SUPPORTING INFORMATION

Andrographolide Derivative AND7/TRAIL Combination Attenuates Acute Lymphoblastic Leukemia through P53-regulated ROS Accumulation

Le-Tian Xu[†1], Yu-Ting Zhou[†1], Rui Ma[1], Xin-Qin Guo[1], Hao Chen[1], Lei Fan[2 *] Xiao-Ming Wang[*,1]

[1]State Key Laboratory of Pharmaceutical Biotechnology, School of Life Sciences, Nanjing University, Nanjing, 210023 P. R. China
[2]Jiangsu Province Hospital and Nanjing Medical University First Affiliated Hospital，Nanjing, 210029 P. R. China
[†]These authors have contributed equally to this work and share first authorship.

[*]CORRESPONDENCE
Xiao-Ming Wang
wangxm07@nju.edu.cn
Lei Fan
fanlei@jsph.org.cn

Scheme 1 synthesis of andrographolide derivatives

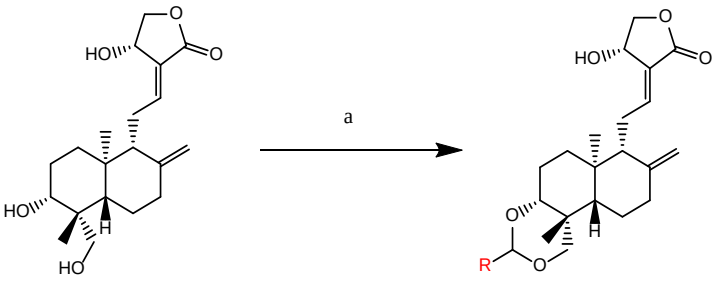
Scheme 2 synthesis of AND7. Reagents and conditions: *p*-toluenesulfonic acid, 60 °C, 4 h

Figure S1 ^{1}H NMR (600 MHz) spectrum of compound AND7 in Chloroform-*d*

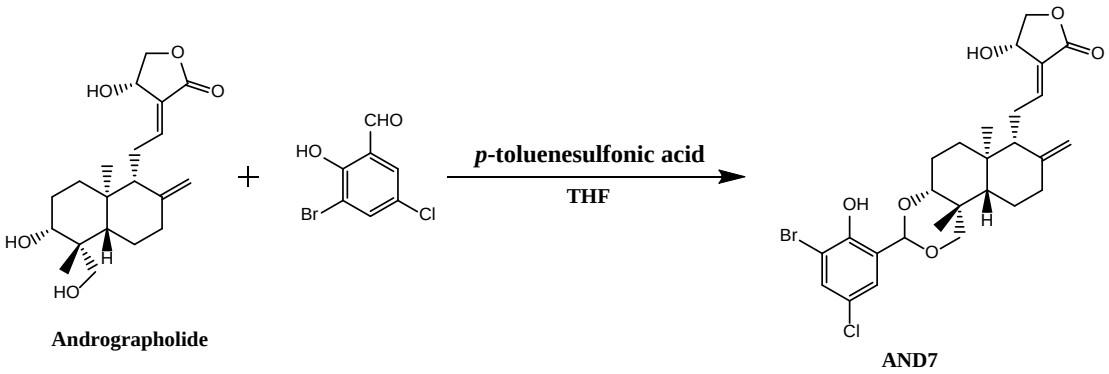
Figure S2 ^{13}C NMR (151 MHz) spectrum of compound AND7 in Chloroform-*d*

Figure S3 Mass spectrum of compound AND7

Figure S4 Apoptosis analysis of AND7-treated PBMCs from nomal people in the presence or absence of TRAIL.



Scheme 1 synthesis of andrographolide derivatives



Andrographolide **AND7**

Scheme 2 synthesis of AND7. Reagents and conditions: *p*-toluenesulfonic acid, 60 °C, 4 h

Reagents and conditions: (a) Aldehyde, tetrahydrofuran, *p*-toluenesulfonic acid, 60 °C, 4 h. All reagents and solvents were of analytical grade and used without further purification. Reactions were monitored via thin-layer chromatography (TLC) using Qingdao TLC silica gel GF_{254} plates. ^{1}H NMR spectra were srecorded on a Bruker DRX 500 or Bruker DRX 600 NMR instrument.

