

## S1 Supplementary data contents page

**Title:** Steroidal Saponins from Fresh Stems of *Dracaena angustifolia*

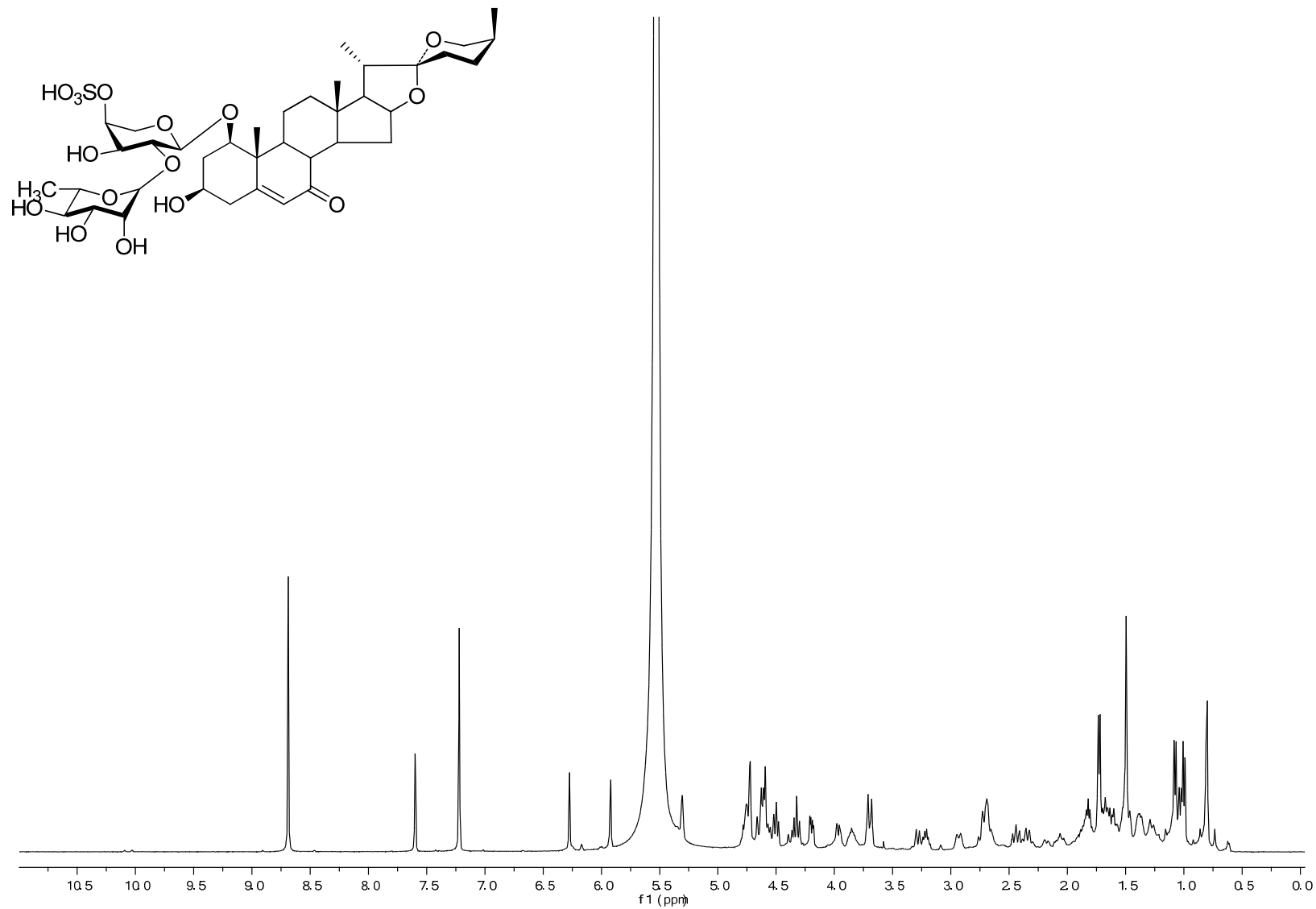
**Authors:** Min Xu, Ying-Jun Zhang, Melissa R. Jacob, Shabana I. Khan, Xing-Cong Li, Chong-Ren Yang

**Address:** Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650204, China; National Center for Natural Products Research, University of Mississippi, MS 38677, USA; Weihe Biotech Laboratory, 653100, Yuxi, Yunnan, P. R. China

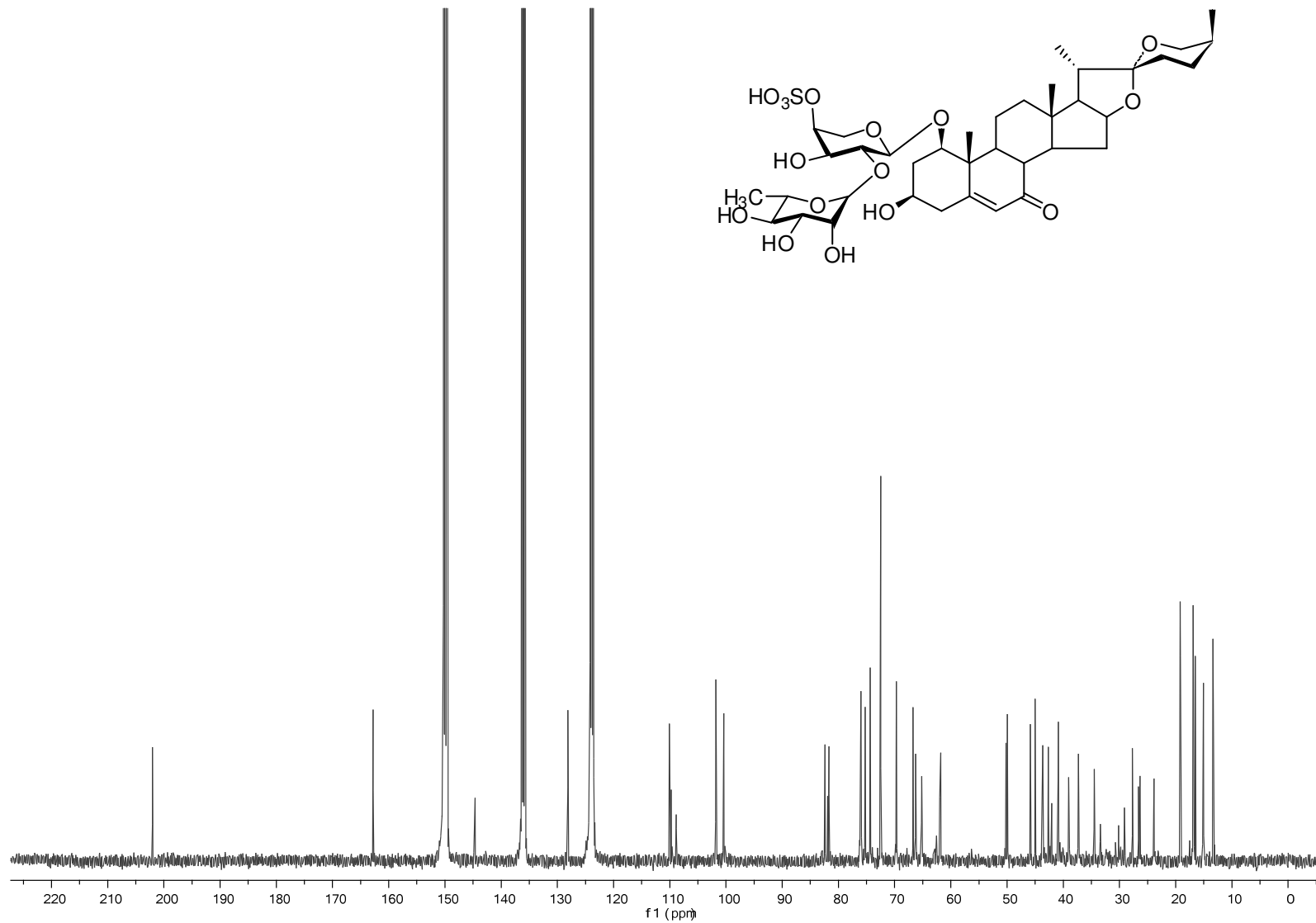
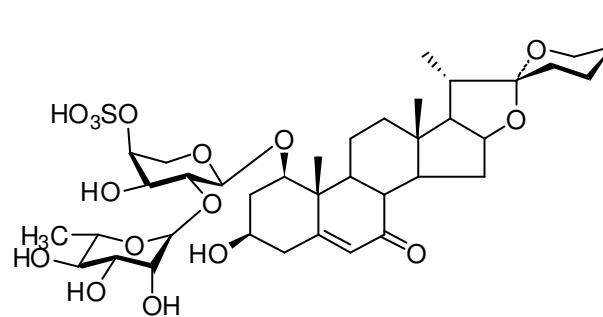
S2 <sup>1</sup>H NMR spectrum of Angudracanoside A (**1**) in pyridine-*d*<sub>5</sub>  
S3 <sup>13</sup>C NMR spectrum of Angudracanoside A (**1**) in pyridine-*d*<sub>5</sub>  
S4 HSQC spectrum of Angudracanoside A (**1**) in pyridine-*d*<sub>5</sub>  
S5 HMBC spectrum of Angudracanoside A (**1**) in pyridine-*d*<sub>5</sub>  
S6 <sup>1</sup>H NMR spectrum of Angudracanoside B (**2**) in pyridine-*d*<sub>5</sub>  
S7 <sup>13</sup>C NMR spectrum of Angudracanoside B (**2**) in pyridine-*d*<sub>5</sub>  
S8 HSQC spectrum of Angudracanoside B (**2**) in pyridine-*d*<sub>5</sub>  
S9 HMBC spectrum of Angudracanoside B (**2**) in pyridine-*d*<sub>5</sub>  
S10 <sup>1</sup>H NMR spectrum for Angudracanoside C (**3**) in pyridine-*d*<sub>5</sub>  
S11 <sup>13</sup>C NMR spectrum for Angudracanoside C (**3**) in pyridine-*d*<sub>5</sub>  
S12 HSQC spectrum for Angudracanoside C (**3**) in pyridine-*d*<sub>5</sub>  
S13 HMBC spectrum for Angudracanoside C (**3**) in pyridine-*d*<sub>5</sub>  
S14 ROESY spectrum of Angudracanoside C (**3**) in pyridine-*d*<sub>5</sub>

S15 <sup>1</sup>H NMR spectrum for Angudracanoside D (**4**) in pyridine-*d*<sub>5</sub>  
S16 <sup>13</sup>C NMR spectrum for Angudracanoside D (**4**) in pyridine-*d*<sub>5</sub>  
S17 HSQC spectrum for Angudracanoside D (**4**) in pyridine-*d*<sub>5</sub>  
S18 HMBC spectrum for Angudracanoside D (**4**) in pyridine-*d*<sub>5</sub>  
S19 ROESY spectrum of Angudracanoside D (**4**) in pyridine-*d*<sub>5</sub>  
S20 <sup>1</sup>H NMR spectrum for Angudracanoside F (**6**) in pyridine-*d*<sub>5</sub>  
S21 <sup>13</sup>C NMR spectrum for Angudracanoside F (**6**) in pyridine-*d*<sub>5</sub>  
S22 HSQC spectrum for Angudracanoside F (**6**) in pyridine-*d*<sub>5</sub>  
S23 HMBC spectrum for Angudracanoside F (**6**) in pyridine-*d*<sub>5</sub>  
S24 ROESY spectrum of Angudracanoside F (**6**) in pyridine-*d*<sub>5</sub>  
S25 <sup>1</sup>H NMR spectrum of Angudracanoside A (**1**) in pyridine-*d*<sub>5</sub>  
S26 <sup>13</sup>C NMR spectrum of Angudracanoside A (**1**) in pyridine-*d*<sub>5</sub>  
S27 HSQC spectrum of Angudracanoside A (**1**) in pyridine-*d*<sub>5</sub>  
S28 HMBC spectrum of Angudracanoside A (**1**) in pyridine-*d*<sub>5</sub>  
S29 Structures of the known compounds **8-14**  
S30 Important HMBC correlations for **1**  
S31 Selected ROESY correlations of **3**

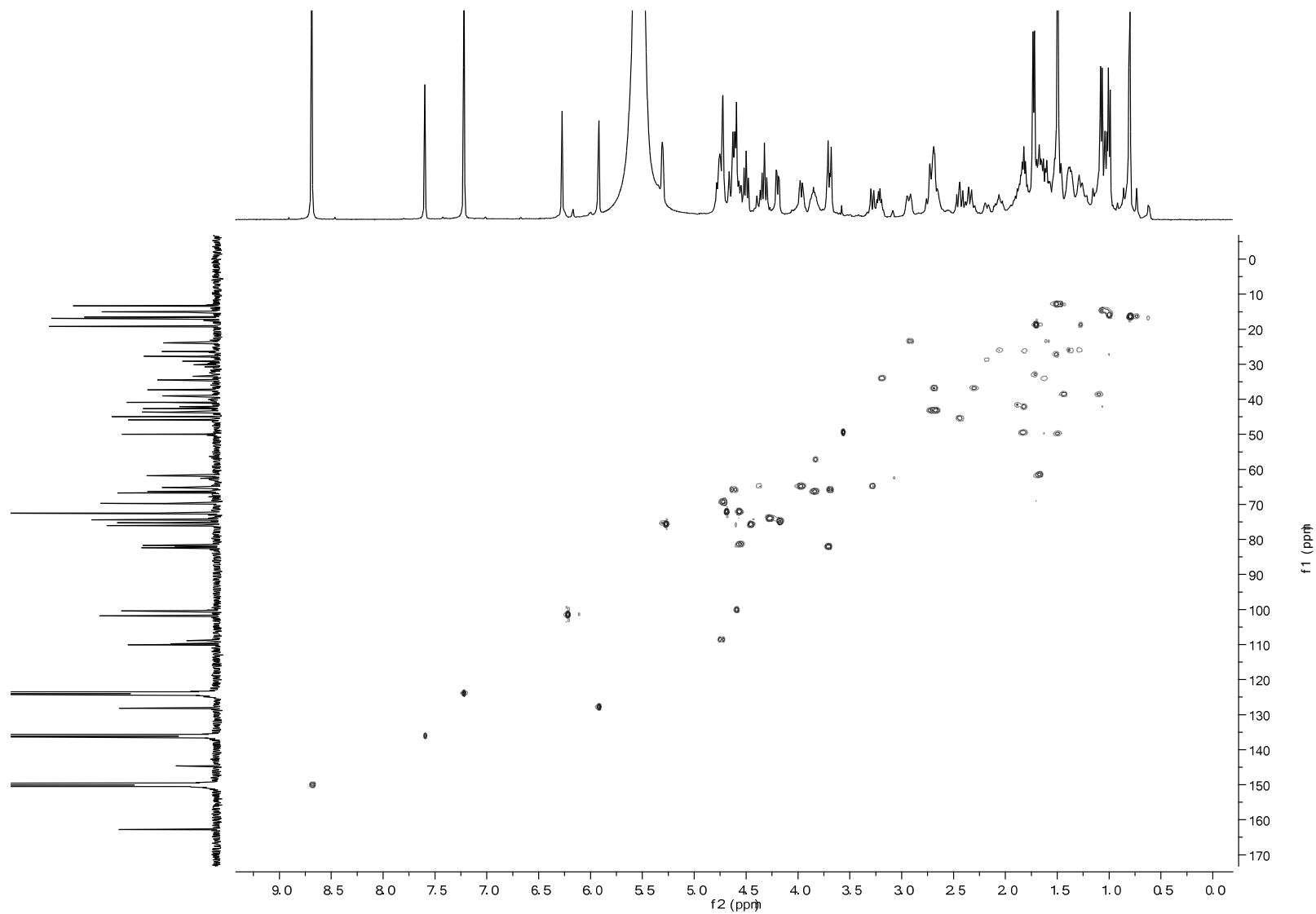
**S2  $^1\text{H}$  NMR spectrum for Angudraconoside A (1) in pyridine- $d_5$**



