

SUPPLEMENTARY DATA

Cytotoxic and Antiproliferative Effects of Diarylheptanoids Isolated from *Curcuma comosa* Rhizomes on Leukaemic Cells

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Abstract: *Curcuma comosa* belongs to the Zingiberaceae family. In this study, two natural compounds were isolated from *C. comosa*, and their structures were determined using nuclear magnetic resonance. The isolated compounds were identified as 7-(3,4-dihydroxyphenyl)-5-hydroxy-1-phenyl-(1*E*)-1-heptene (**1**) and *trans*-1,7-diphenyl-5-hydroxy-1-heptene (**2**). Compound **1** showed the strongest cytotoxicity effect against HL-60 cells, while its antioxidant and anti-inflammatory properties were stronger than those of compound **2**. Compound **1** proved to be a potent antioxidant, compared to ascorbic acid. Neither compounds had any effect on red blood cell haemolysis. Furthermore, compound **1** significantly decreased Wilms' tumour 1 protein expression and cell proliferation in KG-1a cells. Both purified compounds decreased the WT1 protein levels in a time- and dose- dependent manner. Compound **1** suppressed cell cycle at the S phase. In conclusion, compound **1** has a promising chemotherapeutic potential against leukaemia.

Keywords: Zingiberaceae; *Curcuma comosa*; diarylheptanoids; cytotoxicity; antioxidant; anti-inflammatory; haemolysis; anticancer; Wilms' tumour 1

