500 HMBC

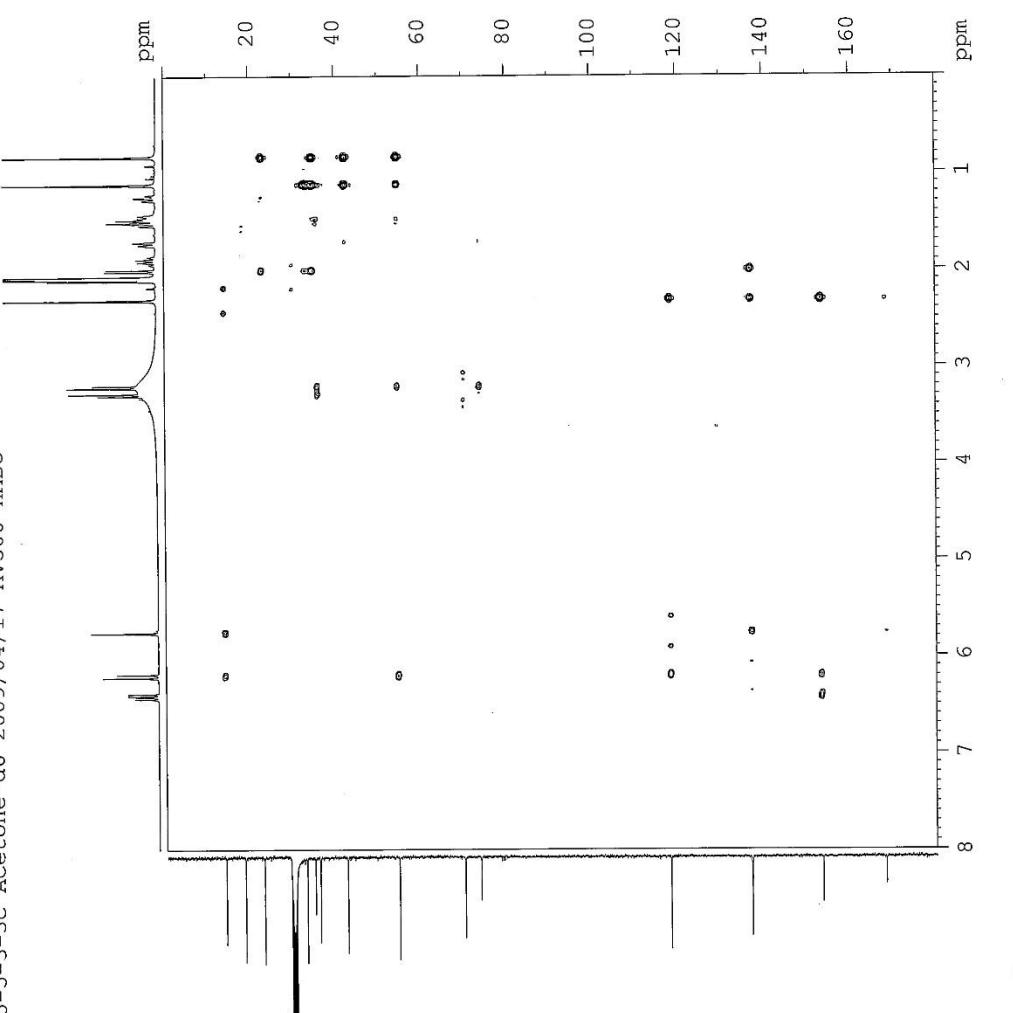


Fig. S23. HMBC spectrum of **9**

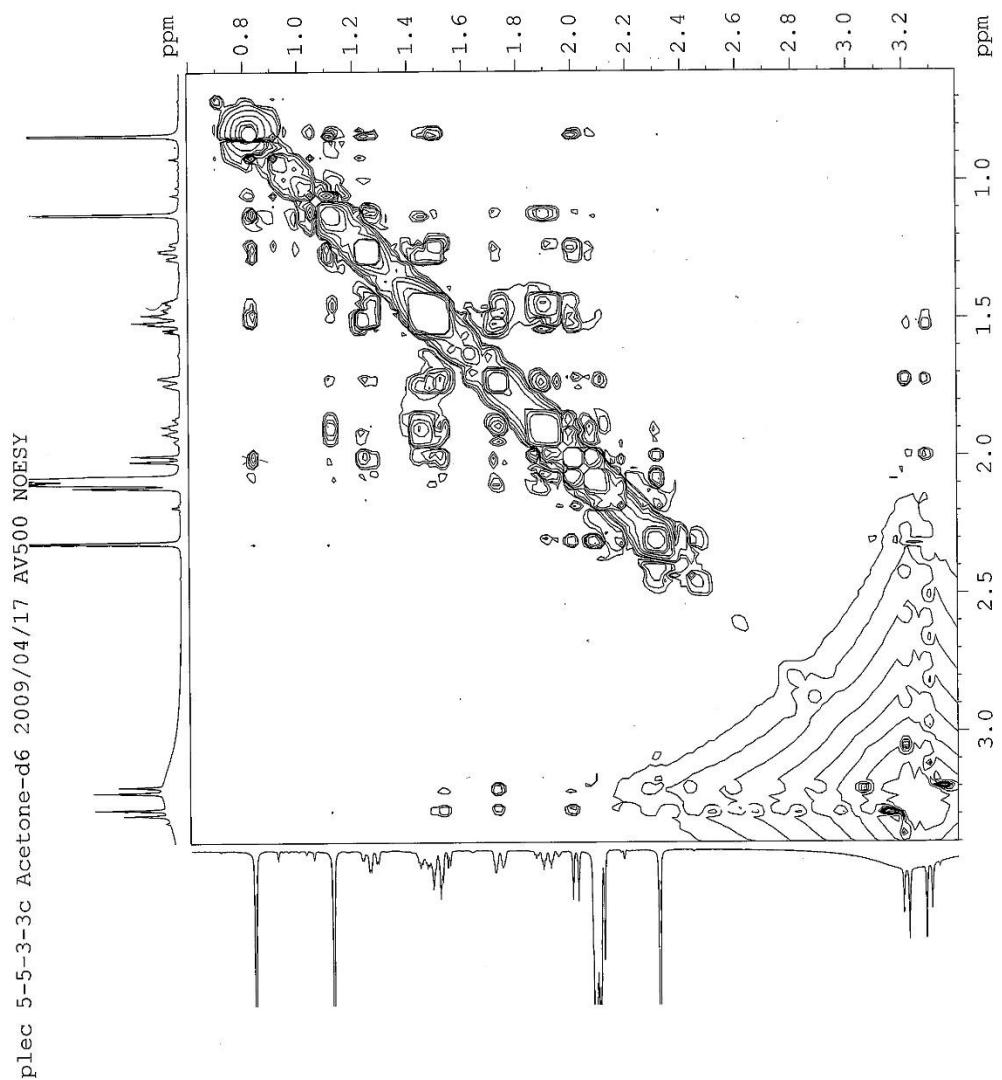
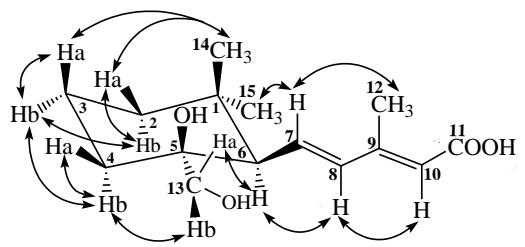


