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SUPPORTING INFORMATION

Mild Method for the Conversion of Amides to Thioamides.

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General Information. Unless otherwise stated, reactions were run under an inert atmosphere (nitrogen or argon) with rigid exclusion of moisture from reagents and glassware using standard techniques for manipulating air-sensitive compounds.¹ All glassware was flame-dried prior to use. Dichloromethane was obtained by filtration through drying columns. Pyridine was distilled over calcium hydride. Triflic anhydride was distilled over phosphorus pentoxide. Analytical thin-layer chromatography (TLC) was performed on precoated, glass-backed silica gel. Visualization of the developed chromatogram was performed by UV and aqueous potassium permanganate. Flash column chromatography was performed using 230-400 mesh silica. Melting points are uncorrected. Chemical shifts for ¹H NMR spectra are recorded in parts per million from tetramethylsilane with the solvent resonance as the internal standard (chloroform, δ 7.27 ppm). Chemical shifts for ¹³C NMR spectra are recorded in parts per million from tetramethylsilane using the central peak of deuteriochloroform (77.23 ppm) as the internal standard. All spectra were obtained with complete proton decoupling. Optical rotations were determined at a wavelength of 589 nm.

N-Methylthiobenzamide (2a). Prepared from *N*-Methylbenzamide (134.8 mg) according to Method B. Flash chromatography afforded 136.9 mg (91%) of thioamide **2a** as a pale yellow solid. Mp 77-79 °C; *R*_f 0.48 (30% EtOAc/hexane); ¹H NMR (400 MHz, CDCl₃) δ 7.99 (br s, 1H), 7.68-7.66 (m, 2H), 7.43-7.39 (m, 1H), 7.33-7.29 (m, 2H), 3.23 (d, *J* = 4.9 Hz, 3H); ¹³C NMR (100 MHz, CDCl₃) δ 200.0, 141.5, 131.1, 128.5(2), 126.7(2), 33.7; FTIR (solid) 3311, 3063, 2923, 1538, 1488, 1457, 1434, 1356, 1234, 1043 cm⁻¹. Anal. Calcd for C₈H₉NS: C, 63.54; H, 6.00; N, 9.26. Found: C, 63.10; H, 6.07; N, 9.24.

N,N'-Dimethyl-N-thiobenzoylbenzamidine (3). Pale yellow solid; Mp 114-118 °C; *R*_f 0.38 (30% EtOAc/hexane); ¹H NMR (400 MHz, CDCl₃) δ 7.61-7.59 (m, 2H), 7.45-7.35 (m, 3H), 7.29-7.27 (m, 2H), 7.23-7.19 (m, 1H), 7.11-7.07 (m, 2H), 3.64 (s, 3H), 3.23 (s, 3H); ¹³C NMR (100 MHz, CDCl₃) δ 203.5, 156.4, 142.7, 135.0, 131.3, 130.0, 128.9(2), 128.0(2), 127.8(2), 126.6(2), 41.8, 39.5; FTIR (neat solid) 3064, 2914, 1646, 1460, 1435, 1367, 1288, 1268, 1103, 1070, 1022 cm⁻¹; HRMS (MAB) Calcd for C₁₆H₁₆N₂S [M]⁺: 268.1034, Found 268.1026.

N-Isopropyl-3-phenylthiopropionamide (2b). Prepared from *N*-Isopropyl-3-phenylpropionamide (189.1 mg) according to Method B. Flash chromatography afforded 125.3 mg of thioamide **2b** (62%) as a beige solid. Mp 62-64 °C; *R*_f 0.49 (20% EtOAc/hexane); ¹H NMR (300 MHz, CDCl₃) δ 7.32-7.17 (m, 5H), 6.63 (br s, 1H), 4.60-4.49 (m, *J* = 6.5 Hz, 1H), 3.10 (t, *J* = 7.2 Hz, 2H), 2.88 (t, *J* = 7.1 Hz, 2H), 1.09 (d, *J* = 6.6 Hz, 6H); ¹³C NMR (75 MHz, CDCl₃) δ 202.4, 140.3, 128.7(4), 126.6, 49.5, 47.5, 35.6, 21.3(2); FTIR (solid) 3192, 3027, 2975, 1533, 1496, 1454, 1408, 1363, 1210, 1098, 1074 cm⁻¹. Anal. Calcd for C₁₂H₁₇NS: C, 69.51; H, 8.26; N, 6.76. Found: C, 69.62; H, 8.62; N, 6.87.

