

## ***Supplementary Information***

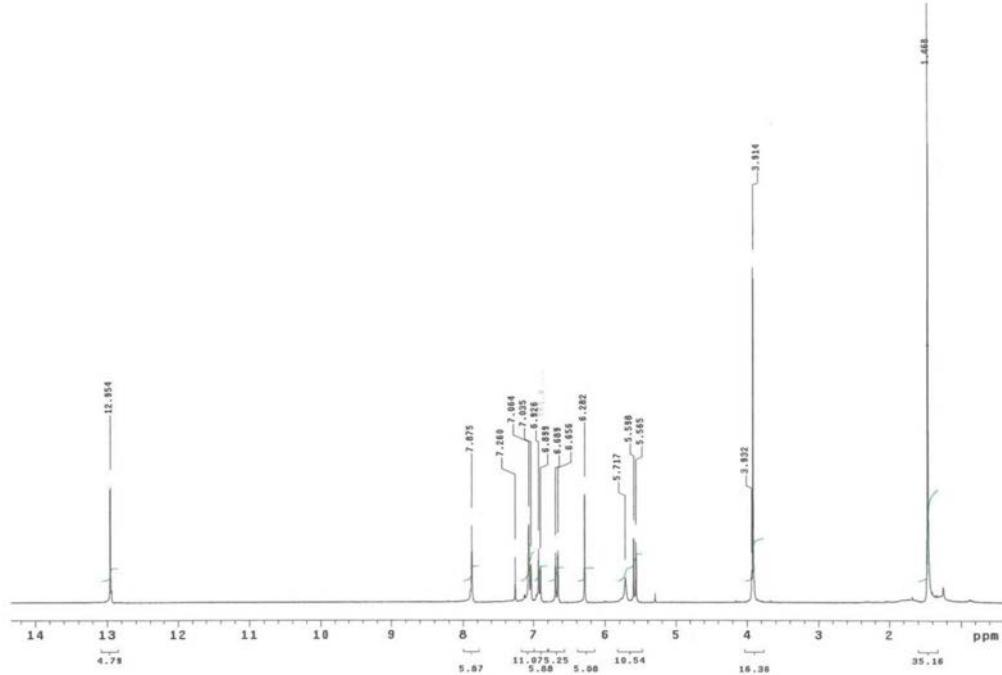
## New Isoflavones from the Leaves of *Vatairea guianensis* Aubl 

*Ronilson Freitas de Souza,<sup>a</sup> Victor H. S. Marinho,<sup>a</sup> Geilson A. da Silva,<sup>a</sup> Lívio M. Costa-Jr.,<sup>b</sup> Joyce Kelly R. da Silva,<sup>c</sup> Gilmara N. T. Bastos,<sup>d</sup> Alberto C. Arruda,<sup>a</sup> Milton N. da Silva<sup>a</sup> and Mara Silvia P. Arruda<sup>\*a</sup>*

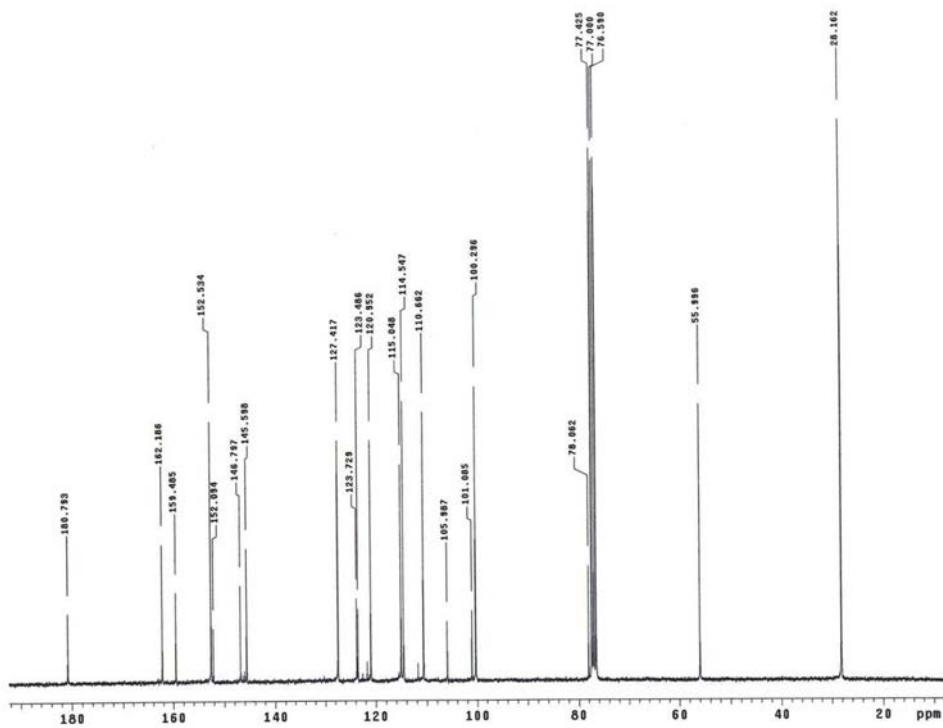
<sup>a</sup>Programa de Pós-Graduação em Química, Instituto de Ciências Exatas e Naturais, Universidade Federal do Pará, Campus Universitário do Guamá, 66075-970 Belém-PA, Brazil

<sup>b</sup>Centro de Ciências Agrárias e Ambientais, Universidade Federal do Maranhão, MA-230, km 04, s/n, Boa Vista, 65500-000 Chapadinha-MA, Brazil

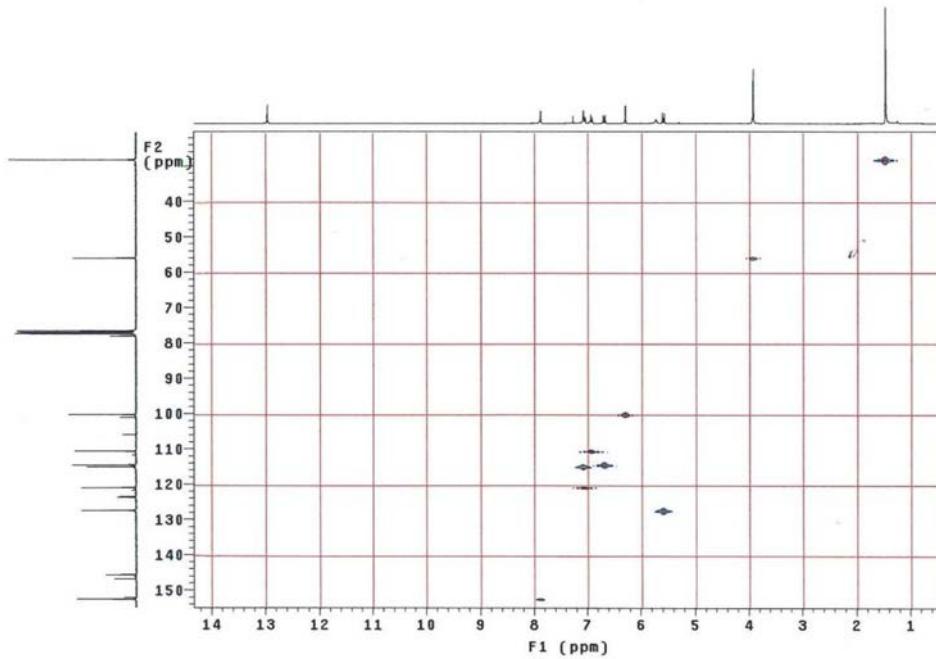
<sup>c</sup>Programa de Pós-Graduação em Biotecnologia and <sup>d</sup>Programa de Pós-Graduação em Neurociências e Biologia Celular, Instituto de Ciências Biológicas, Universidade Federal do Pará, Campus Universitário do Guamá, 66075-970 Belém-PA, Brazil