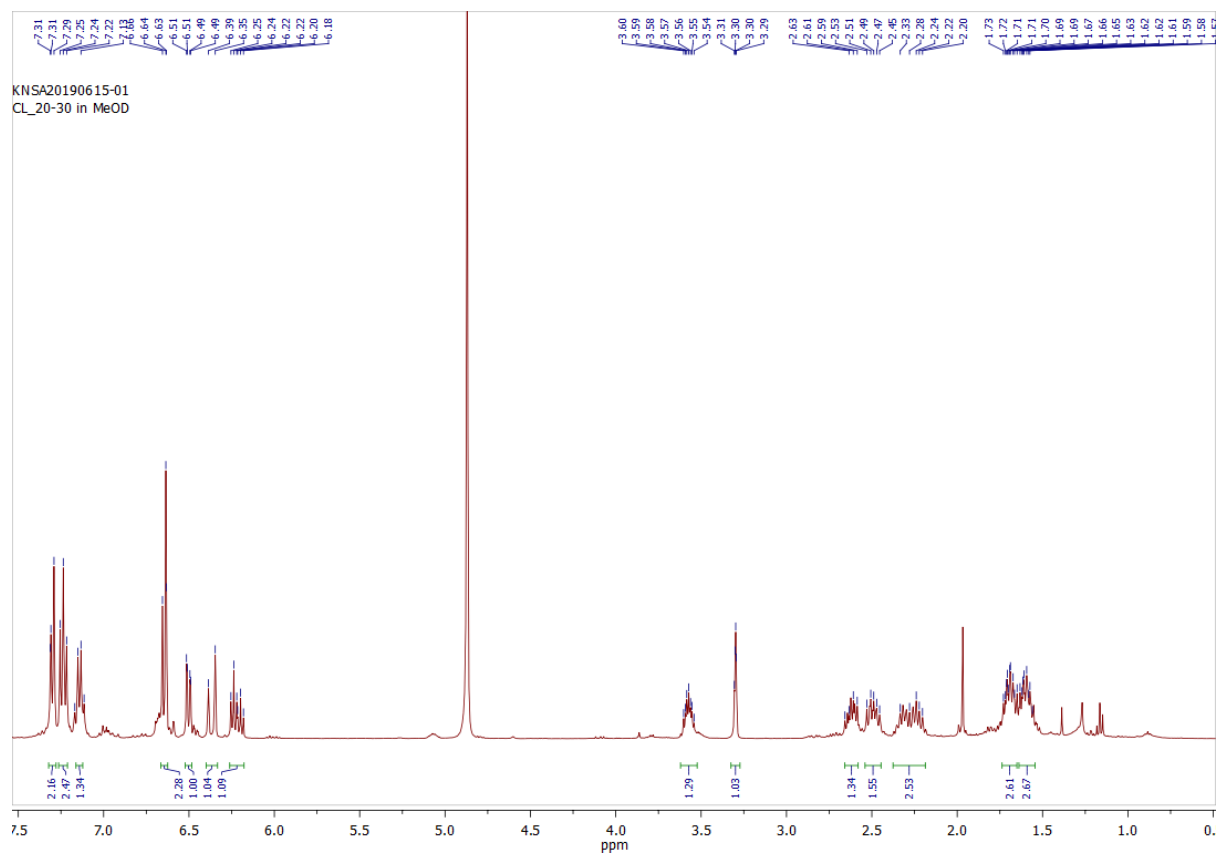


Figure S1. ^1H NMR spectrum of compound **1** in CDCl_3 .

