Supporting Information

Synthesis of 2-Methyl-3-Indolylacetic Derivatives as Anti-Inflammatory Agents that Inhibit Preferentially Cyclooxygenase 1 without Gastric Damage

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Spectroscopic data of compounds 1, 2, 3 Indo 2-4 and results from elemental analysis

N-(1-Methyl-4-piperidinyl)-4-anisidine (1).
^{1}H-NMR (500 MHz, $CDCl_3$) δ: 6.9 (d, 2H, *J=8.0 Hz*), 6.5 (d, 2H, *J=8.0 Hz*), 3.78 (s, 3H), 3.4 (s, 1H), 3.22 (m, 1H), 2.76 (m, 2H, *J=12.0 Hz*), 2.23 (s, 3H), 1.95 (m, 4H), 1.45 (qd, 2H, *J=12.0 Hz*).
ESI-MS: 221.1 $[M+H]^+$.

N-(1-Methyl-4-piperidinyl)-4-anisylhydrazine (2).
^{1}H-NMR (500 MHz, $CDCl_3$) δ: 7.07 (d, 2H, *J=8.5Hz*), 6.95 (d, 2H, *J=8.5 Hz*), 3.81 (s, 3H), 3.45 (m, 1H), 3.26 (s, 2H), 2.87 (d, 2H, *J=9.6Hz*), 2.27 (s, 3H), 1.95 (d, 2H, *J=12 Hz*), 1.83 (q, 2H, *J=12Hz*), 1.72 (m, 2H).
ESI-MS: 236.0 $[M+H]^+$.

[5-Methoxy-2-methyl-1-(1-methyl-piperidin-4-yl)-1H-indol-3-yl]-acetic acid ethyl ester (3).
^{1}H-NMR (500 MHz, CD_3OD) δ: 7.48 (d, 1H, *J=8.5Hz*), 6.95 (s, 1H), 6.71 (d, 2H, *J=8.5Hz*), 4.2 (m, 1H), 4.11 (q, 2H, *J=9.2Hz*), 3.78 (s, 3H), 3.63 (s, 2H), 3.00 (d, 2H, *J=12.0 Hz*), 2.57 (q, 2H *J=12.0 Hz*), 2.35 (s, 3H), 2.34 (s, 3H), 2.23 (t, 2H, *J=12.0 Hz*), 1.74 (d, 2H, *J=12.0 Hz*), 1.22 (t, 3H, *J=9.2 Hz*).
ESI-MS: 345.1 $[M+H]^+$.
Anal. ($C_{20}H_{28}N_2O_3$), C, H, N.

[5-Methoxy-2-methyl-1-(1-methyl-piperidin-4-yl)-1H-indol-3-yl]-acetic acid (Indo 2).
^{1}H-NMR (500 MHz, CD_3OD) δ: 7.47 (d, 1H, *J=8.5Hz*), 7.02 (s, 1H), 6.68 (d, 1H, *J=8.5Hz*), 4.46 (m, 1H), 3.76 (s, 3H), 3.59 (s, 2H), 3.38 (d, 2H, *J=12.0 Hz*), 3.11 (t, 2H, *J=12.0 Hz*), 2.78 (s, 3H), 2.72 (m, 2H), 2.37 (s, 3H), 1.82 (d, 2H, *J=12.0 Hz*).
ESI-MS: 317.2 $[M+H]^+$.
Anal. ($C_{18}H_{24}N_2O_3$), C, H, N.

[5-Hydroxy-2-methyl-1-(1-methyl-piperidin-4-yl)-1H-indol-3-yl]-acetic acid · HI (Indo 3).
^{1}H-NMR (500 MHz, CD_3OD) δ: 7.40 (d, 1H, *J=8.5Hz*), 7.39 (s, 1H), 6.64 (d, 1H, *J=8.5Hz*), 4.64 (m, 1H), 3.66 (d, 2H, *J=12Hz*), 3.63 (s, 2H), 3.40 (t, 2H, *J=12Hz*), 2.95 (s, 3H), 2.84 (q, 2H, *J=12.0 Hz*), 2.39 (s, 3H), 2.05 (d, 2H, *J=12.0 Hz*).
ESI-MS: 303.1 $[M+H]^+$.
Anal. ($C_{17}H_{22}N_2O_3$), C, H, N.

***[5-Acetoxy-2-methyl-1-(1-methyl-piperidin-4-yl)-1H-indol-3-yl]-acetic acid ethyl ester (Indo 4*)**.

^{1}H-NMR (500 MHz, CD_3OD) δ: 8.11 (d, 1H, *J=8.5Hz*), 8.05 (s, 1H), 6.85 (d, 1H, *J=8.5Hz*), 4.34 (m, 1H), 4.12 (q, 2H, *J=9.2Hz*), 3.65 (s, 2H), 3.11 (d, 2H, *J=12Hz*), 2.75 (s, 3H), 2.66 (q, 2H, *J=12Hz*), 2.43 (s, 3H), 2.42 (s, 3H), 2.35 (m, 2H), 1.87 (d, 2H, *J=12Hz*), 1.24 (t, 3H, *J=9.2Hz*).
ESI-MS: 373.1 $[M+H]^+$.
Anal. ($C_{21}H_{28}N_2O_4$), C, H, N.

Elemental Analysis

Compd	Calcd. C (found)	Calcd. H (found)	Calcd. N (found)
Indo 1	69,74 (69,80)	8,19 (8,20)	8,13 (8,10)
Indo 2	68,33 (68,46)	7,65 (7,63)	8,85 (8,88)
Indo 3	67,53 (67,66)	7,33 (7,35)	9,26 (9,24)
Indo 4	67,72 (67,65)	7,58 (7,60)	7,52 (7,55)