**Figure S1.**  $^1\text{H}$  NMR spectrum of **1** ( $\text{CDCl}_3$ , 300 MHz).



**Figure S2.**  $^{13}\text{C}$  NMR spectrum of **1** ( $\text{CDCl}_3$ , 75 MHz).



**Figure S3.** HETCOR NMR spectrum of **1** ( $\text{CDCl}_3$ , 300 x 75 MHz).

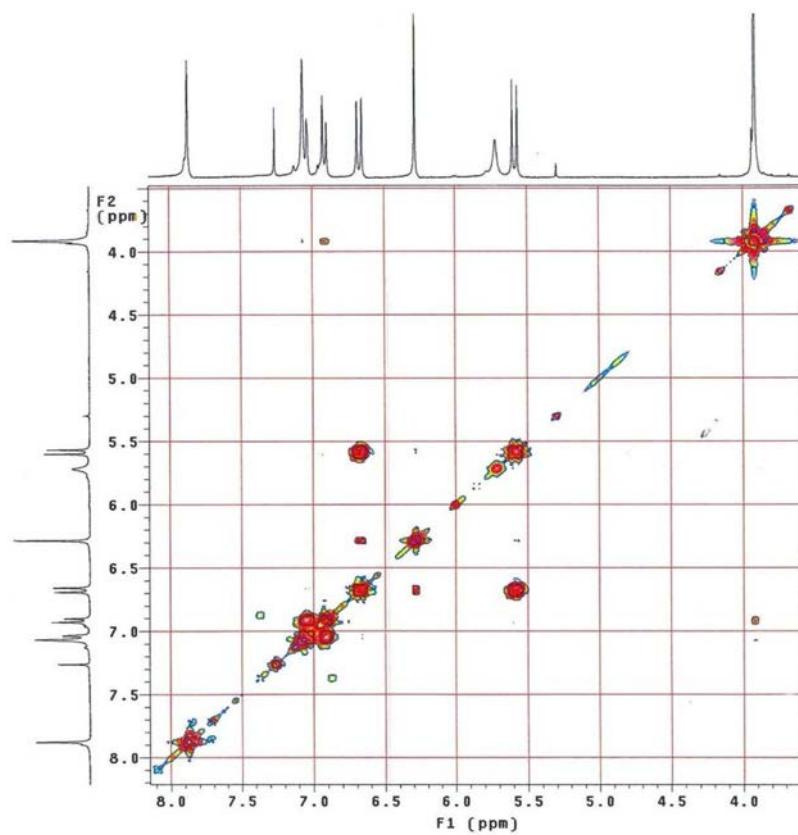


Figure S4. COSY NMR spectrum of **1** ( $\text{CDCl}_3$ , 300 MHz).

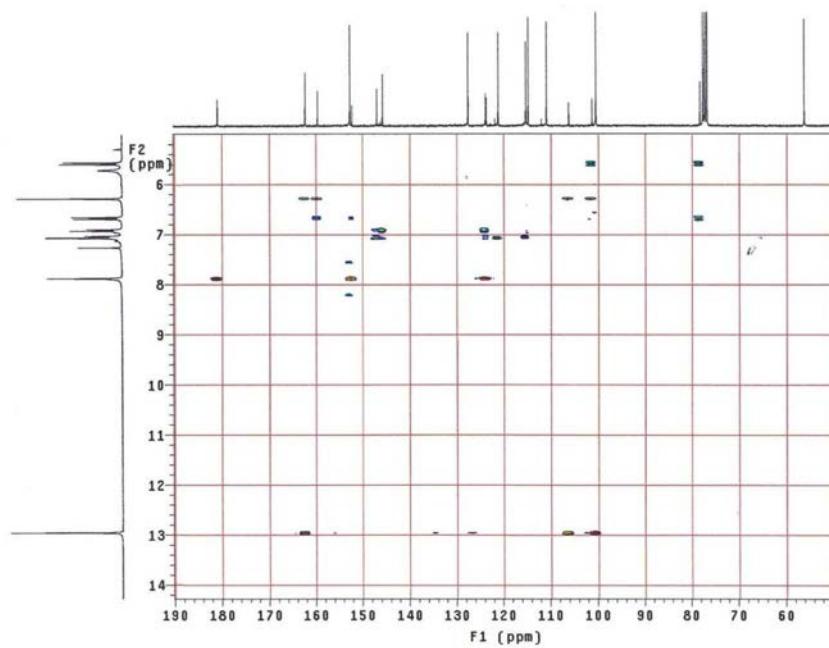
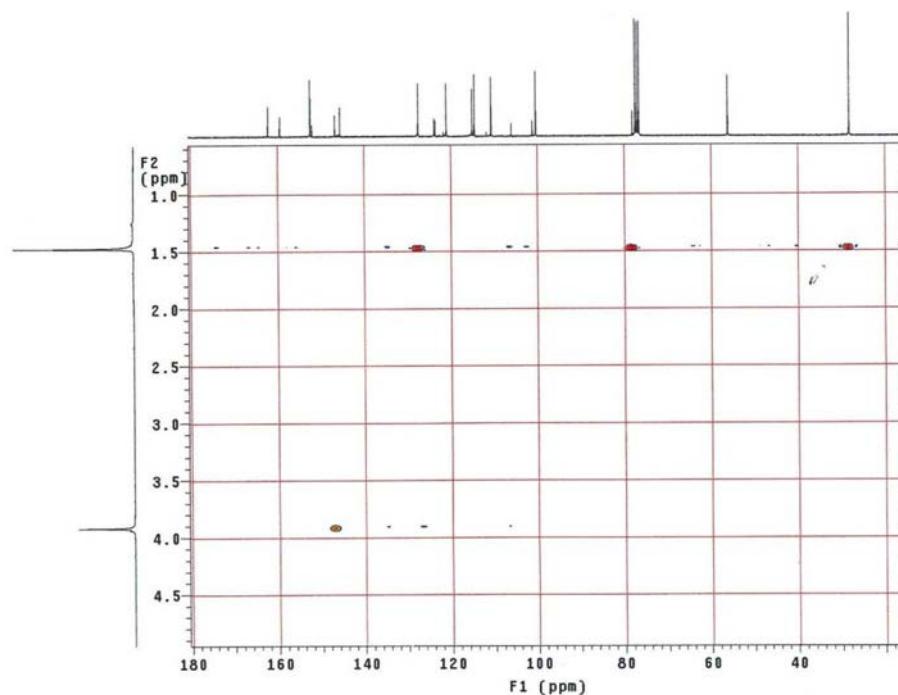
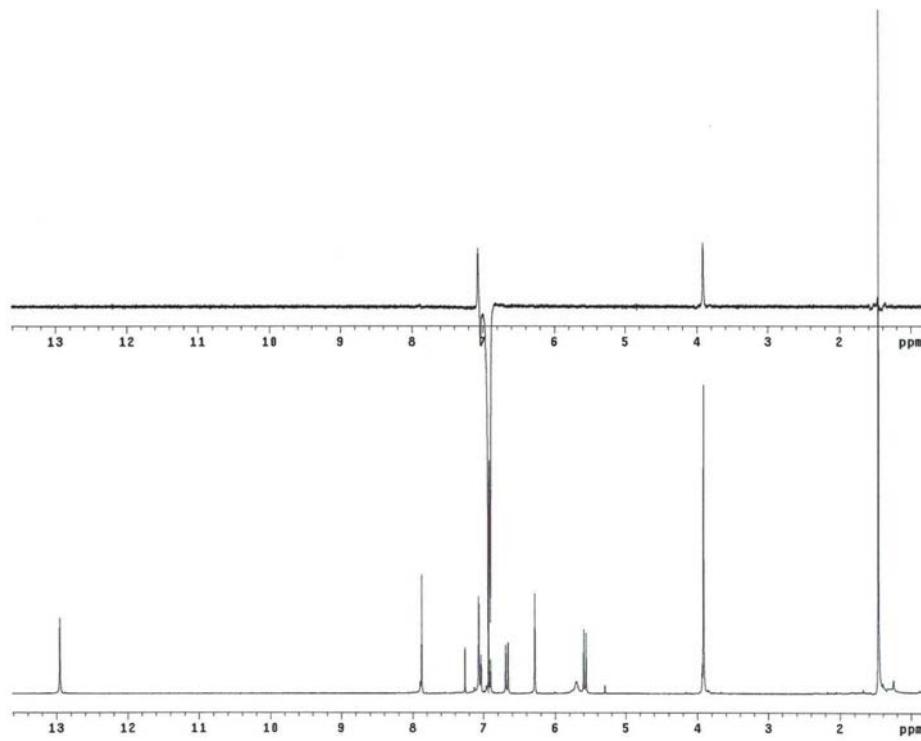