N-Benzyl-3-phenylthiopropionamide (2c). Prepared from *N*-Benzyl-3-phenylpropionamide (238.1 mg) according to Method B. Flash chromatography afforded 210.5 mg (83%) of thioamide **2c** as a yellowish solid. Mp 76-78 °C; *R*_f 0.35 (20% EtOAc/hexane); ¹H NMR (400 MHz, CDCl₃) δ 7.41 (br s, 1H), 7.33-7.20 (m, 8H), 7.11-7.09 (m, 2H), 4.71 (d, *J* = 5.2 Hz, 2H), 3.13 (t, *J* = 7.3 Hz, 2H), 2.94 (t, *J* = 7.4 Hz, 2H); ¹³C NMR (100 MHz, CDCl₃) δ 204.1, 140.2, 135.9, 128.8(2), 128.63(2), 128.56(2), 128.2(2), 128.0, 126.5, 50.2, 48.7, 35.5; FTIR (solid) 3177, 3026, 2931, 1539, 1495, 1447, 1400,

1304, 1189, 1121, 1070 cm^{-1} . Anal. Calcd for $\text{C}_{16}\text{H}_{17}\text{NS}$: C, 75.25; H, 6.71; N, 5.48. Found: C, 75.29; H, 6.80; N, 5.46.

N-Benzylthiocyclopropylamide (2d). Prepared from *N*-Benzylcyclopropylamide (172.6 mg) according to Method B. Flash chromatography afforded 141.5 mg (75%) of thioamide **2d** as a brown solid. Mp 58-60 °C; R_f 0.38 (20% EtOAc/hexane); ^1H NMR (400 MHz, CDCl_3) δ 7.61 (br s, 1H), 7.39-7.32 (m, 5H), 4.85 (d, J = 5.2 Hz, 2H), 1.83-1.79 (m, 1H), 1.33-1.30 (m, 2H), 0.95-0.90 (m, 2H); ^{13}C NMR (100 MHz, CDCl_3) δ 207.3, 136.5, 129.0(2), 128.5(2), 128.2, 50.4, 24.6, 12.3(2); FTIR (neat) 3220, 3026, 1528, 1451, 1416, 1324, 1191, 1069, 1002 cm^{-1} . Anal. Calcd for $\text{C}_{11}\text{H}_{13}\text{NS}$: C, 69.07; H, 6.85; N, 7.32. Found: C, 69.21; H, 7.05; N, 7.41.

N-Methyl-3-phenylthiopropionamide (2e). Prepared from *N*-Methyl-3-phenylpropionamide (162.8 mg) according to Method B. Flash chromatography afforded 142.8 mg (80%) of thioamide **2e** as a brownish oil. R_f 0.22 (20% EtOAc/hexane); ^1H NMR (400 MHz, CDCl_3) δ 7.55 (br s, 1H) 7.29-7.18 (m, 5H), 3.11-3.05 (m, 5H), 2.91 (t, J = 7.2 Hz, 2H); ^{13}C NMR (100 MHz, CDCl_3) δ 205.0, 140.3, 128.6(2), 128.4(2), 126.5, 48.6, 35.5, 33.0; FTIR (film) 3222, 3028, 1541, 1457, 1362, 1210, 1091, 1052 cm^{-1} . Anal. Calcd for $\text{C}_{10}\text{H}_{13}\text{NS}$: C, 66.99; H, 7.31; N, 7.81. Found: C, 66.68; H, 7.50; N, 7.80.

