Supporting Information

Discovery of Highly Selective and Nanomolar Carbamate-Based Butyrylcholinesterase Inhibitors by Rational Investigation into Their Inhibition Mode

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Contents:

Experimental Section

General Reaction Procedures:

General Amide Formation Procedure (GP1):

6-Hydroxy-1-methyl-2*H*-benzo[*d*][1,3]oxazine-2,4(1*H*)-dione **5** was dissolved in dry DMF (30 mL) and treated with the corresponding amine (5 equiv) or a mixture of the amine hydrochloride (5 equiv) and triethylamine (5 equiv). The mixture was heated to 40-120 °C (depending on the amine) for 4-5 h. For workup, the mixture was poured into water (100 mL) and the product was extracted with ethyl acetate (5 x 100 mL). The combined organic layers were washed with brine (50 mL), dried over Na_2SO_4 and evaporated to dryness. The crude product was purified by column chromatography to obtain 5-hydroxy-*N*-methyl-2-(alkylamino)benzamides **6a-d**.

General Cyclization Procedure (GP2):

5-Hydroxy-*N*-methyl-2-(alkylamino)benzamides **6a-d** were dissolved in glacial acetic acid (20 mL). The mixture was treated with the corresponding aldehyde (1.2 equiv) and heated to 70 °C for 1-3 h. Then the mixture was poured onto ice water (20 mL), basified with a NaOH-solution (2 M) and the pH was adjusted to 9 with sat. NH_4Cl-solution. The product was extracted with ethyl acetate (3 x 40 mL), the combined organic layers were washed with brine (30 mL), dried over Na_2SO_4 and the solvent was evaporated under reduced pressure. The crude product was either crystallized or purified by column chromatography to obtain dihydroquinazolinones **7a-u** and **8a-c**.

General Reduction Procedure (GP3):

Dihydroquinazolinone **7a-u** and **8a-c** were dissolved in dry THF (30 mL) at 0 °C and $LiAlH_4$ (4 equiv) was added. The mixture was allowed to reach RT and was then heated to reflux temperature for 1-3 h. After cooling to RT, the mixture was poured into ice water (50 mL) followed by the addition of saturated NH_4Cl-solution until pH = 9. The aqueous phase was then extracted with ethyl acetate (3 x 80 mL). The combined organic layers were washed with brine (50 mL), dried over Na_2SO_4 and the solvent was evaporated under reduced pressure. The crude product was purified by column chromatography to obtain the corresponding tetrahydroquinazolines **9a-u** and **10a-c**.

General Carbamate Formation Procedure (GP4):

A solution of tetrahydroquinazolines **9a-n**, **9q-u** and **10a-c** in dry THF (5 mL) were treated with NaH in paraffin oil (60%, 1.2 equiv). The mixture was stirred until the formation of gas stopped. Then, a solution of 4-nitrophenyl-*n*-heptylcarbamate (1.2 equiv) in dry THF (3 mL) was added at once. The mixture was stirred for 2 h. For workup, the mixture was diluted with ethyl acetate (30 mL), washed with water (10 mL) and washed with brine (10 mL). The organic phase was dried over Na_2SO_4 and the solvent was evaporated under reduced pressure. The crude product was purified by column chromatography to obtain the corresponding *n*-heptylcarbamate **2a-n**, **2q-u** and **3a-c**.

Synthesis and Spectral Data:

4-Nitrophenyl-*n*-heptylcarbamate. 4-Nitrophenyl chloroformate (2.1 g, 10 mmol, 1.2 eq.) was dissolved in DCM (30 mL) and treated with triethylamine (1.44 mL, 10.4 mmol, 1.2 eq.). Then heptylamine (1.29 mL, 8.7 mmol, 1 eq.) in DCM (10 mL) was added drop wise over 30 min and the reaction mixture is stirred for 4 h at rt. For workup, the mixture was diluted with DCM (50 mL), washed with 1 M HCl-solution (3 x 30 mL) and washed with brine (30 mL). Then the organic layer was dried over Na_2SO_4, followed by the removal of the solvent under reduced pressure. The crude product was purified by column chromatography (petroleum ether:DCM = 1:1) to yield 4-nitrophenyl-*n*-heptylcarbamate (1.62 g, 67%) as white solid; **mp:** 80-82 °C. **^{1}H NMR** (400 MHz, $CDCl_3$): δ = 8.20 - 8.12 (m, 2H), 7.28 - 7.21 (m, 2H), 5.07 (s, NH), 3.26 - 3.14 (m, 2H), 1.59 - 1.45 (m, 2H), 1.35 - 1.14 (m, 8H), 0.82 (t, *J* = 6.9 Hz, 3H) ppm. **^{13}C NMR** (101 MHz, $CDCl_3$): δ = 156.03 (CO), 153.10 (arom.), 144.70 (arom.), 125.10 (arom., 2C), 121.93 (arom., 2C), 41.43 (NCH_2), 31.71 (CH_2), 29.70 (CH_2), 28.89 (CH_2), 26.67 (CH_2), 22.57 (CH_2), 14.04 (CH_3) ppm. **ESI-MS**: *m/z* calcd: 280.14, found: no mass found.

5-Hydroxy-*N*-*iso*-propyl-2-(methylamino)benzamide 6b. According to GP1, 6-hydroxy-1-methyl-1*H*-benzo[*d*][1,3]oxazine-2,4-dione **5** (800 mg, 4.15 mmol, 1 equiv) and *iso*-propylamine (1.77 mL, 20.73 mmol, 5 equiv) were used to obtain 5-hydroxy-*N*-*iso*-propyl-2-(methylamino)benzamide **6b** (353 mg, 41%) as a yellow solid; mp 144-146 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.56 (s, OH), 8.01 (d, *J* = 7.8 Hz, NH), 6.95 (d, *J* = 2.8 Hz, 1H), 6.79 (dd, *J* = 8.7, 2.8 Hz, 1H), 6.73 (q, *J* = 5.2 Hz, NH), 6.48 (d, *J* = 8.8 Hz, 1H), 4.10 - 3.95

(m, 1H), 2.70 (d, *J* = 5.1 Hz, 3H), 1.13 (d, *J* = 6.6 Hz, 6H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 168.6, 147.0, 143.7, 119.8, 117.8, 115.5, 112.0, 40.9, 30.5, 22.7 (2C) ppm. ESI-MS: *m/z* calcd: 208.12, found: 209.20 $[M+H]^+$.