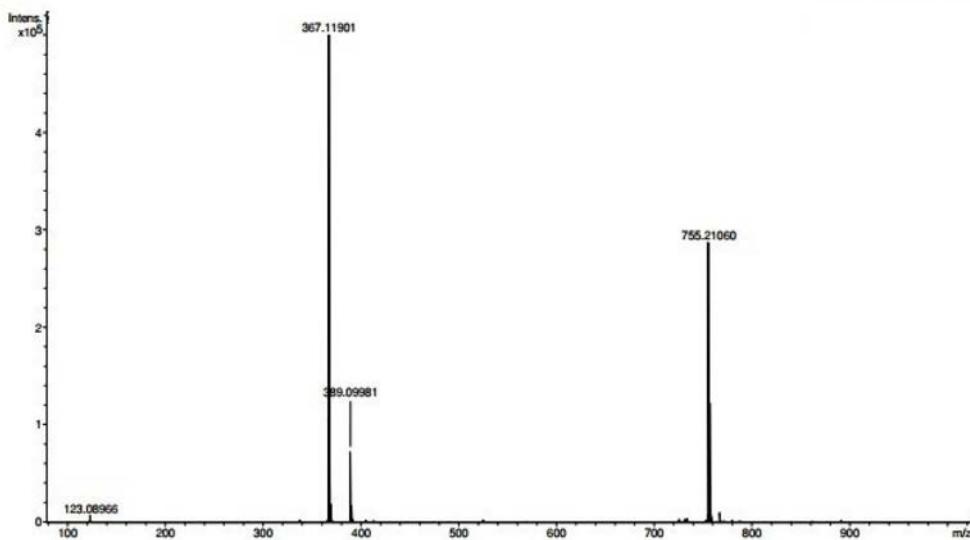
Figure S5. HMBC NMR spectrum of **1** ( $\text{CDCl}_3$ , 300 x 75 MHz) (expansion 1).



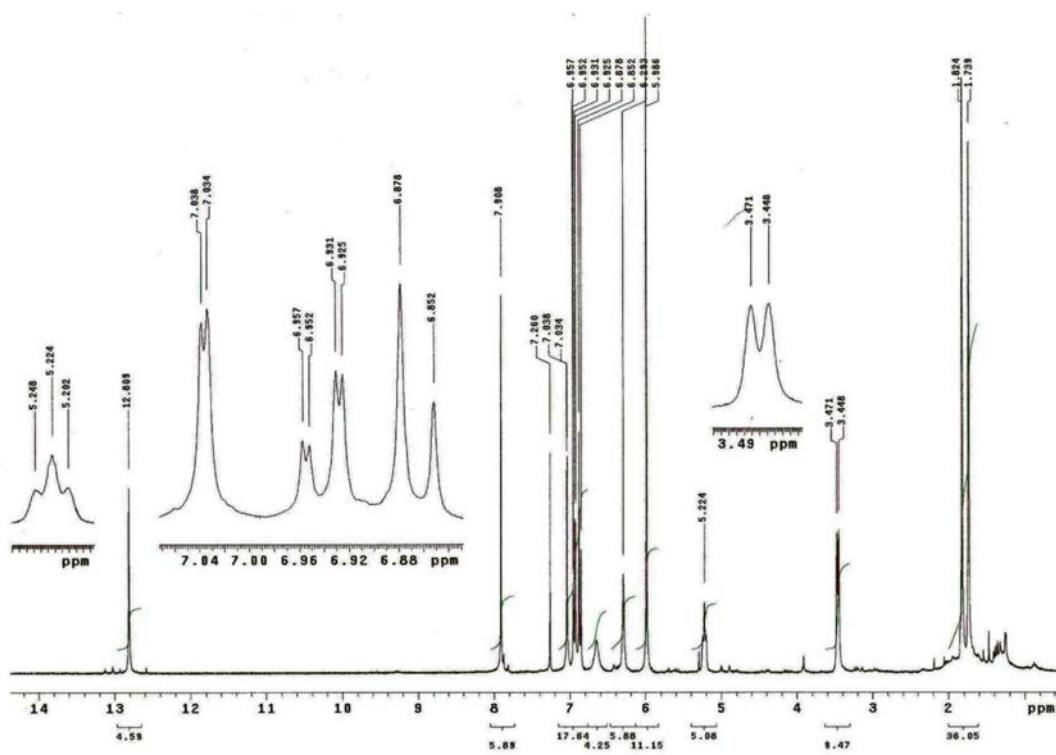
**Figure S6.** HMBC NMR spectrum of **1** ( $\text{CDCl}_3$ ,  $300 \times 75$  MHz) (expansion 2).



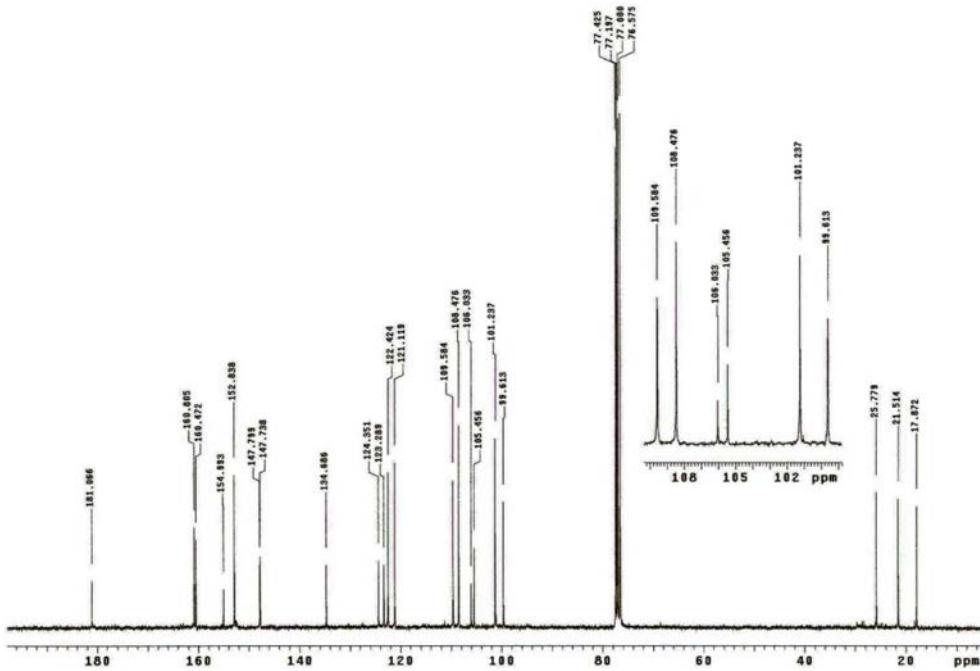
**Figure S7.** NOEdiff NMR spectrum of **1** ( $\text{CDCl}_3$ , 75 MHz).