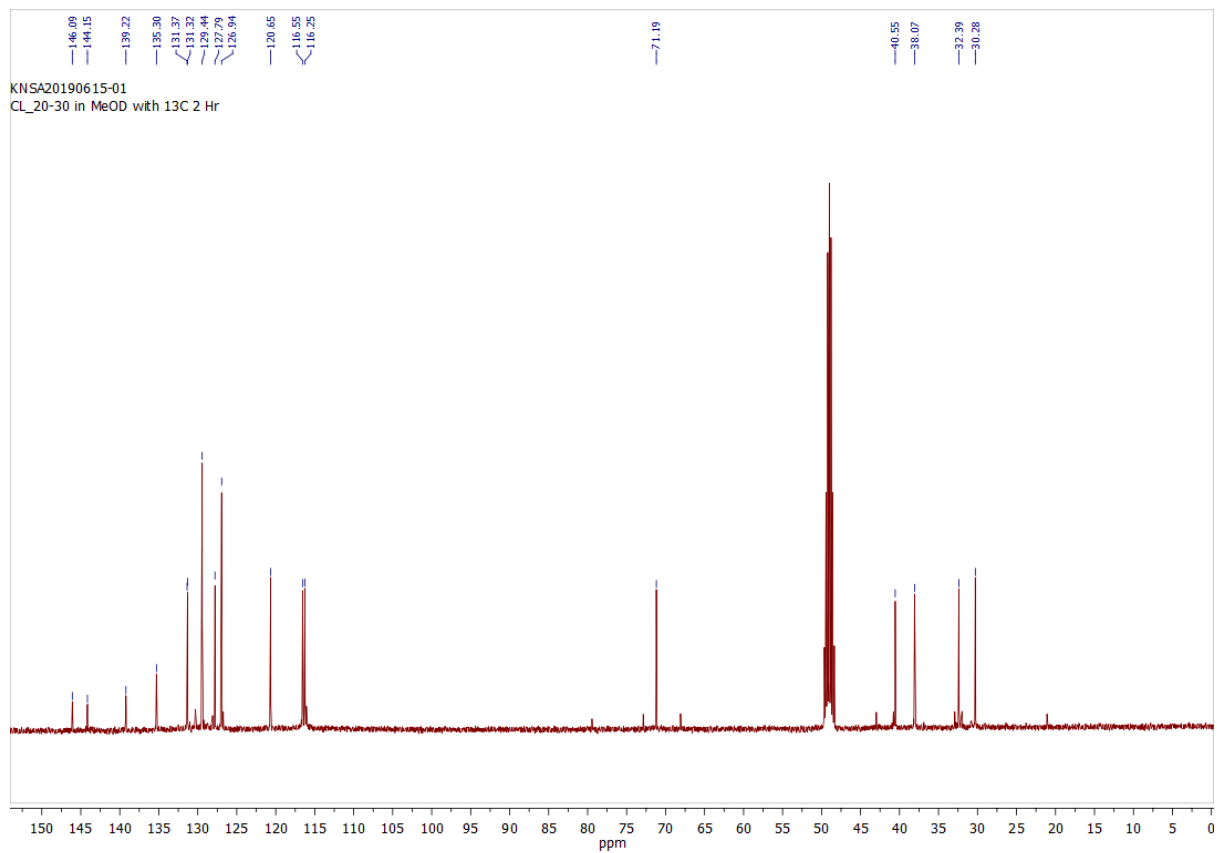


Figure S2. ^{13}C NMR spectrum of compound **1** in CDCl_3 .

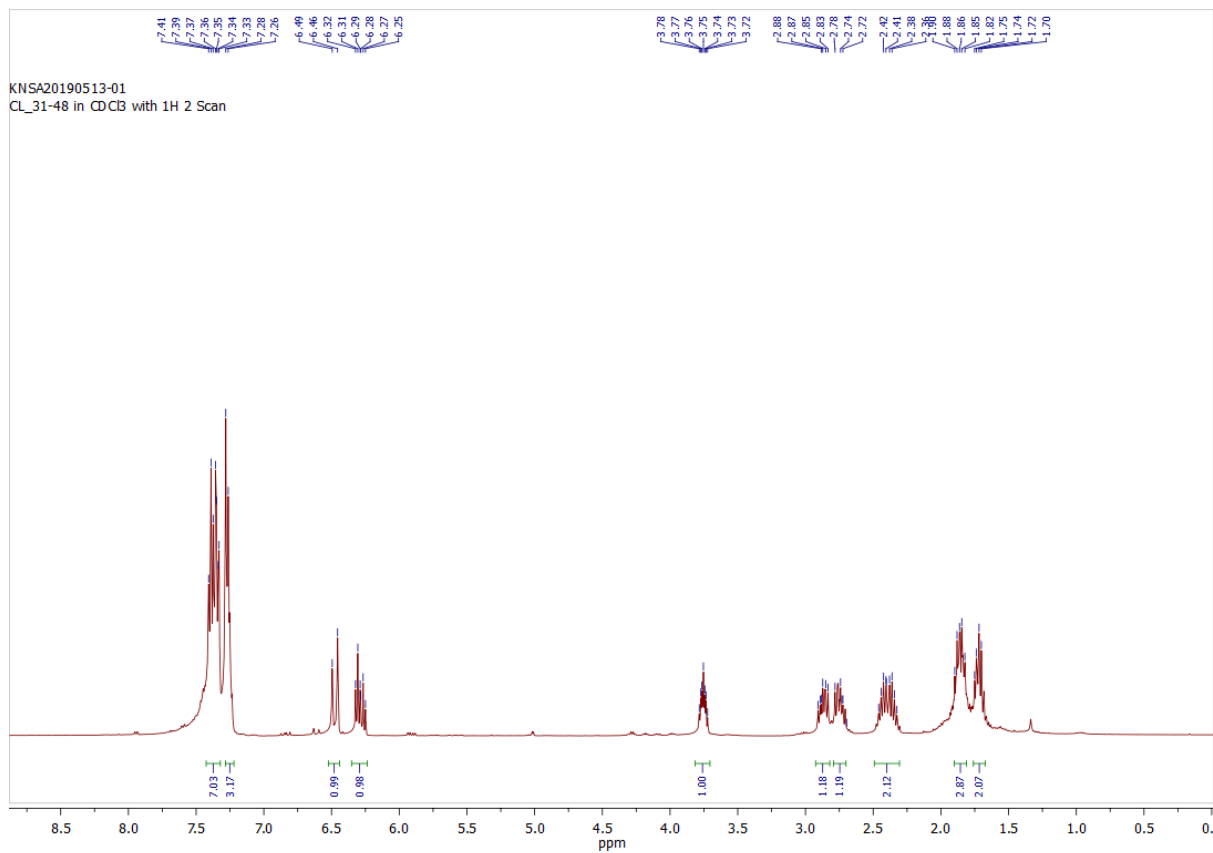


Figure S3. ¹H NMR spectrum of compound 2.

