

*ent*-KAURANE DITERPENOIDS AND OTHER CONSTITUENTS FROM THE STEM OF *Xylopia laevigata* (ANNONACEAE)

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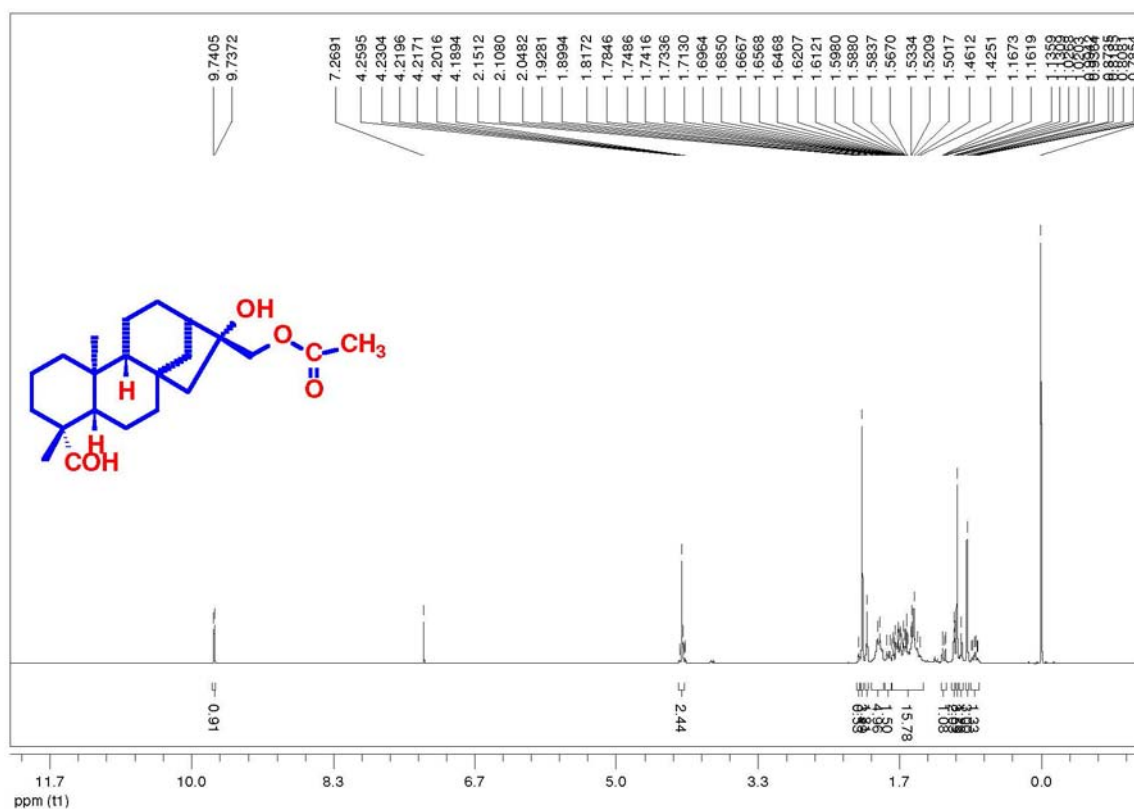


Figure 1S. <sup>1</sup>H NMR spectrum of *ent*-16β-hydroxy-17-acetoxy-kauran-19-al (7) in CDCl<sub>3</sub> at 400 MHz

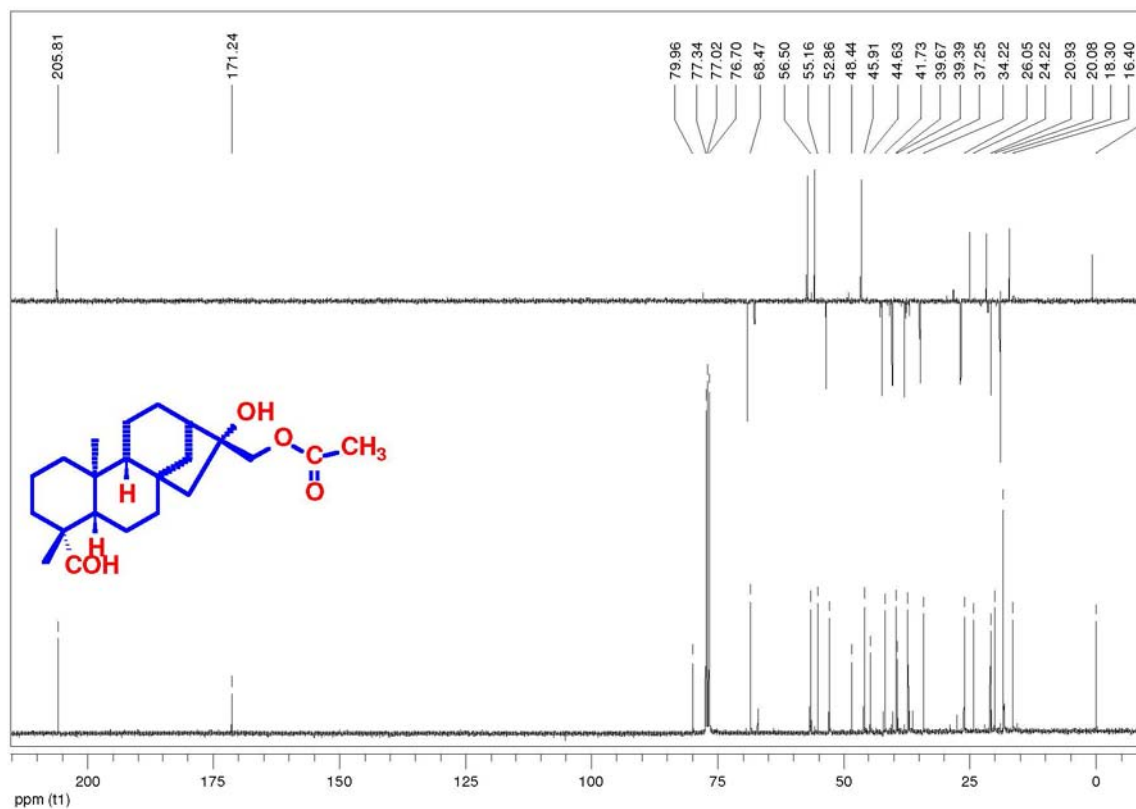


Figure 2S.  $^{13}\text{C}\{^1\text{H}\}$  and DEPT 135 NMR spectra of ent-16 $\beta$ -hydroxy-17-acetoxy-kauran-19-al (7) in  $\text{CDCl}_3$  at 100 MHz.