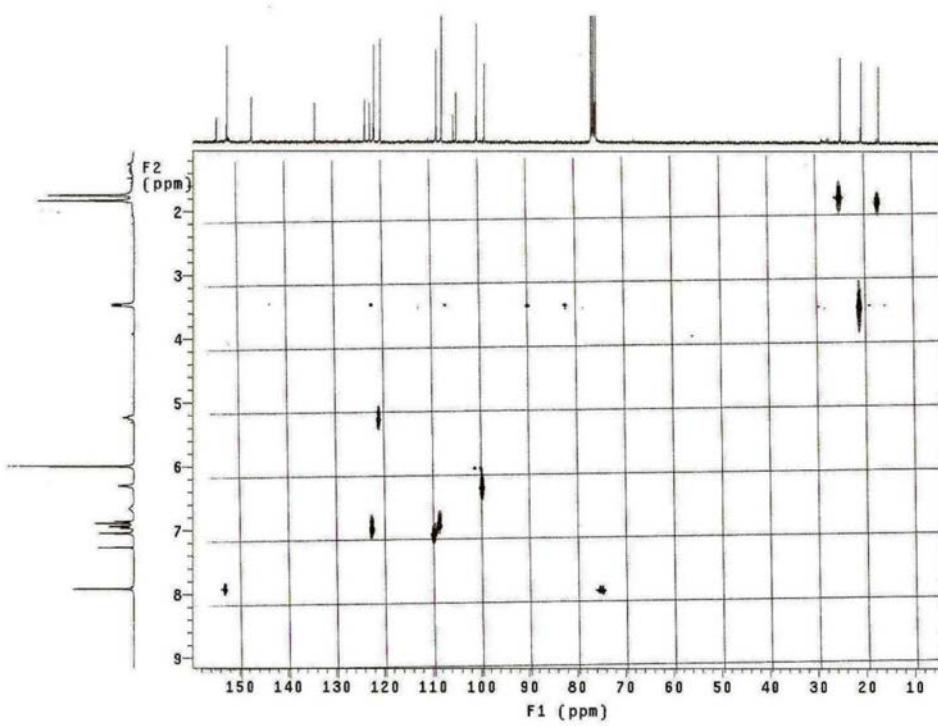
**Figure S8.** HRESITOF-MS spectrum of **1**.



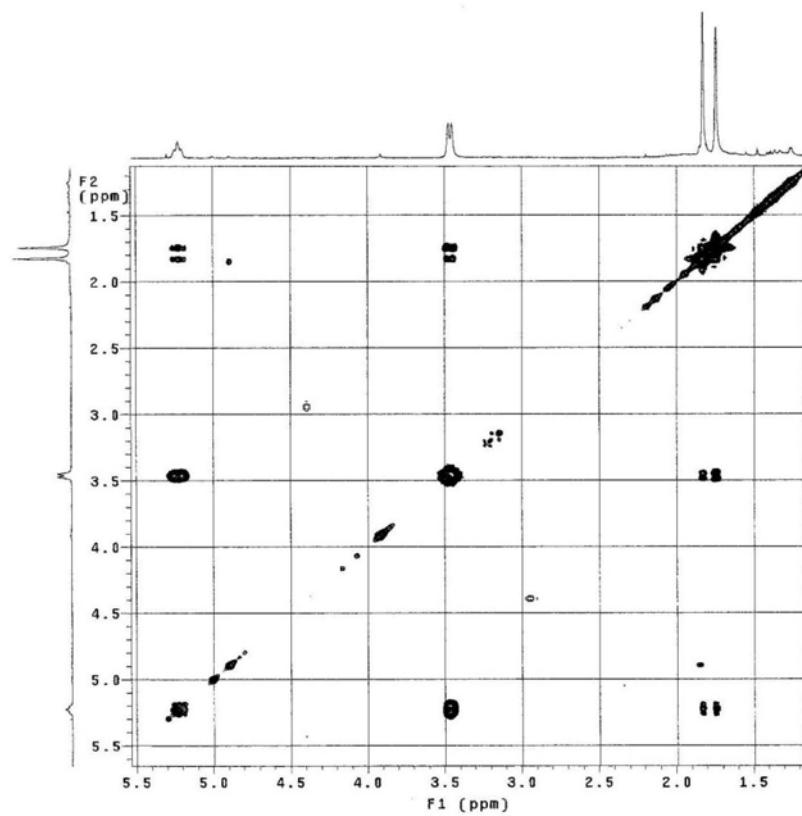
**Figure S9.**  $^1\text{H}$  NMR spectrum of **2** ( $\text{CDCl}_3$ , 300 MHz).



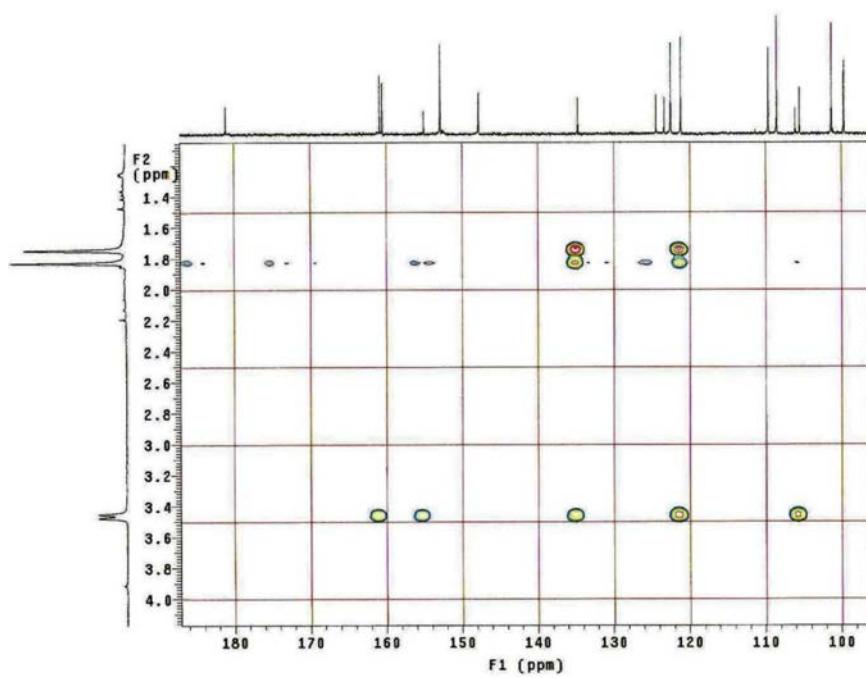
**Figure S10.**  $^{13}\text{C}$  NMR spectrum of **2** ( $\text{CDCl}_3$ , 75 MHz).