Fig. S24. NOESY spectrum of **9**

plec 3-1-4-1 CDCl<sub>3</sub> 2009/07/01 AV500 H

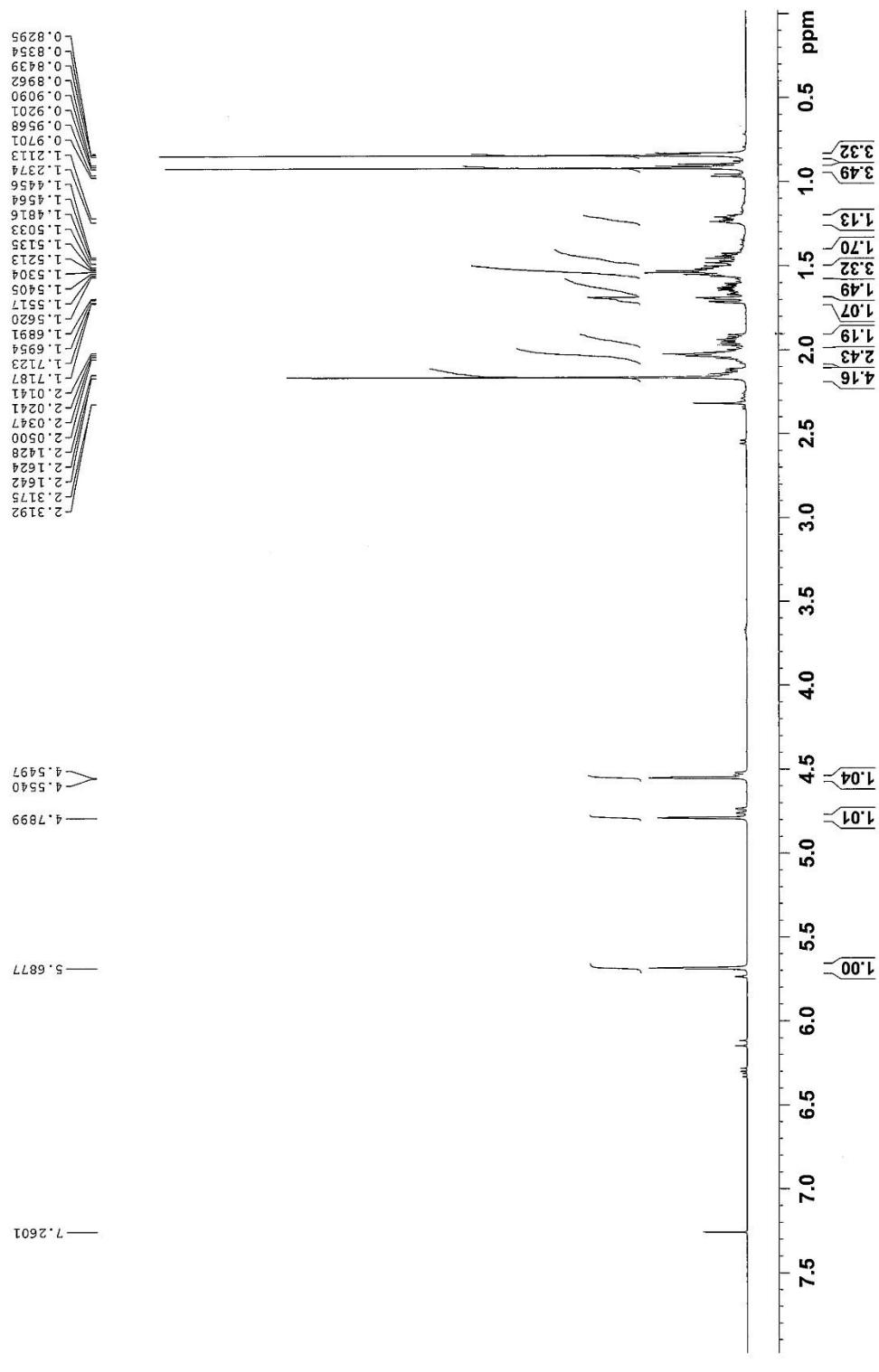


Fig. S25. <sup>1</sup>H NMR spectrum of **10**

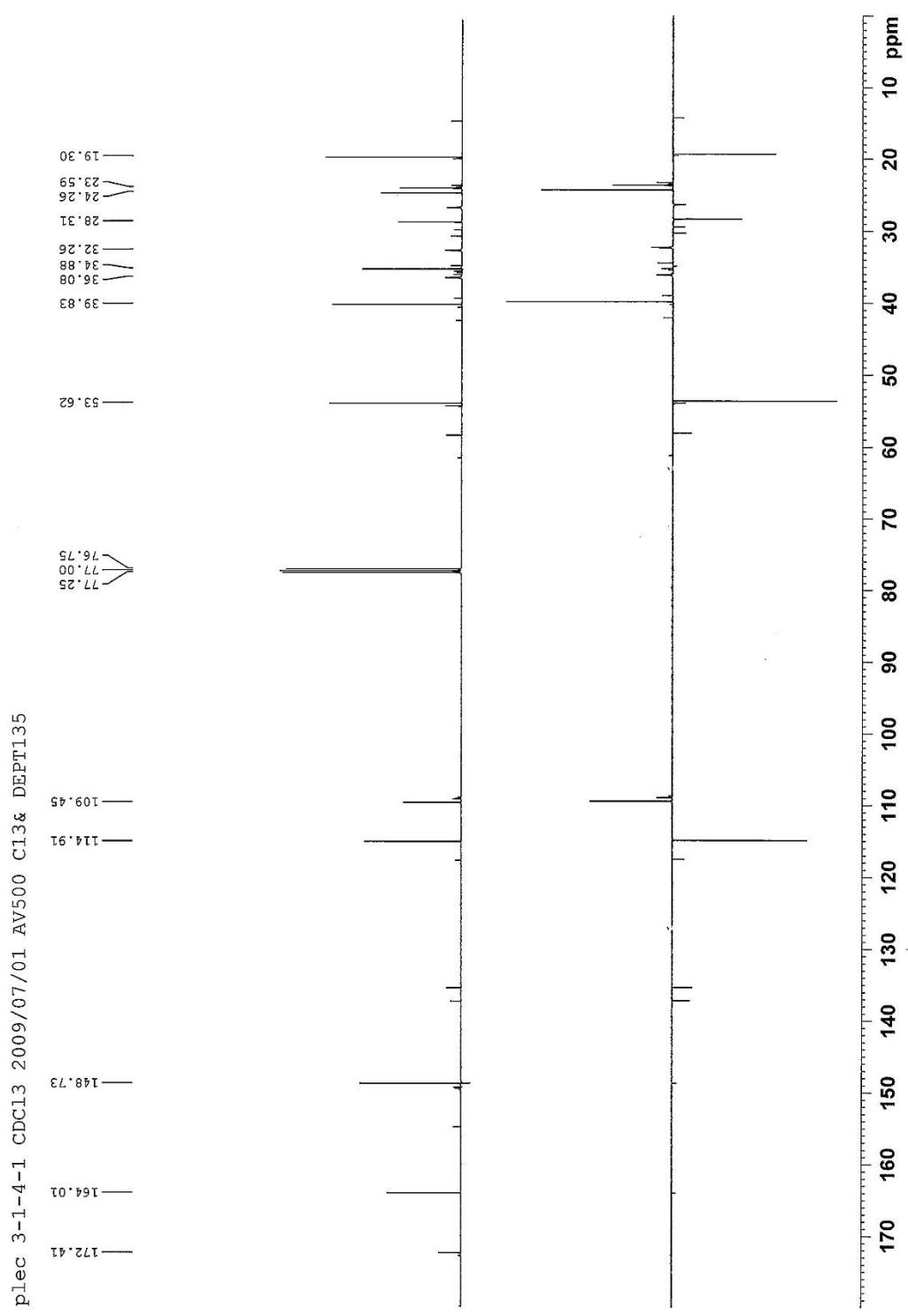


Fig. S26.  $^{13}\text{C}$  NMR spectrum of **10**

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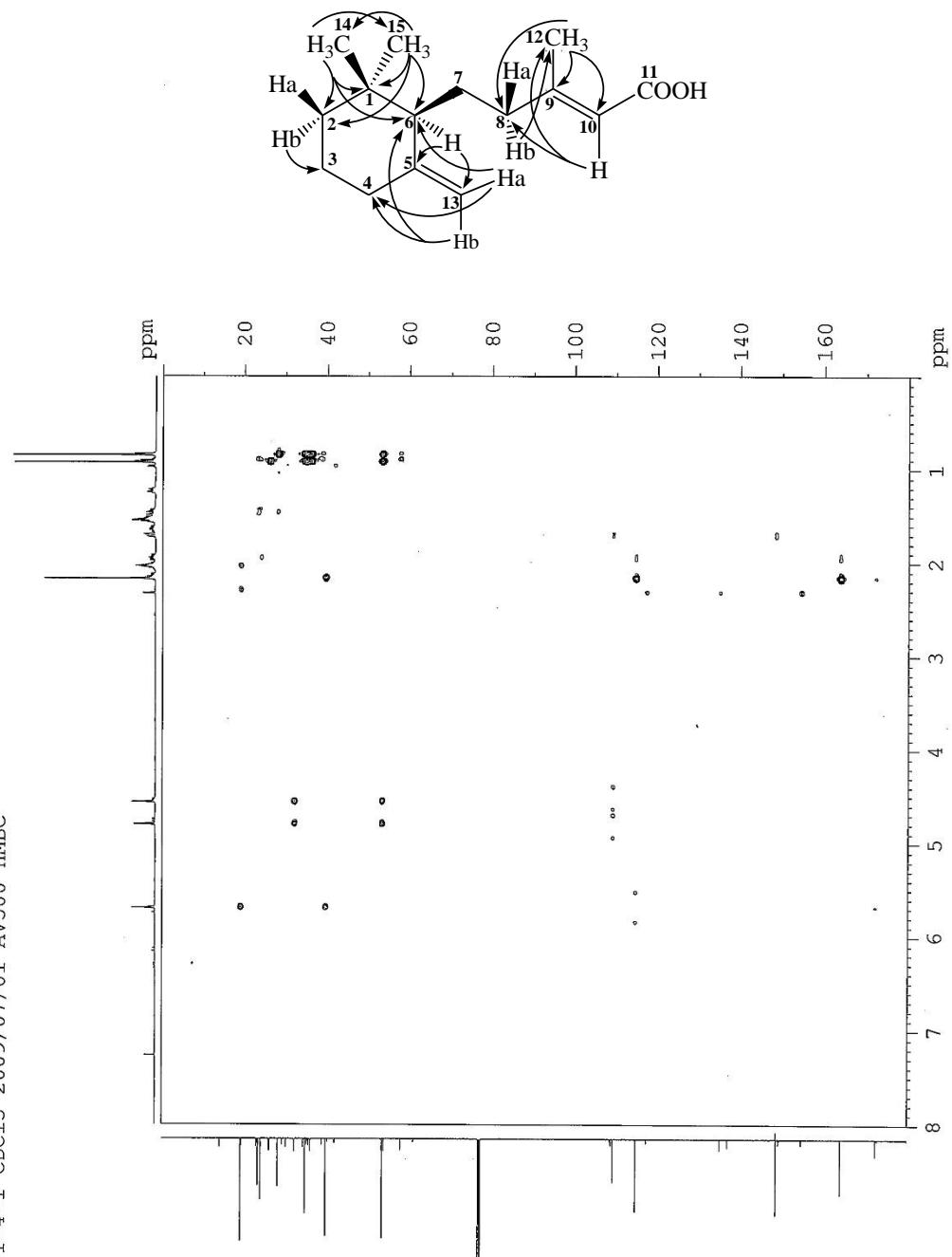