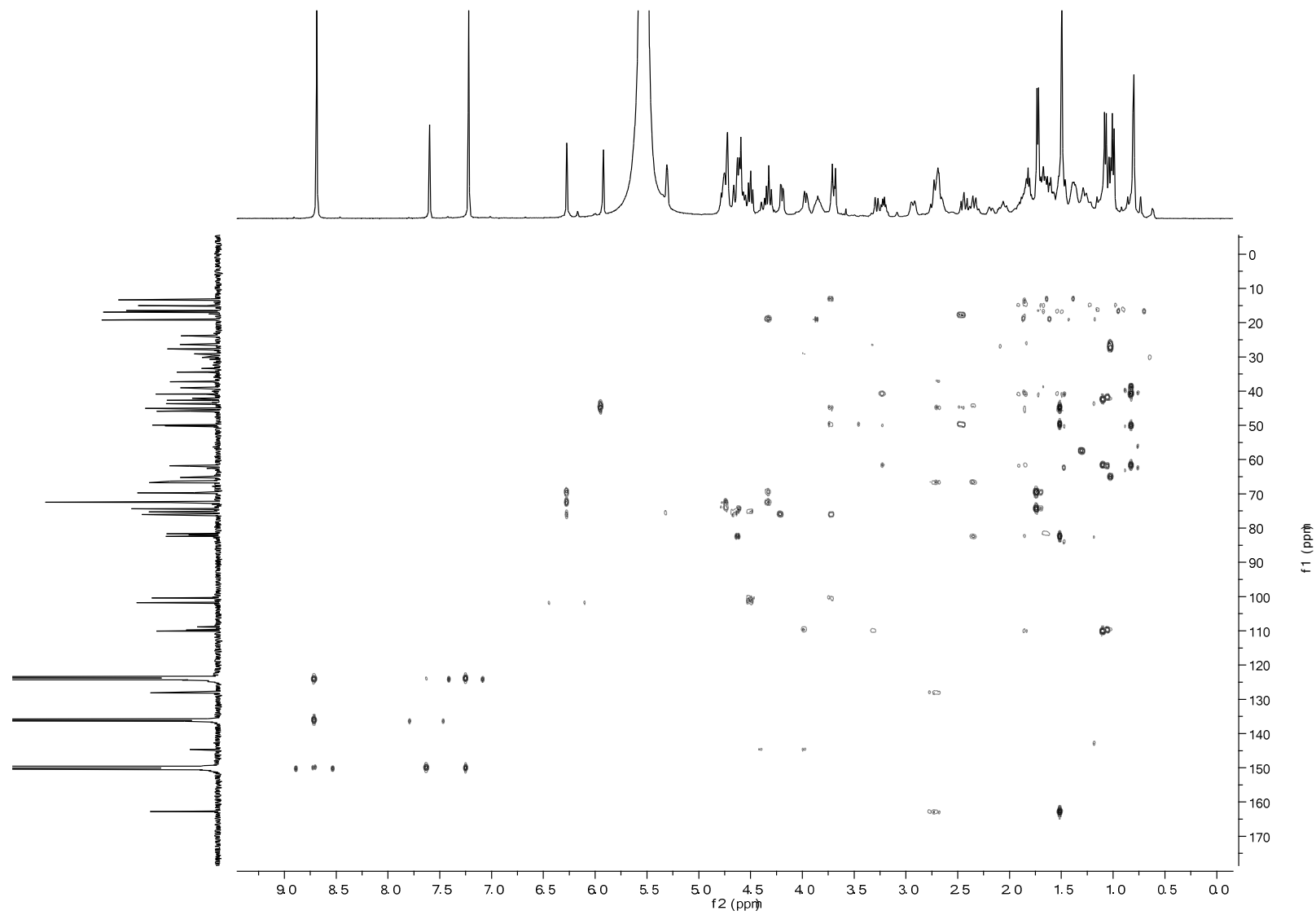
S3  $^{13}\text{C}$  NMR spectrum for Angudracanoside A (1) in pyridine- $d_5$



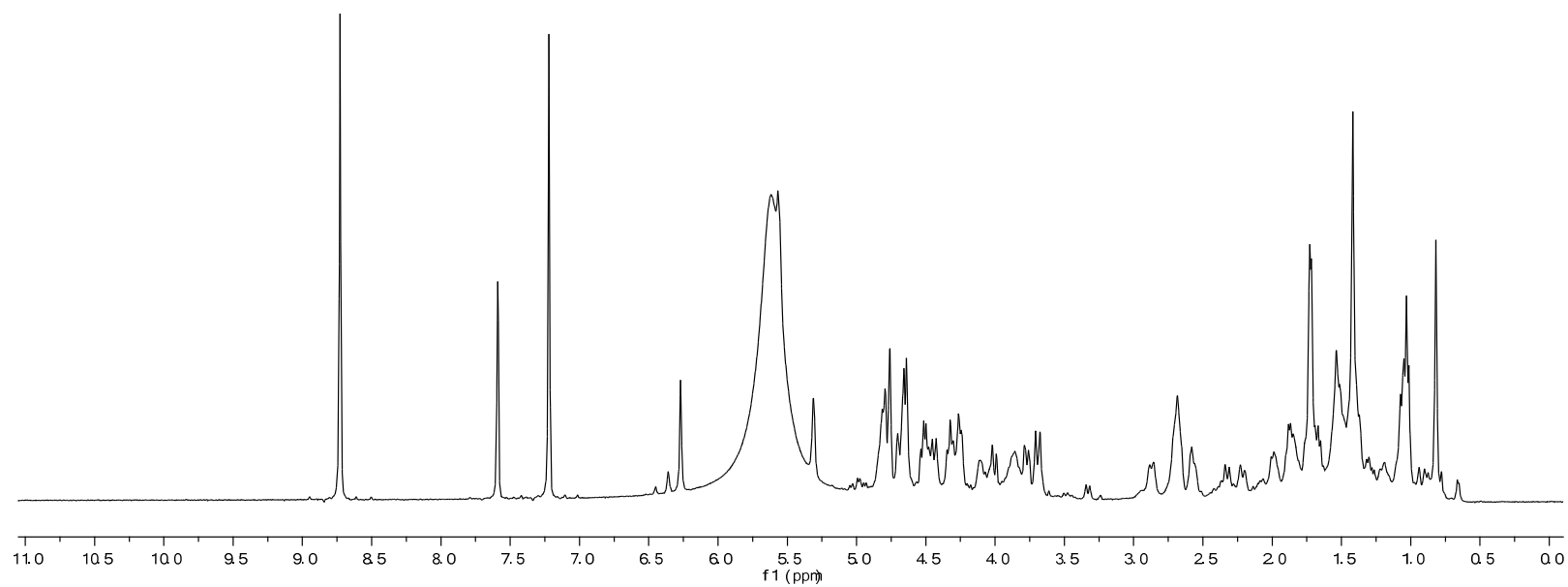
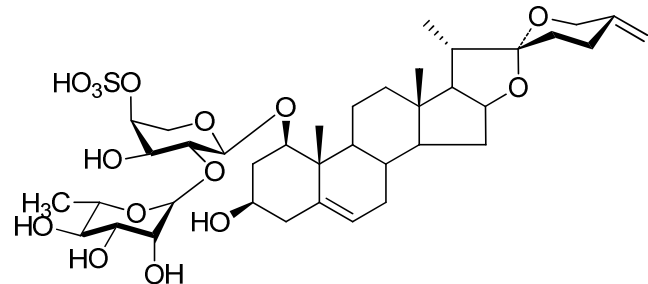
**S4 HSQC spectrum for Angudracanoside A (1) in pyridine-*d*<sub>5</sub>**



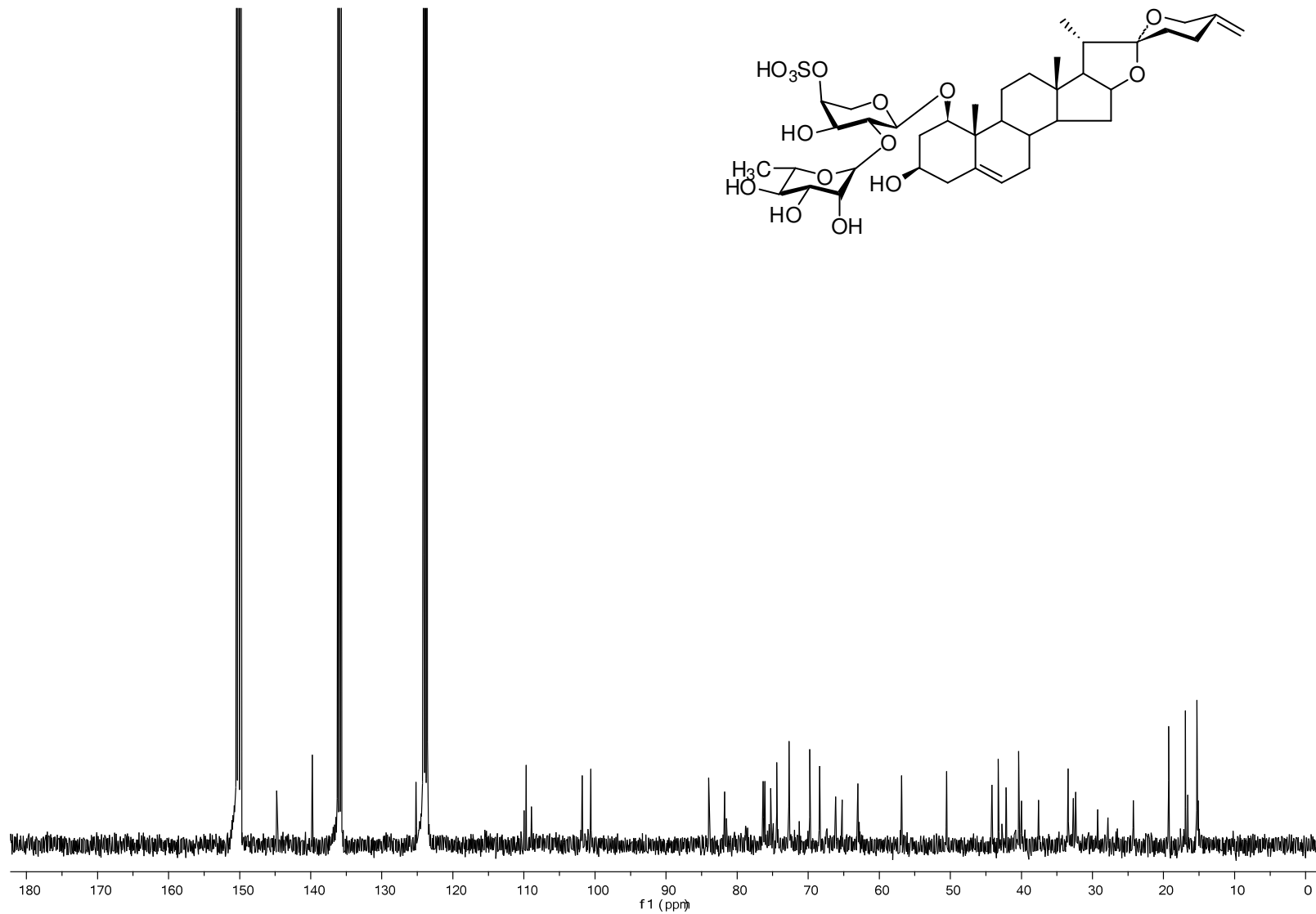
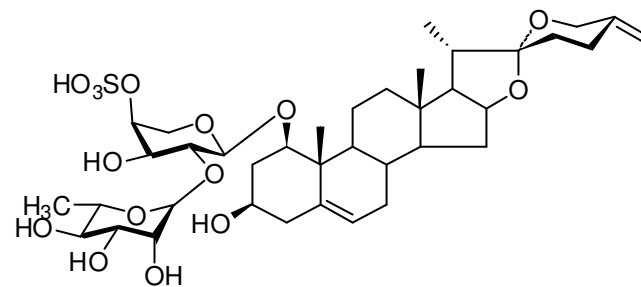
**S5 HMBC spectrum for Angudraconoside A (1) in pyridine- $d_5$**