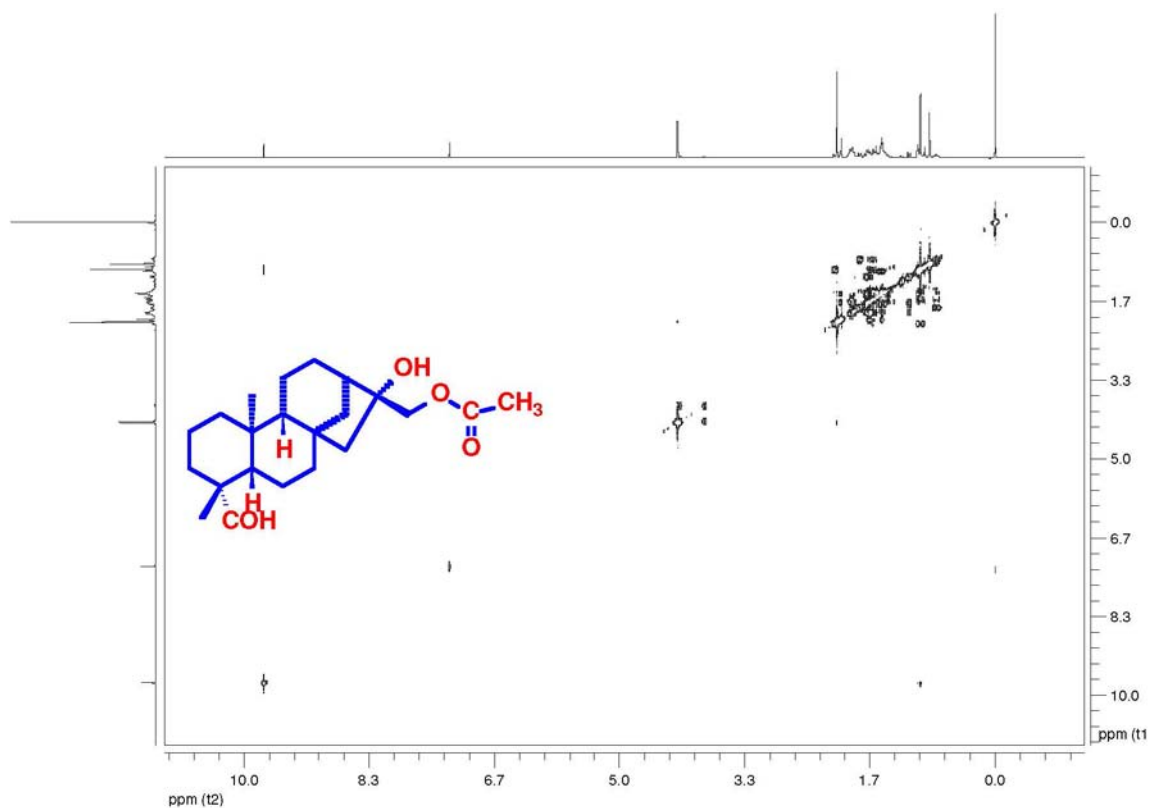


Figure 3S.  $^1\text{H}\text{-}^1\text{H}$  correlation map from COSY NMR experiment of ent-16 $\beta$ -hydroxy-17-acetoxy-kauran-19-al (7) in  $\text{CDCl}_3$  at 400 MHz.

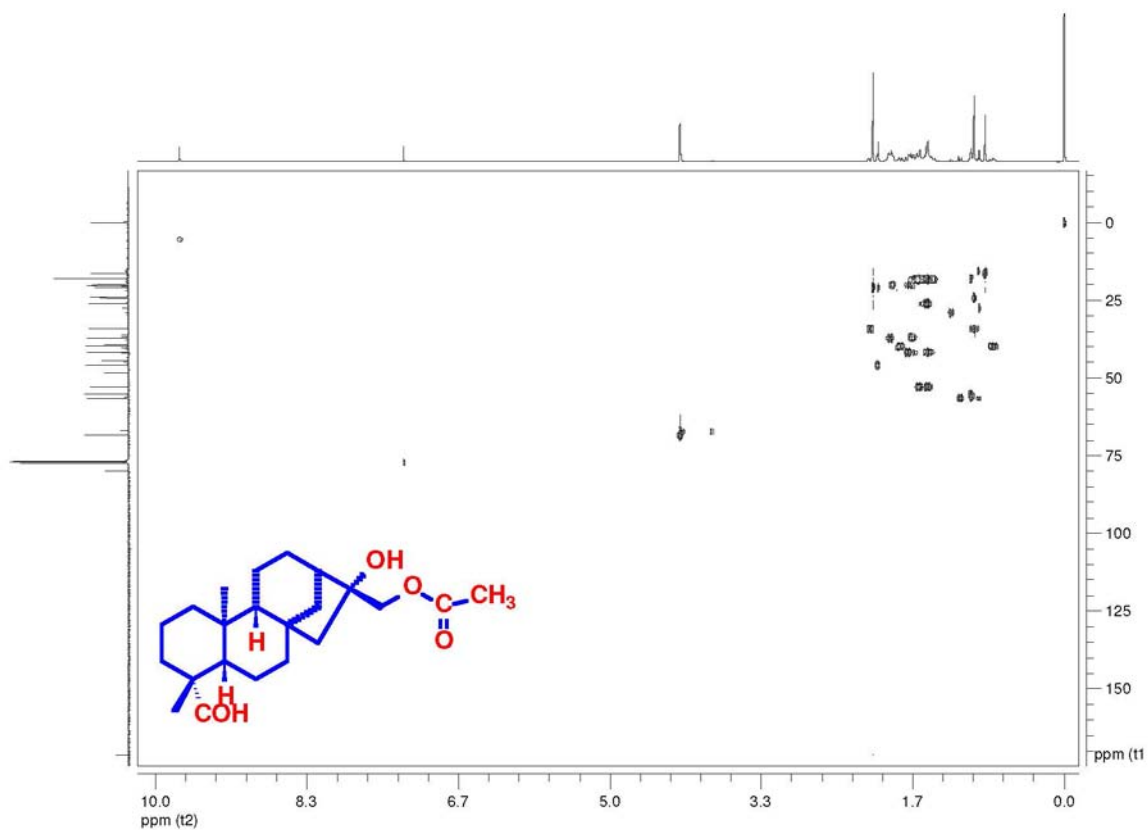


Figure 4S.  $^1\text{H}$ - $^{13}\text{C}$  one-bond correlation map from HSQC NMR experiment of *ent*-16 $\beta$ -hydroxy-17-acetoxy-kauran-19-al (7) in  $\text{CDCl}_3$  at 400 and 100 MHz.