Fig. S27. HMBC spectrum of **10**

plec 3-1-4-1 CDC13 2009/07/01 AV500 NOESY

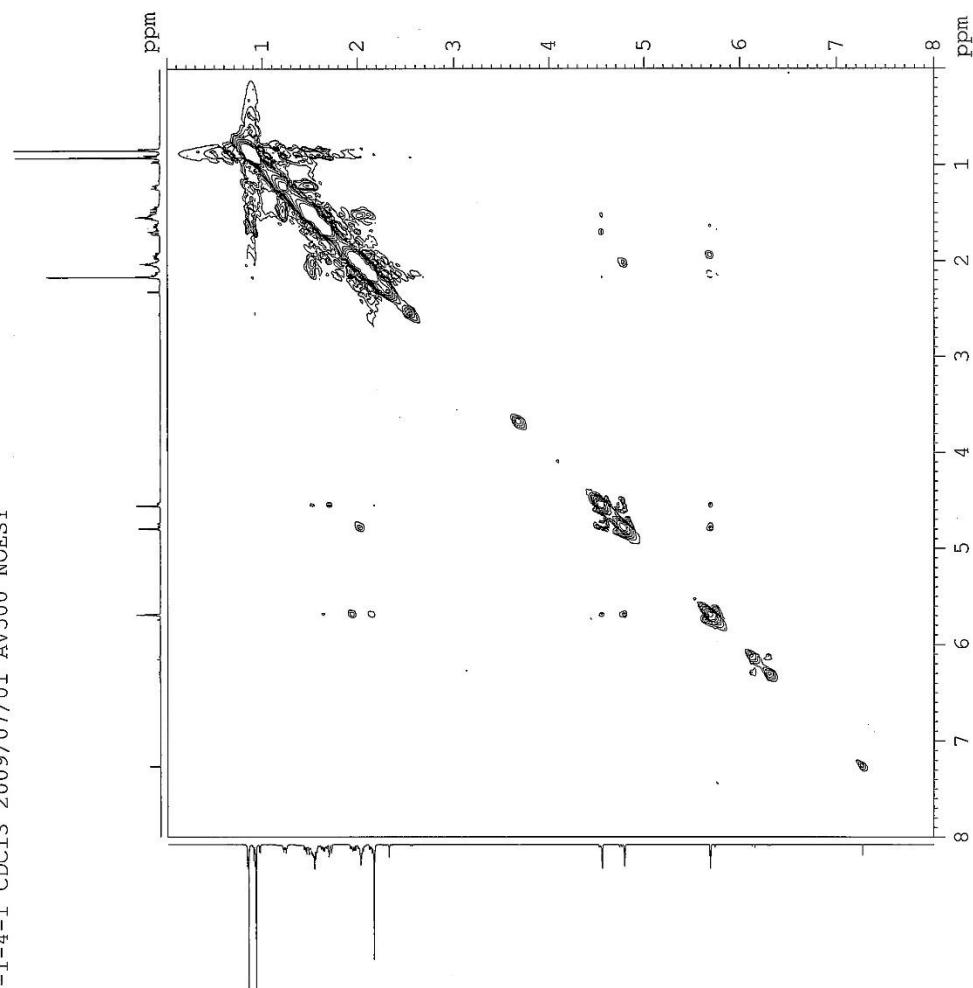
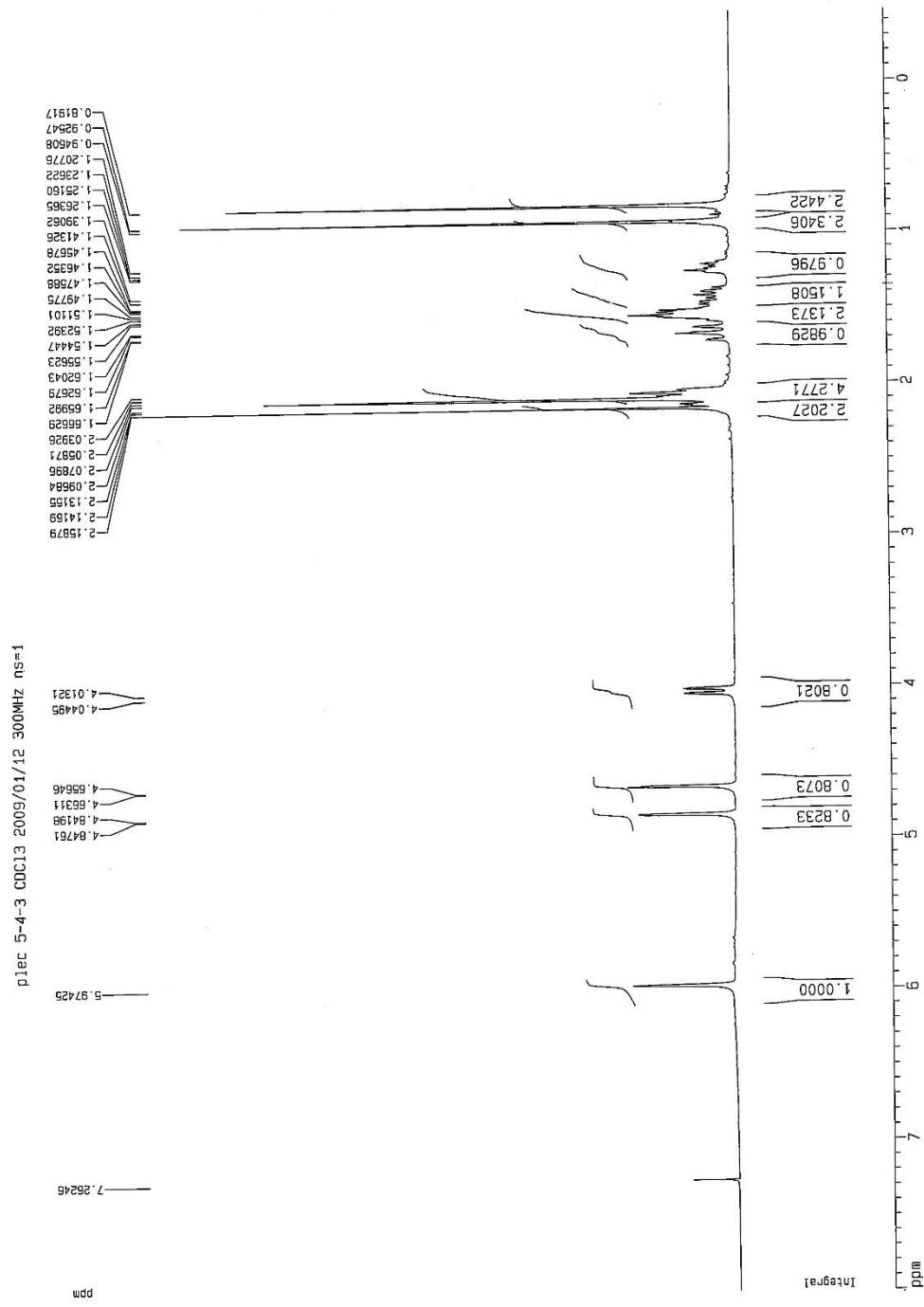