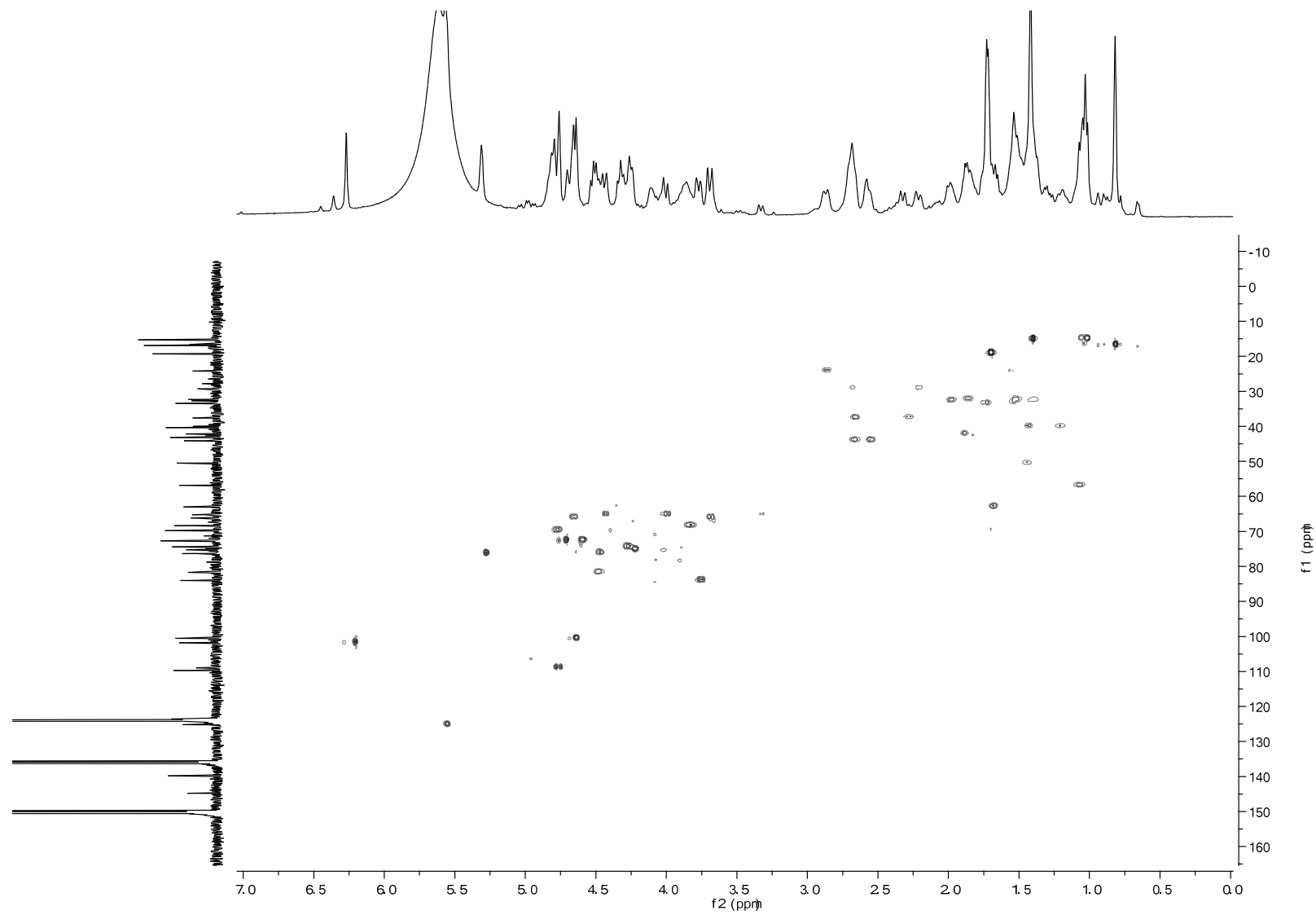
**S6**  $^1\text{H}$  NMR spectrum for Angudracanoside B (2) in pyridine- $d_5$



S7  $^{13}\text{C}$  NMR spectrum for Angudracanoside B (2) in pyridine- $d_5$

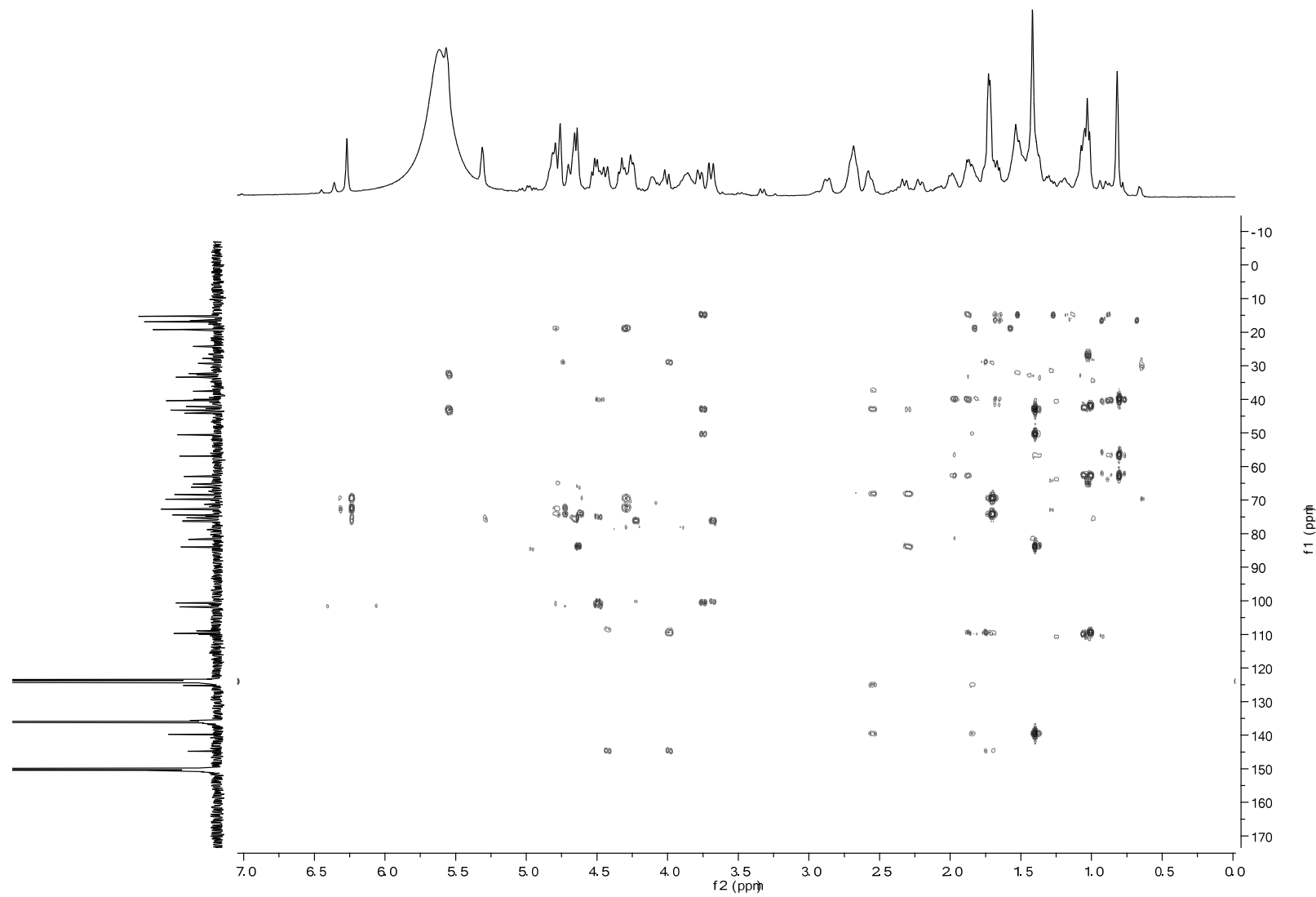


**S8 HSQC spectrum for Angudracanoside B (2) in pyridine-*d*<sub>5</sub>**

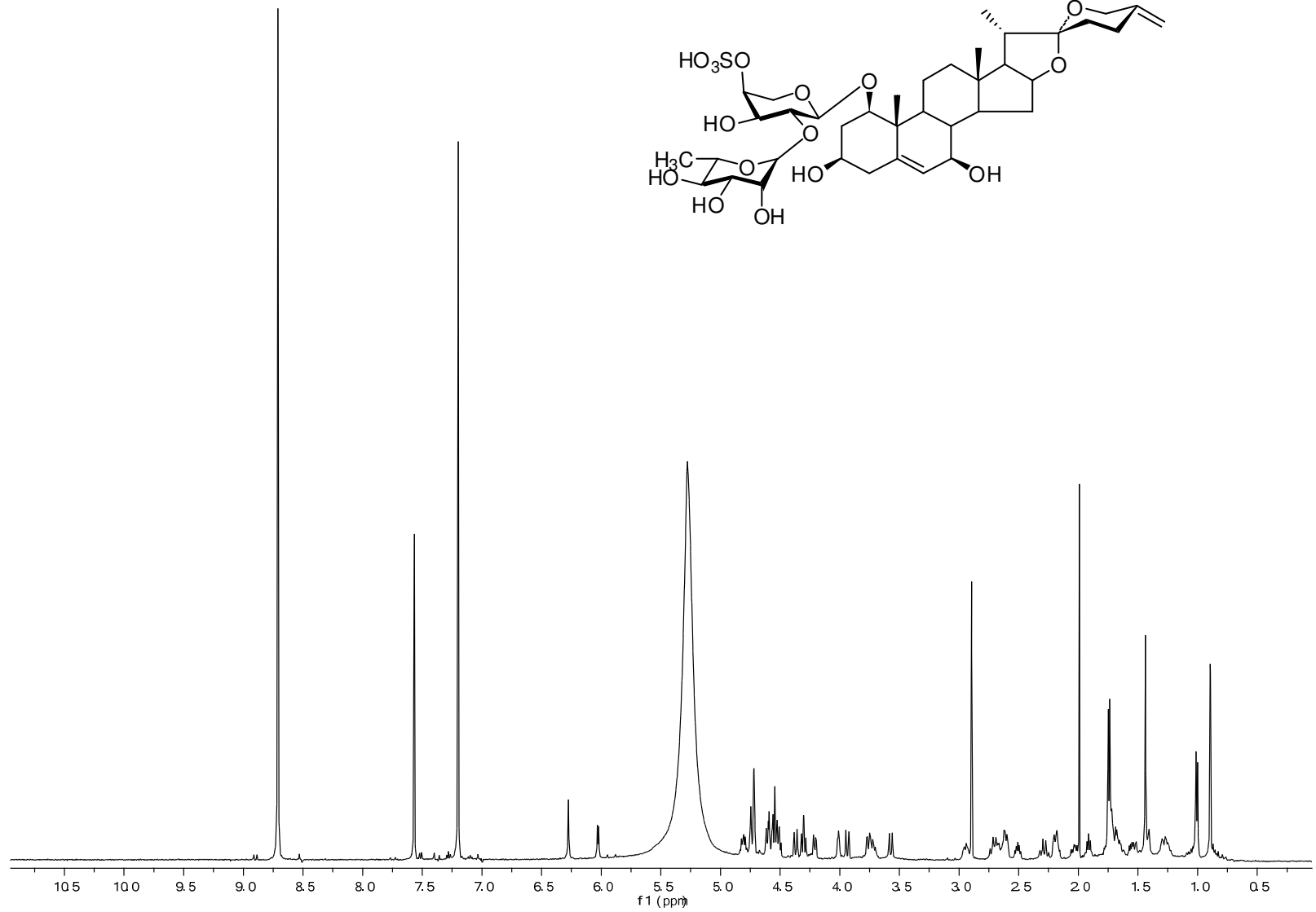
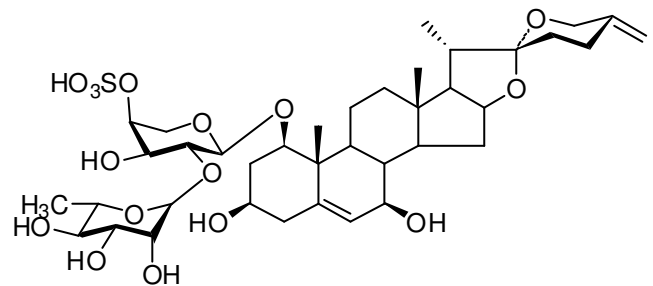




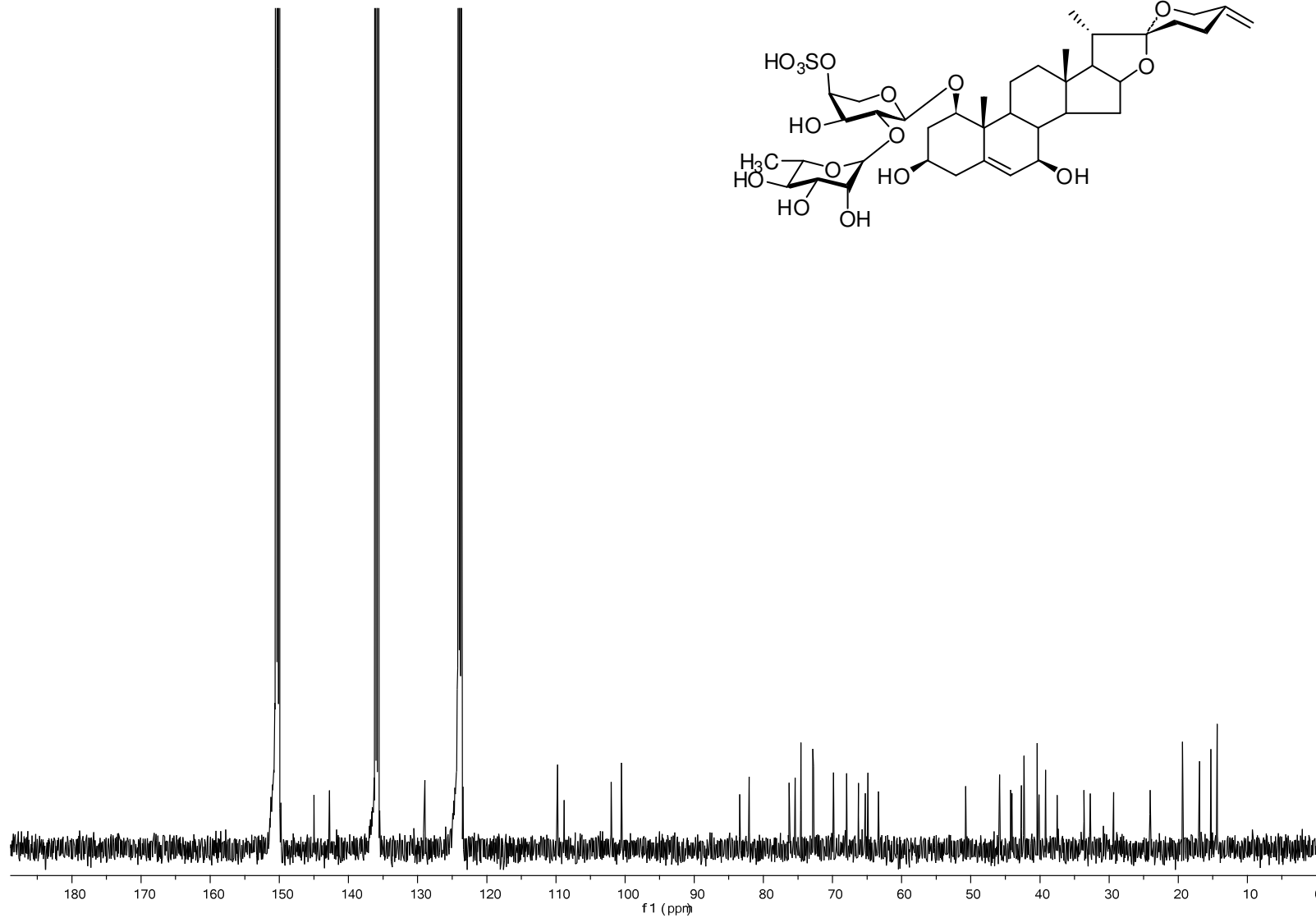
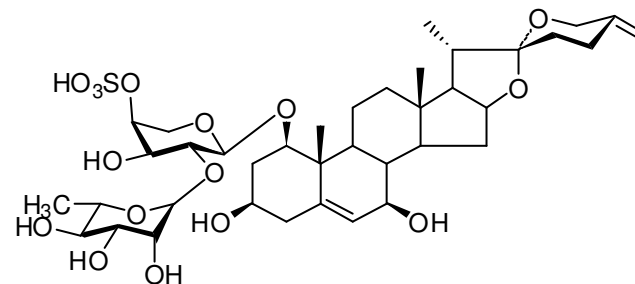
**S9 HMBC spectrum for Angudracanoside B (2) in pyridine-*d*<sub>5</sub>**