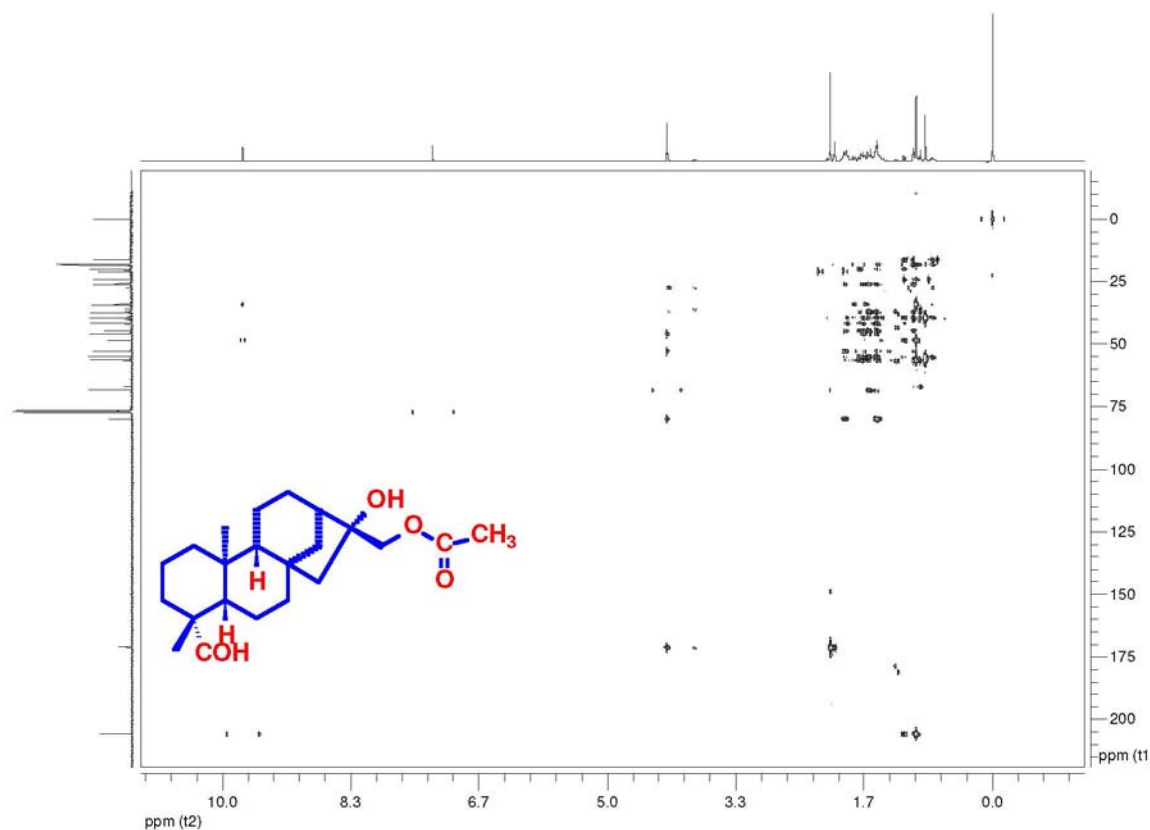


Figure 5S.  $^1\text{H}$ - $^{13}\text{C}$  long-range correlation map from HMBC NMR experiment of *ent*-16 $\beta$ -hydroxy-17-acetoxy-kauran-19-al (7) in  $\text{CDCl}_3$  at 400 and 100 MHz.

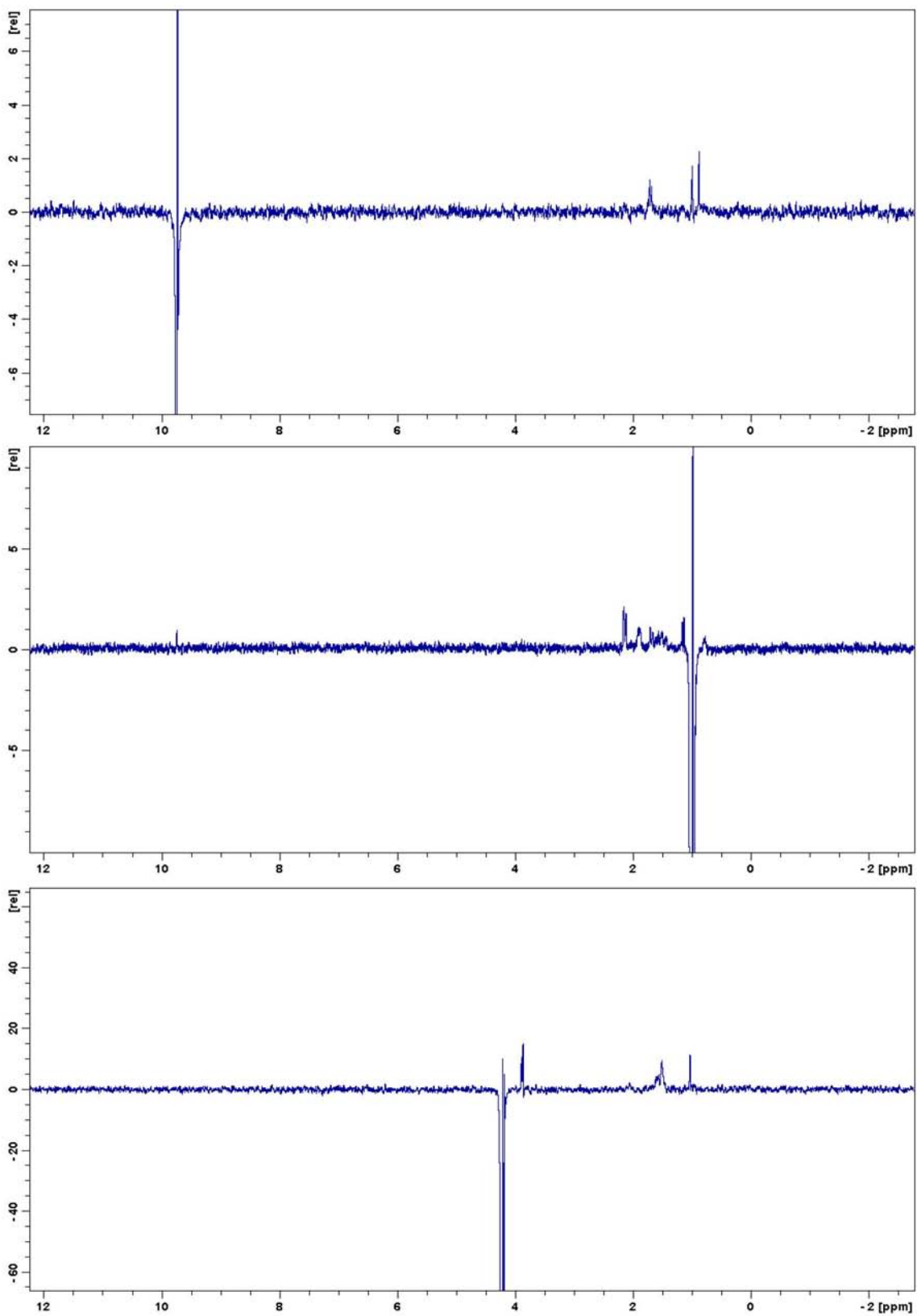


Figure 6S. 1D NOE experiments for *ent*-16 $\beta$ -hydroxy-17-acetoxy-kauran-19-al (7) in CDCl<sub>3</sub> at 400 MHz