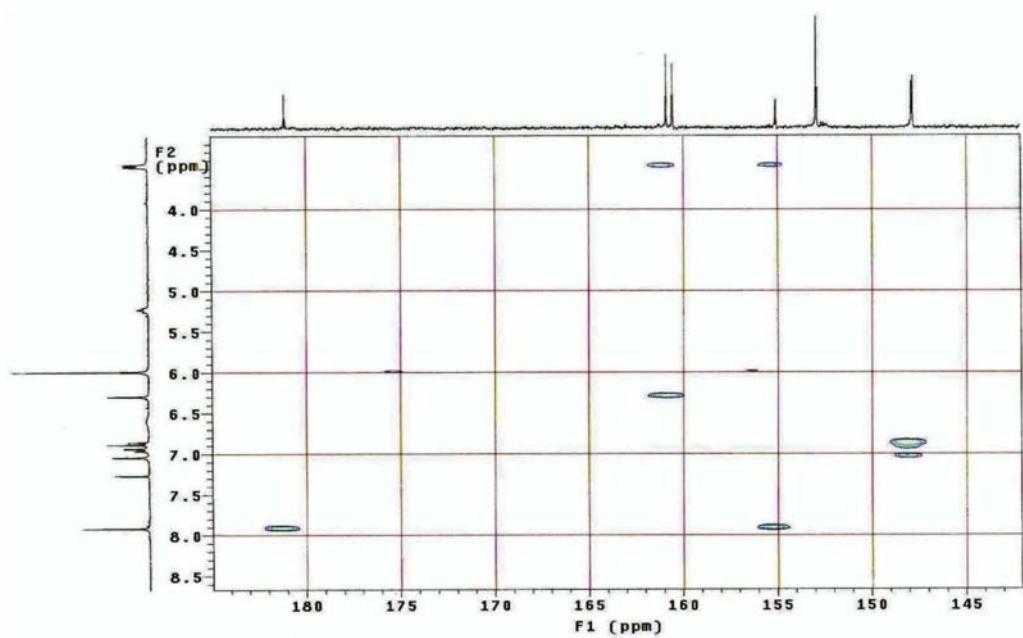
**Figure S11.** HETCOR NMR spectrum of **2** ( $\text{CDCl}_3$ , 300 x 75 MHz).



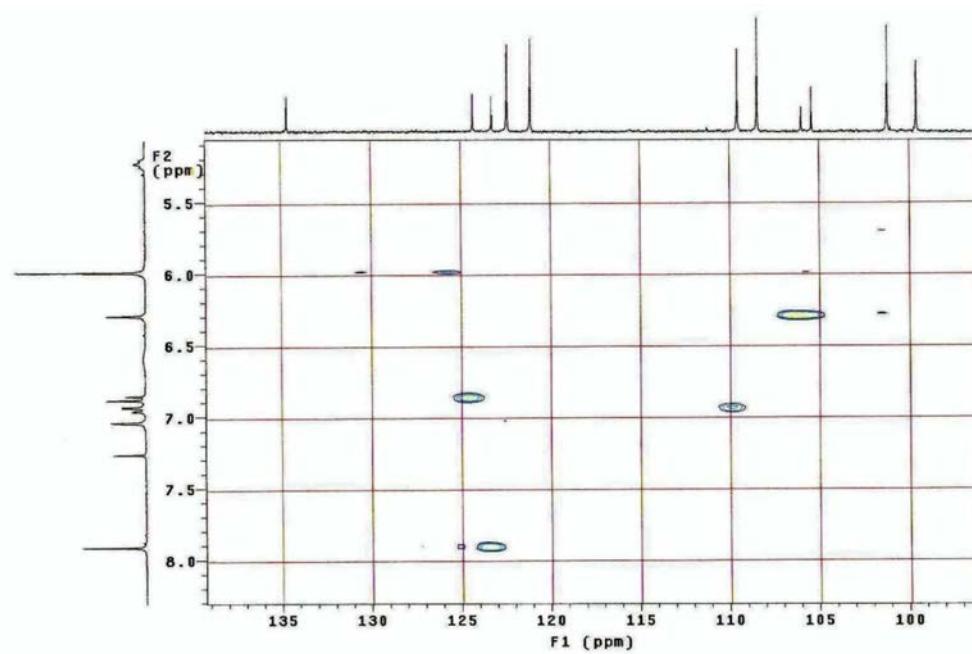
**Figure S12.** COSY NMR spectrum of **2** ( $\text{CDCl}_3$ , 300 MHz).



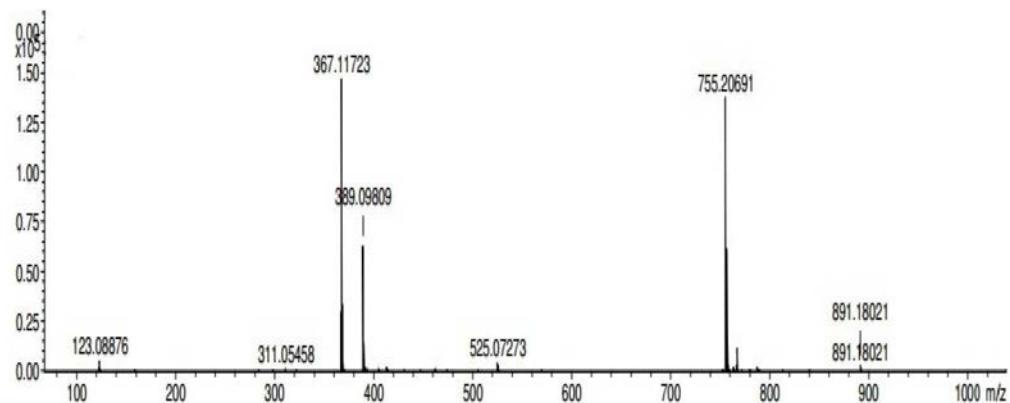
**Figure S13.** HMBC NMR spectrum of **2** ( $\text{CDCl}_3$ , 300 x 75 MHz) (expansion 1).