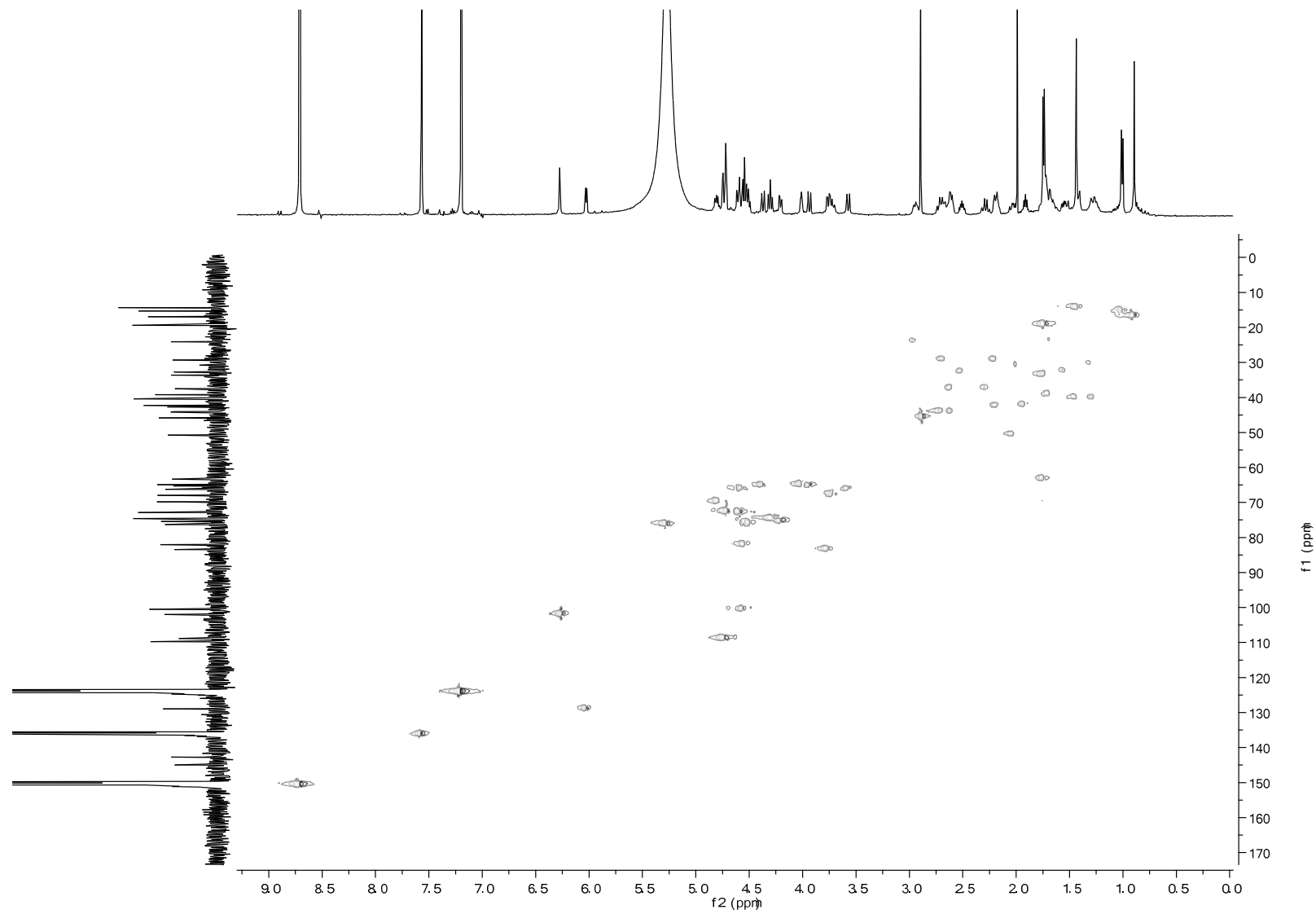
**S10**  $^1\text{H}$  NMR spectrum for Angudracanoside C (3) in pyridine- $d_5$



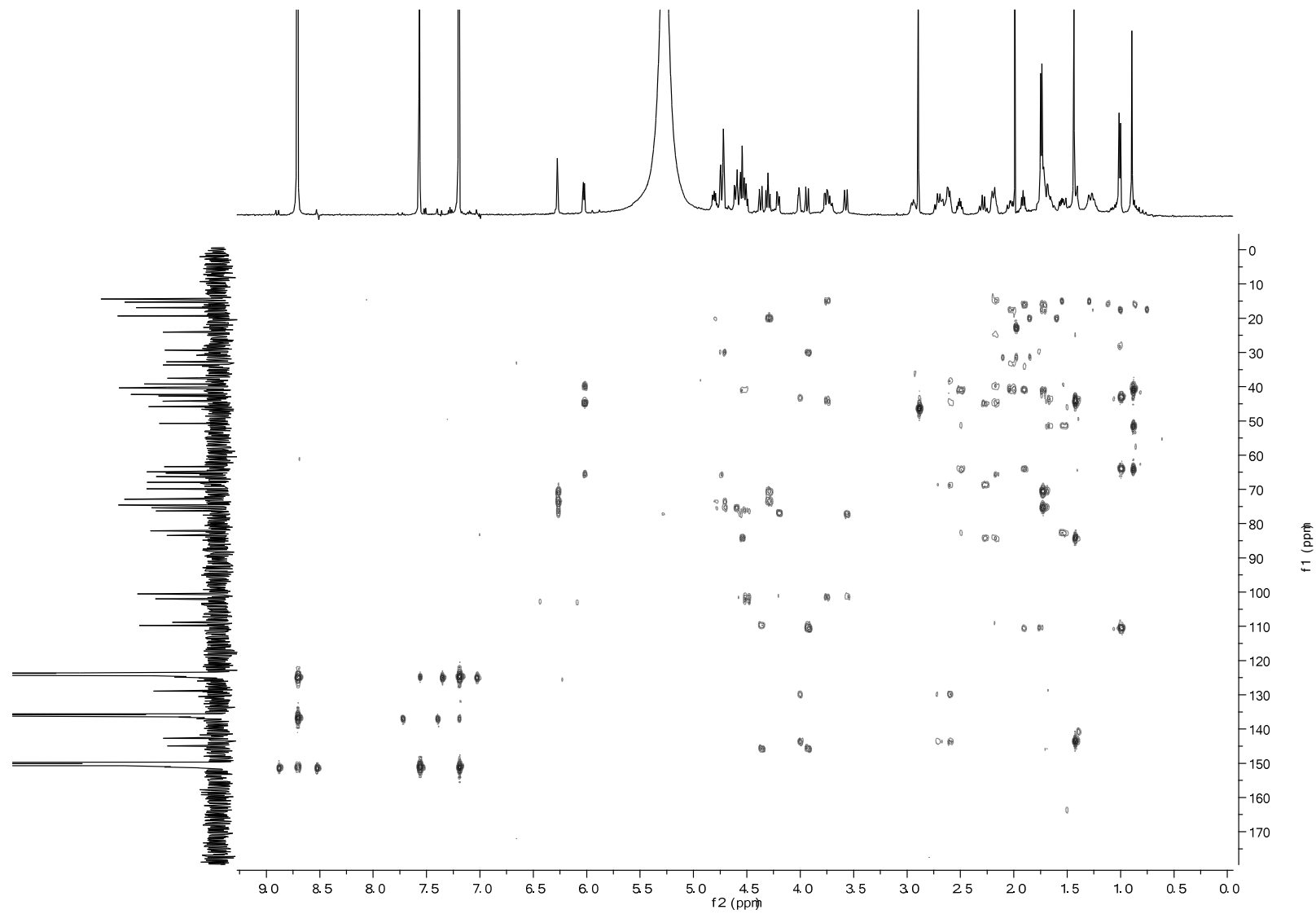
S11  $^{13}\text{C}$  NMR spectrum for Angudraconoside C (3) in pyridine- $d_5$



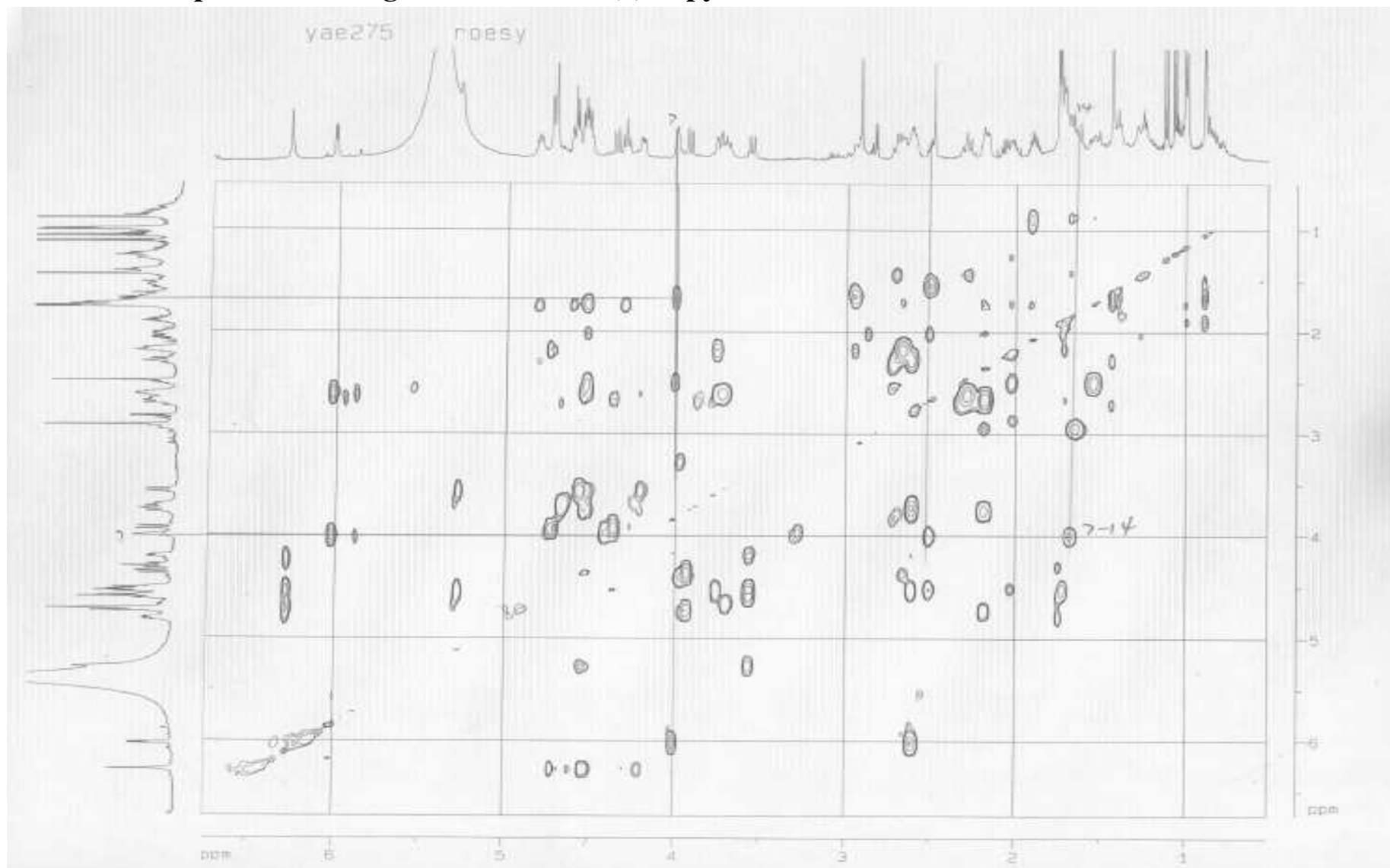
**S12 HSQC spectrum for Angudracanoside C (3) in pyridine-*d*<sub>5</sub>**



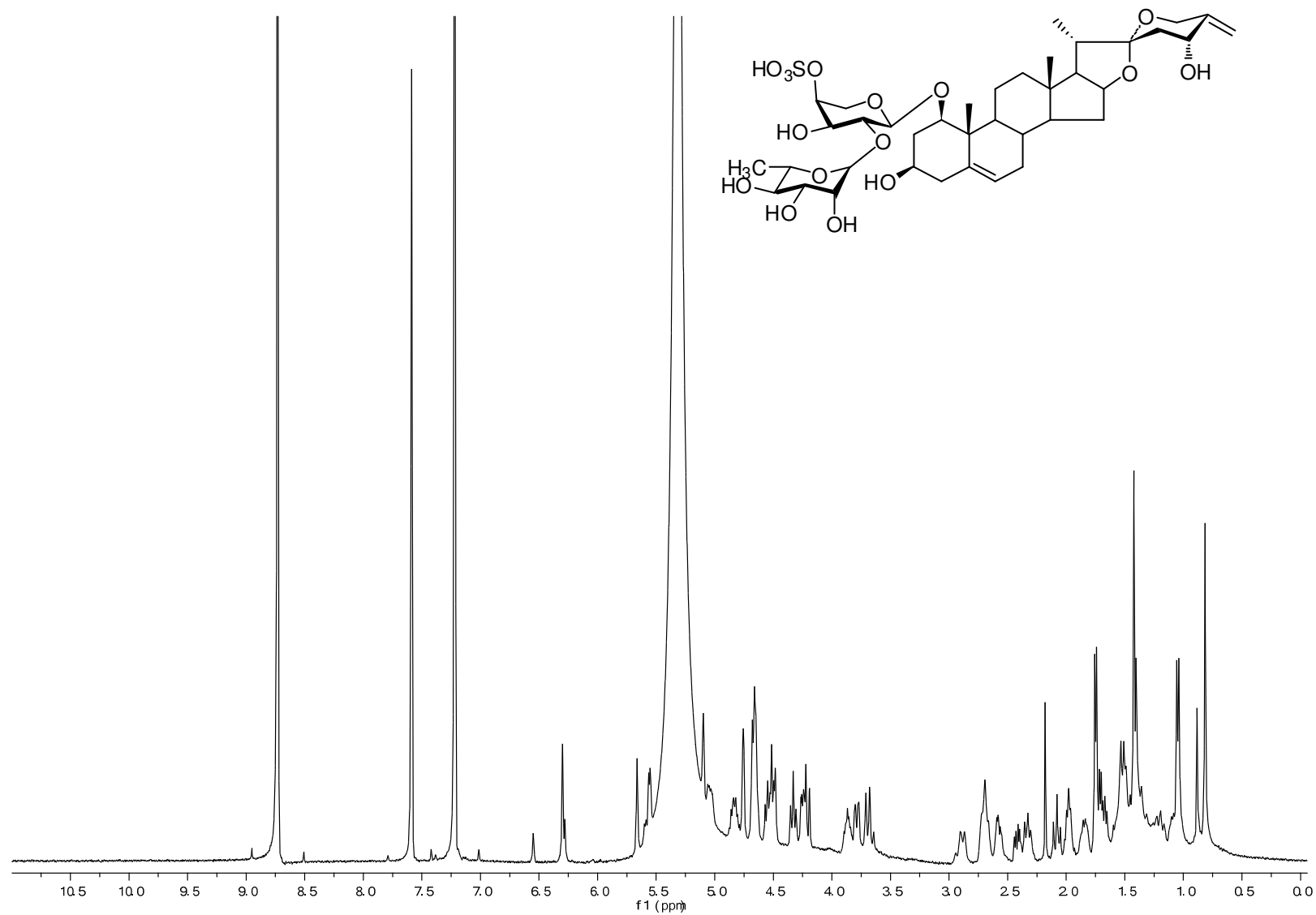
**S13** HMBC spectrum for Angudracanoside C (3) in pyridine-*d*<sub>5</sub>



