SUPPLEMENTARY MATERIAL

One new flavanocoumarin from the thorns of *Gleditsia sinensis*

Jinqian Yu\(^a\), Yunxia Xian\(^b\), Gang Li\(^b\), Daijie Wang\(^a\), Honglei Zhou\(^b\) and Xiao Wang\(^a,b^*\)

\(^a\) Shandong Key Laboratory of TCM Quality Control Technology, Shandong Analysis and Test Center, Jinan, 250014, P. R. China

\(^b\) College of Pharmacy, Shandong University of Traditional Chinese Medicine, Jinan, 250014, P. R. China

**Abstract:** One new flavanocoumarin (1), as well as six known flavonoids (2-7), was isolated from the ethyl acetate extract of the thorns of *Gleditsia sinensis*. The structures of these compounds were elucidated by extensive spectroscopic measurements and comparison with data reported in literatures. Cytotoxic activities of compounds 1-6 were evaluated against human liver cancer SK-hep-1 cells *in vitro* by the MTT method, with compound 1 displaying moderate activity (IC\(_{50}\) of 62.53 μM). Furthermore, compound 1 could increase the number of apoptosis cells in a concentration-dependent manner.

**Keywords:** *Gleditsia sinensis*; Flavanocoumarin; Cytotoxic activity; Apoptosis
Supporting Information

The List of Contents

| No. | Content                                                                 | Page |
|-----|-------------------------------------------------------------------------|------|
| 1   | **Figure S1.** The HREIMS Spectroscopic Data of Compound 1             | 2    |
| 2   | **Figure S2.** The \(^1\)H NMR Spectrum of Compound 1 in DMSO-\(d_6\) (500 MHz) | 3    |
| 3   | **Figure S3.** The \(^{13}\)C NMR Spectrum of Compound 1 in DMSO-\(d_6\) (125 MHz) | 3    |
| 4   | **Figure S4.** The HSQC Spectrum of Compound 1 in DMSO-\(d_6\)          | 4    |
| 5   | **Figure S5.** The HMBC Spectrum of Compound 1 in DMSO-\(d_6\)          | 4    |
| 6   | **Figure S6.** Key correlations in HMBC of compound 1.                 | 5    |
**Figure S1.** The HREIMS Spectroscopic Data of Compound 1
Figure S2. The $^1$H NMR Spectrum of Compound 1 in DMSO-$d_6$ (500 MHz)

Figure S3. The $^{13}$C NMR Spectrum of Compound 1 in DMSO-$d_6$ (125 MHz)
Figure S4. The HSQC Spectrum of Compound 1 in DMSO-\textit{d}_6

Figure S5. The HMBC Spectrum of Compound 1 in DMSO-\textit{d}_6
Figure S6. Key correlations in HMBC (→) of compound 1.