N-Isopropylthiobenzamide (2f). Prepared from *N*-Isopropylbenzamide (162.8 mg) according to Method A, except that the ammonium sulfide solution was added at -15 °C. Filtration of the crude product on a pad of silica gel with 20% EtOAc/hexane (100 mL) afforded 159.2 mg (89%) of thioamide **2f** as a pale yellow solid. Mp 55-57 °C; R_f 0.46 (30% EtOAc/hexane); ^1H NMR (400 MHz, CDCl_3) δ 7.67-7.64 (m, 2H), 7.54 (br s, 1H), 7.43-7.39 (m, 1H), 7.34-7.30 (m, 2H), 4.79-4.73 (m, J = 6.6 Hz, 1H), 1.32 (d, J = 6.6 Hz, 6H); ^{13}C NMR (100 MHz, CDCl_3) δ 197.8, 142.2, 130.9, 128.4(2), 126.7(2), 48.2, 21.4(2); FTIR (solid) 3241, 3029, 2968, 1520, 1486, 1447, 1361, 1332, 1236, 1167, 1127 cm^{-1} . Anal. Calcd for $\text{C}_{10}\text{H}_{13}\text{NS}$: C, 66.99; H, 7.31; N, 7.81. Found: C, 66.93; H, 7.41; N, 7.85.

N-Benzylthiobenzamide (2g). Prepared from *N*-Benzylbenzamide (211.4 mg) according to Method A. Flash chromatography afforded 205.5 mg (90%) of thioamide **2g** as a pale yellow solid. Mp 78-80 °C; R_f 0.45 (20% EtOAc/hexane); ^1H NMR (400 MHz, CDCl_3) δ 7.78-7.76 (m, 2H), 7.71 (br s, 1H), 7.49-7.35 (m, 8H), 5.01 (d, J = 5.1 Hz, 2H); ^{13}C NMR (100 MHz, CDCl_3) δ 199.3, 141.8, 136.3, 131.3, 129.2(2), 128.7(2), 128.5(2), 128.4, 126.9(2), 51.2; FTIR (solid) 3313, 3029, 2930, 1520, 1486, 1447, 1387, 1321, 1266, 1200, 1089, 1066, 1029 cm^{-1} . Anal. Calcd for $\text{C}_{14}\text{H}_{13}\text{NS}$: C, 73.97; H, 5.76; N, 6.16. Found: C, 73.84; H, 5.86; N, 6.24.

(S)-N-[2-(1-Methoxy-3-methylbutyl)]-thiobenzamide (2h). Prepared from (S)-*N*-[2-(1-Methoxy-3-methylbutyl)]-benzamide (222.0 mg) according to Method A. Flash chromatography afforded 194.7 mg (82%) of thioamide **2h** as a pale yellow solid. Mp 39-41 °C; R_f 0.47 (20% EtOAc/hexane); $[\alpha]_D^{20}$ = -37.5 (c 0.48 CHCl_3); ^1H NMR (300 MHz, CDCl_3) δ 7.82 (br s, 1H), 7.77-7.74 (m, 2H), 7.50-7.38 (m, 3H), 4.76-4.68 (m, 1H), 3.70 (dd, J = 9.8, 3.0 Hz, 1H), 3.60 (dd, J = 9.8, 3.5 Hz, 1H), 3.37 (s, 3H), 2.24-2.15 (m, J = 6.8 Hz, 1H), 1.06 (d, J = 6.8 Hz, 6H); ^{13}C NMR (75 MHz, CDCl_3) δ 199.0, 142.5, 131.1, 128.6(2), 126.8(2), 71.1, 61.0, 59.4, 29.6, 19.7, 19.5; FTIR (solid) 3386, 3269, 3028, 2962, 1515, 1487, 1448, 1368, 1232, 1196, 1112, 1032 cm^{-1} . Anal. Calcd for $\text{C}_{13}\text{H}_{19}\text{NOS}$: C, 65.78; H, 8.07; N, 5.90. Found: C, 65.62; H, 8.45; N, 5.94.