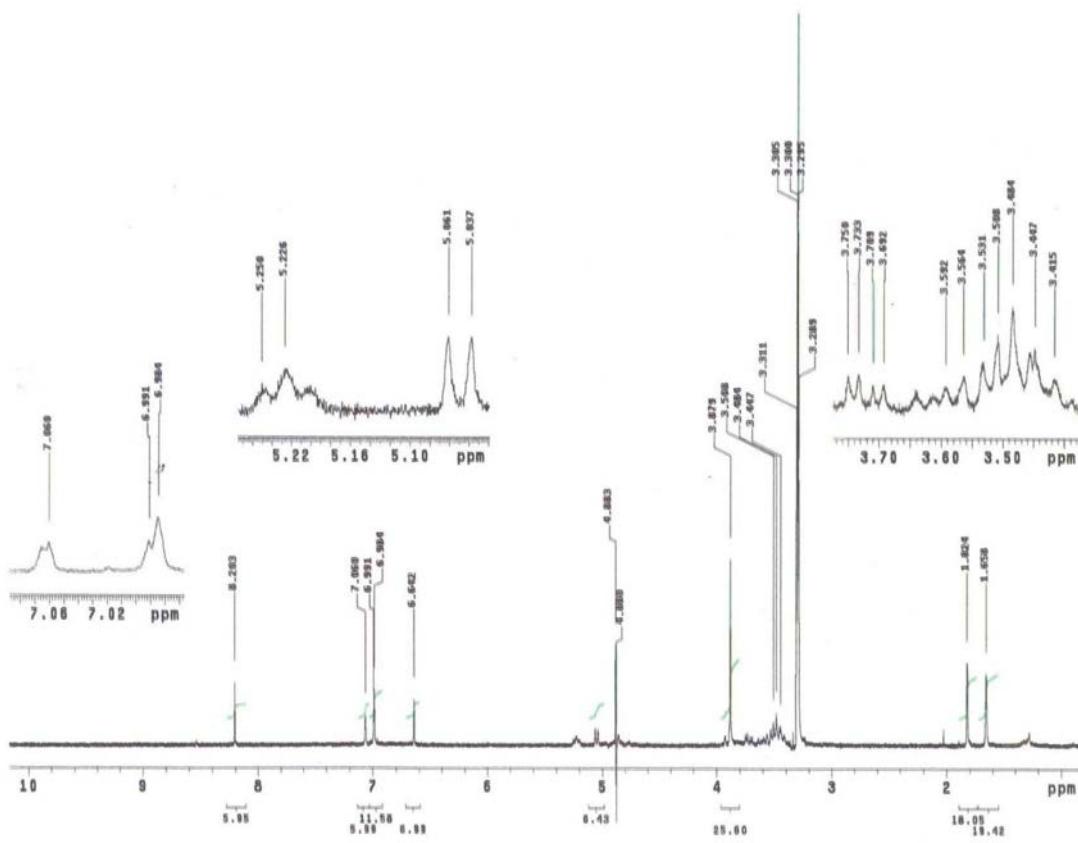
**Figure S14.** HMBC NMR spectrum of **2** ( $\text{CDCl}_3$ ,  $300 \times 75$  MHz) (expansion 2).



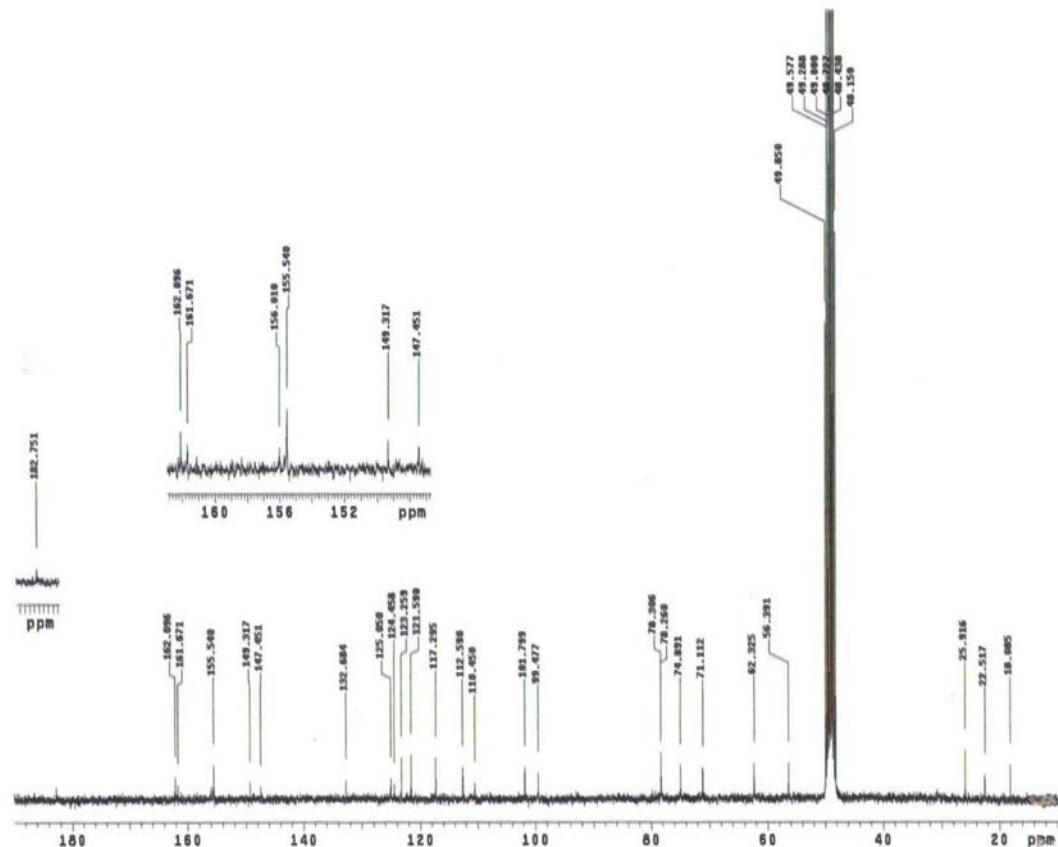
**Figure S15.** HMBC NMR spectrum of **2** ( $\text{CDCl}_3$ ,  $300 \times 75$  MHz) (expansion 3).



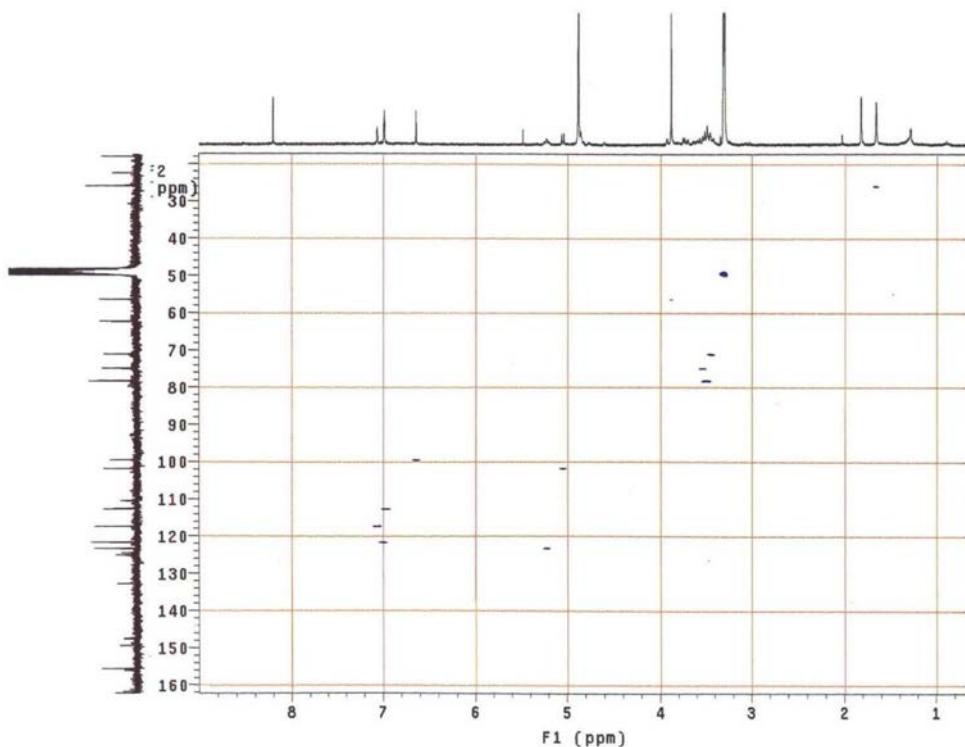
**Figure S16.** HRESITOF-MS spectrum of **2**.