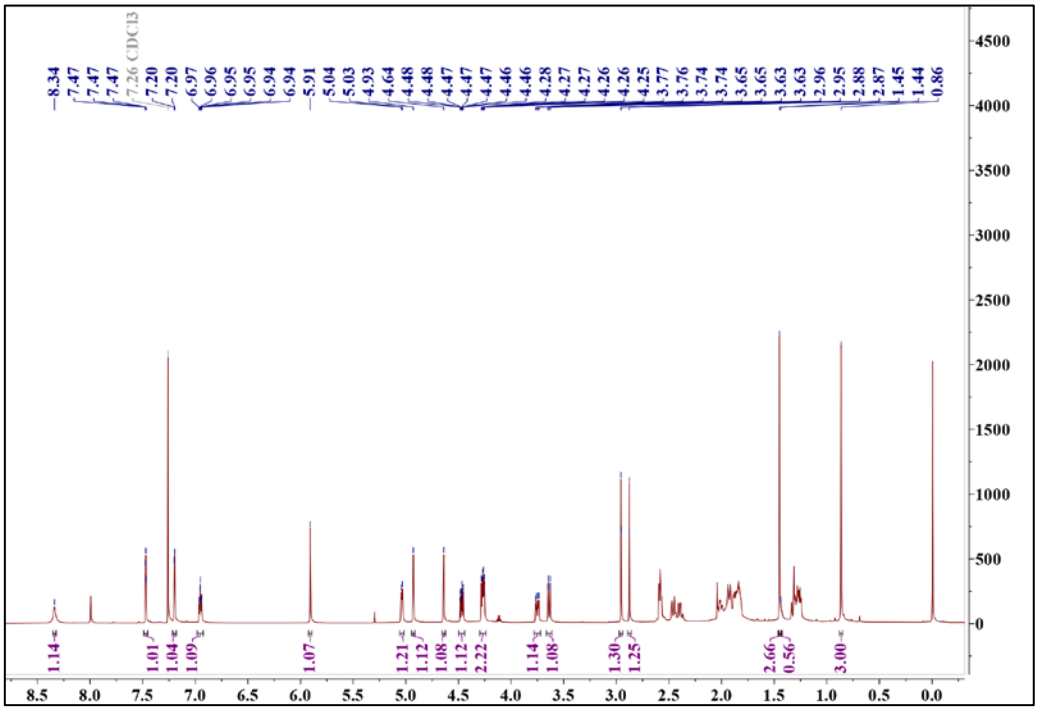


Figure S2 ^{1}H NMR (600 MHz) spectrum of compound AND7 in Chloroform-*d*

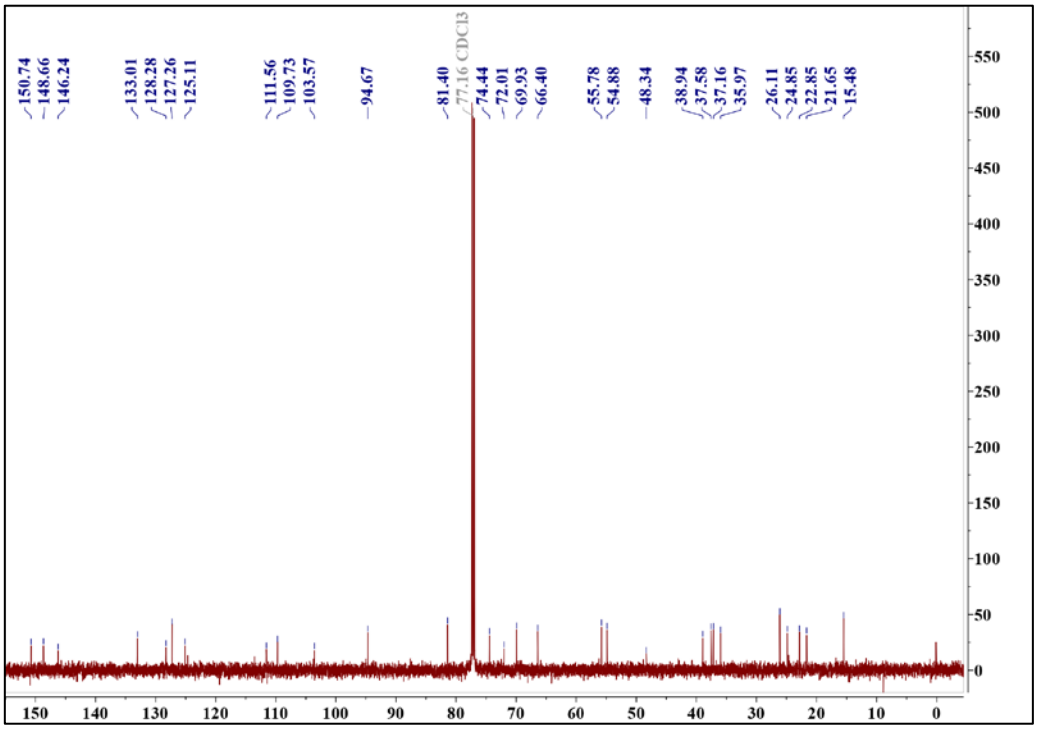


Figure S2 ^{13}C NMR (151 MHz) spectrum of compound AND7 in Chloroform-*d*

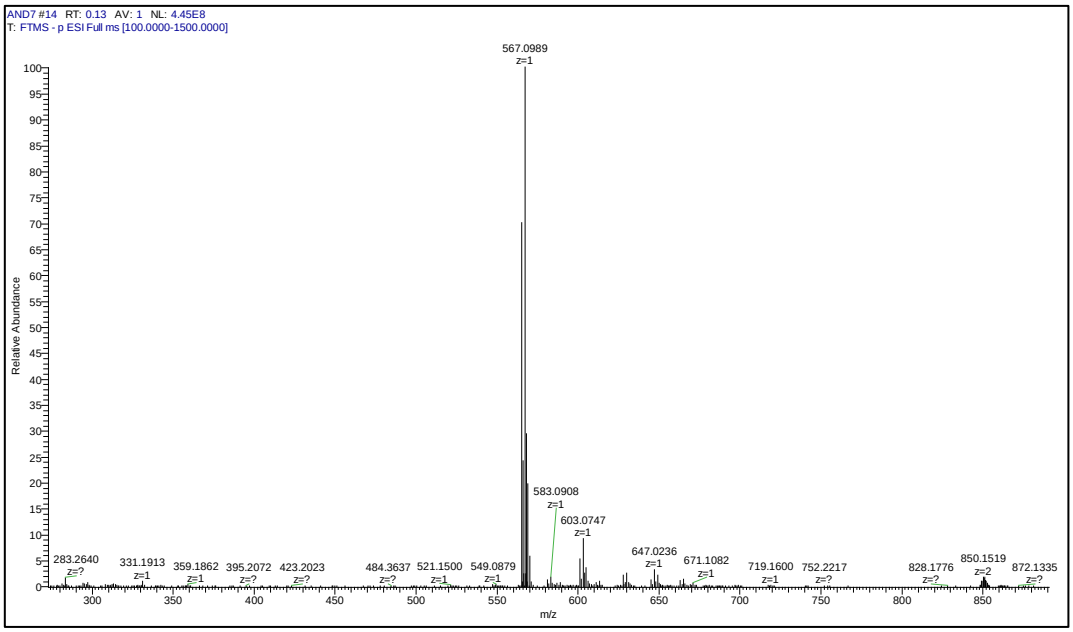


Figure S3 Mass spectrum of compound AND7

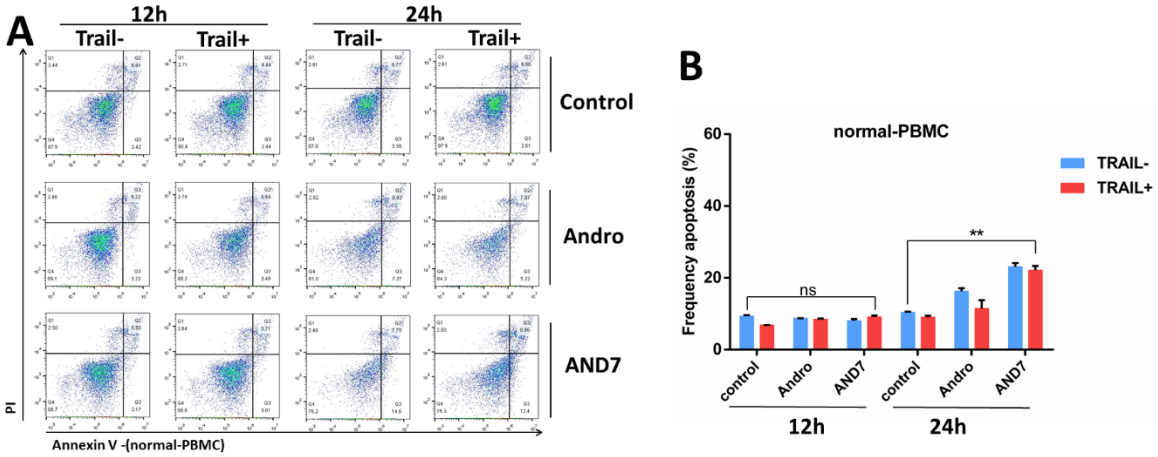


Figure S4 Apoptosis analysis of AND7-treated PBMCs from nomal people in the presence or absence of TRAIL. A: Apoptosis analysis of nomal-PBMCs was performed using a flow cytometry after the treatment of andrographolide or AND7 in the presence or absence of TRAIL for 12 or 24 h. B: Statistical analysis of A plots, respectively. The concentration was taken as the IC_{20} value of the drug. The concentration of Andrographolide and AND7 was 5 μM and that of TRAIL was 4 ng/mL. "+" indicates that the processing group uses TRAIL processing. Error bars represent SE. * indicates a significant difference (*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.0001$).