(S)-N-[2-(1-Methoxy-3-phenylpropyl)]-thiobenzamide (2i). Prepared from (S)-*N*-[2-(1-Methoxy-3-phenylpropyl)]-benzamide (270.1 mg) according to Method A. Flash chromatography afforded 246.3 mg (86%) of thioamide **2i** as a yellow oil. R_f 0.27 (15% EtOAc/hexane); $[\alpha]_D^{20}$ = -34.6 (c 0.75 CHCl_3); ^1H NMR (300 MHz, CDCl_3) δ 7.98 (br d, J = 7.1 Hz, 1H), 7.75-7.72 (m, 2H), 7.51-7.24 (m, 8H), 5.06-4.96 (m, 1H), 3.53 (dd, J = 9.6, 3.5 Hz, 1H), 3.46 (dd, J = 9.7, 2.8 Hz, 1H), 3.41 (s, 3H), 3.28 (dd, J = 13.2, 5.1 Hz, 1H), 2.99 (dd, J = 13.1, 9.6 Hz, 1H); ^{13}C NMR (100 MHz, CDCl_3) δ 198.5, 142.2, 137.7, 131.2, 129.6(2), 128.7(2), 128.6(2), 126.8(3), 70.7, 59.3, 57.0, 35.7; FTIR (neat) 3380, 3264, 3027, 2927, 1506, 1487, 1449, 1373, 1202, 1120 cm^{-1} ; HRMS (MAB) Calcd for $\text{C}_{17}\text{H}_{19}\text{NOS}$ $[M]^+$: 285.1187, Found 285.1195.

N,N-dimethyl-3-phenylthiopropionamide (5a). Prepared from *N,N*-dimethyl-3-phenylpropionamide (176.6 mg) according to Method A. Flash chromatography afforded 182.1 mg

(95%) of thioamide **5a** as a pale yellow solid. Mp 44-46 °C; R_f 0.27 (20% EtOAc/hexane); ^1H NMR (300 MHz, CDCl_3) δ 7.33-7.19 (m, 5H), 3.48 (s, 3H), 3.14 (s, 3H), 3.14-3.03 (m, 4H); ^{13}C NMR (75 MHz, CDCl_3) δ 203.2, 140.7, 128.6(2), 128.5(2), 126.5, 45.0, 44.7, 41.6, 35.7; FTIR (solid) 3021, 2937, 1524, 1493, 1455, 1390, 1288, 1260, 1248, 1190, 1099, 1066 cm^{-1} ; HRMS (FAB) Calcd for $\text{C}_{11}\text{H}_{16}\text{NS}$ [$\text{M} + \text{H}$] $^+$: 194.1003, Found 194.1011.

3-Phenyl-1-pyrrolidin-1-yl-propane-1-thione (5b). Prepared from 3-Phenyl-1-pyrrolidin-1-yl-propane-1-one (201.0 mg) according to Method A. Flash chromatography afforded 195.2 mg (90%) of thioamide **5b** as a pale yellow solid. Mp 46-48 °C; R_f 0.49 (30% EtOAc/hexane); ^1H NMR (300 MHz, CDCl_3) δ 7.33-7.19 (m, 5H), 3.88-3.84 (m, 2H), 3.41-3.37 (m, 2H), 3.18-3.13 (m, 2H), 3.01-2.95 (m, 2H), 1.97-1.89 (m, 4H); ^{13}C NMR (75 MHz, CDCl_3) δ 199.2, 140.7, 128.48(2), 128.44(2), 126.3, 53.8, 50.7, 45.6, 35.5, 26.3, 24.2; FTIR (solid) 3024, 2969, 2870, 1484, 1450, 1439, 1326, 1256, 1227, 1207, 1178, 1103 cm^{-1} ; HRMS (FAB) Calcd for $\text{C}_{13}\text{H}_{18}\text{NS}$ [$\text{M} + \text{H}$] $^+$: 220.1160, Found 220.1156.

***N,N*-Diethylthiobenzamide (5c).** Prepared from *N,N*-Diethylbenzamide (175.1 mg) according to Method B. Flash chromatography afforded 100.4 mg (53%) of thioamide **5c** as a yellow oil. R_f 0.55 (20% EtOAc/hexane); ^1H NMR (400 MHz, CDCl_3) δ 7.37-7.23 (m, 5H), 4.14 (q, $J = 7.1$ Hz, 2H), 3.45 (q, $J = 7.1$ Hz, 2H), 1.40 (t, $J = 7.1$ Hz, 3H), 1.15 (t, $J = 7.1$ Hz, 3H); ^{13}C NMR (100 MHz, CDCl_3) δ 200.5, 144.1, 128.6(2), 128.2, 125.2(2), 48.0, 46.3, 14.0, 11.5; FTIR (film) 3056, 2975, 2934, 1496, 1441, 1381, 1315, 1287, 1253, 1192, 1139, 1075 cm^{-1} . Anal. Calcd for $\text{C}_{11}\text{H}_{15}\text{NS}$: C, 68.35; H, 7.82; N, 7.25. Found: C, 68.28; H, 8.16; N, 7.28.