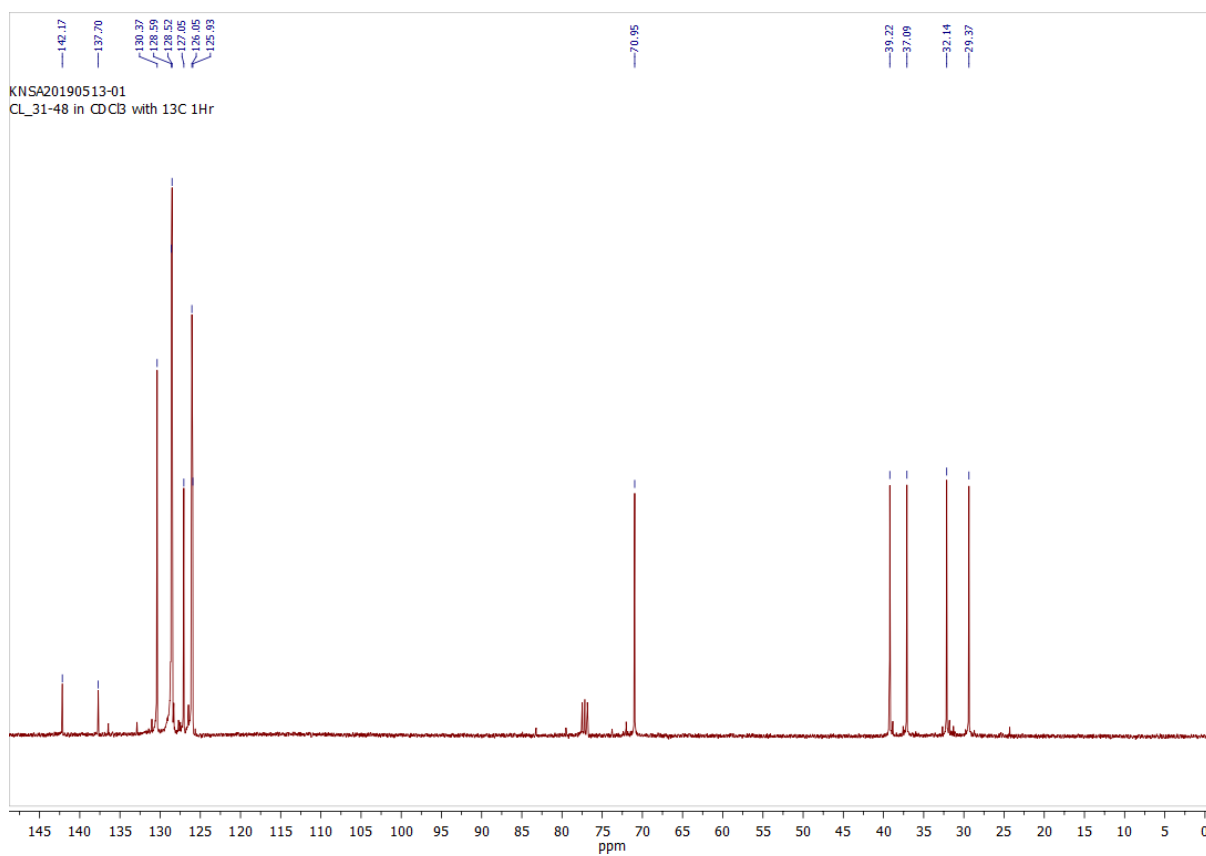


Figure S4. ¹³C NMR spectrum of compound 2.