5-Hydroxy-2-(methylamino)-*N*-*n*-propylbenzamide 6c. According to GP1, 6-hydroxy-1-methyl-1*H*-benzo[*d*][1,3]oxazine-2,4-dione **5** (800 mg, 4.15 mmol, 1 equiv) and *n*-propylamine (1.70 mL, 20.73 mmol, 5 equiv) were used to obtain 5-hydroxy-2-(methylamino)-*N*-*n*-propylbenzamide **6c** (524 mg, 61%) after column chromatography (petroleum ether:EtOAc= 1:1) as a brown oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.58 (s, OH), 8.21 (t, *J* = 5.1 Hz, NH), 6.95 (d, *J* = 2.7 Hz, 1H), 6.86 - 6.69 (m, 1H + NH), 6.48 (d, *J* = 8.8 Hz, 1H), 3.14 (q, *J* = 6.6 Hz, 2H), 2.69 (d, *J* = 5.2 Hz, 3H), 1.50 (sex, *J* = 7.3 Hz, 2H), 0.88 (t, *J* = 7.4 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 169.4, 147.1, 143.8, 120.0, 117.5, 115.2, 112.1, 41.0, 30.5, 22.8, 11.9 ppm. ESI-MS: *m/z* calcd: 208.12, found: 209.20 $[M+H]^+$.

***N*-Benzyl-5-hydroxy-2-(methylamino)benzamide 6d.** According to GP1, 6-hydroxy-1-methyl-1*H*-benzo[*d*][1,3]oxazine-2,4-dione **5** (800 mg, 4.15 mmol, 1 equiv) and benzylamine (2.26 mL, 20.73 mmol, 5 equiv) were used to obtain *N*-benzyl-5-hydroxy-2-(methylamino)benzamide **6d** (477 mg, 45%) after column chromatography (petroleum ether:EtOAc = 2:1) as a white solid; mp 161-162 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.80 (t, *J* = 5.9 Hz, NH), 8.60 (s, OH), 7.36 - 7.27 (m, 4H), 7.27 - 7.16 (m, 1H), 7.04 (d, *J* = 2.8 Hz, 1H), 6.88 (q, *J* = 5.0 Hz, NH), 6.83 (dd, *J* = 8.8, 2.8 Hz, 1H), 6.51 (d, *J* = 8.8 Hz, 1H), 4.40 (d, *J* = 6.0 Hz, 2H), 2.70 (d, *J* = 5.2 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 169.4, 147.0, 144.1, 140.4, 128.7 (2C), 127.6 (2C), 127.1, 120.5, 116.7, 115.2, 112.2, 42.7, 30.5 ppm. ESI-MS: *m/z* calcd: 256.12, found: 257.15 $[M+H]^+$.

2-(4-Chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7b. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 4-chlorobenzaldehyde (375 mg, 2.66 mmol, 1.2 equiv) were used to obtain 2-(4-chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7b** (538 mg, 80%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow solid; mp 196-202 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.03 (s, OH), 7.43 - 7.34 (m, 2H), 7.22 (d, *J* = 2.9 Hz, 1H), 7.20 - 7.16 (m, 2H), 6.81 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.48 (d, *J* = 8.7 Hz, 1H), 5.71 (s, 1H), 2.90 (s, 3H), 2.73 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.6, 149.8,

139.1, 135.7, 133.3, 128.6 (2C), 128.1 (2C), 121.0, 117.6, 114.4, 113.4, 77.8, 35.8, 32.0 ppm. ESI-MS: *m/z* calcd: 302.08, found: 303.1 $[M+H]^+$.

2-(3-Chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7c. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 3-chlorobenzaldehyde (375 mg, 2.66 mmol, 1.2 equiv) were used to obtain 2-(3-chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7c** (538 mg, 80%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.07 (br, OH), 7.42 - 7.30 (m, 2H), 7.26 - 7.19 (m, 2H), 7.10 (dt, *J* = 7.3, 1.5 Hz, 1H), 6.83 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.50 (d, *J* = 8.7 Hz, 1H), 5.72 (s, 1H), 2.91 (s, 3H), 2.75 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.1, 150.4, 139.9, 139.6, 133.7, 131.1, 129.1, 126.7, 125.2, 121.6, 118.1, 115.1, 113.8, 78.3, 36.4, 32.6 ppm. ESI-MS: *m/z* calcd: 302.08, found: 303.1 $[M+H]^+$.

2-(2-Chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7d. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 2-chlorobenzaldehyde (299 µL, 2.67 mmol, 1.2 equiv) were used to obtain 2-(2-chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7d** (526 mg, 78%) after crystallization from petroleum ether/DCM as a yellow solid; mp 211-215 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.13 (s, OH), 7.50 (dd, *J* = 8.0, 1.2 Hz, 1H), 7.34 (td, *J* = 7.7, 1.6 Hz, 1H), 7.27 - 7.19 (m, 2H), 7.06 (dd, *J* = 7.8, 1.6 Hz, 1H), 6.83 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.58 (d, *J* = 8.7 Hz, 1H), 6.06 (s, 1H), 2.87 (s, 3H), 2.79 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.1, 150.9, 139.6, 135.4, 132.6, 130.9, 130.5, 128.3, 127.2, 121.6, 118.8, 116.9, 113.6, 75.6, 38.1, 32.2 ppm. ESI-MS: *m/z* calcd: 302.08, found: 303.1 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-*p*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one 7e. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 4-methylbenzaldehyde (314 µL, 2.66 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-*p*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one **7e** (472 mg, 75%) after crystallization from a mixture of petroleum ether/DCM as a yellow solid; mp 182-186 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.97 (s, OH), 7.22 (d, *J* = 2.9 Hz, 1H), 7.11 (d, *J* = 7.9 Hz, 2H), 7.04 (d, *J* = 8.2 Hz, 2H), 6.80 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.44 (d, *J* = 8.7 Hz, 1H), 5.61 (s, 1H), 2.88 (s, 3H), 2.70 (s, 3H), 2.24 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.7, 149.5,