***N*-Methylpiperidine-2-thione (5d).** Prepared from *N*-Methyl-2-piperidone (114.6 mg) according to Method A. Flash chromatography afforded 111.2 mg (85%) of thioamide **5d** as a colorless solid. The ^1H NMR spectra of this material is in accordance with the one previously reported in the literature.²

Pyrrolidine-2-thione (5e). Prepared from 2-Pyrrolidinone (84.1 mg) according to Method A. Flash chromatography afforded 91.7 mg (92%) of thioamide **5e** as a beige solid. The ^1H NMR spectra of this material is in accordance with the one previously reported in the literature.²

***N*-Benzyl-4-(*t*-butyldiphenylsilyloxy)butylthioamide (6).** Prepared from *N*-Benzyl-4-(*t*-butyldiphenylsilyloxy)butylamide (215.2 mg) according to Method B. Flash chromatography afforded 186.9 mg (84%) of thioamide **6** as a yellow oil. R_f 0.26 (20% EtOAc/hexane); ^1H NMR (300 MHz, CDCl_3) δ 7.65 (br s, 1H), 7.61-7.58 (m, 4H), 7.45-7.27 (m, 11H), 4.80 (d, $J = 5.2$ Hz, 2H), 3.73 (t, $J = 5.9$ Hz, 2H), 2.88 (t, $J = 7.2$ Hz, 2H), 2.06-1.97 (m, 2H), 1.00 (s, 9H); ^{13}C NMR (75 MHz, CDCl_3) δ 205.2, 136.3, 135.6(4), 133.5(2), 129.9(2), 129.1(2), 128.4(2), 128.2, 127.9(4), 62.5, 50.4, 43.5, 31.7, 27.0(3), 19.3; FTIR (film) 3237, 3070, 2930, 2858, 1521, 1455, 1428, 1404, 1329, 1111 cm^{-1} ; HRMS (FAB) Calcd for $\text{C}_{27}\text{H}_{34}\text{NOSSi}$ [$\text{M} + \text{H}$] $^+$: 448.2130, Found 448.2140.

***N*-Benzyl-4-(4-methylbenzoyloxy)butylthioamide (7).** Prepared from *N*-Benzyl-4-(4-methylbenzoyloxy)butylamide (157.0 mg) according to Method B. Flash chromatography afforded 92.3 mg (56%) of thioamide **7** as a yellow oil. R_f 0.29 (20% EtOAc/hexane); ^1H NMR (300 MHz, CDCl_3) δ 7.97 (br s, 1H), 7.88-7.86 (m, 2H), 7.37-7.29 (m, 5H), 7.22-7.19 (m, 2H), 4.82 (d, $J = 5.1$ Hz, 2H), 4.32 (t, $J = 6.1$ Hz, 2H), 2.78 (t, $J = 7.2$ Hz, 2H), 2.40 (s, 3H), 2.34-2.25 (m, 2H); ^{13}C NMR (75 MHz, CDCl_3) δ 204.2, 167.1, 144.0, 136.2, 129.7(2), 129.2(2), 129.0(2), 128.5(2), 128.2, 127.2, 63.7, 50.5, 43.1, 28.7, 21.8; FTIR (neat) 3305, 3032, 2959, 1715, 1611, 1532, 1455, 1408, 1276, 1178, 1111, 1021 cm^{-1} ; HRMS (FAB) Calcd for $\text{C}_{19}\text{H}_{22}\text{NO}_2\text{S}$ [$\text{M} + \text{H}$] $^+$: 328.1371, Found 328.1364.