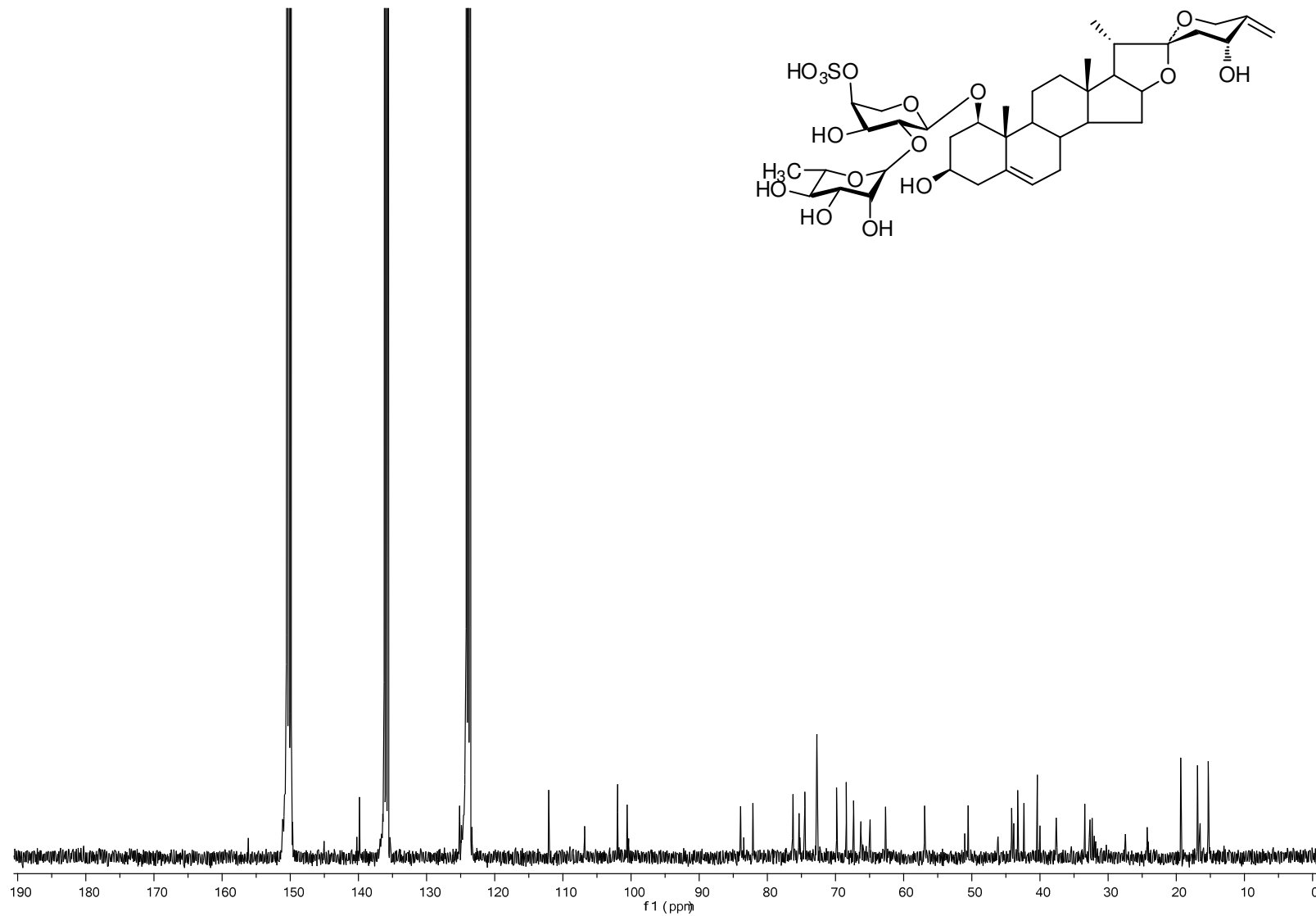
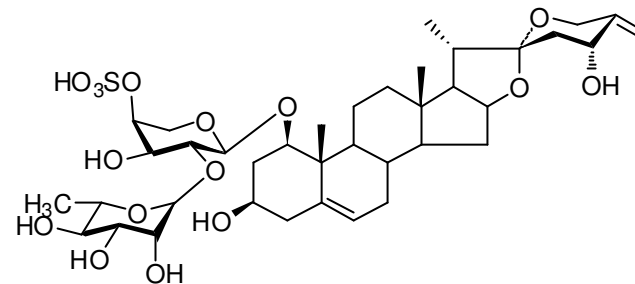
**S14 ROESY spectrum of Angudracanoside C (3) in pyridine-*d*<sub>5</sub>**