139.4, 138.0, 133.7, 129.1 (2C), 126.2 (2C), 120.8, 117.6, 114.0, 113.4, 78.5, 35.6, 32.0, 20.6 ppm. ESI-MS: *m/z* calcd: 282.14, found: 283.2 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-*m*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one 7f. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 3-methylbenzaldehyde (314 µL, 2.67 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-*m*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one **7f** (380 mg, 61%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.98 (s, OH), 7.22 (d, *J* = 2.9 Hz, 1H), 7.18 (t, *J* = 7.5 Hz, 1H), 7.12 (d, *J* = 7.5 Hz, 1H), 7.00 (s, 1H), 6.92 (d, *J* = 7.6 Hz, 1H), 6.81 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.46 (d, *J* = 8.7 Hz, 1H), 5.61 (s, 1H), 2.88 (s, 3H), 2.72 (s, 3H), 2.24 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.2, 150.0, 140.0, 138.1, 137.3, 129.8, 129.0, 127.5, 123.6, 121.4, 118.0, 114.6, 113.8, 79.2, 36.2, 32.6, 21.6 ppm. ESI-MS: *m/z* calcd: 282.14, found: 283.1 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-*o*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one 7g. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 2-methylbenzaldehyde (308 µL, 2.67 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-*o*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one **7g** (283 mg, 45%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow solid; mp 207-210 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.12 (s, OH), 7.22 (d, *J* = 2.9 Hz, 1H), 7.21 - 7.14 (m, 2H), 7.08 - 7.01 (m, 1H), 6.89 (d, *J* = 7.6 Hz, 1H), 6.79 (dd, *J* = 8.6, 3.0 Hz, 1H), 6.61 (d, *J* = 8.7 Hz, 1H), 5.82 (s, 1H), 2.86 (s, 3H), 2.77 (s, 3H), 2.47 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.5, 151.4, 140.4, 137.0, 136.7, 131.5, 128.7, 126.5, 125.7, 121.3, 120.3, 118.7, 113.3, 76.4, 39.6, 32.4, 19.6 ppm. ESI-MS: *m/z* calcd: 282.14, found: 283.2 $[M+H]^+$.

6-Hydroxy-2-(4-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7h. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 4-methoxybenzaldehyde (324 µL, 2.66 mmol, 1.2 equiv) were used to obtain 6-hydroxy-2-(4-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7h** (490 mg, 74%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow solid; mp 180-183 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.97 (s, OH), 7.22 (d, *J* = 2.9 Hz, 1H), 7.12 - 7.03 (m, 2H), 6.89 - 6.83 (m, 2H), 6.80 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.45 (d, *J* = 8.7 Hz, 1H), 5.59 (s, 1H), 3.70 (s, 3H), 2.87 (s, 3H), 2.69 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ

= 161.7, 159.4, 149.5, 139.5, 128.7, 127.5 (2C), 120.8, 117.5, 114.0, 113.9 (2C), 113.4, 78.3, 55.0, 35.4, 31.9 ppm. ESI-MS: *m/z* calcd: 298.13, found: 299.15 $[M+H]^+$.

6-Hydroxy-2-(3-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7i. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 3-methoxybenzaldehyde (363 µL, 2.67 mmol, 1.2 equiv) were used to obtain 6-hydroxy-2-(3-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7i** (375 mg, 57%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.99 (s,OH), 7.27 - 7.18 (m, 2H), 6.92 - 6.84 (m, 1H), 6.81 (dd, *J* = 8.7, 2.9 Hz, 1H), 6.77 - 6.67 (m, 2H), 6.47 (d, *J* = 8.7 Hz, 1H), 5.62 (s, 1H), 3.67 (s, 3H), 2.89 (s, 3H), 2.73 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.2, 159.7, 150.1, 140.0, 138.9, 130.3, 121.4, 118.8, 118.0, 114.5, 113.8, 113.8, 113.1, 79.0, 55.4, 36.2, 32.6 ppm. ESI-MS: *m/z* calcd: 298.13, found: 299.2 $[M+H]^+$.

6-Hydroxy-2-(2-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7j. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 2-methoxybenzaldehyde (363 mg, 2.67 mmol, 1.2 equiv) were used to obtain 6-hydroxy-2-(2-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7j** (631 mg, 95%) after crystallization from petroleum ether/DCM as a yellow solid; mp 216-219 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.95 (s, OH), 7.32 - 7.24 (m, 1H), 7.22 (d, *J* = 2.9 Hz, 1H), 7.07 (d, *J* = 8.3 Hz, 1H), 6.90 (dd, *J* = 7.7, 1.7 Hz, 1H), 6.83 - 6.76 (m, 2H), 6.47 (d, *J* = 8.7 Hz, 1H), 6.01 (s, 1H), 3.82 (s, 3H), 2.83 (s, 3H), 2.72 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.5, 157.2, 149.9, 140.0, 130.5, 126.5, 125.5, 121.3, 121.0, 117.9, 114.5, 113.7, 112.1, 72.9, 56.1, 36.3, 32.3 ppm. ESI-MS: *m/z* calcd: 298.13, found: 299.15 $[M+H]^+$.