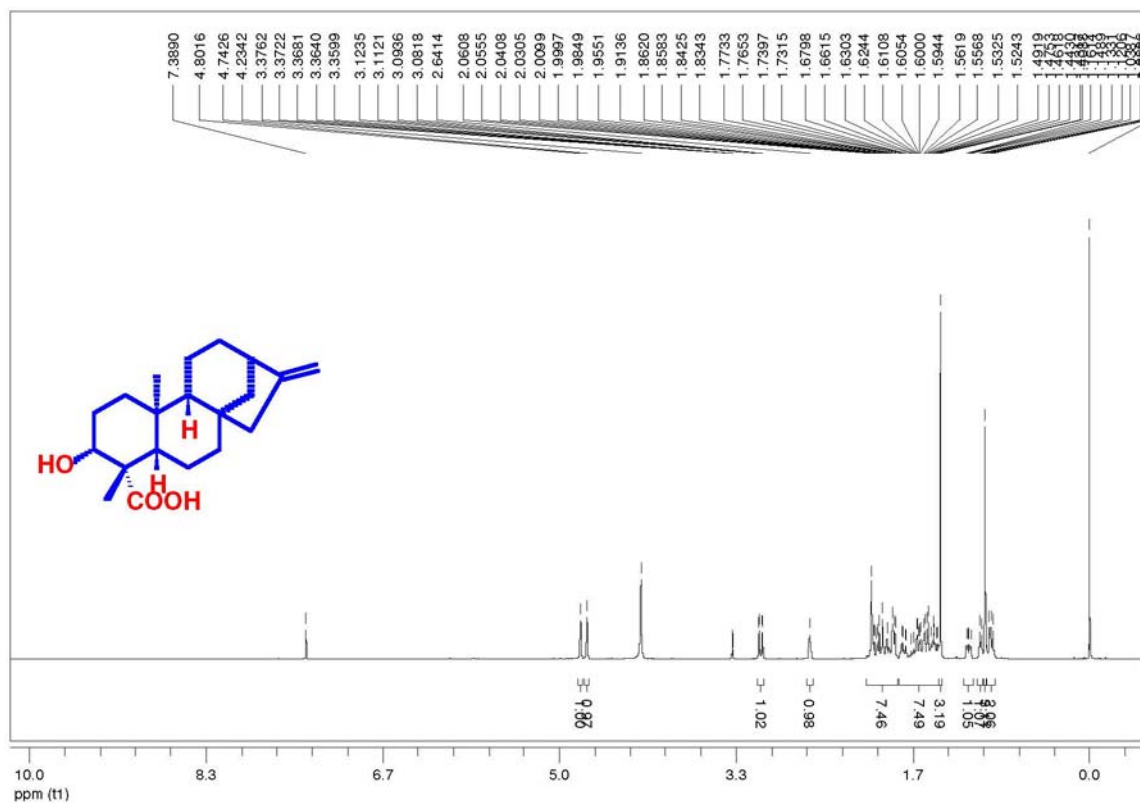


Figure 7S. <sup>1</sup>H NMR spectrum of ent-3β-hydroxy-kaur-16-en-19-oic acid (8) in CDCl<sub>3</sub> + drops of CD<sub>3</sub>OD at 400 MHz.

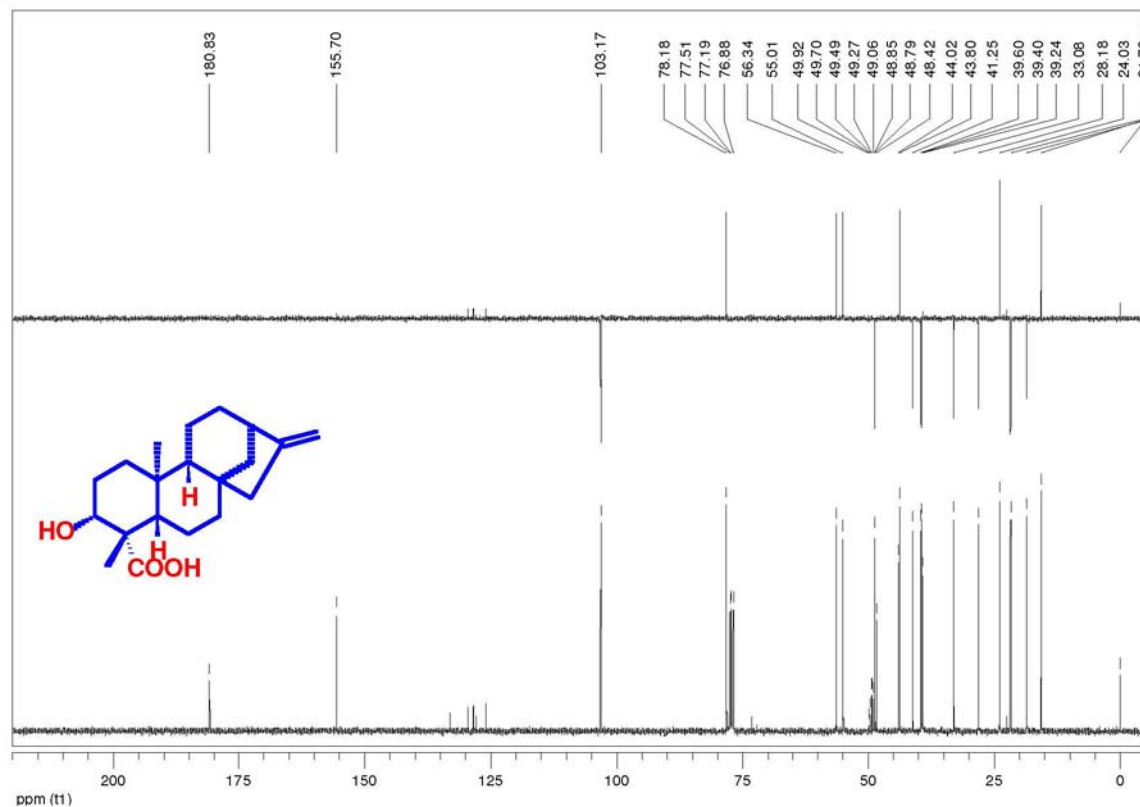


Figure 8S. <sup>13</sup>C<sup>[1</sup>H] and DEPT 135 NMR spectra of ent-3β-hydroxy-kaur-16-en-19-oic acid (8) in CDCl<sub>3</sub> + drops of CD<sub>3</sub>OD at 100 MHz.