S15  $^1\text{H}$  NMR spectrum of Angudracanoside D (4) in pyridine- $d_5$

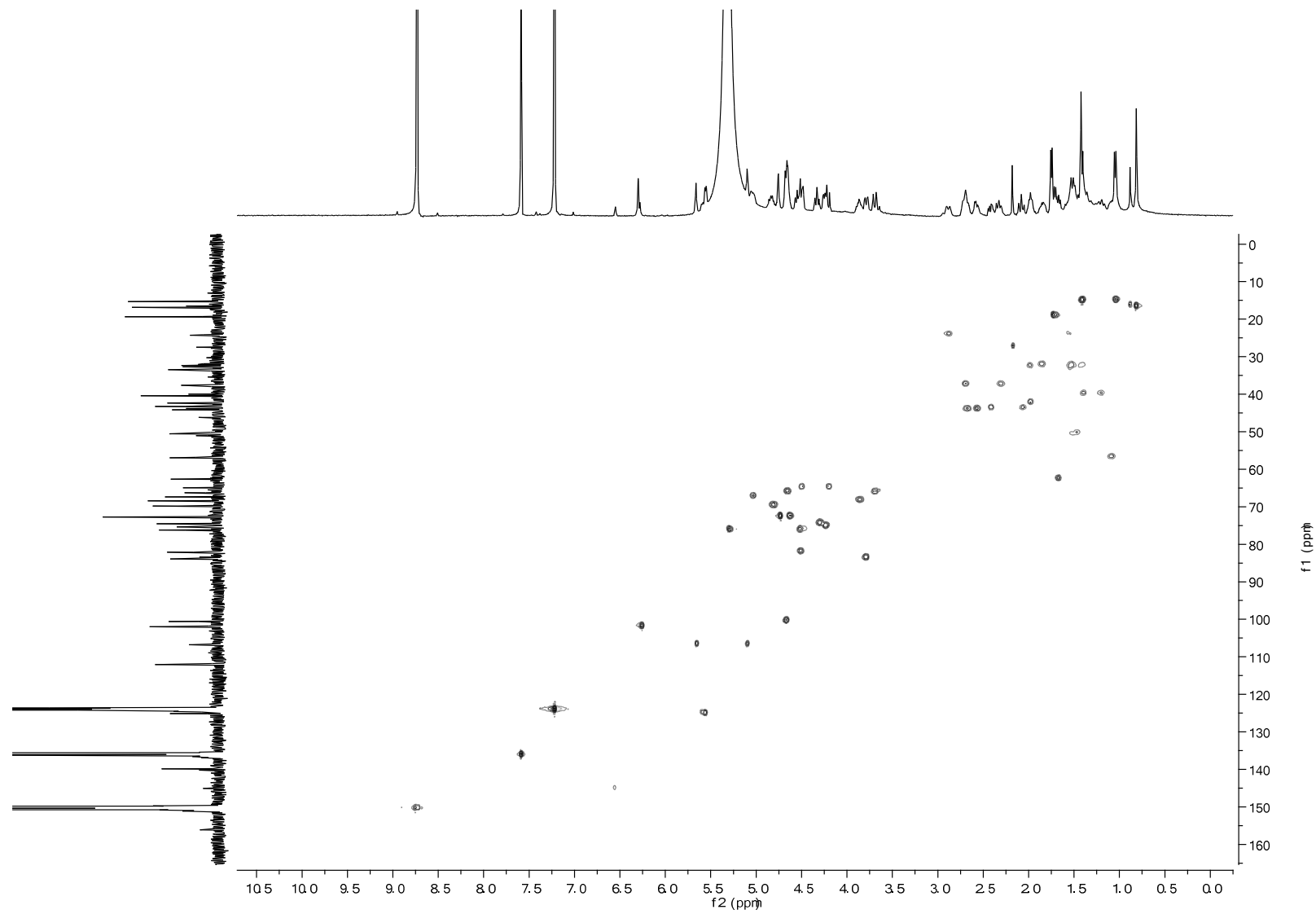


S16  $^{13}\text{C}$  NMR spectrum of Angudracanoside D (4) in pyridine- $d_5$

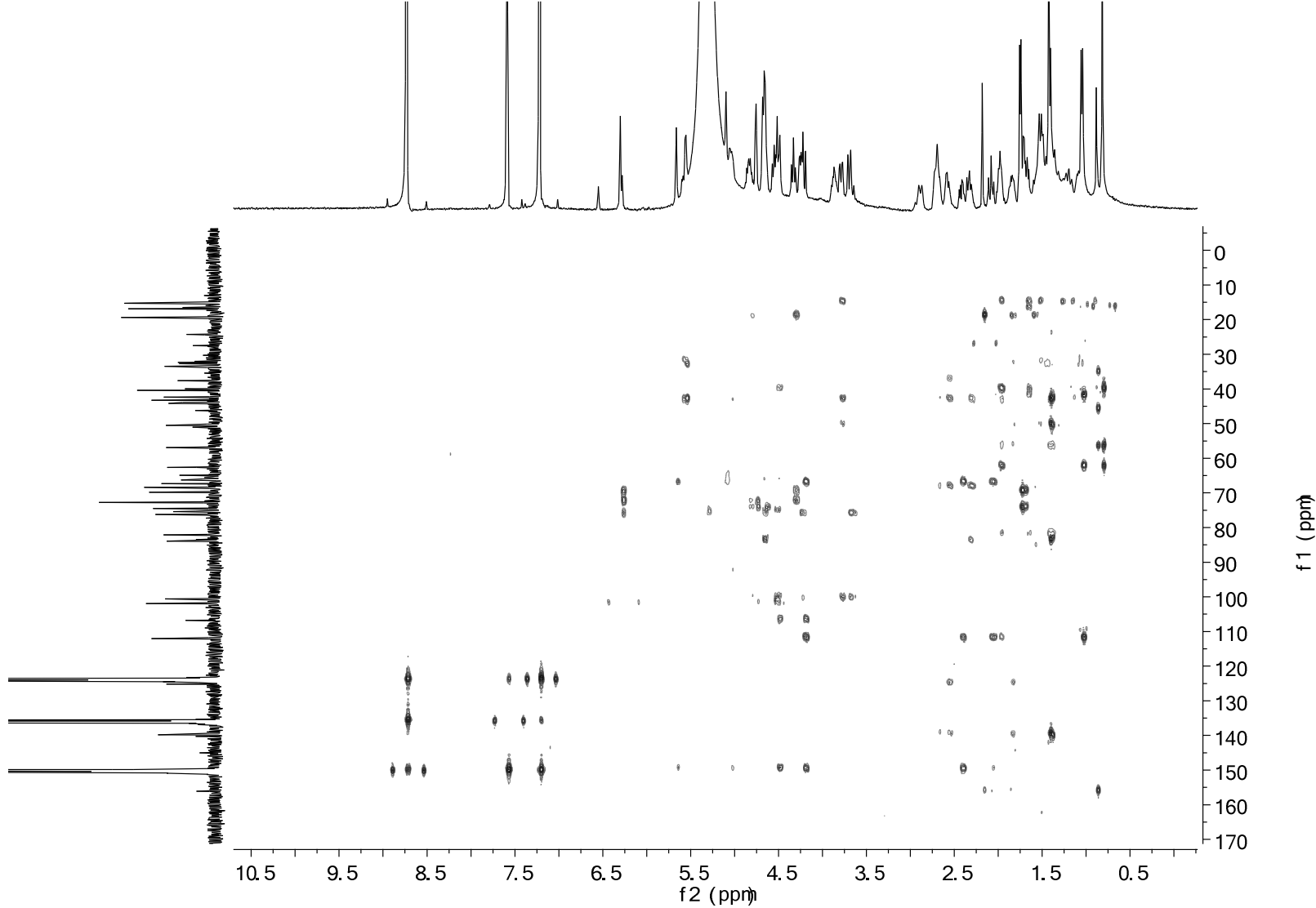




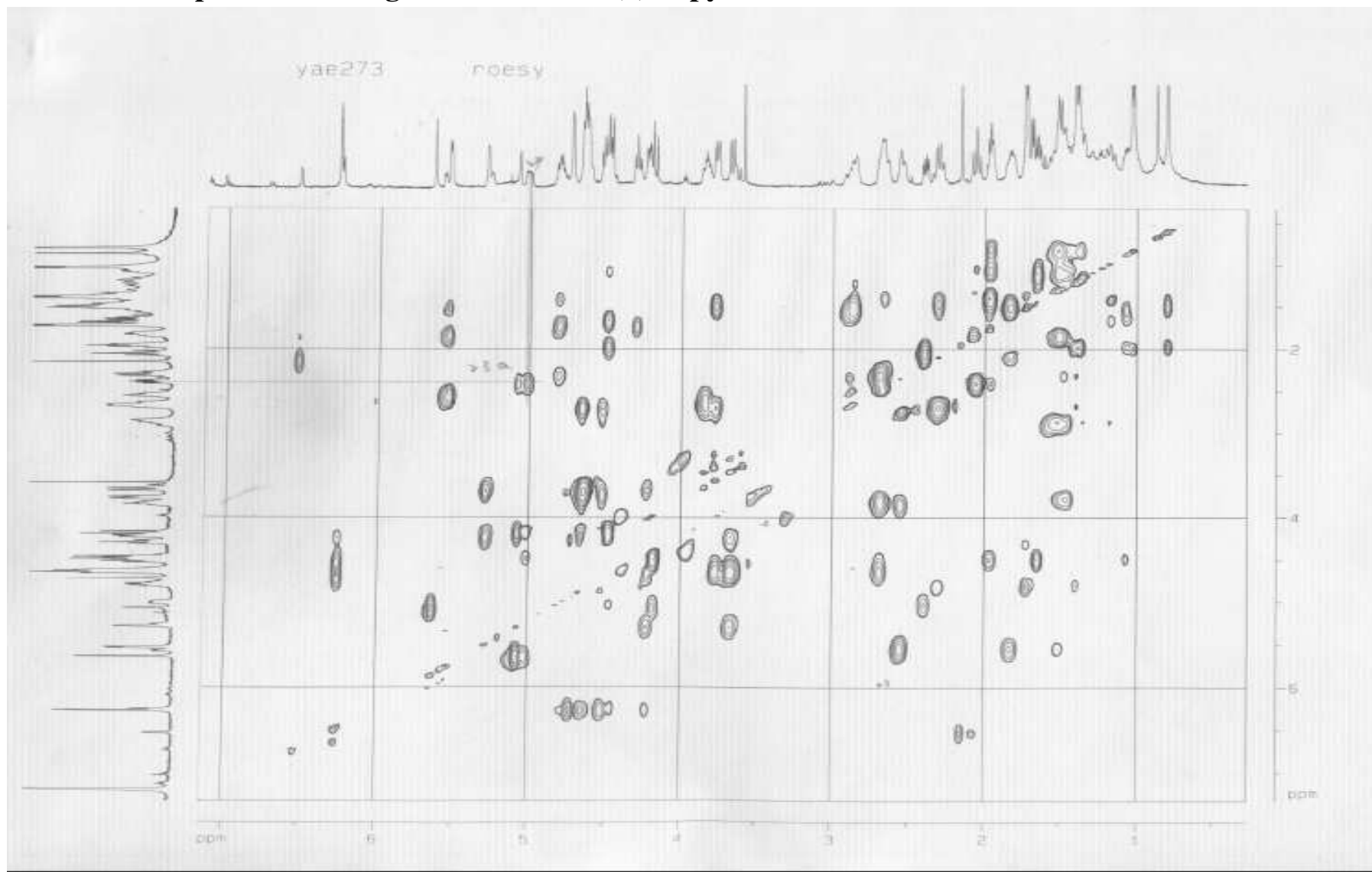
**S17 HSQC spectrum of Angudracanoside D (4) in pyridine-*d*<sub>5</sub>**



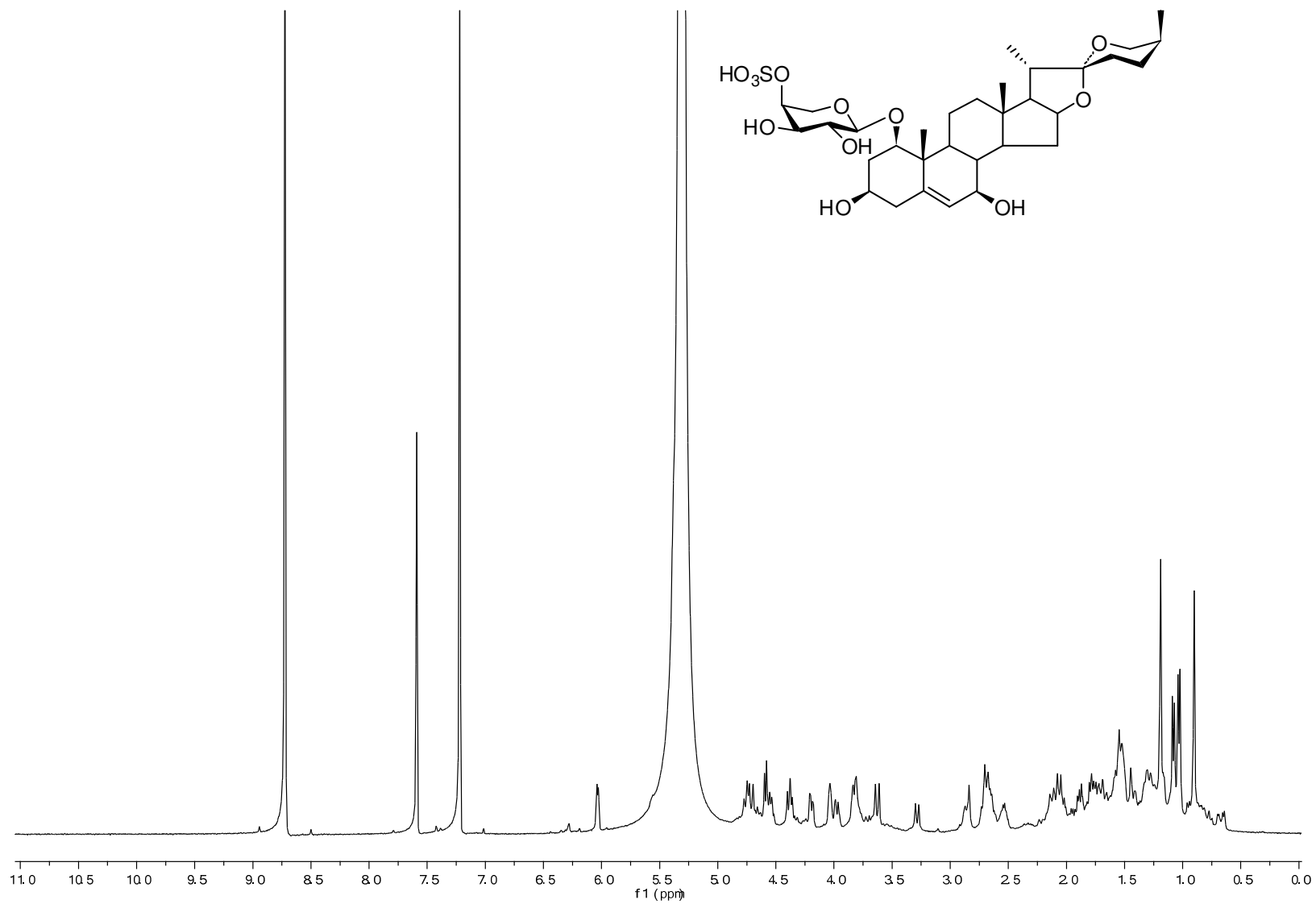
S18 HMBC spectrum of Angudracanoside D (4) in pyridine-*d*<sub>5</sub>



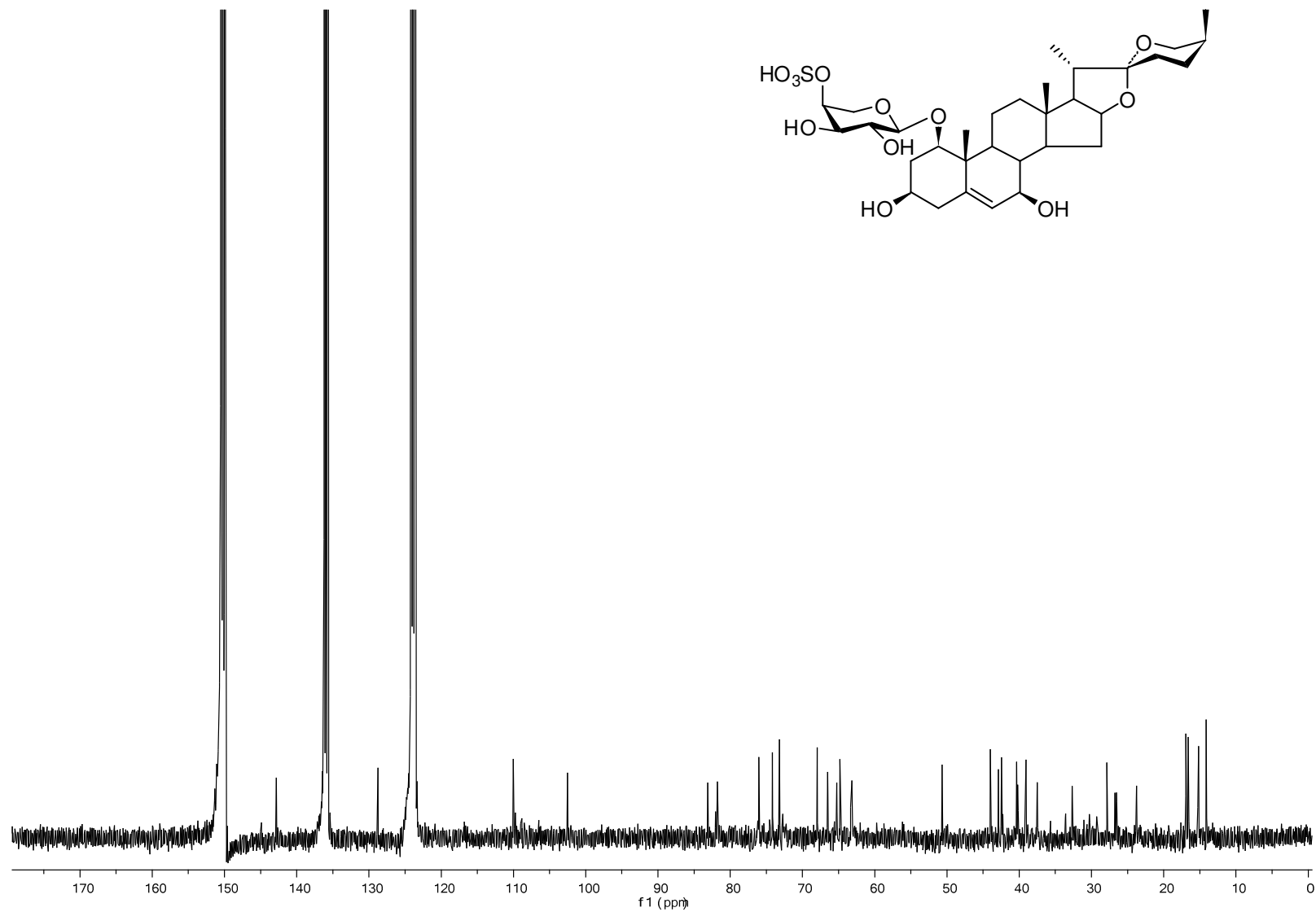
**S19 ROESY spectrum of Angudracanoside D (4) in pyridine-*d*<sub>5</sub>**



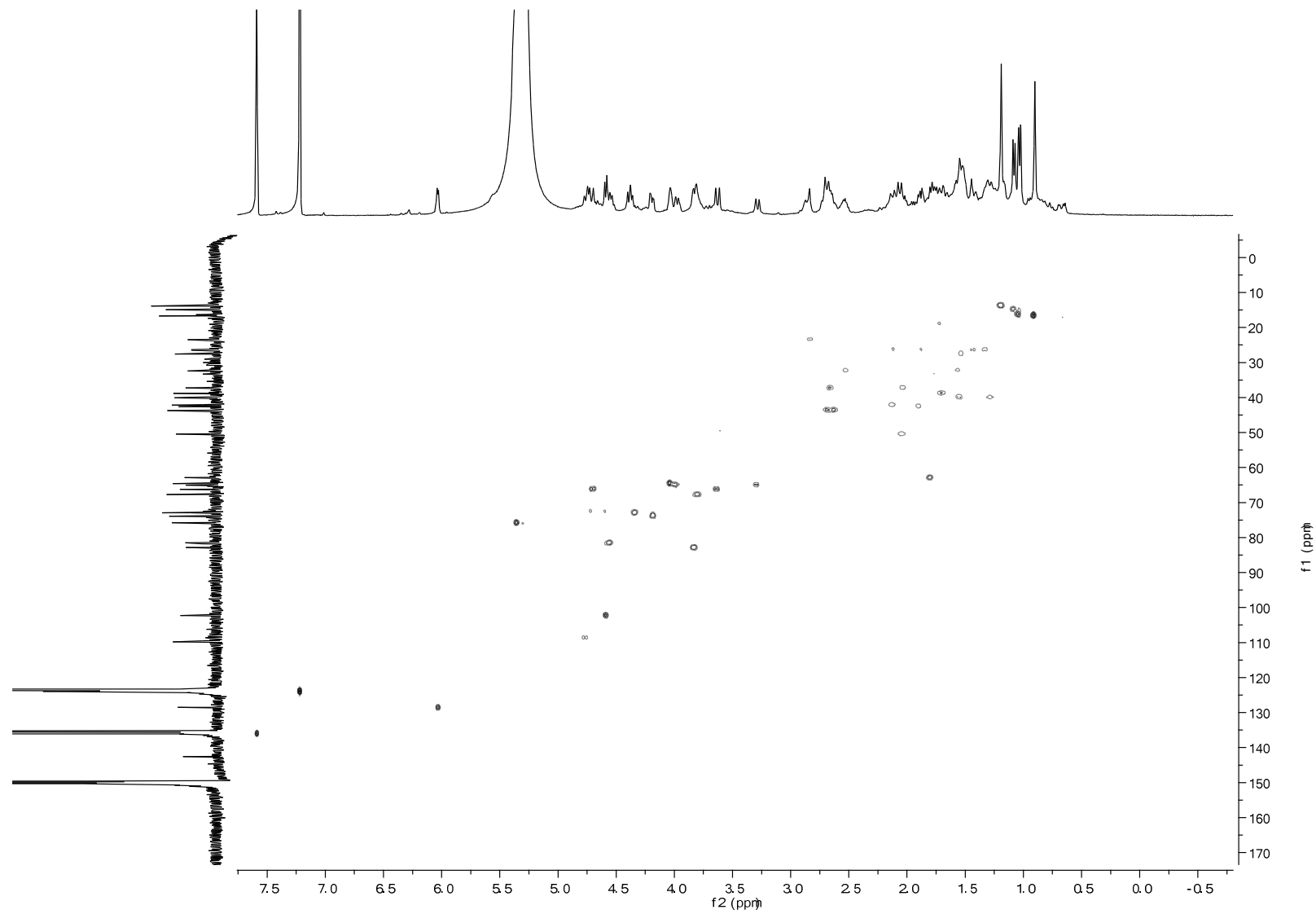
**S20  $^1\text{H}$  NMR spectrum of Angudracanoside G (5) in pyridine- $d_5$**