2-(4-Fluorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7k. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 4-fluorobenzaldehyde (286 µL, 2.67 mmol, 1.2 equiv) were used to obtain 2-(4-fluorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7k** (415 mg, 65%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow solid; mp: 168-171 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.01 (s, OH), 7.24 - 7.11 (m, 5H), 6.82 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.48 (d, *J* = 8.7 Hz, 1H), 5.70 (s, 1H), 2.89 (s, 3H), 2.72 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.7 (d, *J* = 244.6 Hz), 162.1, 150.2, 139.7, 133.6 (d, *J* =

3.1 Hz), 128.8 (d, *J* = 8.4 Hz, 2C), 121.5, 118.1, 115.9 (d, *J* = 21.4 Hz, 2C), 114.8, 113.9, 78.3, 36.2, 32.5 ppm. ESI-MS: *m/z* calcd: 286.11, found: 287.1 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-[4-(trifluoromethyl)phenyl]-2,3-dihydroquinazolin-4(*1H*)-one 7l. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 4-trifluormethylbenzaldehyde (364 µL, 2.67 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-[4-(trifluoromethyl)phenyl]-2,3-dihydroquinazolin-4(1*H*)-one **7l** (606 mg, 81%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.09 (s, OH), 7.70 (d, *J* = 8.1 Hz, 2H), 7.38 (d, *J* = 8.1 Hz, 2H), 7.23 (d, *J* = 2.9 Hz, 1H), 6.82 (dd, *J* = 8.7, 2.9 Hz, 1H), 6.50 (d, *J* = 8.7 Hz, 1H), 5.82 (s, 1H), 2.93 (s, 3H), 2.77 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.2, 150.5, 141.8, 139.6, 129.6 (q, *J* = 32.0 Hz, 2C), 127.6 (2C), 126.1 (q, *J* = 3.7 Hz,), 124.5 (q, *J* = 272.4 Hz), 121.6, 118.3, 115.3, 113.9, 78.3, 36.6, 32.7 ppm. ESI-MS: *m/z* calcd: 336.11, found: 337.1 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-(pyridin-4-yl)-2,3-dihydroquinazolin-4(1*H*)-one 7m. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and isonicotinaldehyde (251 µL, 2.66 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-(pyridin-4-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7m** (483 mg, 81%) after column chromatography (DCM:MeOH = 9:1) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.08 (s, OH), 8.52 (dd, *J* = 4.5, 1.6 Hz, 2H), 7.22 (d, *J* = 2.9 Hz, 1H), 7.13 (dd, *J* = 4.5, 1.6 Hz, 2H), 6.82 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.53 (d, *J* = 8.7 Hz, 1H), 5.75 (s, 1H), 2.95 (s, 3H), 2.80 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.2, 150.7, 150.5 (2C), 145.6, 139.6, 121.7 (2C), 121.5, 118.5, 115.5, 113.8, 77.7, 36.9, 32.8 ppm. ESI-MS: *m/z* calcd: 269.12, found: 270.1 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-(pyridin-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one 7n. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and nicotinaldehyde (250 µL, 2.67 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-(pyridin-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7n** (395 mg, 66%) as a yellow oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.07 (s, OH), 8.51 (dd, *J* = 4.8, 1.6 Hz, 1H), 8.43 (d, *J* = 1.9 Hz, 1H), 7.53 - 7.45 (m, 1H), 7.34 (ddd, *J* = 7.9, 4.8, 0.7 Hz, 1H), 7.23 (d, *J* = 2.9 Hz, 1H), 6.83 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.52 (d, *J* = 8.7 Hz, 1H), 5.79 (s, 1H), 2.93 (s, 3H), 2.76 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.7, 150.1, 150.0, 147.6,

139.1, 133.7, 132.1, 123.8, 121.0, 117.9, 114.8, 113.3, 76.5, 35.9, 32.1 ppm. ESI-MS: *m/z* calcd: 269.12, found: 270.1 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-(thiophen-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one 7o. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and thiophene-3-carbaldehyde (233 µL, 2.66 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-(thiophen-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7o** (461 mg, 76%) after crystallization from petroleum ether/DCM as a yellow solid; mp 218-220 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.00 (s, OH), 7.43 (dd, *J* = 5.0, 3.0 Hz, 1H), 7.33 (dd, *J* = 2.9, 1.1 Hz, 1H), 7.22 (d, *J* = 2.9 Hz, 1H), 6.83 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.71 (dd, *J* = 5.0, 1.3 Hz, 1H), 6.51 (d, *J* = 8.7 Hz, 1H), 5.72 (s, 1H), 2.92 (s, 3H), 2.73 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.7, 149.7, 139.8, 138.2, 127.1, 125.4, 123.6, 120.9, 117.7, 114.0, 113.4, 74.7, 35.5, 31.9 ppm. ESI-MS: *m/z* calcd: 274.08, found: 571.15 $[2M+Na]^+$.

6-Hydroxy-1,3-dimethyl-2-(thiophen-2-yl)-2,3-dihydroquinazolin-4(1*H*)-one 7p. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and thiophene-2-carbaldehyde (249 µL, 2.66 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-(thiophen-2-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7p** (428 mg, 70%) after crystallization from ether as a yellow solid; mp 205-208 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.04 (OH), 7.32 (dd, *J* = 5.0, 1.0 Hz, 1H), 7.21 (d, *J* = 2.9 Hz, 1H), 7.05 (dd, *J* = 3.5, 1.0 Hz, 1H), 6.95 (dd, *J* = 5.0, 3.5 Hz, 1H), 6.86 (dd, *J* = 8.7, 2.9 Hz, 1H), 6.55 (d, *J* = 8.7 Hz, 1H), 5.97 (s, 1H), 2.94 (s, 3H), 2.72 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.5, 150.0, 139.4, 138.7, 127.1, 126.2, 125.9, 121.0, 117.8, 114.6, 113.3, 75.0, 35.4, 31.8 ppm. ESI-MS: *m/z* calcd: 274.08, found: 571.15 $[2M+Na]^+$.

2-(Furan-3-yl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7q. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and furan-3-carbaldehyde (223 µL, 2.67 mmol, 1.2 equiv) were used to obtain 2-(furan-3-yl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7q** (323 mg, 56%) after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.00 (s, OH), 7.56 (s, 1H), 7.52 (t, *J* = 1.7 Hz, 1H), 7.20 (d, *J* = 2.9 Hz, 1H), 6.84 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.54 (d, *J* = 8.7 Hz, 1H), 5.96 (dd, *J* = 1.8, 0.8 Hz, 1H), 5.61 (s, 1H), 2.93 (s, 3H), 2.72 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.3,