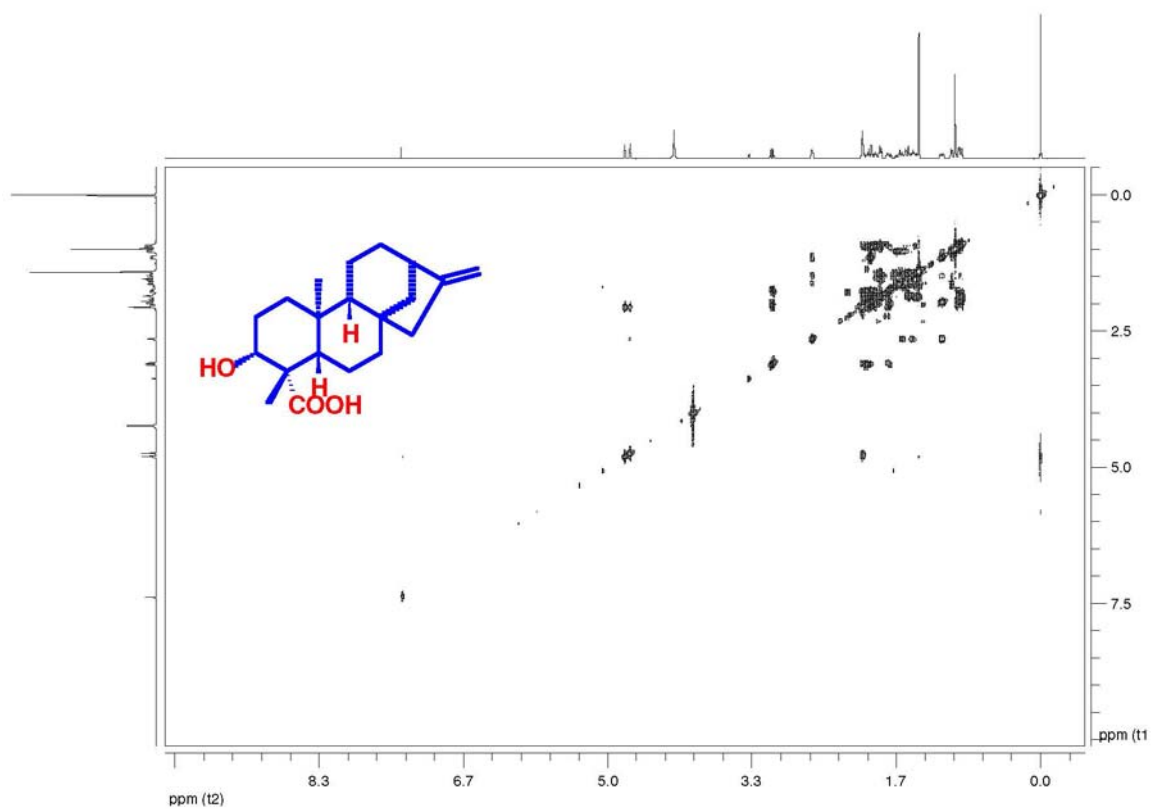


Figure 9S.  $^1\text{H}$ - $^1\text{H}$  correlation map from COSY NMR experiment of ent-3 $\beta$ -hydroxy-kaur-16-en-19-oic acid (8) in  $\text{CDCl}_3$  + drops of  $\text{CD}_3\text{OD}$  at 400 MHz

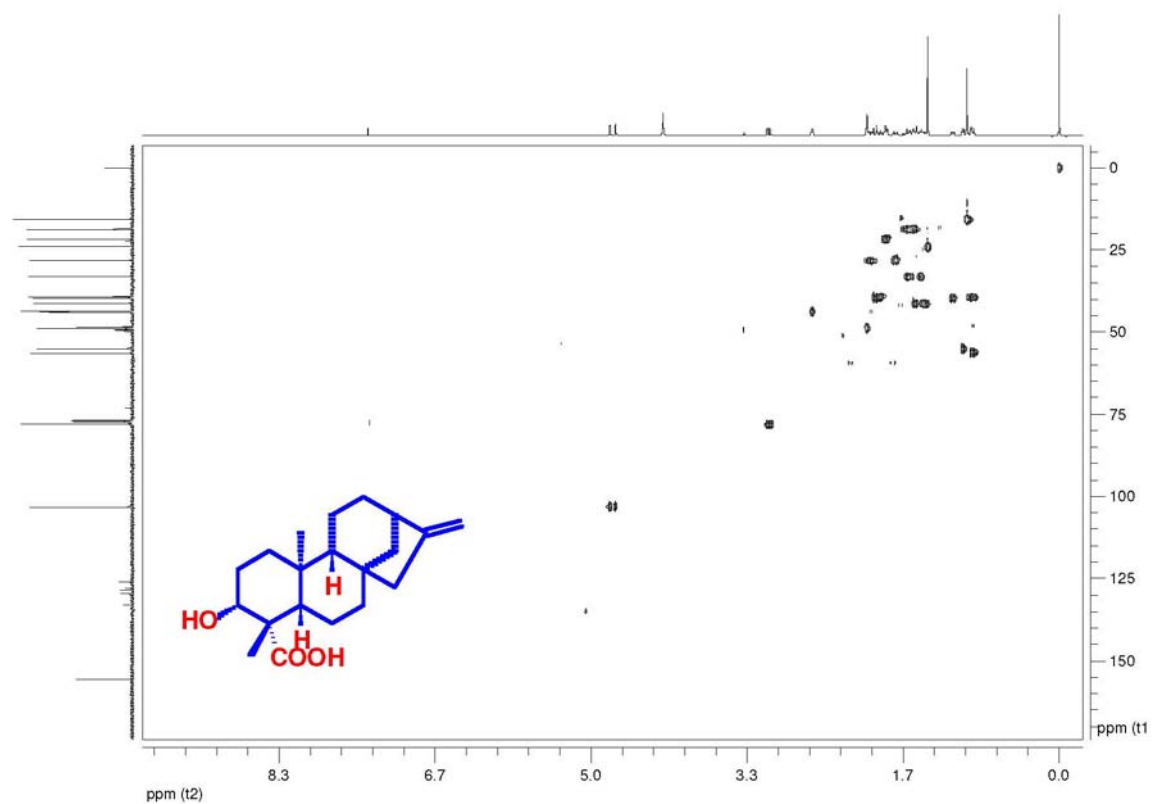
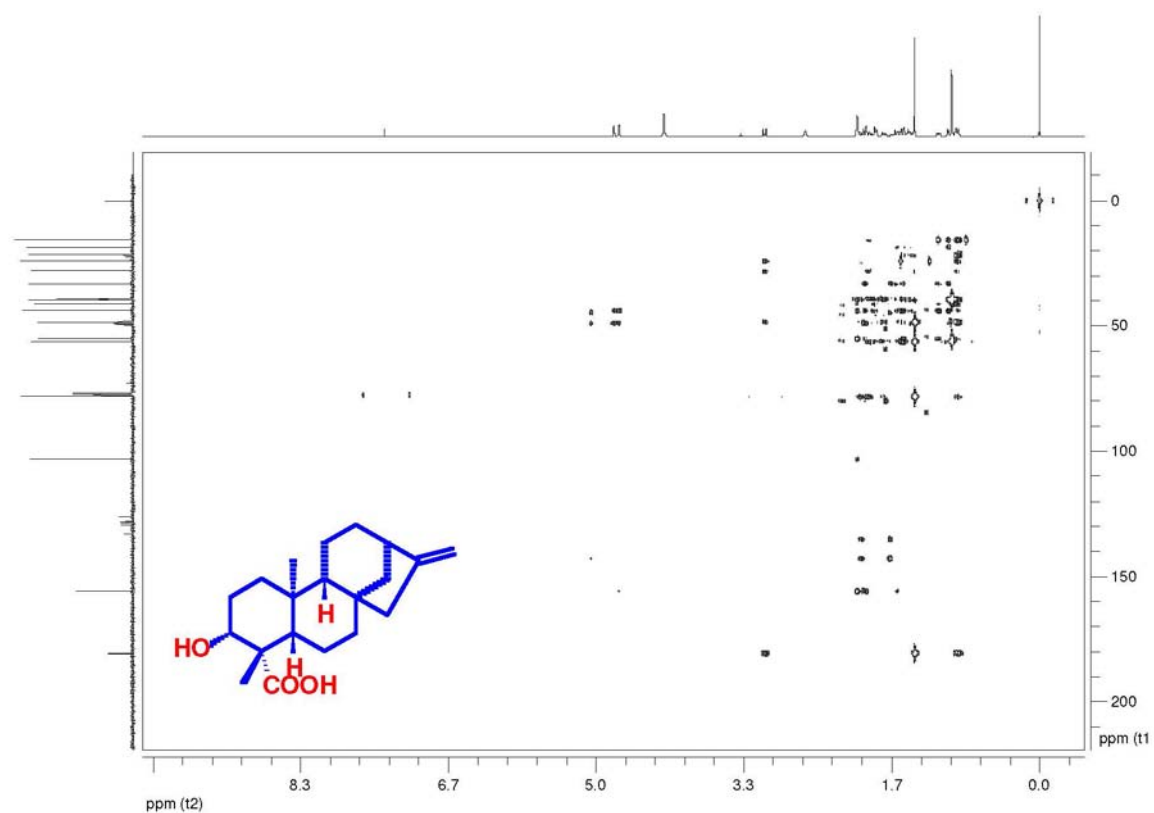


Figure 10S.  $^1\text{H}$ - $^{13}\text{C}$  one-bond correlation map from HSQC NMR experiment of ent-3 $\beta$ -hydroxy-kaur-16-en-19-oic acid (8) in  $\text{CDCl}_3$  + drops of  $\text{CD}_3\text{OD}$  at 400 and 100 MHz



**Figure 11S.** <sup>1</sup>H-<sup>13</sup>C long-range correlation map from HMBC NMR experiment of ent-3β-hydroxy-kaur-16-en-19-oic acid (8) in CDCl<sub>3</sub> + drops of CD<sub>3</sub>OD at 400 and 100 MHz.