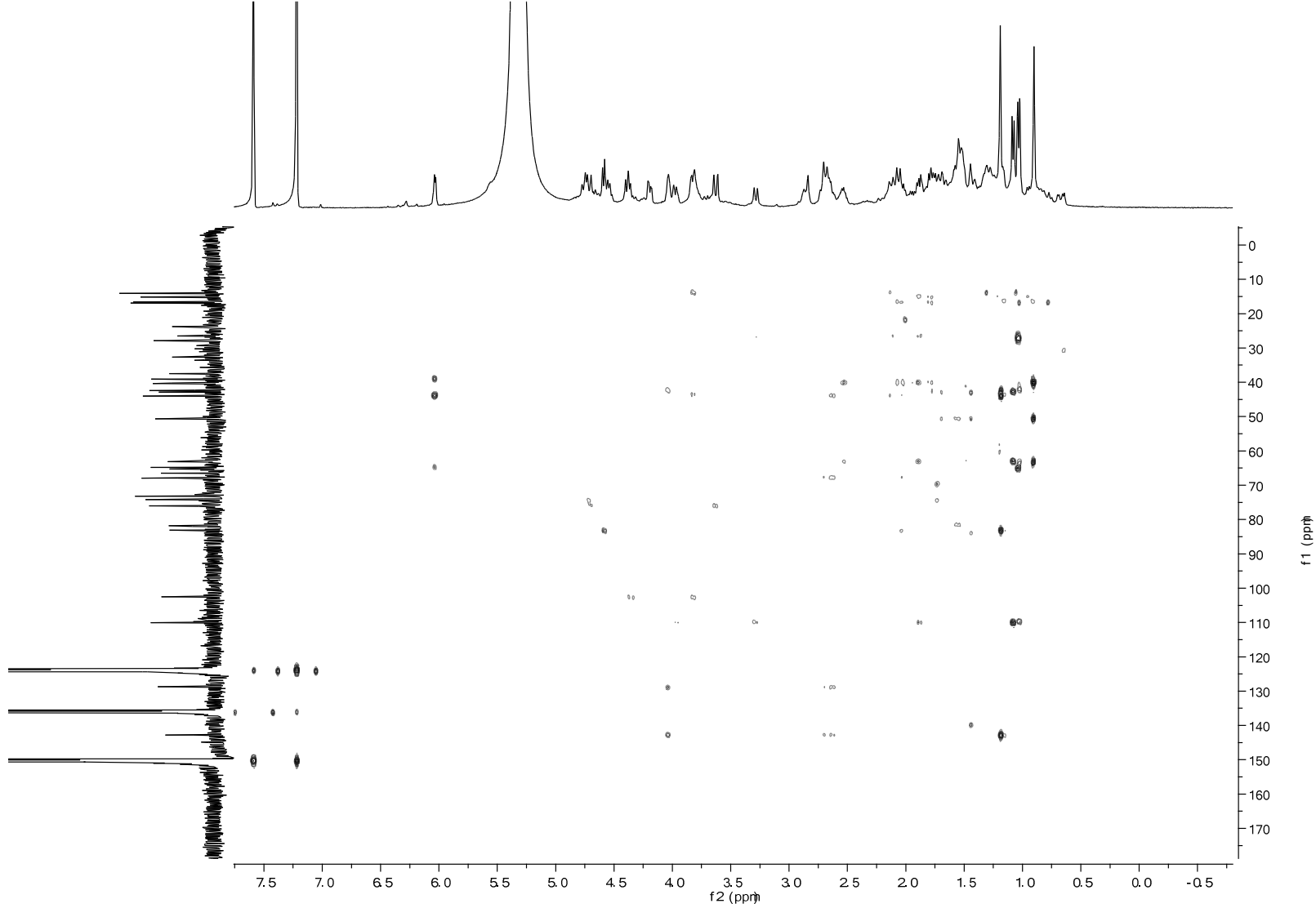
S21  $^{13}\text{C}$  NMR spectrum of Angudracanoside G (5) in pyridine- $d_5$



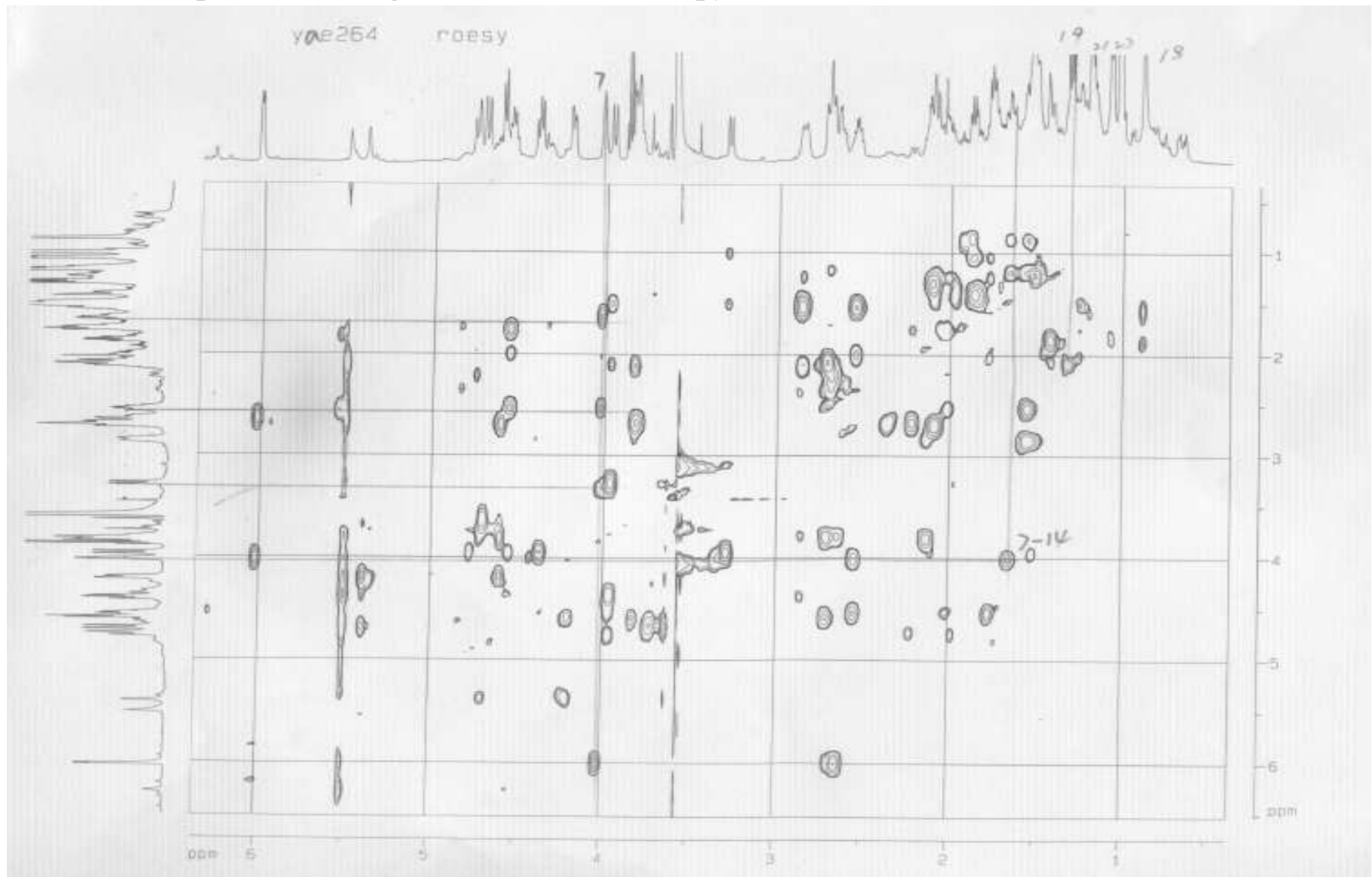
**S22 HSQC spectrum of Angudracanoside G (5) in pyridine- $d_5$**



S23 HMBC spectrum of Angudracanoside G (5) in pyridine-d<sub>5</sub>

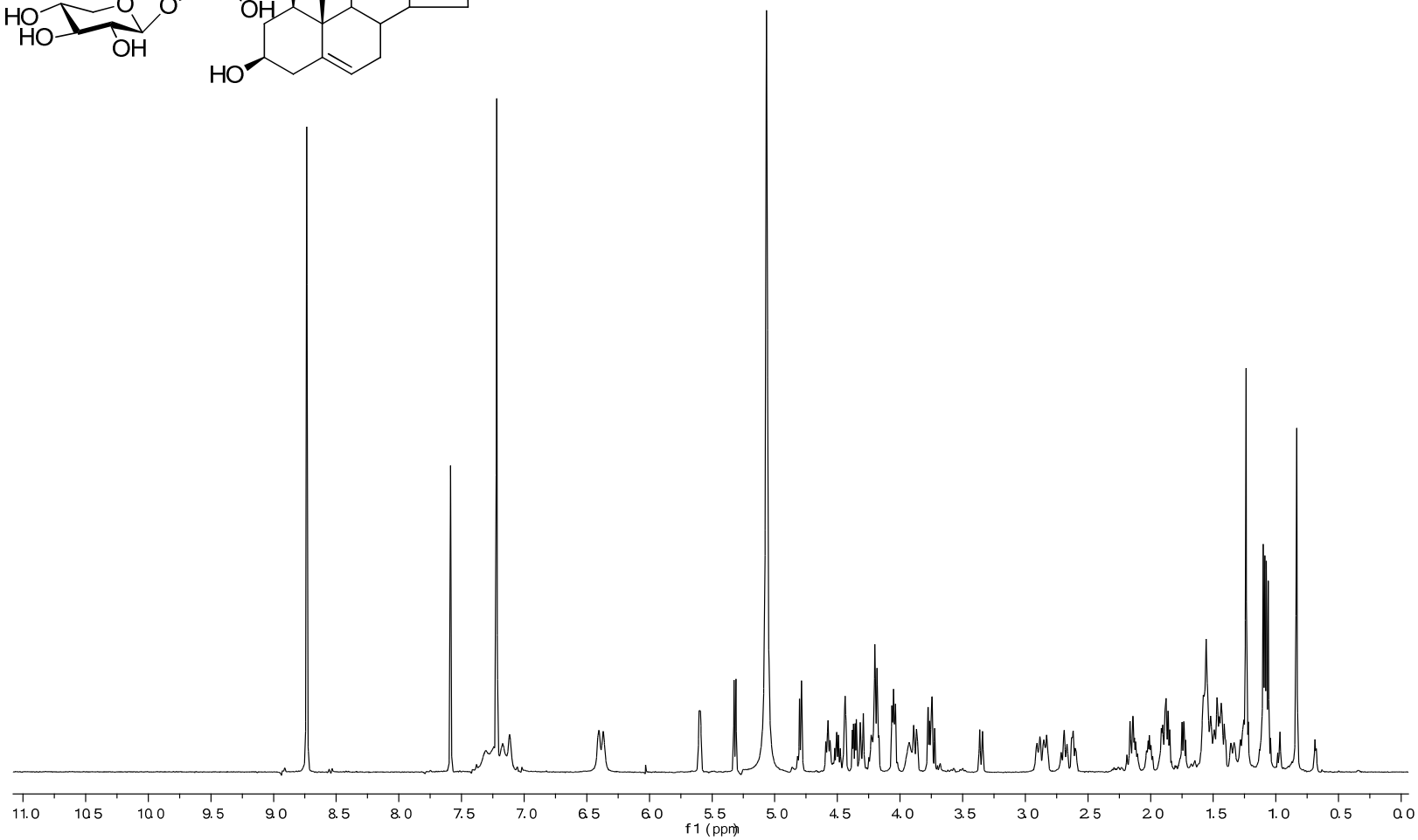
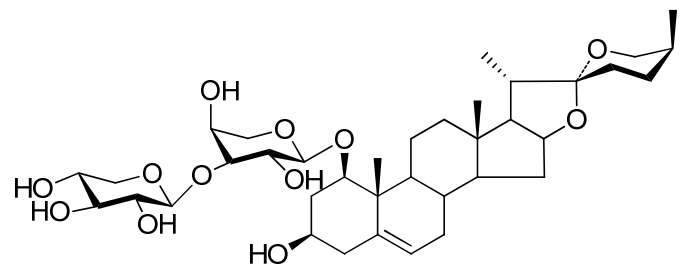


**S24 ROESY spectrum of Angudracanoside G (5) in pyridine-*d*<sub>5</sub>**

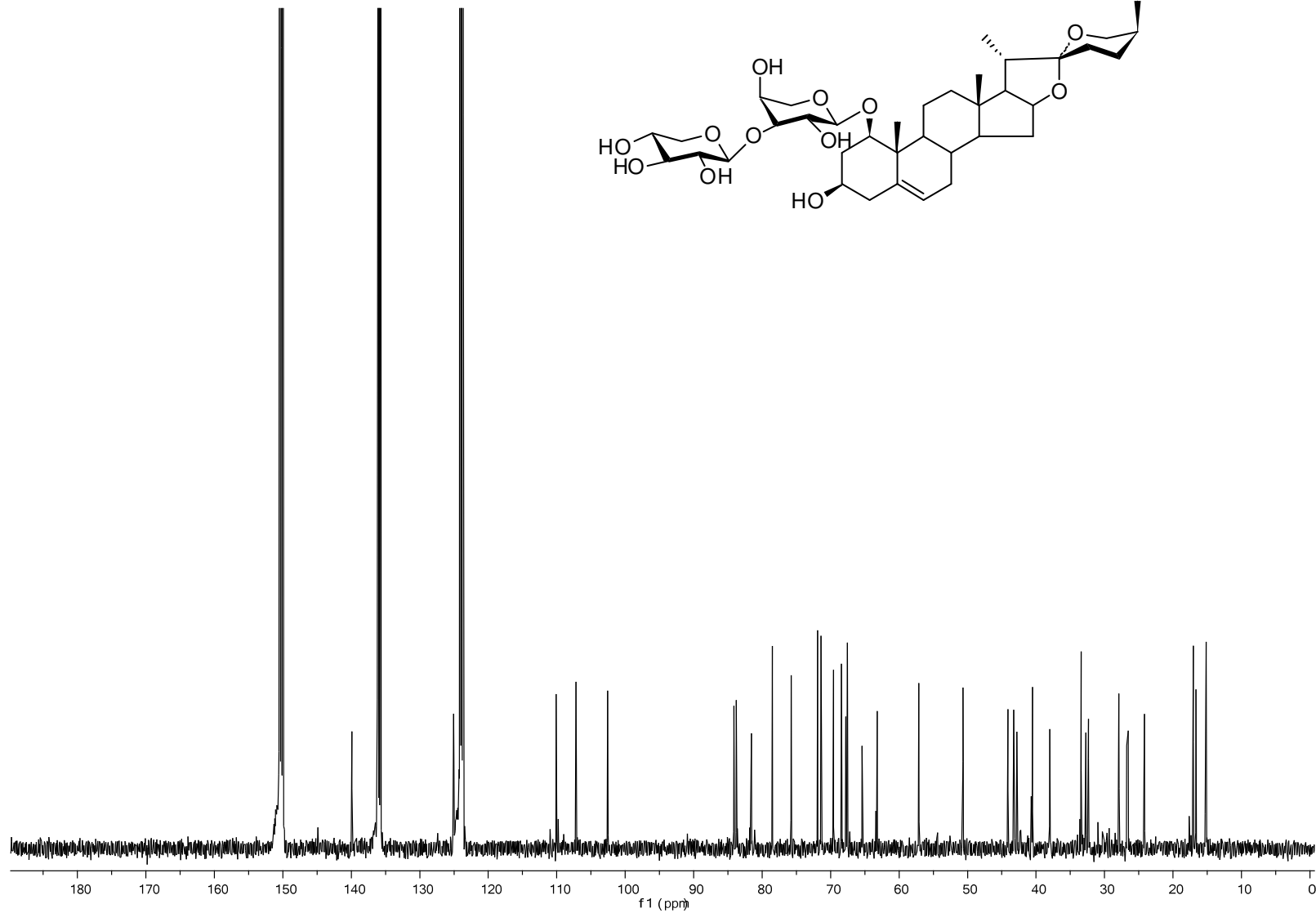
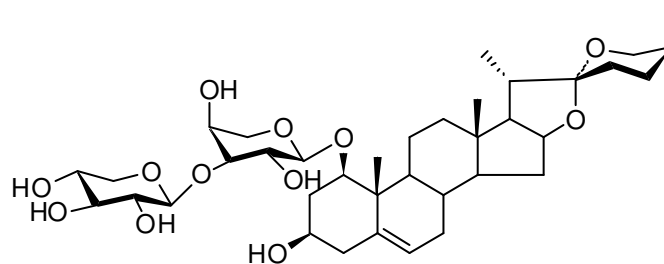