150.3, 144.3, 141.3, 140.45, 121.5, 121.3, 118.3, 114.6, 113.8, 109.0, 72.3, 35.8, 32.2 ppm. ESI-MS: *m/z* calcd: 258.10, found: 259.1 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-(1*H*-pyrrol-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one 7r. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 1*H*-pyrrole-3-carbaldehyde (253 mg, 2.67 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-(1*H*-pyrrol-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7r** (406 mg, 71%) after column chromatography (DCM:MeOH = 95:5) as a yellow solid; mp 222-225 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 10.68 (s, NH), 8.88 (s, OH), 7.19 (d, *J* = 2.9 Hz, 1H), 6.80 (dd, *J* = 8.6, 3.0 Hz, 1H), 6.60 - 6.54 (m, 2H), 6.45 (d, *J* = 8.7 Hz, 1H), 5.63 (dd, *J* = 4.2, 2.5 Hz, 1H), 5.45 (s, 1H), 2.89 (s, 3H), 2.68 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.6, 149.7, 141.0, 120.9, 118.7, 118.6, 118.3, 116.7, 114.1, 113.8, 106.2, 74.7, 35.7, 32.3 ppm. ESI-MS: *m/z* calcd: 257.12, found: 258.1 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-(naphthalen-1-yl)-2,3-dihydroquinazolin-4(1*H*)-one 7s. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 1-naphthalenecarboxaldehyde (362 µL, 2.67 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-(naphthalen-1-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7s** (428 mg, 61%) after crystallization from a mixture of DCM/petroleum ether as a yellow solid; mp 228-234 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.19 (s, OH), 8.48 (d, *J* = 8.5 Hz, 1H), 7.95 (d, *J* = 7.4 Hz, 1H), 7.87 (d, *J* = 8.2 Hz, 1H), 7.63 (ddd, *J* = 8.5, 6.9, 1.4 Hz, 1H), 7.59 - 7.50 (m, 1H), 7.41 - 7.33 (m, 1H), 7.28 (d, *J* = 2.9 Hz, 1H), 7.15 (d, *J* = 6.7 Hz, 1H), 6.77 (dd, *J* = 8.6, 3.0 Hz, 1H), 6.57 (d, *J* = 8.7 Hz, 1H), 6.49 (s, 1H), 2.90 (s, 3H), 2.84 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.8, 151.7, 140.4, 134.1, 133.9, 131.6, 129.6, 129.1, 126.9, 126.4, 125.6, 124.3, 124.2, 121.3, 120.8, 119.2, 113.4, 76.3, 40.2, 32.6 ppm. ESI-MS: *m/z* calcd: 318.14, found: 319.2 $[M+H]^+$.

6-Hydroxy-1,3-dimethyl-2-(naphthalen-2-yl)-2,3-dihydroquinazolin-4(1*H*)-one 7t. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 2-naphthaldehyde (417 mg, 2.66 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1,3-dimethyl-2-(naphthalen-2-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7t** (494 mg, 70%) after crystallization from DCM as a yellow solid; mp 202-203 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.02 (s, OH), 7.89 - 7.80 (m, 3H), 7.73 (d, *J* = 1.0 Hz, 1H), 7.54 - 7.48 (m, 2H), 7.27 (d, *J* = 2.9 Hz, 1H), 7.25 (dd, *J* = 8.6, 1.8 Hz, 1H), 6.81 (dd, *J* = 8.7, 3.0 Hz, 1H),

6.49 (d, *J* = 8.7 Hz, 1H), 5.84 (s, 1H), 2.95 (s, 3H), 2.78 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.2, 150.2, 140.0, 135.0, 133.4, 132.9, 129.0, 128.5, 128.0, 127.0, 126.9, 126.1, 124.2, 121.4, 118.1, 114.8, 113.9, 79.3, 36.4, 32.6 ppm. ESI-MS: *m/z* calcd: 318.14, found: 659.30 $[2M+Na]^+$.

2-(2,6-Dichlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one 7u. According to GP2, 5-hydroxy-*N*-methyl-2-(methylamino)benzamide **6a** (400 mg, 2.22 mmol, 1 equiv) and 2,6-dichlorobenzaldehyde (467 mg, 2.67 mmol, 1.2 equiv) were used to obtain 2-(2,6-dichlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7u** (577 mg, 77%) after crystallization from petroleum ether/DCM as a white solid; mp 258-261 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.84 (s, OH), 7.60 - 7.50 (m, 2H), 7.45 (dd, *J* = 8.7, 7.3 Hz, 1H), 7.21 (d, *J* = 3.0 Hz, 1H), 6.82 (dd, *J* = 8.8, 3.0 Hz, 1H), 6.72 (s, 1H), 6.53 (d, *J* = 8.8 Hz, 1H), 2.63 (s, 3H), 2.58 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.3, 148.9, 140.6, 135.5, 132.4, 131.8, 130.6 (2C), 121.7, 114.6, 113.5, 111.9, 76.1, 34.4, 30.8 ppm. ESI-MS: *m/z* calcd: 336.04, found: 337.10 $[M+H]^+$.

6-Hydroxy-3-*iso*-propyl-1-methyl-2-phenyl-2,3-dihydroquinazolin-4(1*H*)-one 8a. According to GP2, 5-hydroxy-*N*-*iso*-propyl-2-(methylamino)benzamide **6b** (340 mg, 1.96 mmol, 1 equiv) and benzaldehyde (200 µL, 1.63 mmol, 1.2 equiv) were used to obtain 6-hydroxy-3-*iso*-propyl-1-methyl-2-phenyl-2,3-dihydroquinazolin-4(1*H*)-one **8a** (364 mg, 75%) after crystallization from a mixture of DCM and petroleum ether as a pale yellow solid; mp 243-246 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.01 (s, OH), 7.32 - 7.13 (m, 6H), 6.75 (dd, *J* = 8.6, 2.9 Hz, 1H), 6.40 (d, *J* = 8.7 Hz, 1H), 5.73 (s, 1H), 4.70 (hept, *J* = 6.8 Hz, 1H), 2.77 (s, 3H), 1.25 (d, *J* = 6.8 Hz, 3H), 0.85 (d, *J* = 6.9 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.6, 150.6, 139.4, 139.3, 128.6 (3C), 126.8 (2C), 121.0, 120.5, 115.9, 113.8, 73.1, 45.3, 37.0, 20.8, 20.4 ppm. ESI-MS: *m/z* calcd: 296.15, found: 297.15 $[M+H]^+$.