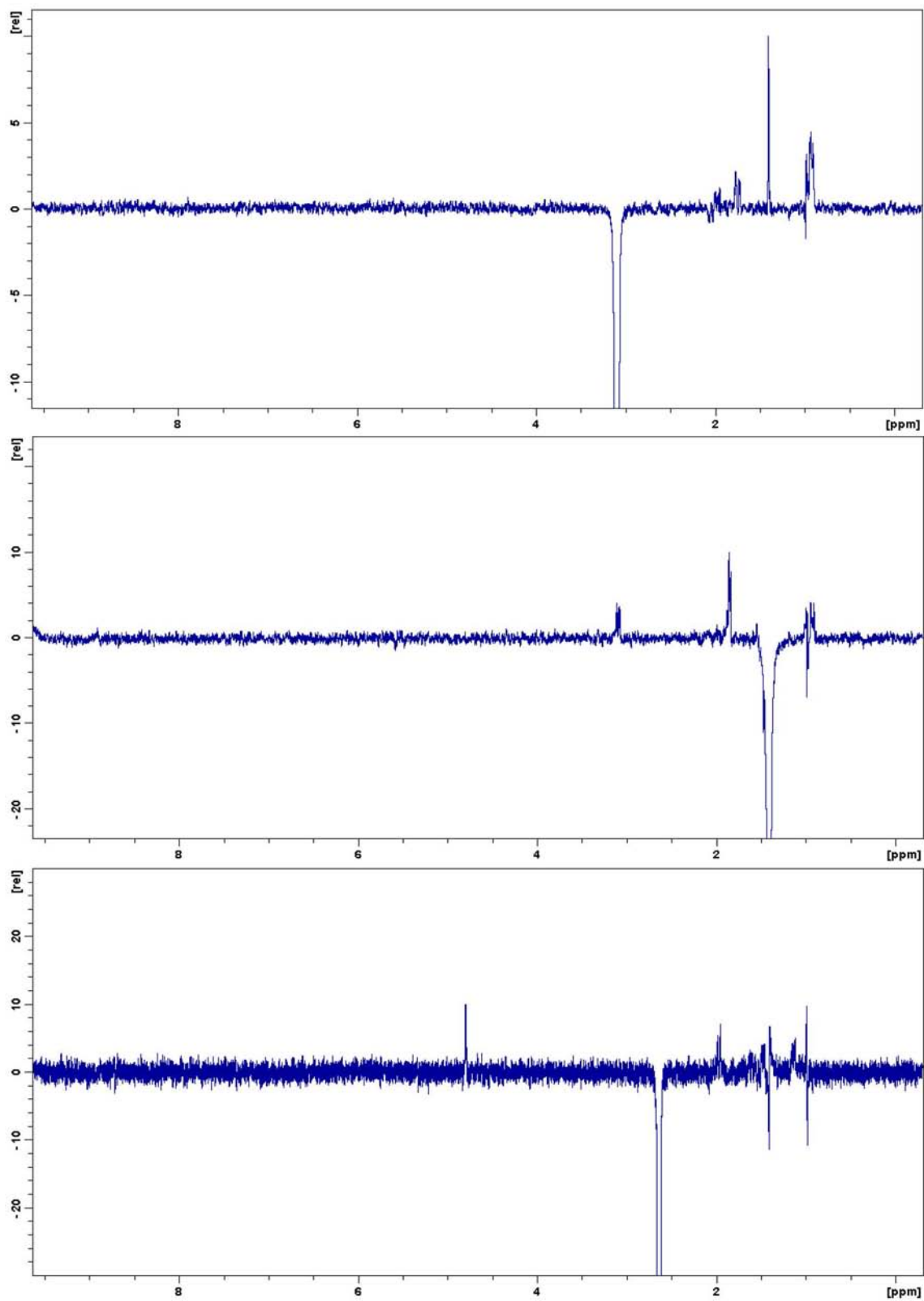


Figure 12S. 1D NOE experiments for ent-3β-hydroxy-kaur-16-en-19-oic acid (8) in CDCl<sub>3</sub> + drops of CD<sub>3</sub>OD at 400 MHz



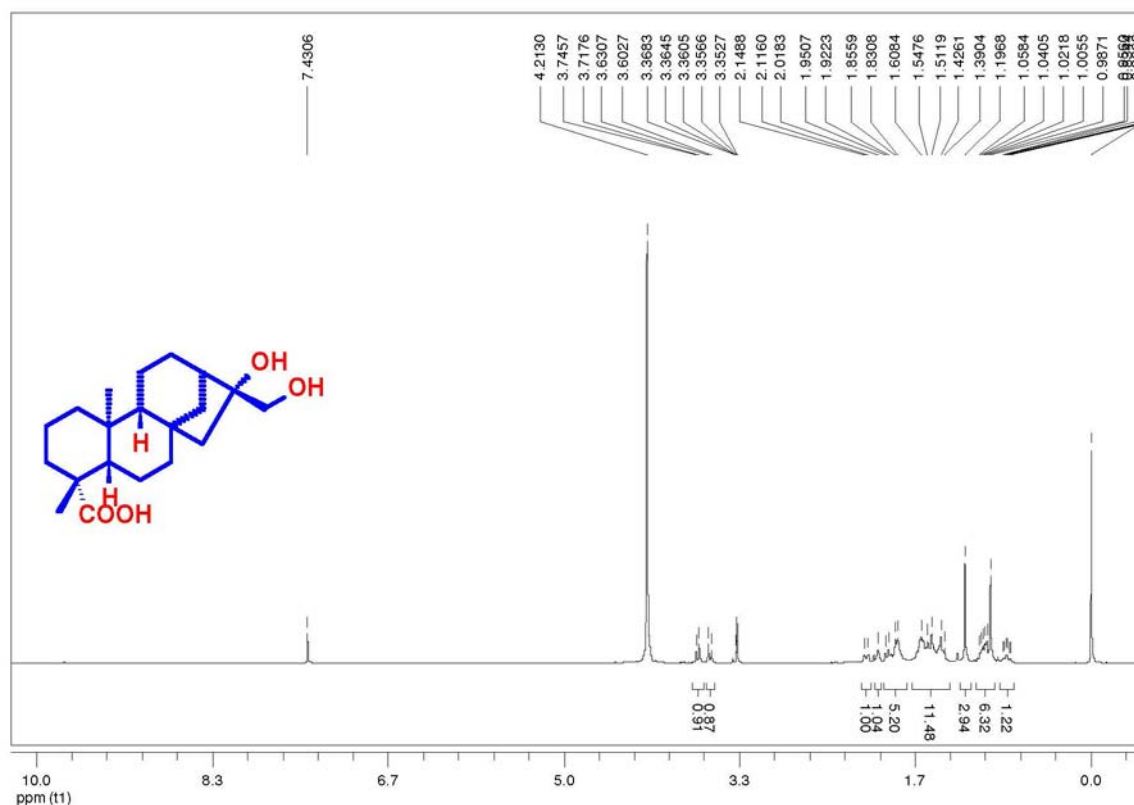


Figure 13S. <sup>1</sup>H NMR spectrum of ent-16β,17-dihydroxy-kauran-19-oic acid (9) in CDCl<sub>3</sub> + drops of CD<sub>3</sub>OD at 400 MHz

