

Supporting Information

Characterization data for compounds 4a-4g

1,2-Diphenylethylamine 4a (entry 1). ^1H NMR (400 MHz, CDCl_3): δ 7.36-7.13 (10H, m), 4.19 (1H, dd, J = 8.4, 5.4 Hz), 3.02 (1H, dd, J = 13.3, 5.3 Hz), 2.87 (1H, dd, J = 13.3, 8.5 Hz), 2.61 (2H, sbr) ppm. ^{13}C NMR (100 MHz, CDCl_3): δ 144.1, 138.0, 128.6, 127.8, 127.7, 126.5, 125.8, 125.7, 56.8, 45.3 ppm. MS (25°C): m/z (%) 196 (1) [$\text{M}^+ - 1$], 178 (3), 106 (100), 91 (14). IR (neat): 3030 (m), 1495 (m), 1453 (m), 1400 (s), 1340 (m), 1074 (m), 1027 (s), 916 (m), 772 (m), 758 (m), 742 (s), 696 (s), 654 (m) cm^{-1} .

2-Amino-1-phenylpropane 4b (amphethamine) (entry 2). ^1H NMR (400 MHz, CDCl_3): δ 7.33-7.17 (5H, m), 3.26-3.11 (3H, mbr), 2.72 (1H, dd, J = 13.3, 6.2 Hz), 2.63 (1H, dd, J = 13.3, 7.5 Hz), 1.15 (3H, d, J = 6.4 Hz) ppm. ^{13}C NMR (100 MHz, CDCl_3): δ 139.1, 129.3, 128.5, 126.3, 48.5, 45.7, 22.6 ppm. MS (25°C): m/z (%) 135 (4) [M^+], 134 (9), 120 (27), 106 (27), 103 (10), 91 (100). IR (neat): 3354 (m), 3062 (m), 3027 (m), 2961 (m), 2926 (s), 1958 (m), 1563 (s), 1496 (m), 1454 (s), 1402 (m), 1091 (m), 888 (m), 742 (s), 701 (s) cm^{-1} .

2-Amino-1-phenylbutane 4c (entry 3). ^1H NMR (400 MHz, CDCl_3): δ 7.32-7.17 (5H, m), 2.93 (1H, mbr), 2.81 (1H, dd, J = 13.3, 4.9 Hz), 2.49 (1H, dd, J = 13.3, 8.6 Hz), 1.94 (2H, sbr), 1.59-1.48 (1H, m), 1.45-1.33 (1H, m), 0.98 (3H, t, J = 7.5 Hz) ppm. ^{13}C NMR (100 MHz, CDCl_3): δ 139.6, 129.3, 128.4, 126.2, 54.3, 43.9, 30.0, 10.6 ppm. MS (25°C): m/z (%) 149 (6) [M^+], 148 (6), 120 (92), 106 (31), 103 (21), 91 (100). IR (neat): 3282 (m), 3062 (m), 3027 (m), 2963 (s), 2937 (m), 2911 (m), 2876 (m), 2831 (m), 1603 (m), 1494 (s), 1454 (s), 1382 (m), 1030 (m), 834 (m), 740 (s), 700 (s) cm^{-1} .

2-Amino-1-phenylpentane 4d (entry 4). ^1H NMR (400 MHz, CDCl_3): δ 7.34-7.17 (5H, m), 3.32 (2H, sbr), 3.06 (1H, mbr), 2.80 (1H, dd, J = 13.3, 5.4 Hz), 2.59 (1H, dd, J = 13.3, 7.9 Hz), 1.50-1.33 (4H, m), 0.9 (3H, tr, J = 6.3 Hz) ppm. ^{13}C NMR (100 MHz, CDCl_3): δ 139.1, 129.3, 128.5, 126.3, 52.5, 43.7, 38.7, 19.3, 14.1 ppm. MS (25°C): m/z (%) 120 (13) [$\text{M}^+ - \text{C}_3\text{H}_7$], 103 (3), 91 (12), 72 (100). IR (neat): 3341 (m), 2957 (m), 2929 (m), 2871 (m), 1566 (s), 1532 (s), 1483 (s), 1454 (s), 1375 (s), 1308 (s), 1272 (m), 741 (s), 721 (s), 700 (s) cm^{-1} .

3-Aminohexane 4e (entry 5). ^1H NMR (400 MHz, CDCl_3): δ 2.68 (1H, m), 2.26 (2H, sbr), 1.52-1.25 (6H, m), 0.93 (3H, tr, J = 7.5 Hz), 0.92 (3H, tr, J = 6.5 Hz) ppm. ^{13}C NMR (100 MHz, CDCl_3): δ 52.6, 39.3, 30.2, 19.3, 14.2, 10.4 ppm. IR (neat): 3226 (w), 2961 (s), 2920 (s), 2876 (s), 1603 (m), 1510 (s), 1461 (s), 1390 (m) cm^{-1} .

4-Aminooctane 4f (entry 6). ^1H NMR (400 MHz, CDCl_3): δ 2.72 (1H, m), 1.97 (2H, sbr), 1.45-1.26 (10H, m), 0.93-0.88 (6H, m) ppm. ^{13}C NMR (100 MHz, CDCl_3): δ 51.0, 40.0, 37.4, 28.3, 22.8, 19.2, 14.2, 14.0 ppm. IR (neat): 3308 (w), 2956 (s), 2925 (s), 2856 (s), 1625 (m), 1566 (m), 1516 (m), 1458 (s), 1377 (m) cm^{-1} .

2-Phenylethylamine 4g (entry 7). ^1H NMR (400 MHz, CDCl_3): δ 7.35-7.17 (5H, m), 2.98 (2H, mbr), 2.77 (2H, t, J = 6.9 Hz), 2.16 (2H, sbr) ppm. ^{13}C NMR (100 MHz, CDCl_3): δ 140.4, 129.7, 129.3, 127.1, 44.1, 40.4 ppm. MS (25°C): m/z (%) 121 (62) [M^+], 118 (45), 104 (100), 91 (99). IR (neat): 3256 (m), 3060 (m), 3027 (m), 2927 (s), 2862 (m), 1662 (s), 1602 (m), 1548 (m), 1496 (s), 1454 (s), 1382 (m), 1030 (w), 749 (s), 699 (s) cm^{-1} .