6-Hydroxy-1-methyl-2-phenyl-3-*n*-propyl-2,3-dihydroquinazolin-4(1*H*)-one 8b. According to GP2, 5-hydroxy-2-(methylamino)-*N*-*n*-propylbenzamide **6c** (500 mg, 2.46 mmol, 1 equiv) and benzaldehyde (291 µL, 2.88 mmol, 1.2 equiv) were used to obtain 6-hydroxy-1-methyl-2-phenyl-3-*n*-propyl-2,3-dihydroquinazolin-4(1*H*)-one **8b** (284 mg, 40%) after column chromatography (petroleum ether:EtOAc= 1:1) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.00 (s, OH), 7.33 - 7.23 (m, 3H), 7.23 - 7.15 (m, 3H), 6.79 (dd, *J* = 8.6, 2.9 Hz, 1H), 6.46 (d, *J* = 8.7 Hz, 1H), 5.67 (s, 1H), 3.77 (ddd, *J* = 13.5, 8.7, 6.6 Hz, 1H),

2.82 - 2.69 (m, 4H), 1.68 - 1.55 (m, 1H), 1.55 - 1.42 (m, 1H), 0.85 (t, *J* = 7.4 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.0, 150.4, 139.8, 138.0, 129.0, 128.9 (2C), 126.9 (2C), 121.2, 119.0, 115.3, 113.8, 77.3, 46.6, 36.7, 21.2, 11.7 ppm. ESI-MS: *m/z* calcd: 296.15, found: 297.20 $[M+H]^+$.

3-Benzyl-6-hydroxy-1-methyl-2-phenyl-2,3-dihydroquinazolin-4(1*H*)-one 8c. According to GP2, *N*-benzyl-5-hydroxy-2-(methylamino)benzamide **6d** (450 mg, 1.76 mmol, 1 equiv) and benzaldehyde (214 µL, 2.11 mmol, 1.2 equiv) were used to obtain 3-benzyl-6-hydroxy-1-methyl-2-phenyl-2,3-dihydroquinazolin-4(1*H*)-one **8c** (332 mg, 55%) after column chromatography (petroleum ether:EtOAc = 1:1) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 9.07 (s, OH), 7.38 - 7.32 (m, 4H), 7.32 - 7.25 (m, 5H), 7.23 - 7.15 (m, 2H), 6.83 (dd, *J* = 8.7, 3.0 Hz, 1H), 6.48 (d, *J* = 8.7 Hz, 1H), 5.57 (s, 1H), 5.28 (d, *J* = 15.4 Hz, 1H), 3.77 (d, *J* = 15.3 Hz, 1H), 2.67 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 162.2, 150.5, 139.9, 137.8, 137.3, 129.1, 129.97 (2C), 128.96 (2C), 128.0 (2C), 127.7, 127.0 (2C), 121.6, 118.5, 115.4, 114.0, 77.3, 47.6, 36.7 ppm. ESI-MS: *m/z* calcd: 344.15, found: 345.15 $[M+H]^+$.

2-(4-Chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9b. According to GP3, starting from 2-(4-chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7b** (500 mg, 1.65 mmol, 1 equiv) the title compound 2-(4-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9b** (415 mg, 87%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a purple foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.45 (s, OH), 7.36 (d, *J* = 8.0 Hz, 2H), 7.16 (d, *J* = 8.0 Hz, 2H), 6.67 - 6.41 (m, 2H), 6.33 (s, 1H), 4.85 (s, 1H), 3.48 (d, *J* = 16.2 Hz, 1H), 3.32 (d, *J* = 16.3 Hz, 1H), 2.84 (s, 3H), 2.36 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.0, 140.1, 136.3, 131.8, 128.8 (2C), 128.1 (2C), 119.0, 114.2, 113.9, 110.3, 80.0, 49.0, 41.6, 36.9 ppm. ESI-MS: *m/z* calcd: 288.10, found: 289.1 $[M+H]^+$. HPLC (method A): 95%.

2-(3-Chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9c. According to GP3, starting from 2-(3-chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7c** (470 mg, 1.55 mmol, 1 equiv) the title compound 2-(3-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9c** (379 mg, 85%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a red foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.57 (br, OH), 7.39 - 7.28 (m, 2H), 7.20 - 7.13 (m, 1H), 7.12 - 7.03 (m, 1H), 6.58 (dd,

J = 8.6, 2.6 Hz, 1H), 6.53 (d, *J* = 8.7 Hz, 1H), 6.34 (d, *J* = 2.5 Hz, 1H), 4.87 (s, 1H), 3.49 (d, *J* = 16.3 Hz, 1H), 3.28 (d, *J* = 16.2, 1H), 2.86 (s, 3H), 2.37 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.5, 144.4, 136.7, 133.3, 130.6, 127.8, 127.3, 126.1, 119.4, 114.7, 114.4, 110.8, 80.5, 49.5, 42.1, 37.5 ppm. ESI-MS: *m/z* calcd: 288.10, found: 289.1 $[M+H]^+$. HPLC (method A): 99%.

2-(2-Chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9d. According to GP3, starting from 2-(2-chlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7d** (500 mg, 1.66 mmol, 1 equiv) the title compound 2-(2-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9d** (326 mg, 68%) was obtained after column chromatography (petroleum ether:EtOAc = 2:1) as a yellow solid; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.47 (s, OH), 7.46 (dd, *J* = 7.8, 1.2 Hz, 1H), 7.30 (td, *J* = 7.6, 1.7 Hz, 1H), 7.23 (td, *J* = 7.5, 1.1 Hz, 1H), 7.01 (dd, *J* = 7.6, 1.6 Hz, 1H), 6.59 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.52 (d, *J* = 8.7 Hz, 1H), 6.38 (d, *J* = 2.6 Hz, 1H), 5.04 (s, 1H), 3.57 (d, *J* = 16.3 Hz, 1H), 3.30 (m, 1H), 2.74 (s, 3H), 2.41 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.5, 138.2, 137.1, 133.3, 130.5, 129.7, 127.9, 127.1, 119.2, 114.8, 114.5, 110.2, 78.5, 49.2, 42.3, 36.5 ppm. ESI-MS: *m/z* calcd: 288.10, found: 289.15 $[M+H]^+$. HPLC (method A): 98%.