Fig. S28. NOESY spectrum of **10**



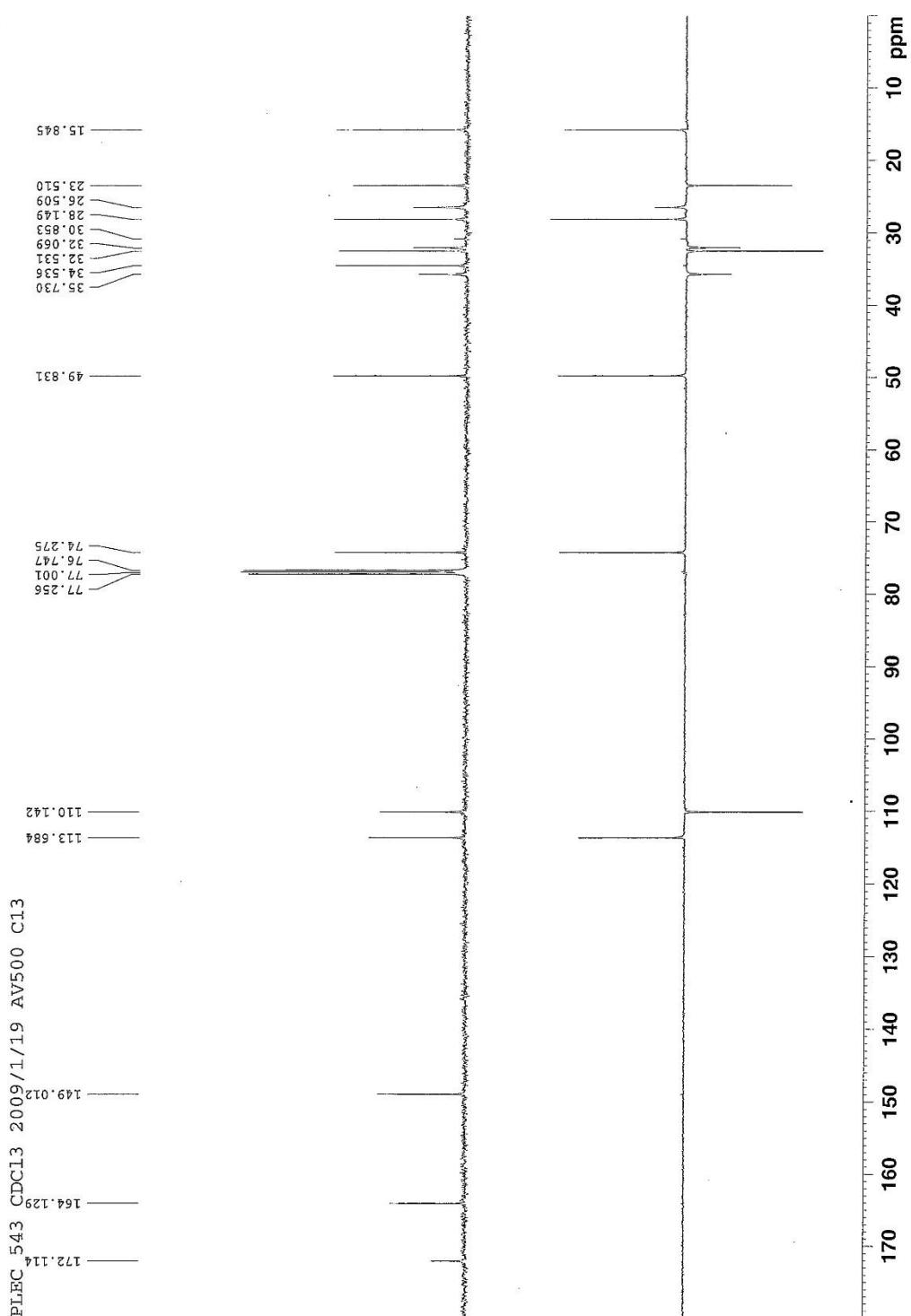


Fig. S30. <sup>13</sup>C NMR spectrum of **11**

PLEC 543 CDCl<sub>3</sub> 2009/1/19 AV500 HMBC

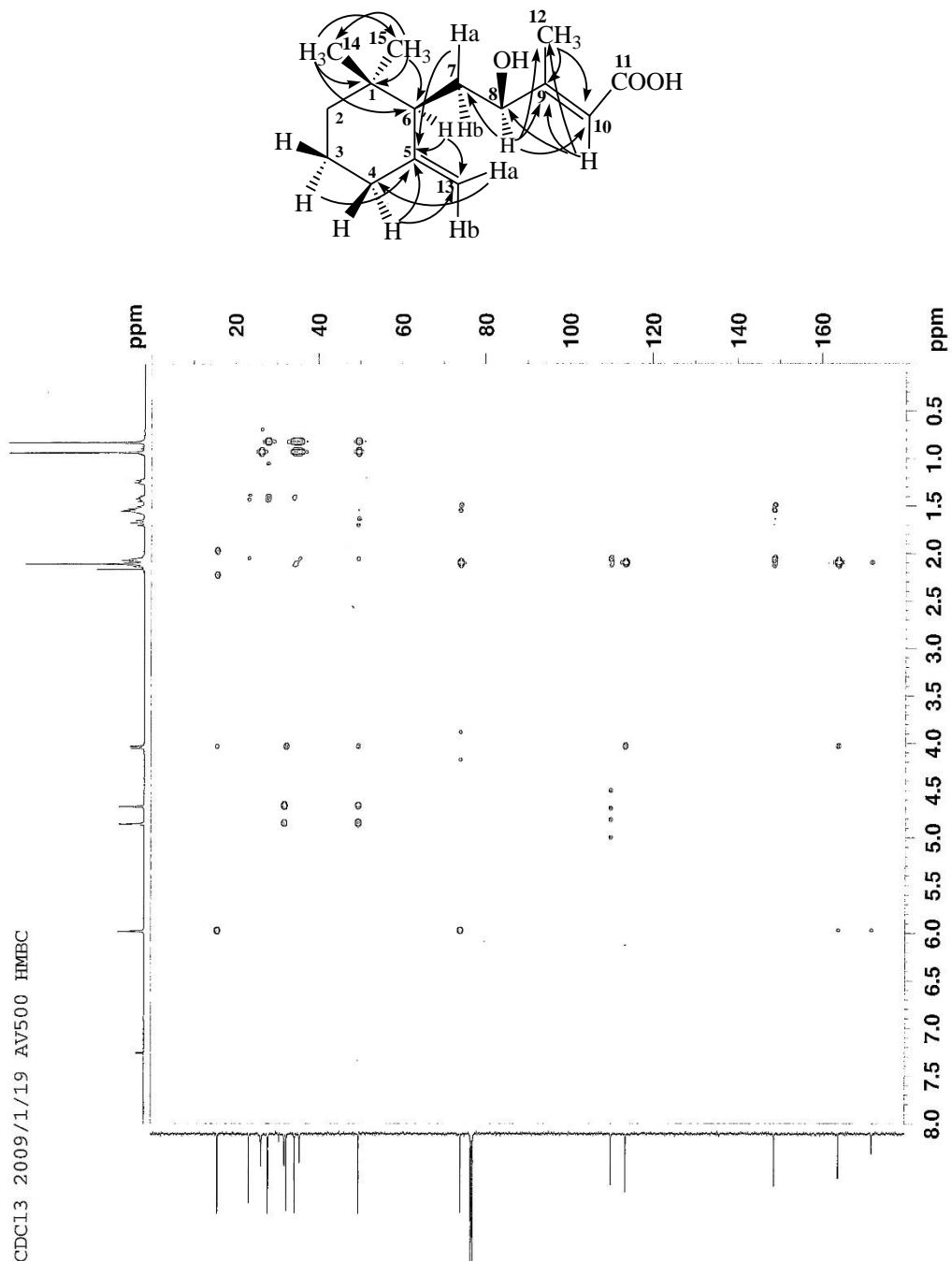


Fig. S31. HMBC spectrum of **11**

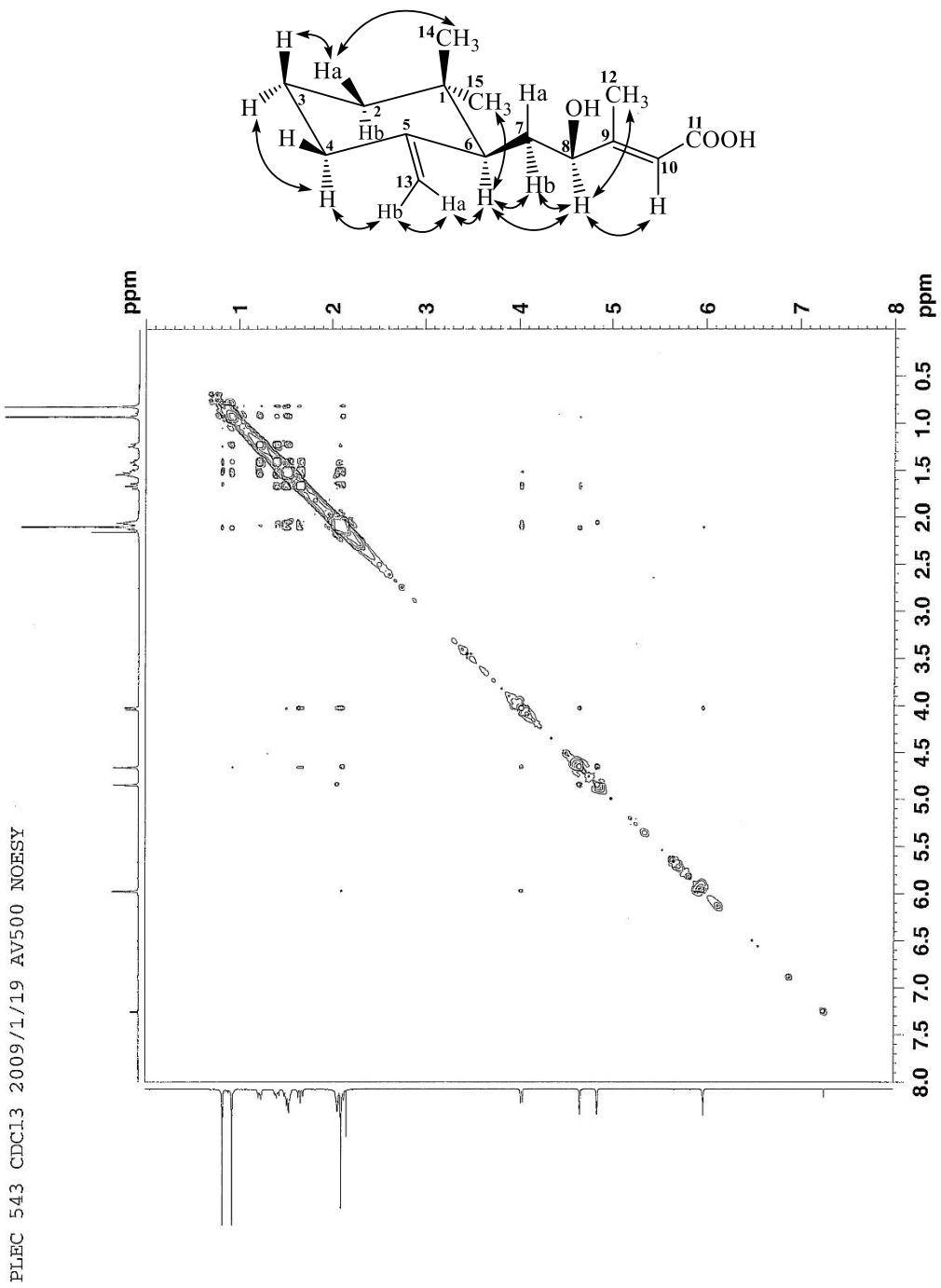


Fig. S32. NOESY spectrum of **11**

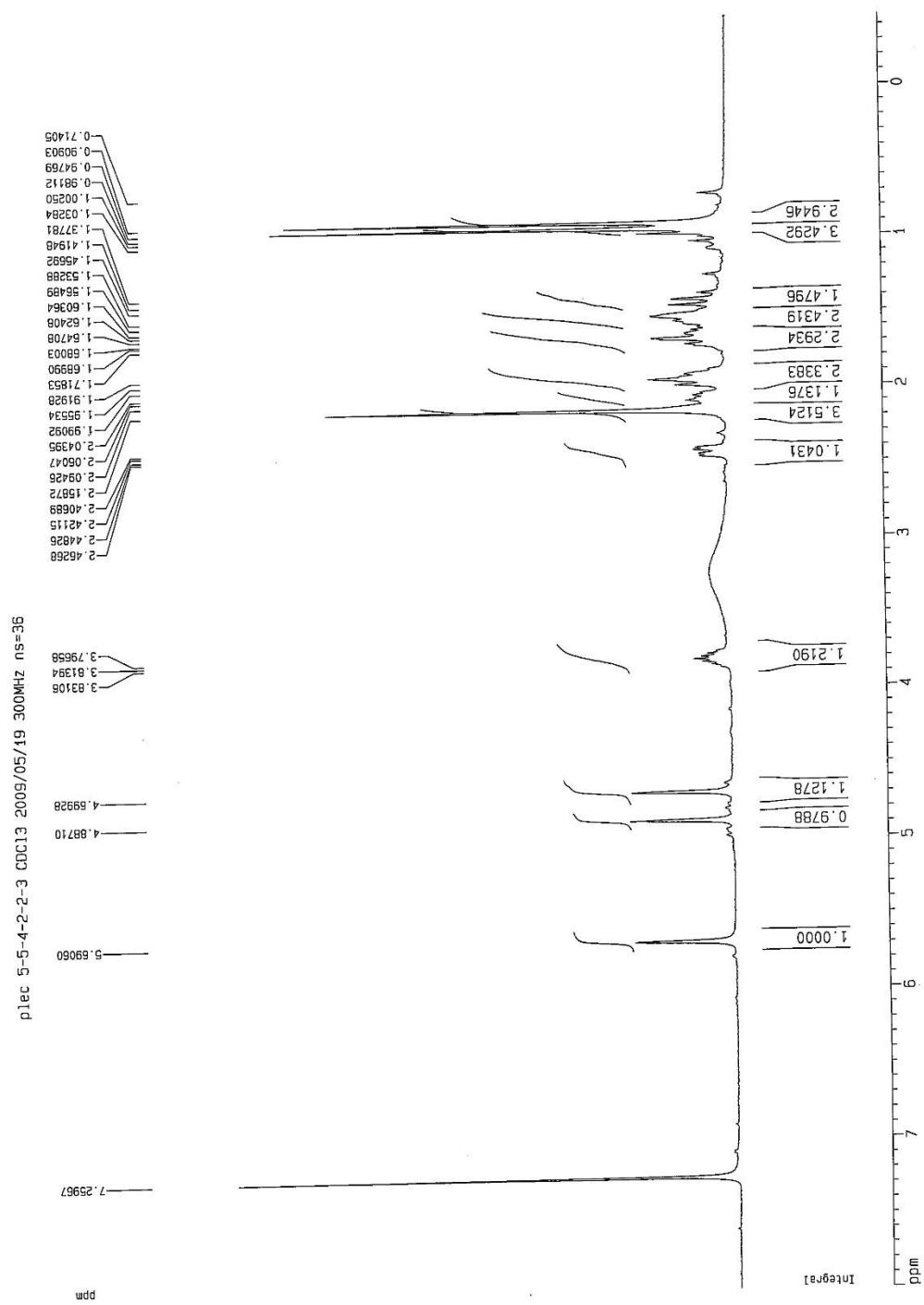


Fig. S33. <sup>1</sup>H NMR spectrum of **12**

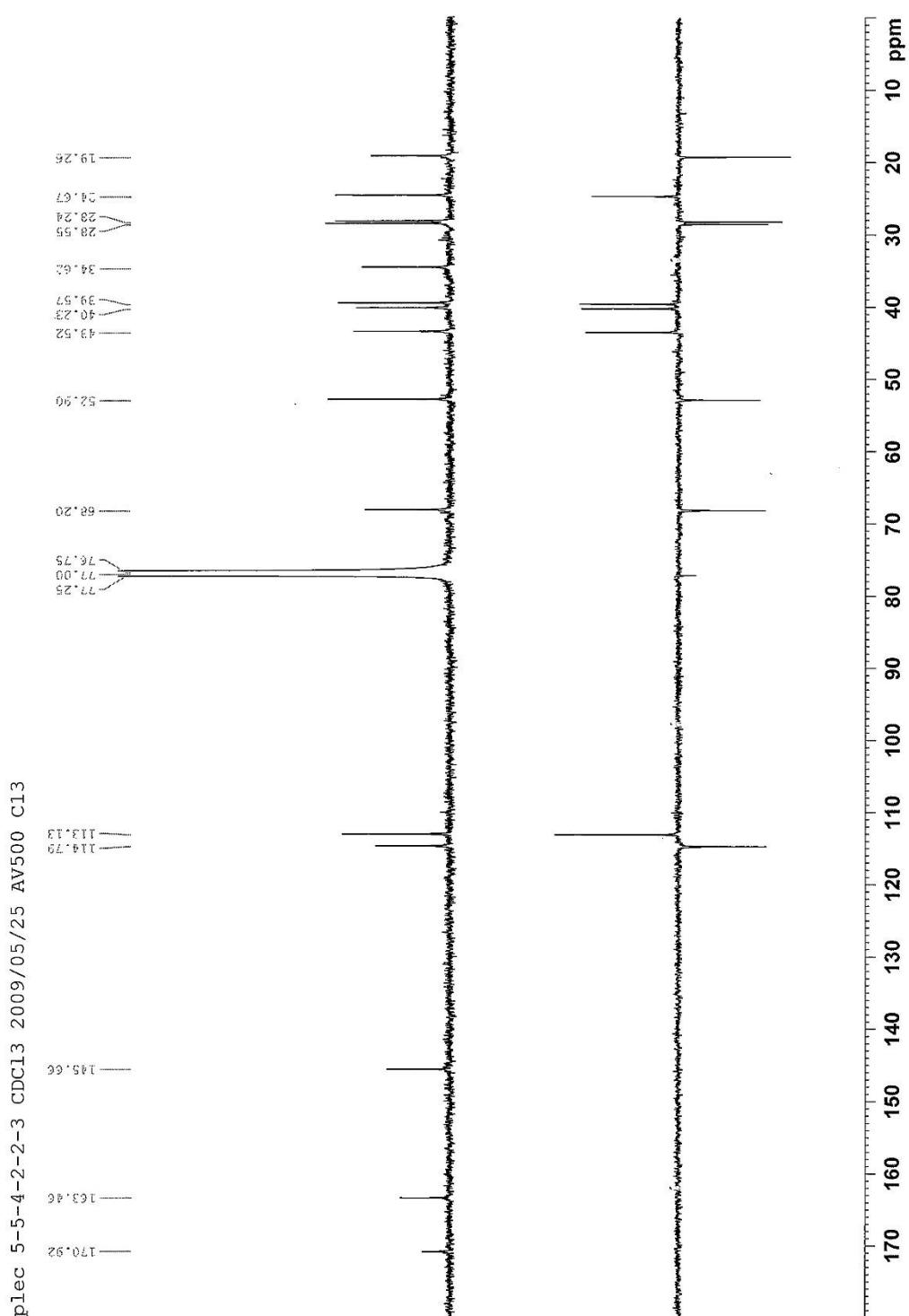


Fig. S34.  $^{13}\text{C}$  NMR spectrum of **12**

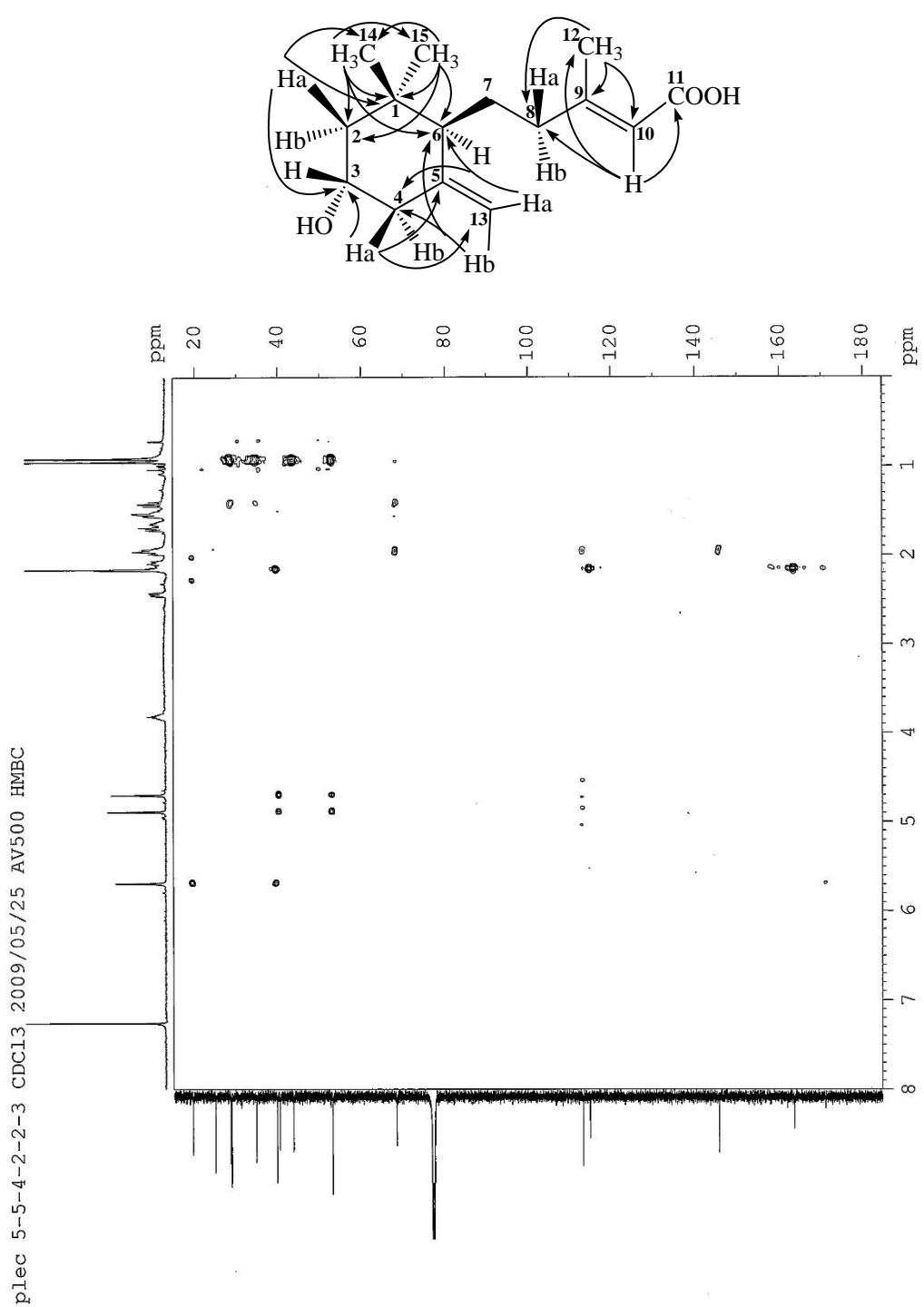