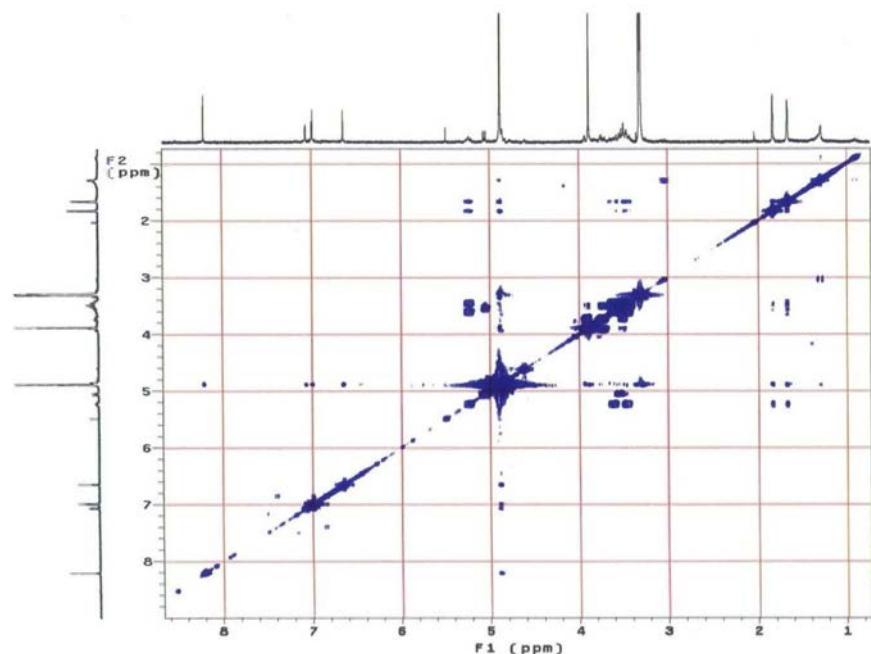
**Figure S17.**  $^1\text{H}$  NMR spectrum of **3** ( $\text{CD}_3\text{OD}$ , 300 MHz).



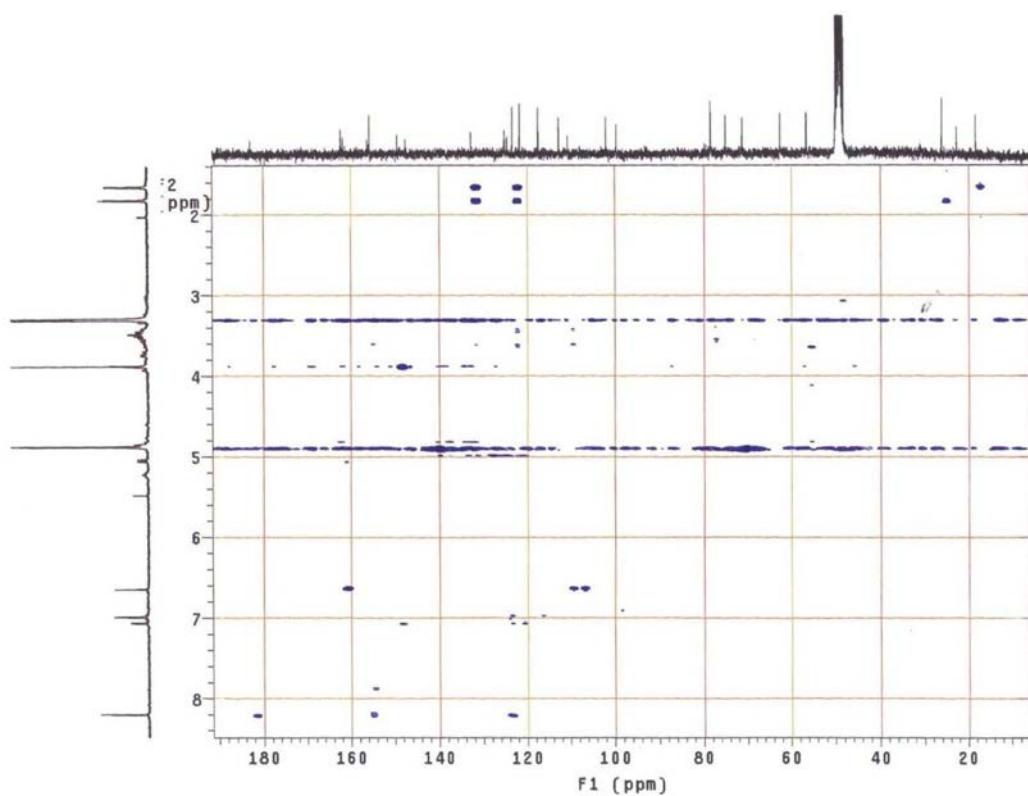
**Figure S18.**  $^{13}\text{C}$  NMR spectrum of **3** ( $\text{CD}_3\text{OD}$ , 75 MHz).



**Figure S19.** HETCOR NMR spectrum of **3** ( $\text{CD}_3\text{OD}$ , 300 x 75 MHz).



**Figure S20.** COSY NMR spectrum of **3** ( $\text{CD}_3\text{OD}$ , 300 MHz).



**Figure S21.** HMBC NMR spectrum of **3** ( $\text{CD}_3\text{OD}$ , 300 x 75 MHz).

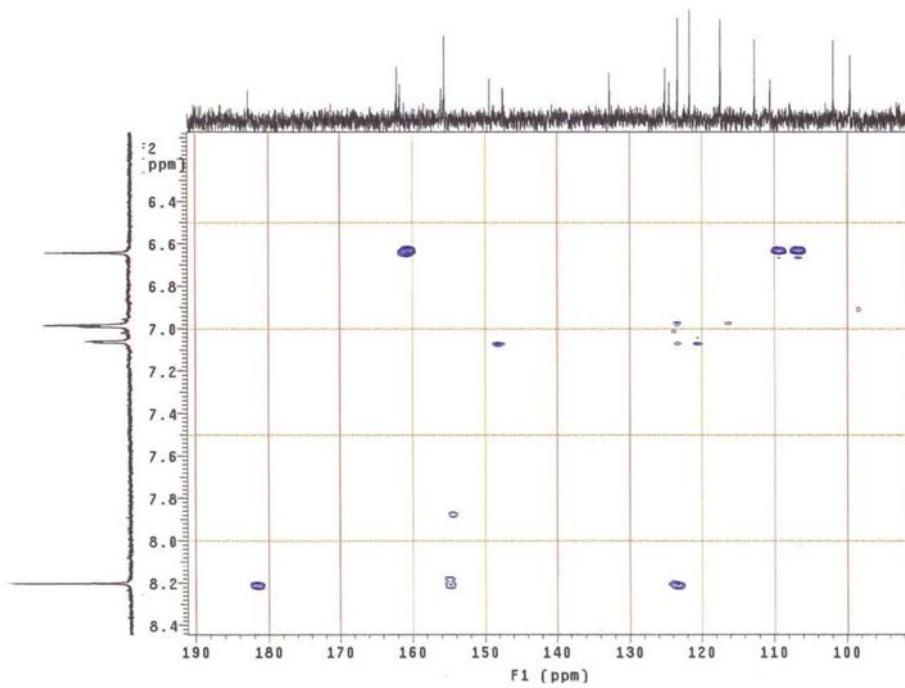


Figure S22. HMBC NMR spectrum of **3** ( $\text{CD}_3\text{OD}$ ,  $300 \times 75$  MHz) (expansion 1).