1,3-Dimethyl-2-*p*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol 9e. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-*p*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one **7e** (450 mg, 1.59 mmol, 1 equiv) the title compound 1,3-dimethyl-2-*p*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol **9e** (308 mg, 72%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.41 (s, OH), 7.10 (d, *J* = 7.9 Hz, 2H), 7.02 (d, *J* = 8.0 Hz, 2H), 6.56 (dd, *J* = 8.6, 2.6 Hz, 1H), 6.49 (d, *J* = 8.7 Hz, 1H), 6.32 (d, *J* = 2.5 Hz, 1H), 4.77 (s, 1H), 3.51 (d, *J* = 16.1 Hz, 1H), 3.26 (d, *J* = 16.1 Hz, 1H), 2.81 (s, 3H), 2.34 (s, 3H), 2.26 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 147.8, 138.0, 136.7, 136.4, 128.6 (2C), 126.9 (2C), 119.2, 114.1, 113.8, 110.1, 80.6, 49.3, 41.6, 36.8, 20.6. ESI-MS: *m/z* calcd: 268.16, found: 269.2 $[M+H]^+$. HPLC (method A): 96%.

1,3-Dimethyl-2-*m*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol 9f. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-*m*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one **7f** (360 mg, 1.28 mmol, 1equiv) the title compound 1,3-dimethyl-2-*m*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol **9f** (248 mg, 73%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a white foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.41 (s, OH), 7.17 (t, *J* = 7.5 Hz,

1H), 7.06 (d, *J* = 7.5 Hz, 1H), 7.00 (s, 1H), 6.90 (d, *J* = 7.6 Hz, 1H), 6.56 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.50 (d, *J* = 8.7 Hz, 1H), 6.32 (d, *J* = 2.6 Hz, 1H), 4.77 (s, 1H), 3.52 (d, *J* = 16.1 Hz, 1H), 3.26 (d, *J* = 16.1 Hz, 1H), 2.82 (s, 3H), 2.34 (s, 3H), 2.26 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.3, 141.7, 137.7, 137.2, 128.5, 128.4, 128.2, 124.4, 119.6, 114.6, 114.4, 110.6, 81.4, 49.8, 42.1, 37.4, 21.6 ppm. ESI-MS: *m/z* calcd: 268.16, found: 269.2 $[M+H]^+$. HPLC (method A): 97%.

1,3-Dimethyl-2-*o*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol 9g. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-*o*-tolyl-2,3-dihydroquinazolin-4(1*H*)-one **7g** (270 mg, 0.96 mmol, 1 equiv) the title compound 1,3-dimethyl-2-*o*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol **9g** (175 mg, 68%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.39 (br, OH), 7.20 - 7.09 (m, 2H), 7.03 (t, *J* = 7.8 Hz, 1H), 6.83 (d, *J* = 7.5 Hz, 1H), 6.57 (dd, *J* = 8.6, 2.6 Hz, 1H), 6.49 (d, *J* = 8.7 Hz, 1H), 6.33 (d, *J* = 2.5 Hz, 1H), 4.91 (s, 1H), 3.55 (d, *J* = 16.3 Hz, 1H), 3.23 (d, *J* = 16.3 Hz, 1H), 2.77 (s, 3H), 2.41 (s, 3H), 2.39 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.2, 139.2, 137.5, 136.9, 131.3, 127.7, 125.9, 125.5, 118.8, 114.7, 114.5, 109.7, 78.9, 49.4, 42.1, 36.6, 18.9 ppm. ESI-MS: *m/z* calcd: 268.16, found: 269.2 $[M+H]^+$. HPLC (method A): 99%.

2-(4-Methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9h. According to GP3, starting from 6-hydroxy-2-(4-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7h** (460 mg, 1.54 mmol, 1 equiv) the title compound 2-(4-methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9h** (282 mg, 64%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a purple foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.42 (s, OH), 7.10 - 7.00 (m, 2H), 6.89 - 6.81 (m, 2H), 6.56 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.49 (d, *J* = 8.7 Hz, 1H), 6.32 (d, *J* = 2.6 Hz, 1H), 4.75 (s, 1H), 3.71 (s, 3H), 3.52 (d, *J* = 16.1 Hz, 1H), 3.26 (d, *J* = 16.1 Hz, 1H), 2.80 (s, 3H), 2.33 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 158.5, 147.8, 136.7, 133.0, 128.1 (2C), 119.2, 114.1, 113.8, 113.4 (2C), 110.1, 80.4, 55.0, 49.3, 41.5, 36.8 ppm. ESI-MS: *m/z* calcd: 284.15, found: 285.2 $[M+H]^+$. HPLC (method A): 98%.

2-(3-Methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9i. According to GP3, starting from 6-hydroxy-2-(3-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7i** (350 mg, 1.17 mmol, 1 equiv) the title compound 2-(3-methoxyphenyl)-1,3-

dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9i** (239 mg, 72%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a purple foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.41 (br, OH), 7.21 (t, *J* = 7.9 Hz, 1H), 6.82 (dd, *J* = 7.9, 2.2 Hz, 1H), 6.72 (d, *J* = 7.7 Hz, 1H), 6.69 (d, *J* = 2.0 Hz, 1H), 6.56 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.50 (d, *J* = 8.7 Hz, 1H), 6.32 (d, *J* = 2.6 Hz, 1H), 4.79 (s, 1H), 3.69 (s, 3H), 3.53 (d, *J* = 16.2 Hz, 1H), 3.27 (d, *J* = 16.1 Hz, 1H), 2.83 (s, 3H), 2.36 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 159.6, 148.4, 143.3, 137.1, 129.6, 119.6 (2C), 114.6, 114.4, 113.3, 112.9, 110.6, 81.1, 55.4, 49.8, 42.1, 37.4 ppm. ESI-MS: *m/z* calcd: 284.1, found: 285.2 $[M+H]^+$. HPLC (method A): 98%.