Fig. S35. HMBC spectrum of **12**

plec 5-5-4-2-2-3 CDCl<sub>3</sub> 2009/05/25 Av500 NOESY

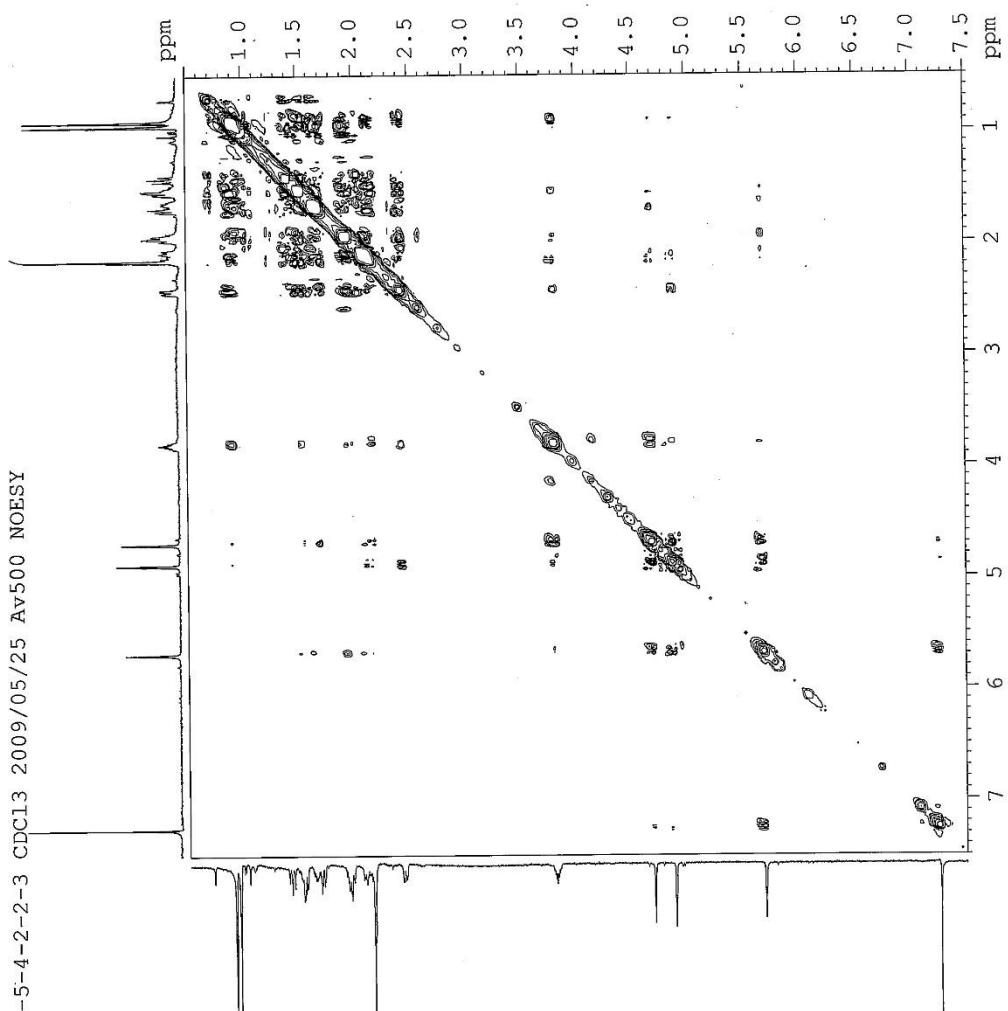


Fig. S36. NOESY spectrum of **12**

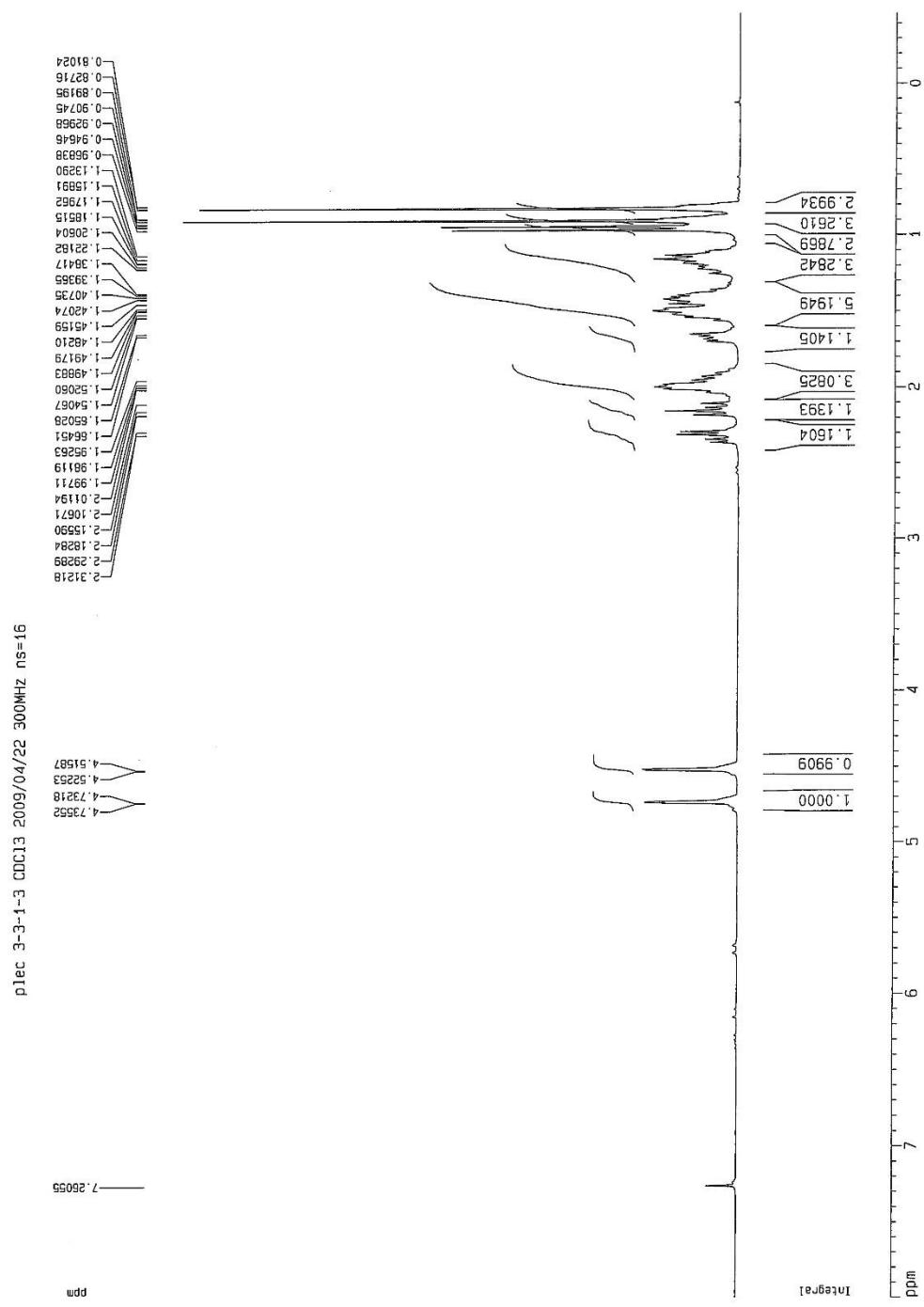


Fig. S37.  $^1\text{H}$  NMR spectrum of **13**

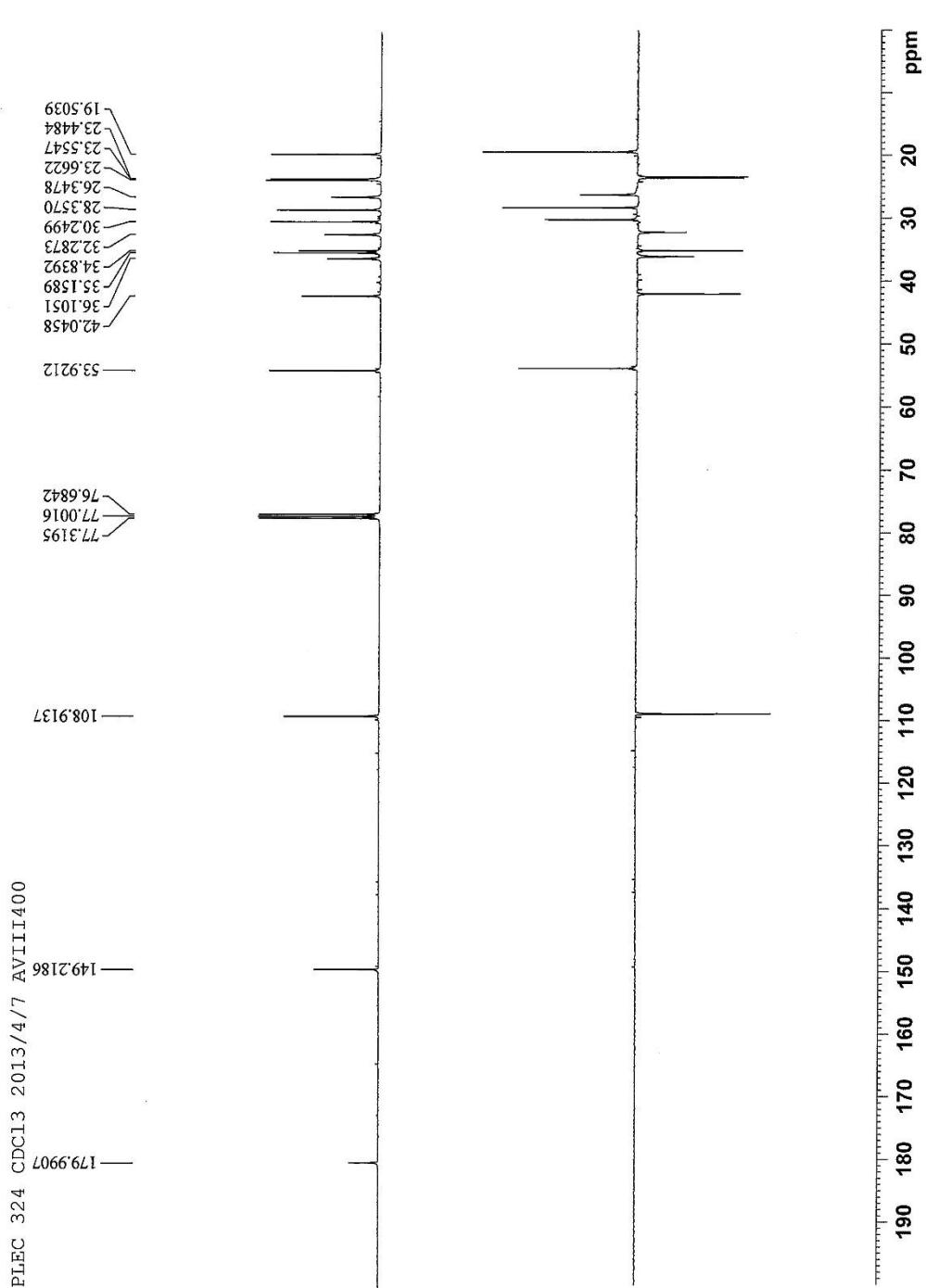


Fig. S38.  $^{13}\text{C}$  NMR spectrum of **13**

PLEC 324 CDC13 2013/4/7 AVIII400 HMBC



Fig. S39. HMBC spectrum of **13**

PLLC 324 CDCl<sub>3</sub> 2013/4/7 AVIII400 NOESY

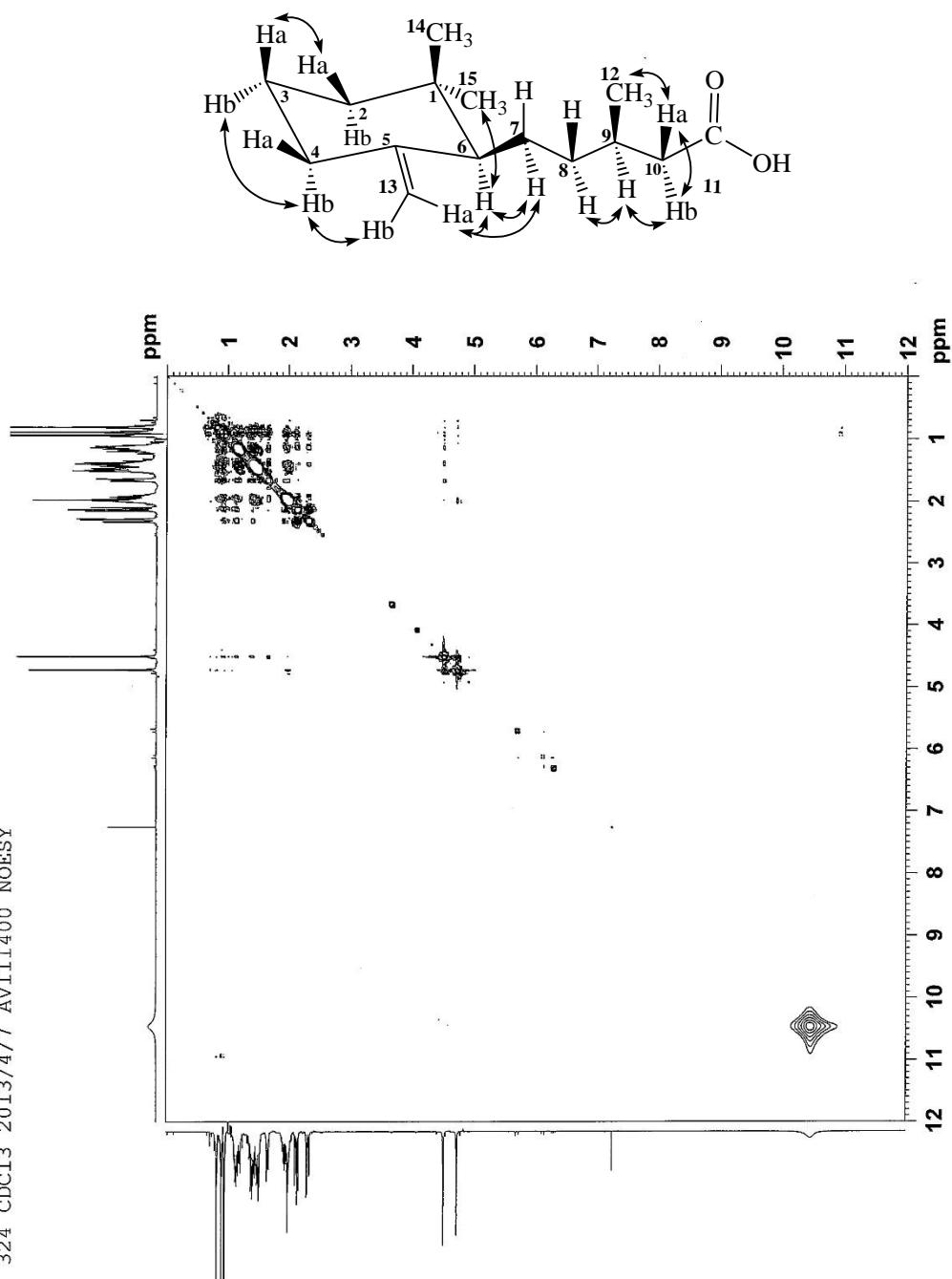


