Supplementary Material

*Isolation of Compounds **1-6***

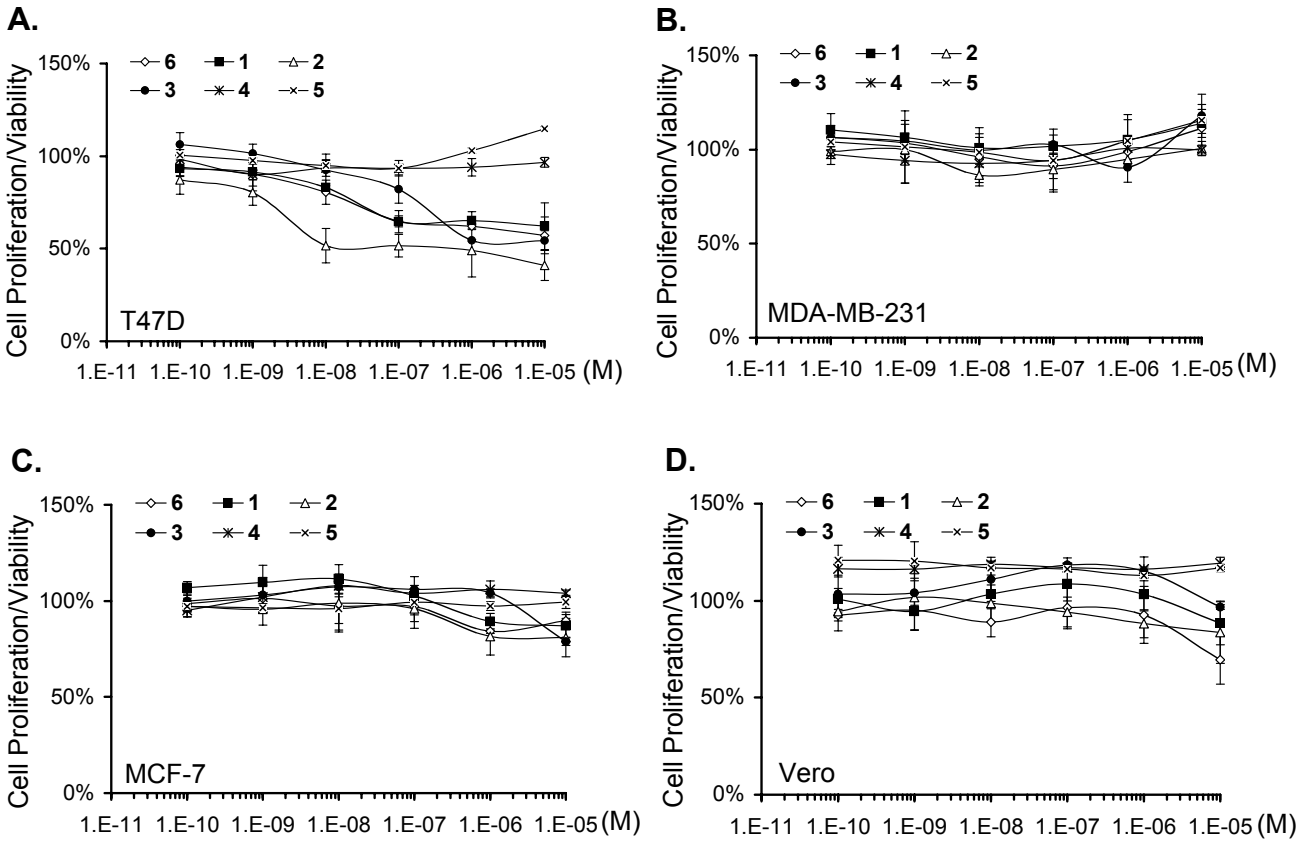
A portion of the extract (11.0 g) was subjected to vacuum liquid chromatography (VLC, Si gel, 32-63 μm, hexanes-EtOAc-MeOH, step gradient) to yield eight fractions. The second fraction (230 mg, eluted with CH_2Cl_2) was purified by NP-HPLC [Prodigy® Silica (3), 5 μm, 250 x 21.2 mm, 2% CH_2Cl_2 in hexanes, 15.0 mL min^{-1}, photodiode-array detection (PDA) monitored at 232 and 280 nm] to yield austrobailignan-5 (**5**, 80 mg). The fifth fraction (1.4 g, eluted with 50% hexanes in EtOAc) was separated using a C_{18} solid phase extraction (SPE) cartridge (MeOH:H_2O step gradient) to obtain four subfractions. The first subfraction (440 mg) was subjected to repeated RP-HPLC (Prodigy® ODS-3, 5 μm, 250 x 21.2 mm, 30% CH_3CN:30% MeOH:40% H_2O, 9.0 mL min^{-1}, PDA detection monitored at 232 and 280 nm) and yielded verrucosin (**4**, 6 mg) and 4-*O*-methylsaucerneol (**3**, 27 mg). Purification of the active constituents from the second subfraction (95 mg) was accomplished by RP-HPLC (Prodigy® ODS-3, 5 μm, 250 x 21.2 mm, 9.0 mL min^{-1}, PDA detection monitored at 232 and 280 nm), successively eluted first with 30% CH_3CN:30% MeOH:40% H_2O and then with 25% CH_3CN:25% MeOH:50% H_2O. This effort yielded the dineolignans manassantin B (**6**, 6.5 mg) and manassantin B_1 (**1**, 3.5 mg). The sixth fraction from the original VLC (862 mg, eluted with 100% EtOAc) was separated on Sephadex LH-20 with 100% MeOH to yield 14 subfractions. The fifth subfraction (150 mg) was first separated by RP-HPLC (Prodigy® ODS-3, 5 μm, 250 x 21.2 mm, 65% CH_3CN:35% H_2O, 9.0 mL min^{-1}, PDA detection monitored at 232 and 280 nm) and the major partially purified compound then separated by NP-HPLC [Prodigy® Silica (3), 5

