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Reaction of 1-(oxiran-2-ylmethyl)-1*H*-indole-3-carboxaldehyde with amines

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For **3d**: yield 35%, mp 170–172 °C (propan-2-ol–acetonitrile, 4:1). ^{1}H NMR (250 MHz, $CDCl_3$) δ: 2.14 (s, 3H, Me), 2.60–2.73 (bp, 1H, NH), 3.14–3.27 (m, 1H, NCH_2), 3.34–3.45 (m, 1H, NCH_2), 3.73–3.97 (bp, 1H, OH), 4.18–4.46 (m, 3H, CH, CH_2), 6.53–6.77 (m, 2H, H_{Ar}), 7.02–7.45 (m, 5H, H_{Ar}), 7.80 (s, 1H, H_{Ind}-2), 8.23–8.31 (m, 1H, H_{Ind}-4), 9.85 (s, 1H, CH=O). ^{13}C NMR ($CDCl_3$) δ: 17.9, 47.8, 51.4, 68.7, 110.5, 110.6, 118.0, 118.5, 122.5, 123.2, 123.3, 124.4, 125.7, 127.5, 130.7, 138.0, 140.7, 146.3, 185.2. IR (ν/cm^{-1}): 3385, 3329 (OH, NH), 1635 (C=O), 1604, 1586 (C–C_{Ar}). Found (%): C, 74.00; H, 6.54; N, 9.08. Calc. for $C_{19}H_{20}N_2O_2$ (%): C, 74.00; H, 6.50; N, 9.00.

For **3e**: yield 26%, mp 110–112 °C (propan-2-ol). ^{1}H NMR ($CDCl_3$) δ: 2.97–3.43 (m, 3H, NCH_2, NH), 3.98–4.46 (m, 4H, CH_2, CH, OH), 6.46–6.59 (m, 2H, H_{Ar}), 7.26–7.42 (m, 5H, H_{Ar}), 7.74 (s, 1H, H_{Ind}-2), 8.16–8.27 (m, 1H, H_{Ind}-4), 9.65 (s, 1H, CH=O). ^{13}C NMR ($CDCl_3$) δ: 47.8, 51.3, 68.6, 109.6, 110.7, 115.1 (2C), 118.4, 122.4, 123.3, 124.4, 125.6, 132.3 (2C), 137.9, 140.7, 147.6, 185.2. IR (ν/cm^{-1}): 3356, 3414 (OH, NH), 1644 (C=O), 1591 (C–C_{Ar}). Found (%): C, 57.68; H, 4.57; N, 7.48. Calc. for $C_{18}H_{17}BrN_2O_2$ (%): C, 57.92; H, 4.59; N, 7.51.

For **3f**: yield 43%, mp 110–112 °C (benzene). ^{1}H NMR ($CDCl_3$) δ: 1.42 (t, 3H, CH_2*Me*), 2.49–2.56 (m, 1H, NH), 3.11–3.26 (m, 1H, NCH_2), 3.28–3.39 (m, 1H, NCH_2), 4.06 (q, 2H, C*H*$_2$Me), 4.16–4.46 (m, 3H, CH_2, CH), 4.47–4.66 (bp, 1H, OH), 6.55–6.89 (m, 4H, H_{Ar}), 7.27–7.43 (m, 3H, H_{Ind}-5,6,7), 7.84 (s, 1H, H_{Ind}-2), 8.24–8.35 (m, 1H, H_{Ind}-4), 9.96 (s, 1H, CH=O). ^{13}C NMR ($CDCl_3$) δ: 15.4, 48.0, 51.3, 64.3, 69.3, 110.7, 111.2, 118.1, 118.4, 121.6, 122.5, 123.5, 124.5, 125.5, 128.8, 138.0, 140.9, 147.0, 185.3. IR (ν/cm^{-1}): 3364, 3435 (OH, NH), 1643 (C=O), 1604, 1586 (C–C_{Ar}). Found (%): C, 70.99; H, 6.55; N, 8.28. Calc. for $C_{20}H_{22}N_2O_3$ (%): C, 71.00; H, 6.53; N, 8.30.

For **3g**: yield 34%, mp 125–128 °C. ^{1}H NMR ($CDCl_3$) δ: 2.24 (s, 1H, Me), 3.05–3.21 (m, 1H, NCH_2), 3.24–3.38 (m, 1H, NCH_2), 3.45–4.05 (bp, 2H, NH, OH), 4.08–4.44 (m, 3H, CH_2, CH), 6.56 (d, 2H, H_{Ar}, *J* 8.3 Hz), 7.00 (d, 2H, H_{Ar}, *J* 8.0 Hz), 7.19–7.42 (m, 3H, H_{Ind}-5,6,7), 7.70 (s, 1H, H_{Ind}-2), 8.11–8.23 (m, 1H, H_{Ind}-4), 9.50 (s, 1H, CH=O). ^{13}C NMR ($CDCl_3$) δ: 20.8, 48.3, 51.4, 69.3, 110.5, 114.1(2C), 118.5, 122.6, 123.5, 124.6, 125.5, 128.3, 130.3(2C), 137.9, 140.6, 145.8, 185.2. IR (ν/cm^{-1}): 3385, 3310 (OH, NH), 1633 (C=O), 1614, 1579, 1529 (C–C_{Ar}). Found (%): C, 74.00; H, 6.54; N, 9.08. Calc. for $C_{19}H_{20}N_2O_2$ (%): C, 74.00; H, 6.50; N, 9.00.