(4*S*,5*S*)-4-(2-*N*-Benzylthioacetamidyl)oxymethyl-5-benzyloxymethyl-2,2-dimethyl-1,3-dioxolane (8). Prepared from (4*S*,5*S*)-4-(2-*N*-Benzylacetamidyl)oxymethyl-5-benzyloxymethyl-2,2-dimethyl-1,3-dioxolane (197.2 mg) according to Method B. Flash chromatography afforded 175.0 mg (85%) of thioamide **8** as a yellow oil. R_f 0.51 (20% EtOAc/hexane); $[\alpha]_D^{20} = -25.0$ (c 1.00 CHCl_3); ^1H NMR (300 MHz, CDCl_3) δ 8.94 (br s, 1H), 7.39-7.26 (m, 10H), 4.91 (dd, $J = 14.9, 5.5$ Hz, 1H), 4.86 (dd, $J = 14.9, 5.3$ Hz, 1H), 4.53 (s, 2H), 4.47 (d, $J = 4.4$ Hz, 2H), 3.98-3.96 (m, 2H), 3.72-3.67 (m, 2H), 3.64-3.57 (m, 2H), 3.53-3.48 (m, 1H), 1.28 (s, 3H), 1.18 (s, 3H); ^{13}C NMR (75 MHz, CDCl_3)

δ 198.4, 137.7, 136.0, 128.9(2), 128.6(2), 128.5(2), 128.2, 128.0, 127.8(2), 109.8, 78.0, 76.9, 75.7, 73.7, 71.2, 70.3, 48.9, 26.9, 26.7; FTIR (neat) 3293, 3031, 2986, 2917, 1532, 1455, 1405, 1371, 1311, 1252, 1216, 1090 cm^{-1} ; HRMS (FAB) Calcd for $\text{C}_{23}\text{H}_{30}\text{NO}_4\text{S}$ $[\text{M} + \text{H}]^+$: 416.1895, Found 416.1901.

3-Phenylthiopropionic acid O-ethyl ester (9). A solution of *N*-Methyl-3-phenylpropionamide (163.7 mg, 1.0 mmol) and pyridine (240 mL, 3 mmol) in dichloromethane (5.0 mL) was cooled to -40°C and trifluoromethanesulfonic anhydride (200 mL, 1.2 mmol) was added along the inner side of the flask. The mixture was allowed to gradually warm to -5°C over a period of 2 hours, and stirred for an additional 2 hours at room temperature. Ethanol (87 mL, 1.5 mmol) was then added, the mixture stirred for 10 minutes before cooling to -15°C and adding aqueous ammonium sulfide (510 mL of a 20 wt. % solution, 1.5 mmol). After *ca.* 2 hours at -15°C , the crude reaction mixture was filtered through a short pad of silica gel with 20% EtOAc/hexane (100 mL). Flash chromatography of the resulting residue with EtOAc/hexane afforded 94.1 mg (48%) of a (6/1) mixture of **9** and **10** as a colorless liquid. Pure **9**; colorless liquid; R_f 0.44 (2% EtOAc/hexane); ^1H NMR (400 MHz, CDCl_3) δ 7.31-7.19 (m, 5H), 4.49 (q, $J = 7.1$ Hz, 2H), 3.09-3.00 (m, 4H), 1.36 (t, $J = 7.1$ Hz, 3H); ^{13}C NMR (100 MHz, CDCl_3) δ 223.0, 140.5, 128.6(4), 126.4, 68.5, 48.6, 34.8, 13.8; FTIR (neat) 3063, 3027, 2982, 1603, 1496, 1454, 1368, 1303, 1246, 1186, 1075, 1031 cm^{-1} ; HRMS (MAB) Calcd for $\text{C}_{11}\text{H}_{14}\text{OS}$ $[\text{M}]^+$: 194.0765, Found 194.0764.

References

- 1 Shriver, D. F.; Drezzdon, M. A. *The manipulation of air-sensitive compounds*; 2nd Edition; Wiley: New York, 1986.
- 2 Smith, D. C.; Lee, S. W.; Fuchs, P. L. *J. Org. Chem.* **1994**, *59*, 348.