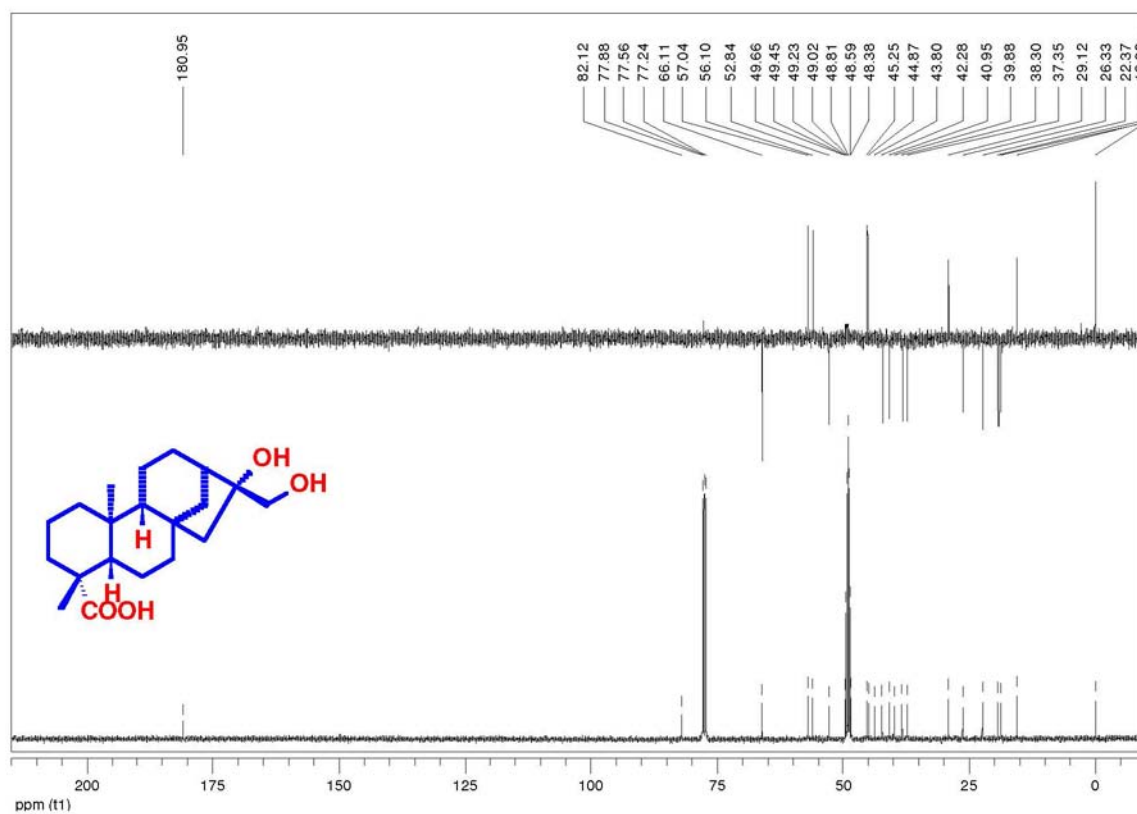


Figure 14S. <sup>13</sup>C[<sup>1</sup>H] and DEPT 135 NMR spectra of ent-16β,17-dihydroxy-kauran-19-oic acid (9) in CDCl<sub>3</sub> + drops of CD<sub>3</sub>OD at 100 MHz

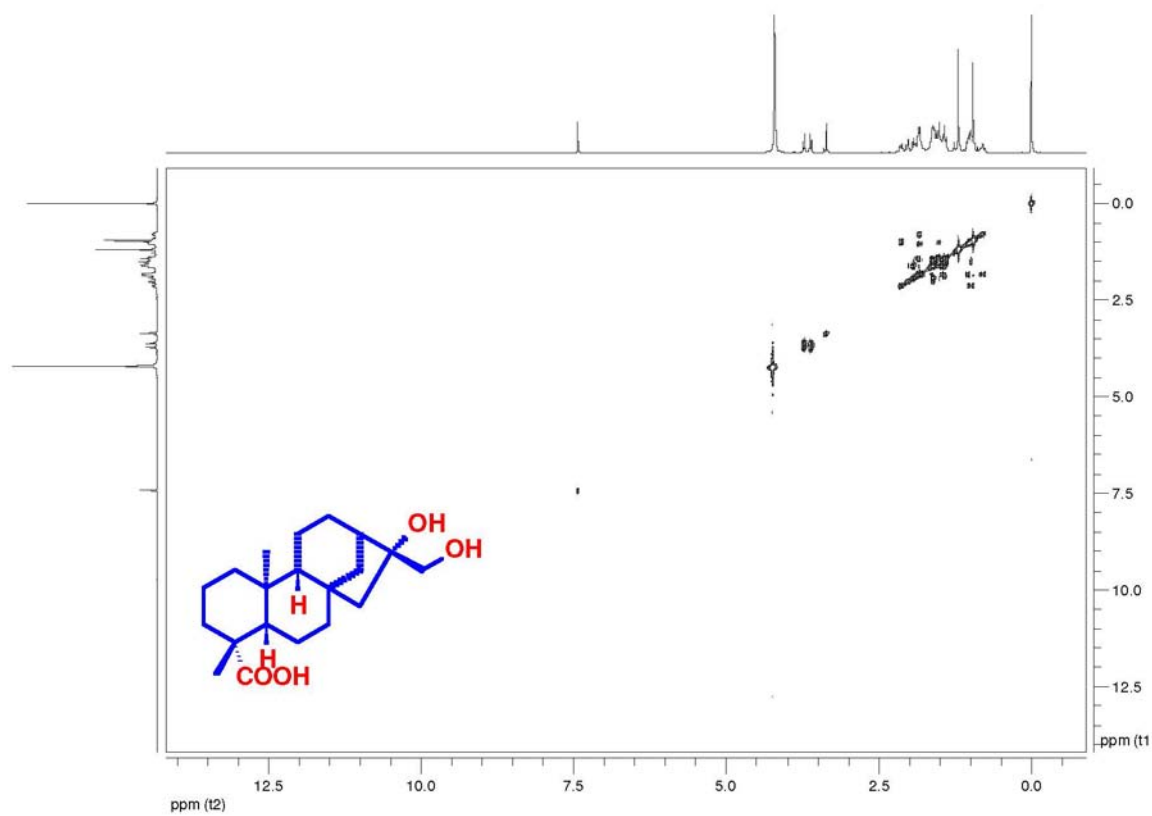


Figure 15S.  $^1\text{H}$ - $^1\text{H}$  correlation map from COSY NMR experiment of ent-16 $\beta$ ,17-dihydroxy-kauran-19-oic acid (9) in  $\text{CDCl}_3$  + drops of  $\text{CD}_3\text{OD}$  at 400 MHz

