Supporting Information

Isolation of Apoptosis-Inducing Stilbenoids from the Orchidaceae


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S2 1H NMR spectrum for 1
S3 COSY spectrum for 1
S4 HSQC spectrum for 1
S5 HMBC spectrum for 1
S6 1H NMR spectrum for 2
S7 HSCQ spectrum for 2
S8 HMBC spectrum for 2
S9 NOESY spectrum for 2
S10 1H NMR spectrum for 3
S11 COSY spectrum for 3
S12 HSQC spectrum for 3
S13 HMBC spectrum for 3
S14 Fremy’s Salt Reaction
S14 Cytotoxicity Assay
S15 Selected HMBC correlations for 2 and 3
$^1$H NMR Spectrum for 1 in CDCl$_3$
$^1$H NMR Spectrum for 2 in MeOD
HMBC Spectrum for 2 in MeOD
NOESY Spectrum for 2 in MeOD

$^1$H NMR Spectrum for 3 in CDCl$_3$
COSY Spectrum for 3 in CDCl₃
HMBC Spectrum for 3 in CDCl₃
**Fremy’s Salt Reaction**

26 mg of *O. ‘Sharry Baby’* (preparative HPLC fractions 2 and 3, from flash fraction 2) was dissolved in 4 mL of acetone to produce an orange solution. Fremy’s salt (85 mg) was dissolved in 6 mL of 0.05 M KH$_2$PO$_4$. The Fremy’s salt solution was added to the *O. ‘Sharry Baby’* acetone solution and stirred for 2.5 h. The reaction was worked up by adding 10 mL of H$_2$O and extracting with CHCl$_3$ to give a red solution. The product was dried in vacuo and a portion of it was purified using the same method as described above for *O. ‘Sharry Baby’*. Serial collections afforded 300 µg of 4 (R$_t$ 12.3 min), 70 µg of 5 (R$_t$ 15.1 min), and 320 µg of 7 (R$_t$ 17.8 min).

**Cytotoxicity Assay**

NCI-H460 (non-small cell lung carcinoma) cells were obtained from ATCC, and M14 (melanoma) cells were obtained from the National Cancer Institute. Cells were grown in RPMI-1640 with 10% FBS supplemented with L-glutamine and HEPES. NCI-H460 cells and M14 cells were seeded into 96-well plates at 6 × 10$^2$ cells/well and 5 × 10$^3$ cells/well, respectively, and allowed to adhere overnight; the media was then removed. A stock solution of test compound in DMSO (1 – 10 mg/mL depending on available material) was diluted in media to generate a series of working solutions. Aliquots (100 µL) of the working solutions were added to the appropriate test wells to expose cells to the final concentrations of the compounds in a total volume of 100 µL with a final DMSO concentration of less than 0.5%. Eight different concentrations were tested in triplicate. Camptothecin (purity ≥98%; LKT Laboratories, Inc.) was used as a positive control; wells containing vehicle without compound were used as negative controls. All isolated compounds were greater than 90% purity as determined by HPLC and NMR except for 14 and 15 which were isolated as a 3:2 mixture. Plates were kept for 72 h in a
37°C, 5% CO₂ incubator. After incubation, viable cells were detected with the CellTiter 96 AQeous Non-Radioactive Cell Proliferation Assay (Promega). Dose–response curves were generated and IC₅₀ values were determined using GraphPad Prism 5 software.

**Selected HMBC correlations for 2 and 3**