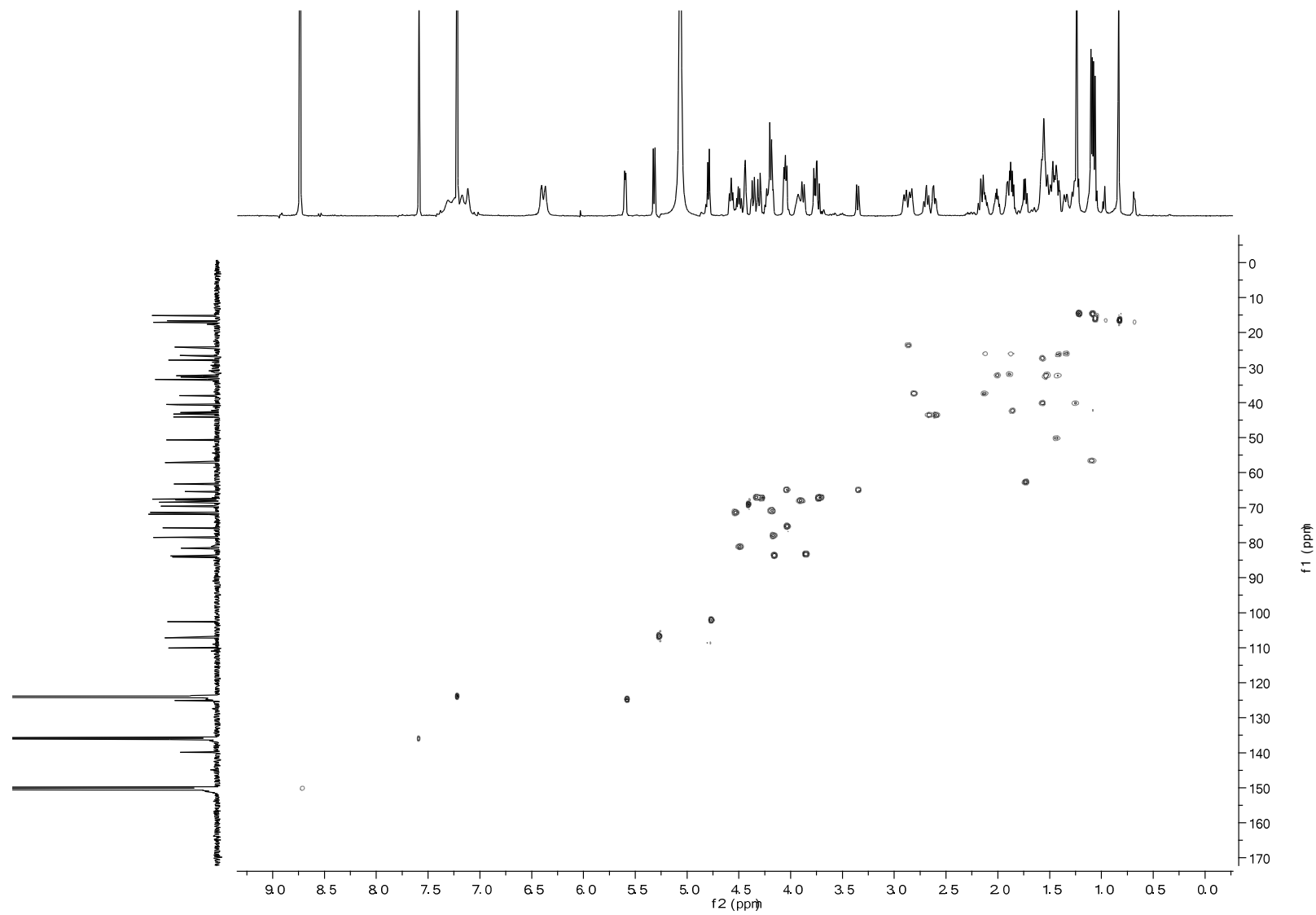
S25  $^1\text{H}$  NMR spectrum for Angudracanoside F (6) in pyridine- $d_5$



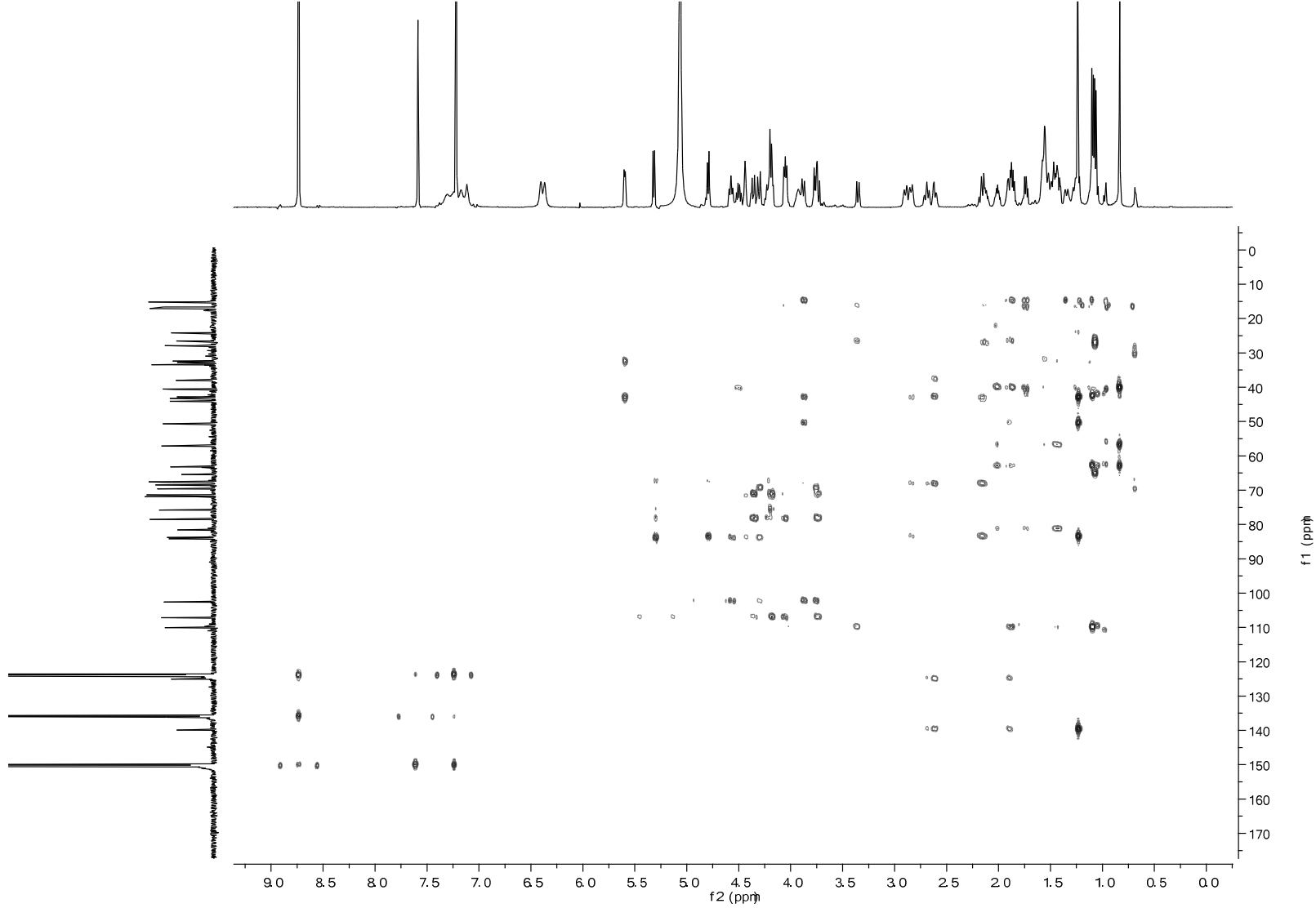
S26  $^{13}\text{C}$  NMR spectrum for Angudracanoside F (6) in pyridine- $d_5$



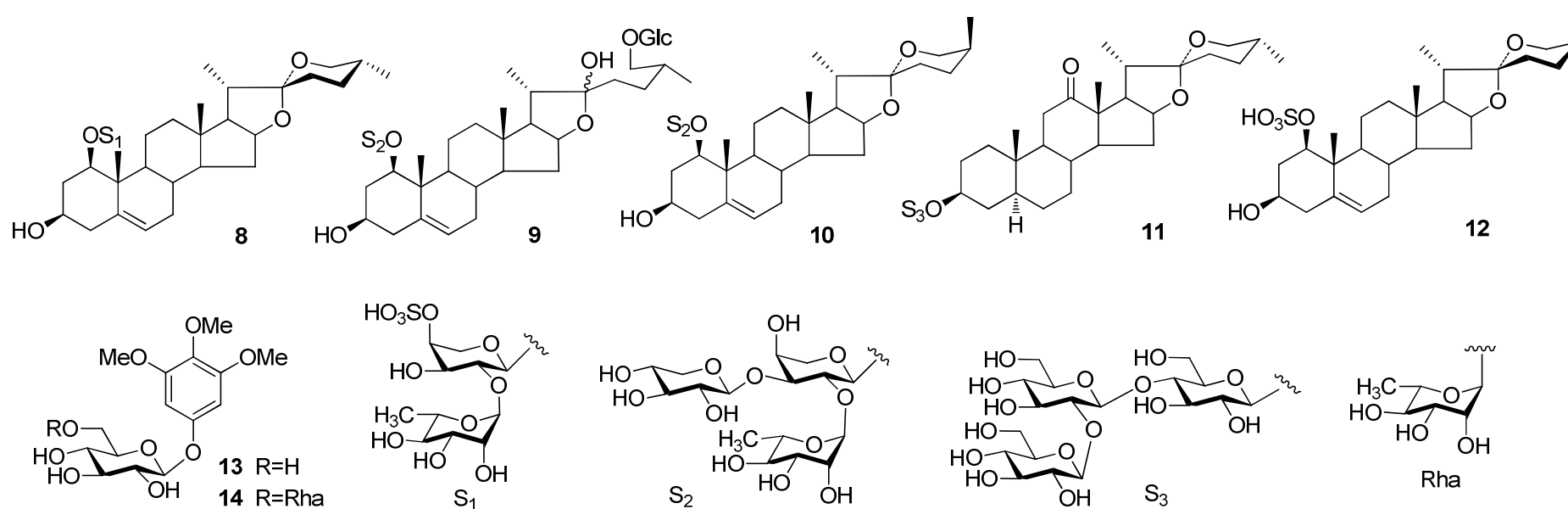
**S27 HSQC spectrum for Angudracanoside F (6) in pyridine-*d*<sub>5</sub>**



S28 HMBC spectrum for Angudracanoside F (6) in pyridine-*d*<sub>5</sub>



## S29 Structures of the known compounds 8-14



(25*R*)-ruscogenin 1-*O*- $\alpha$ -L-rhamnopyranosyl-(1-2)-4-*O*-sulfo- $\beta$ -D-arabinopyranoside (**8**)

26-*O*- $\beta$ -D-glucopyranosyl-furosta-5-ene-1 $\beta$ ,3 $\beta$ ,22 $\zeta$ ,26-tetrol-1-*O*- $\alpha$ -L-rhamnopyranosyl-(1-2)-*O*- $\beta$ -D-xylopyranosyl-(1-3)- $\alpha$ -L-arabinopyranoside (**9**)

(25*S*)-ruscogenin-1-*O*- $\alpha$ -L-rhamnopyranosyl-(1-2)-*O*- $\beta$ -D-xylopyranosyl-(1-3)- $\alpha$ -L-arabinopyranoside (**10**)

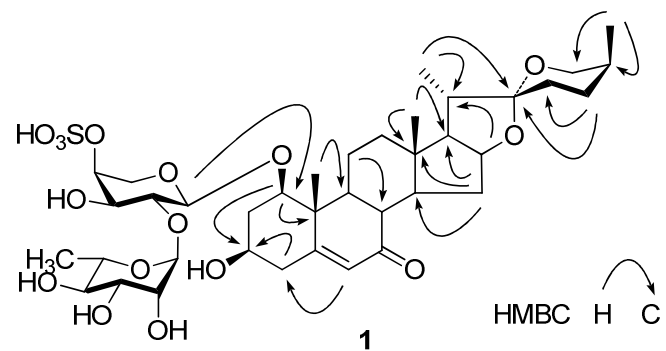
terreside (**11**)

(25*S*)-spirost-5-en-1 $\beta$ ,3 $\beta$ -diol-1-sulphate (**12**)

3,4,5-trimethoxyphenyl-1-*O*- $\beta$ -D-glucopyranoside (**13**)

3,4,5-trimethoxyphenyl-1-*O*- $\alpha$ -L-rhamnopyranosyl-(1-6)- $\beta$ -D-glucopyranoside (**14**)

### S30 Important HMBC correlations for 1



### S31 Selected ROESY correlations of 3