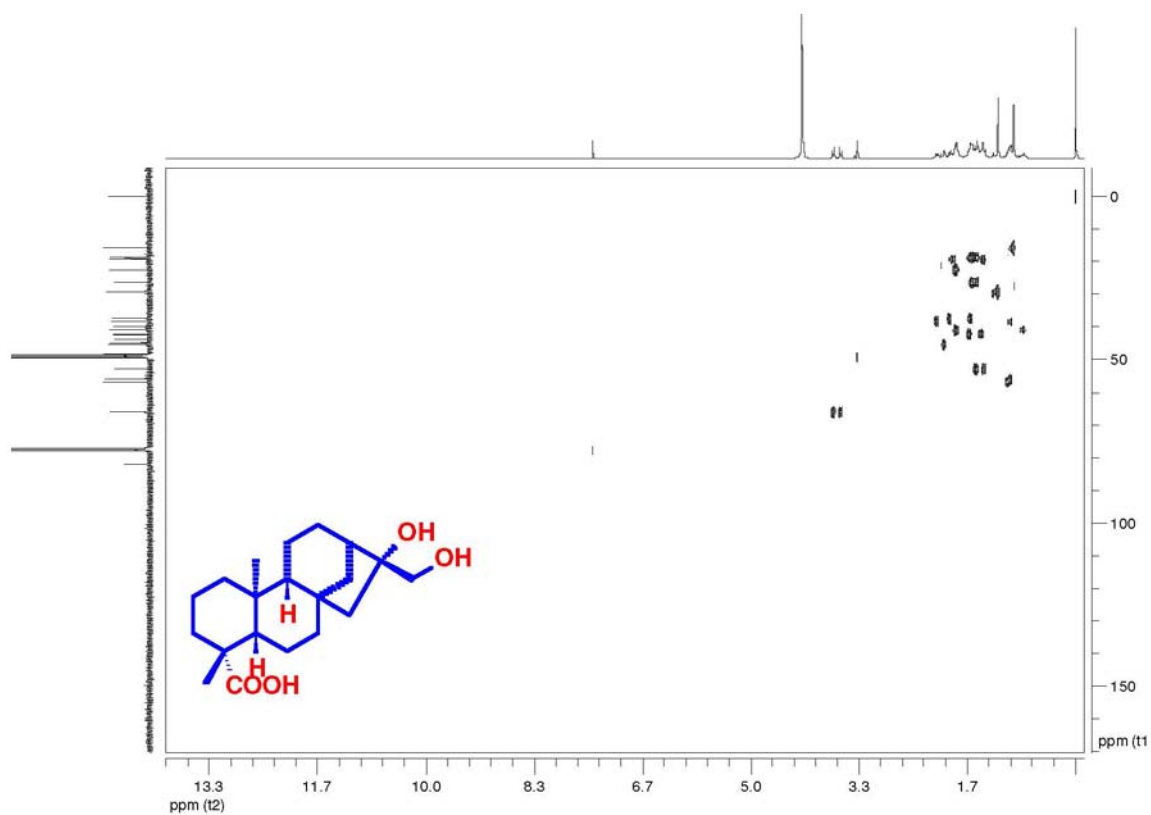
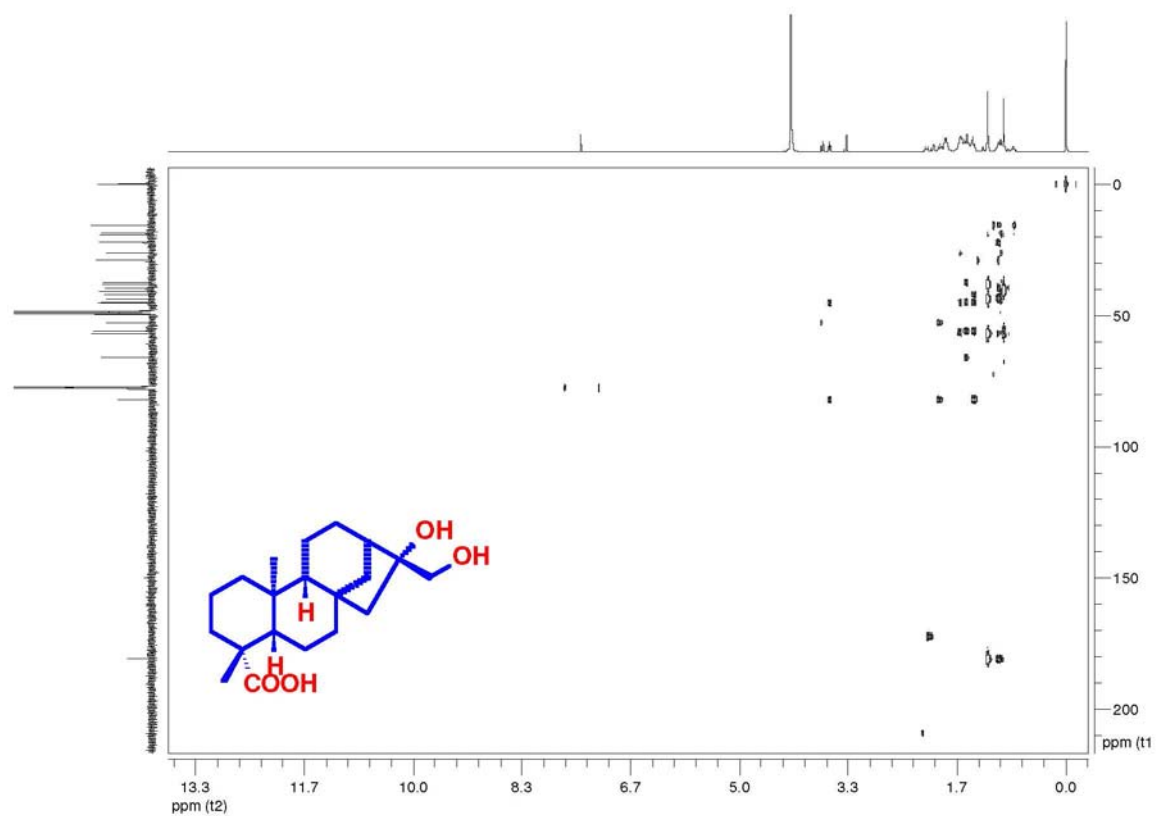


Figure 16S.  $^1\text{H}$ - $^{13}\text{C}$  one-bond correlation map from HSQC NMR experiment of ent-16 $\beta$ ,17-dihydroxy-kauran-19-oic acid (9) in  $\text{CDCl}_3$  + drops of  $\text{CD}_3\text{OD}$  at 400 and 100 MHz



**Figure 17S.** <sup>1</sup>H-<sup>13</sup>C long-range correlation map from HMBC NMR experiment of ent-16β,17-dihydroxy-kauran-19-oic acid (9) in CDCl<sub>3</sub> + drops of CD<sub>3</sub>OD at 400 and 100 MHz