Fig. S40. NOESY spectrum of **13**

p1lec 5-4-1-5-4 CDCl<sub>3</sub> 2009/05/22 AV500 H

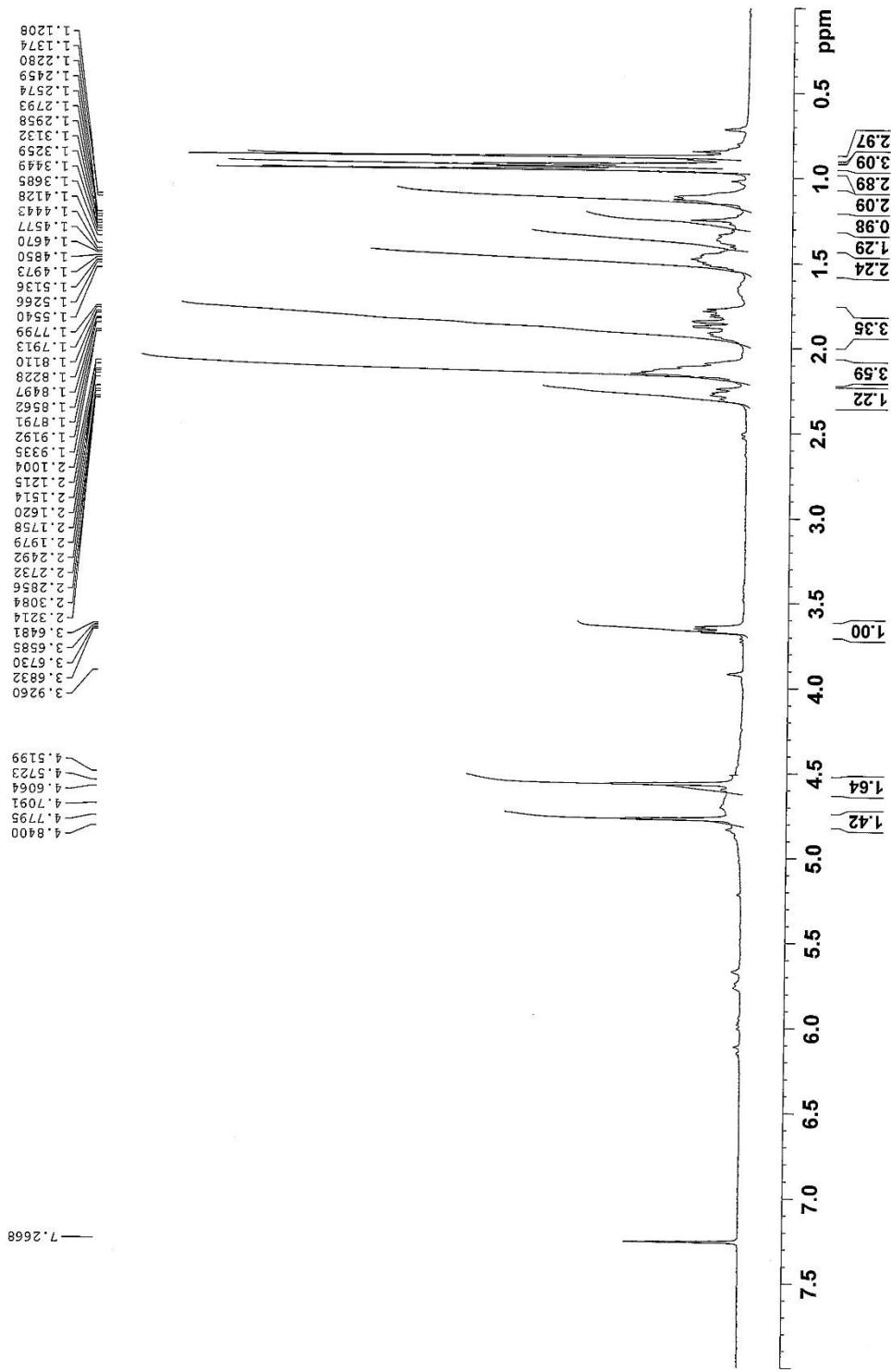


Fig. S41. <sup>1</sup>H NMR spectrum of **14**

plec 5-4-1-5-4 CDC13 2009/05/22 AV500 C13 & Deptt135

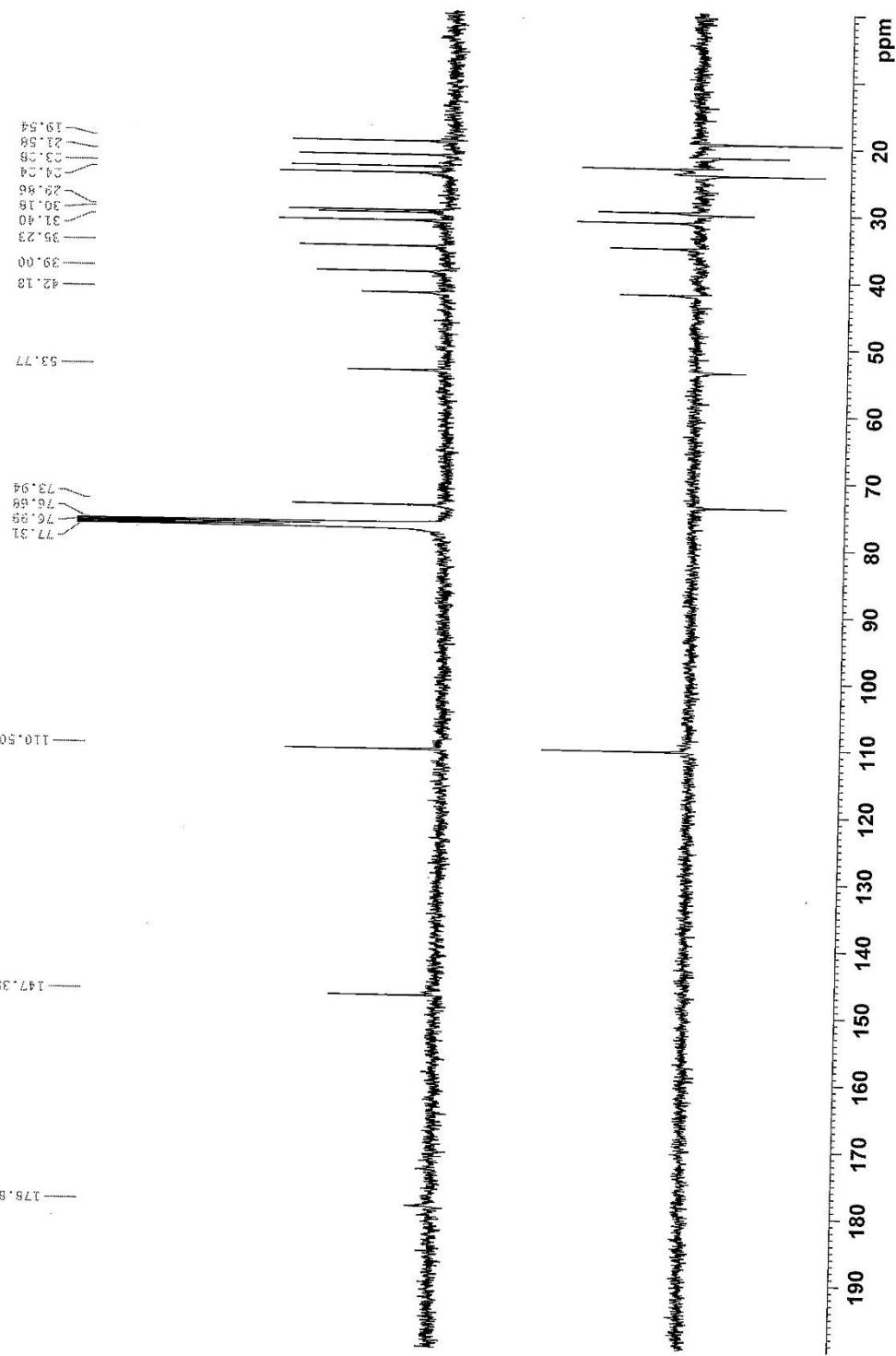


Fig. S42.  $^{13}\text{C}$  NMR spectrum of **14**

p1ec 5-4-1-5-4 CDCl<sub>3</sub> 2009/05/22 AV500 HMBC

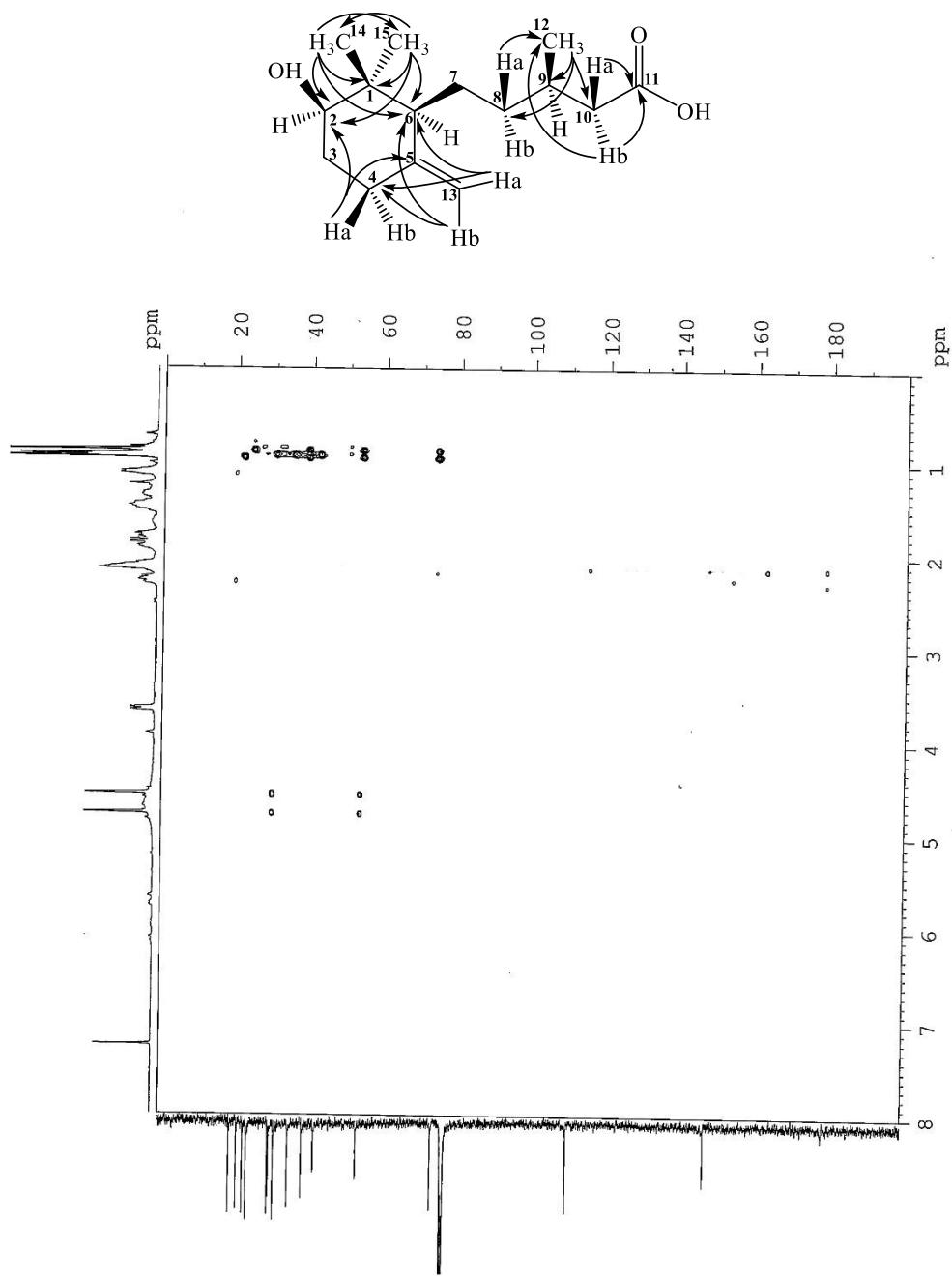


Fig. S43. HMBC spectrum of **14**

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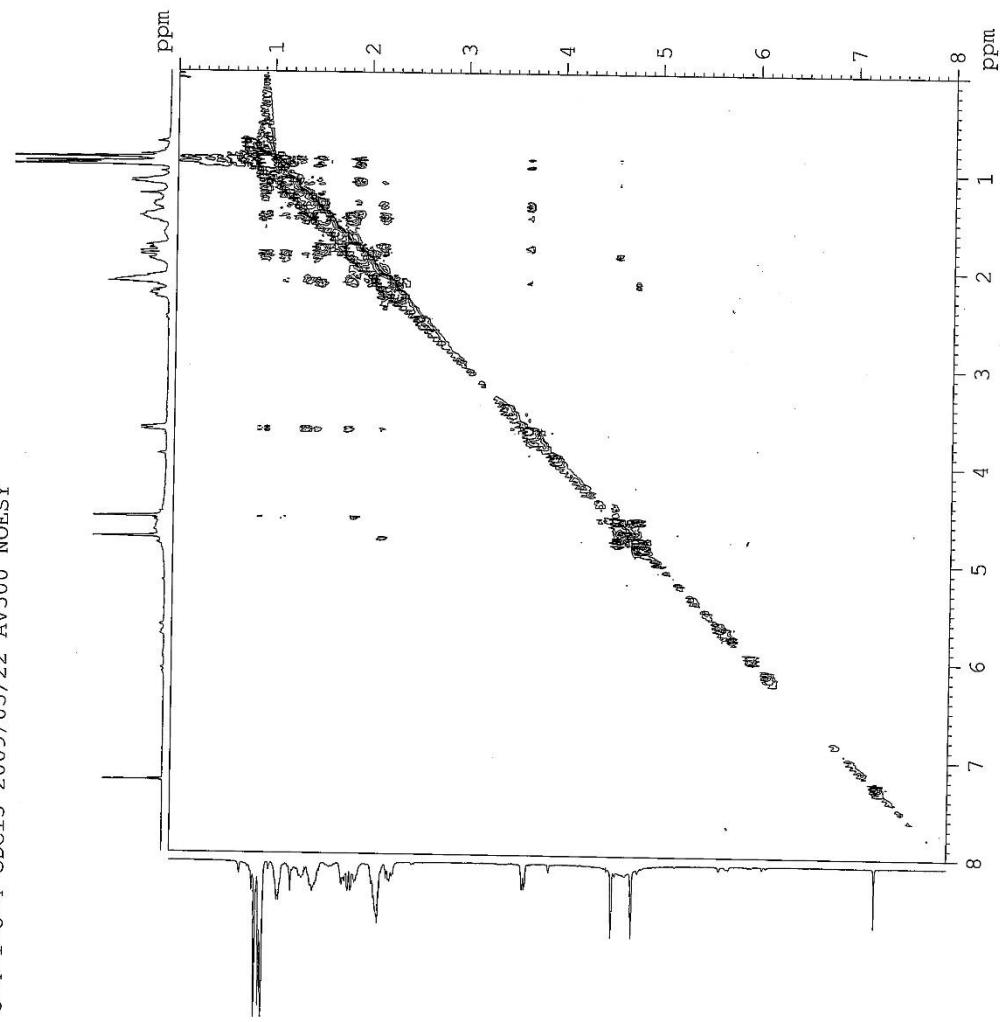