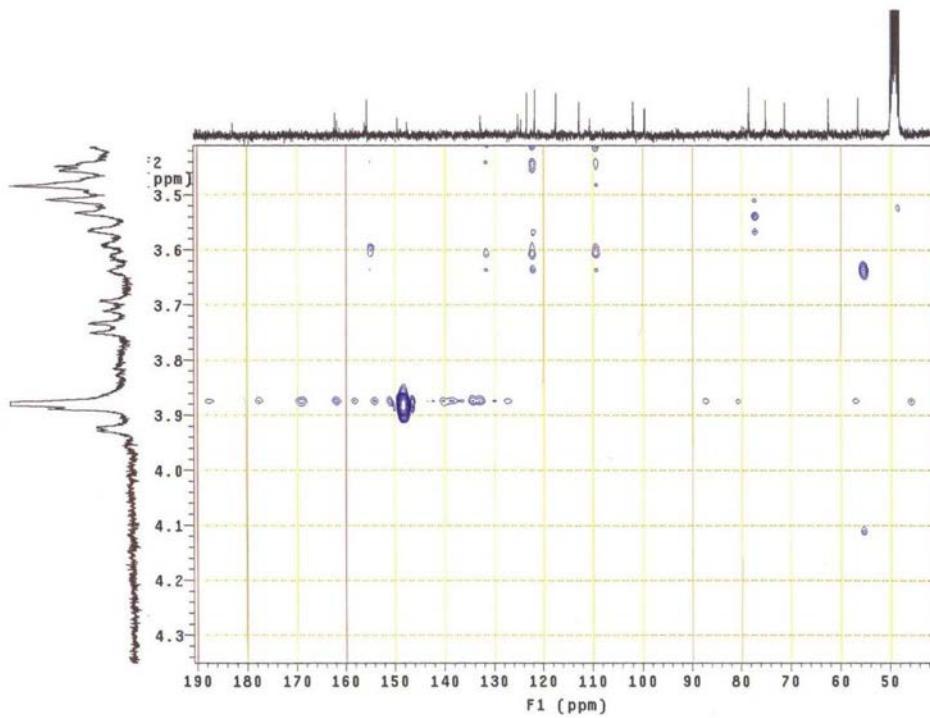
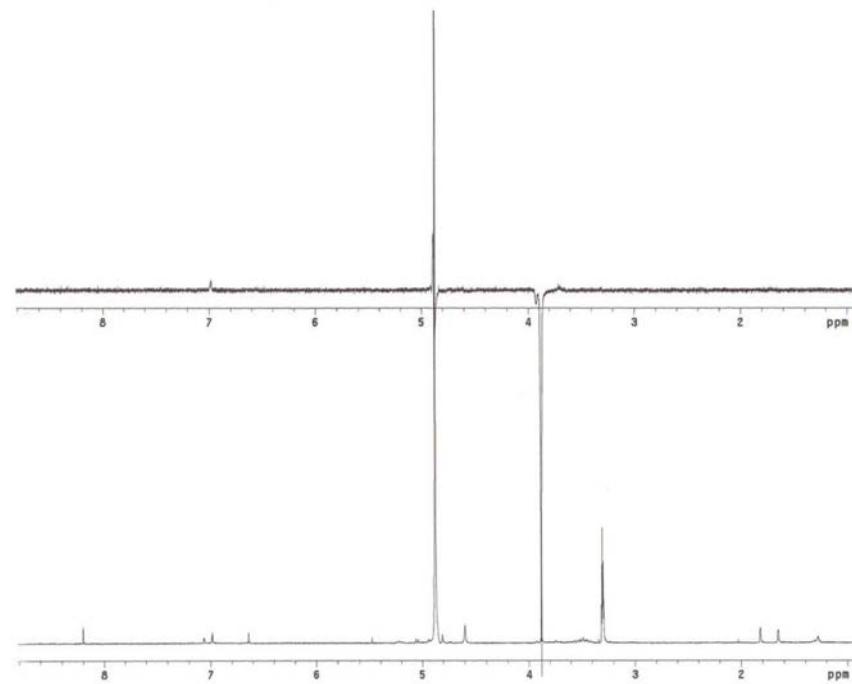
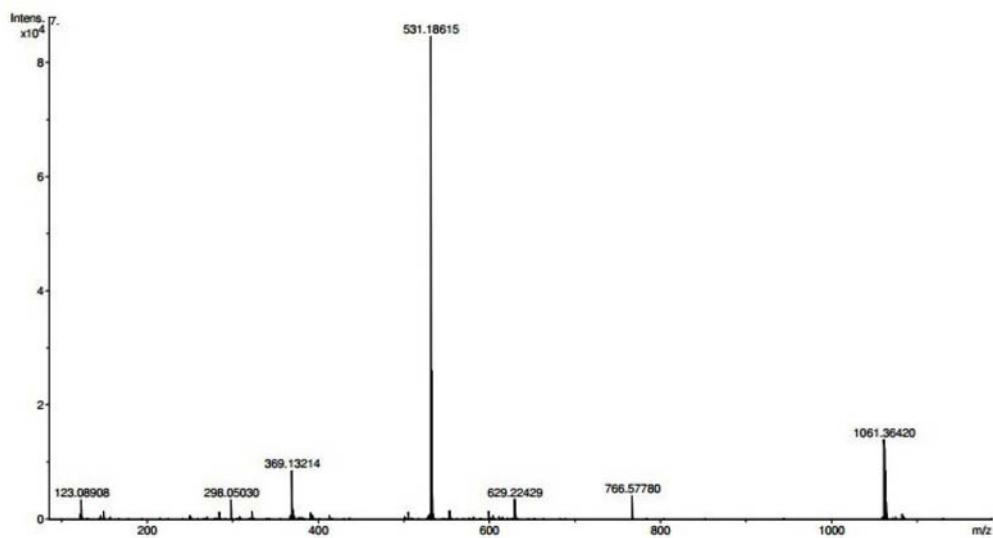


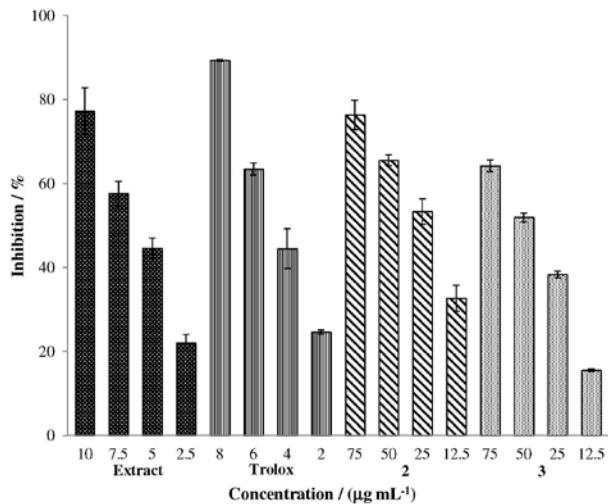
Figure S23. HMBC NMR spectrum of **3** ( $\text{CD}_3\text{OD}$ ,  $300 \times 75$  MHz) (expansion 2).



**Figure S24.** NOEdiff NMR spectrum of **3** ( $\text{CD}_3\text{OD}$ , 75 MHz).



**Figure S25.** HRESITOF-MS spectrum of **3**.



**Figure S26.** Percentage of inhibition of radical DPPH· caused by ethanolic extracts of the leaves of *V. guianensis*, isoflavones **2**, **3** and positive control (Trolox).