SUPPLEMENTARY MATERIAL

A novel diarylheptanoid-bearing sesquiterpene moiety from the rhizomes of *Alpinia officinarum*

Na Wei^{a#}, Zhonglin Zhou^{a,b#}, Qing Wei^c, Yong Wang^a, Jun Jiang^a, Junqing Zhang^a, Lixiang Wu^b,
Shuiping Dai^a, Youbin Li^{a*}

^a School of Pharmacy, Hainan Medical University, Haikou, 571199, PR China;

^b Public Health School of Central South University, Changsha, 410012, PR China;

^c School of Pharmacy, Heilongjiang University of Chinese Medicine, Harbin, 150040, PR China)

Authors contributed equally to this work.

*Corresponding author: Dr. Youbin Li, School of Pharmacy, Hainan Medical University, Haikou,
PR China. Tel: +86-89831350773, 1365260199@qq.com

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A new diarylheptanoid analogue-bearing sesquiterpene moiety, named Alpinisin A, was isolated from the rhizomes of *Alpinia officinarum* Hance. The new structure was determined by various spectroscopic techniques (^1H and ^{13}C APT, HSQC, HMBC, ^1H - ^1H COSY, NOESY, and HR-ESI-MS). The compound was tested for cytotoxic activity *in vitro* against human tumor cell lines (SGC-7901, MCF-7, and Caski), which showed significant inhibitory effects with IC_{50} levels of 11.42, 15.14, and 14.78 μM , respectively. The novel chemical structure characterized with a diarylheptanoid linked to a chain-like sesquiterpenoid should be highlighted.

Keywords: *Alpinia officinarum* Hance, Alpinisin A, cytotoxicity activity

Figure.S1 Key HMBC($\rightarrow$) and ^1H - ^1H COSY(—) correlations of compound **1**

Figure.S2 Key NOESY correlations of compound **1**

Figure S3 ¹H -NMR spectrum of compound1

Figure S4 ¹³C-APT spectrum of compound1

Figure S5 HSQC spectrum of compound1

Figure S6 ^1H - ^1H COSY spectrum of compound1

Figure S7 HMBC spectrum of compound1

Figure S8 NOESY spectrum of compound1

Figure S9 IR spectrum of compound 1

WQ-34-FTMS_141212131243 #1 RT: 0.01 AV: 1 NL: 2.98E6
T: FTMS + c ESIFull ms [50.00-1000.00]

Figure S10 HR-MS spectrum of compound 1