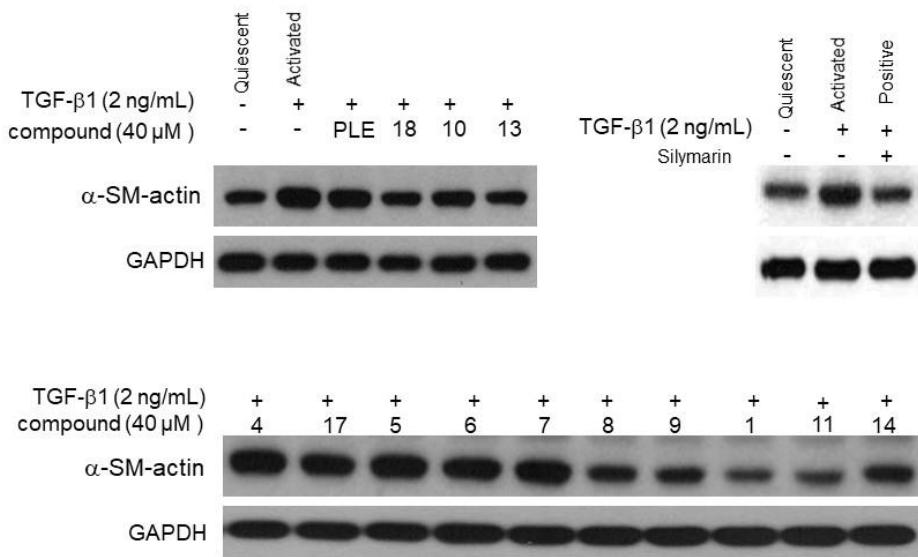


Fig. S44. NOESY spectrum of **14**

Fig. S45. Western blot analysis of examined compounds.



#### *Experimental detail of western blot analysis*

Proteins were separated on 10 % denatured gels and transferred to PVDF membranes. The transferred membranes were then incubated for 1 h with blocking solution of 5 % nonfat milk-TBST solution, followed by immersion in the same solution containing an antibody against glyceraldehyde 3-phosphate dehydrogenase (GAPDH) and  $\alpha$ -SMA (Santa Cruz) overnight. After washing with the mixture of tris-buffered saline and Tween® 20 (TBST) four times, the membranes were incubated with the 5 % nonfat milk-TBST solution containing peroxidase-labeled anti-rabbit IgG (Santa Cruz) for 2 h. After washing in TBST five times, enhanced chemiluminescence substrate (ECL, PerkinElmer TM) was used for protein detection. Band intensity was quantified using GeneTools Image Software (Syngene, England), as GAPDH was used as the internal control. The Western blot experiments were repeated in triplicate.