μm, 250 x 21.2 mm, 5% MeOH in CH_2Cl_2, 13.0 mL min^{-1}, PDA detection monitored at 232 and 280 nm] to yield manassantin A (**2**, 35 mg).

*Structure Data for Manassantin B_1 (**1**)*

UV (MeOH) λ_{max} (log ε) 208 (7.76), 234 (4.27), 282 (3.80) nm; IR (film) ν_{max} 3473, 2962, 2931, 1590, 1511, 1450, 1259, 1139, 1037, 935, 809, 736 cm^{-1}; ^{1}H NMR (C_6D_6, 400 MHz) δ 0.68 (6H, d, *J* = 5.5 Hz, H-9', 9''), 1.20 (3H, d, *J* = 6.2 Hz, H-9), 1.26 (3H, d, *J* = 6.4 Hz, H-9'''), 2.15 (2H, m, H-8', 8''), 3.38 (3H, s, 3''-OC<u>H</u>$_3$), 3.41 (3H, s, 3-OC<u>H</u>$_3$), 3.42 (3H, s, 4-OC<u>H</u>$_3$), 3.44 (3H, s, 3'-OC<u>H</u>$_3$), 4.30 (1H, m, H-8'''), 4.36 (1H, m, H-8), 4.85 (1H, d, *J* = 7.9 Hz, H-7), 4.94 (1H, d, *J* = 7.9 Hz, H-7'''), 5.31 (2H, s, 3'''-OC<u>H</u>$_2$O-4'''), 5.48 (2H, d, *J* = 5.7 Hz, H- 7', 7''), 6.61 (1H, d, *J* = 8.1 Hz, H-5), 6.67 (1H, d, *J* = 8.0 Hz, H-5'''), 6.77 (1H, d, *J* = 8.0 Hz, H-6'''), 6.89 (2H, d, *J* = 8.0, H-6', 6''), 6.92 (1H, d, *J* = 8.0, H-5''), 6.95 (2H, br, s, H-2', 2''), , 6.96 (1H, d, *J* = 8.0, H-6), 7.04 (1H, d, *J* = 8.0, H-5'), 7.08 (1H, *J* = 2.0 Hz, H-2), 7.16 (1H, overlapped with solvent residual peak, H-2'''); ^{13}C NMR (C_6D_6, 100 MHz) δ (ppm): 14.1 (CH_3, C-9'''), 15.5 (CH_3, C-9'), 15.5 (CH_3, C-9''), 17.6 (CH_3, C-9), 45.0 (CH, C-8'), 45.0 (CH, C-8''), 56.0 (4C, CH_3, -OCH_3, C-3, 4, 4', 4''), 74.5 (CH, C-7'''), 79.2 (CH, C-7), 83.0 (CH, C-8'''), 83.8 (2C, CH, C-7', 7''), 84.9 (CH, C-8), 101.2 (CH_2, 3'''-O<u>C</u>H_2O-4'''), 107.9 (CH, C-2'''), 108.5 (CH, C-5'''), 111.3 (CH, C-6''), 111.4 (CH, C-6'), 112.1 (CH, C-2), 112.5 (CH, C-5), 119.5 (CH, C-2''), 119.6 (CH, C-2'), 119.8 (CH, C-5''), 120.2 (CH, C-5'), 120.3 (CH, C-6'''), 120.7 (CH, C-6), 134.2 (C, C-1), 135.4 (C, C-1'''), 137.3 (C, C-1'), 137.4 (C, C-1''), 146.8 (C, C-4'), 147.6 (C, C-4''), 147.8 (C, C-3'''), 148.6 (C, C-4'''), 150.4 (C, C-3), 150.6 (C, C-4), 151.9 (C, C-3'), 152.4 (C, C-3'').

*Effects of Compounds **1-6** on Cell Proliferation/Viability*



Dose-response study of compounds **1-6** on T47D, MDA-MB-231, MCF-7, and Vero cell viability and proliferation. Exponentially grown cells plated in 96-well plates (20,000 cells/well) were exposed to test compounds for 48 h under normoxic conditions (95% air:5% CO_2). Cell viability was determined using MTT assay and expressed as percentage of the untreated control. Data shown are average from one experiment performed in triplicate and the error bars represent standard deviation.