2-(2-Methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9j. According to GP3, starting from 6-hydroxy-2-(2-methoxyphenyl)-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7j** (600 mg, 2.01 mmol, 1 equiv) the title compound 2-(2-methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9j** (508 mg, 89%) was obtained after column chromatography (petroleum ether:EtOAc = 1:5) as a white foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.42 (s, OH), 7.29 - 7.19 (m, 1H), 7.02 (d, *J* = 8.1 Hz, 1H), 6.86 (dd, *J* = 7.5, 1.8 Hz, 1H), 6.80 (t, *J* = 7.3 Hz, 1H), 6.56 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.47 (d, *J* = 8.7 Hz, 1H), 6.37 (d, *J* = 2.7 Hz, 1H), 5.09 (s, 1H), 3.81 (s, 3H), 3.62 (d, *J* = 16.1 Hz, 1H), 3.27 (d, *J* = 16.1 Hz, 1H), 2.65 (s, 3H), 2.33 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 157.4, 148.3, 137.8, 129.2, 128.5, 126.9, 120.0, 119.6, 114.6, 114.4, 111.8, 110.2, 75.3, 56.0, 49.7, 42.3, 36.4 ppm. ESI-MS: *m/z* calcd: 284.15, found: 285.20 $[M+H]^+$. HPLC (method A): 97%.

2-(4-Fluorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9k. According to GP3, starting from 2-(4-fluorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7k** (400 mg, 1.40 mmol, 1 equiv) the title compound 2-(4-fluorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9k** (294 mg, 77%) was obtained after column chromatography (petroleum ether:EtOAc = 2:1) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.44 (br, OH), 7.22 - 7.06 (m, 4H), 6.57 (dd, *J* = 8.6, 2.6 Hz, 1H), 6.51 (d, *J* = 8.7 Hz, 1H), 6.33 (d, *J* = 2.4 Hz, 1H), 4.83 (s, 1H), 3.48 (d, *J* = 16.2 Hz, 1H), 3.28 (d, *J* = 16.2 Hz, 1H), 2.83 (s, 3H), 2.35 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.9 (d, *J* = 243.0 Hz), 148.5, 137.8 (d, *J* = 2.9 Hz), 136.9, 129.4 (d, *J* = 8.1 Hz, 2C), 119.5, 115.3 (d, *J* = 21.3 Hz, 2C), 114.7, 114.4, 110.8, 80.6, 49.6, 42.0, 37.4 ppm. ESI-MS: *m/z* calcd: 272.13, found: 273.1 $[M+H]^+$. HPLC (method A): 98%.

1,3-Dimethyl-2-(4-(trifluoromethyl)phenyl)-1,2,3,4-tetrahydroquinazolin-6-ol 9l. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-(4-(trifluoromethyl)phenyl)-2,3-dihydroquinazolin-4(1*H*)-one **7l** (600 mg, 1.79 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(4-(trifluoromethyl)phenyl)-1,2,3,4-tetrahydroquinazolin-6-ol **9l** (274 mg, 48%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a white foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.59 (br, OH), 7.66 (d, *J* = 8.2 Hz, 2H), 7.35 (d, *J* = 8.1 Hz, 2H), 6.62 - 6.43 (m, 2H), 6.33 (d, *J* = 2.4 Hz, 1H), 4.94 (s, 1H), 3.44 (d, *J* = 16.4 Hz, 1H), 3.28 (d, *J* = 16.4 Hz, 1H), 2.86 (s, 3H), 2.38 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.4, 146.3, 136.7, 128.5 (q, *J* = 31.8 Hz), 128.3 (2C), 125.6 (q, *J* = 3.8 Hz, 2C) 124.7 (q, *J* = 272.0 Hz), 119.4, 114.8, 114.5, 110.9, 80.5, 49.4, 42.4, 37.4 ppm. ESI-MS: *m/z* calcd: 322.13, found: 323.1 $[M+H]^+$. HPLC (method A): 98%.

1,3-Dimethyl-2-(pyridin-4-yl)-1,2,3,4-tetrahydroquinazolin-6-ol 9m. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-(pyridin-4-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7m** (450 mg, 1.67 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(pyridin-4-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9m** (226 mg, 53%) was obtained after column chromatography (DCM:MeOH = 9:1) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.50 (dd, *J* = 4.4, 1.6 Hz, 2H), 8.47 (s, OH), 7.12 (dd, *J* = 4.6, 1.2 Hz, 2H), 6.62 - 6.48 (m, 2H), 6.33 (d, *J* = 2.4 Hz, 1H), 4.91 (s, 1H), 3.45 (d, *J* = 16.4 Hz, 1H), 3.31 (d, *J* = 17.1 Hz, 1H), 2.89 (s, 3H), 2.40 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 150.2, 150.1 (2C), 148.7, 136.6, 122.6 (2C), 119.3, 114.8, 114.4, 110.9, 80.0, 49.5, 42.2, 37.5 ppm. ESI-MS: *m/z* calcd: 255.14, found: 256.2 $[M+H]^+$. HPLC (method A): 99%.

1,3-Dimethyl-2-(pyridin-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol 9n. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-(pyridin-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7n** (370 mg, 1.38 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(pyridin-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9n** (191 mg, 54%) was obtained after column chromatography (DCM:MeOH = 9:1) as a brown oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.48 (s, OH), 8.46 (dd, *J* = 4.7, 1.5 Hz, 1H), 8.36 (d, *J* = 2.0 Hz, 1H), 7.48 (dt, *J* = 7.8, 1.7 Hz, 1H), 7.33 (dd, *J* = 7.8, 4.8 Hz, 1H), 6.58 (dd, *J* = 8.7, 2.6 Hz, 1H), 6.54 (d, *J* = 8.7 Hz, 1H), 6.34 (d, *J* = 2.4 Hz, 1H), 4.95 (s, 1H), 3.47 (d, *J* = 16.4 Hz, 1H), 3.32 (d, *J* = 16.3 Hz, 1H), 2.87 (s, 3H), 2.39 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.7, 148.6, 148.1, 136.3, 136.2, 134.6, 123.3, 119.0, 114.3, 113.9, 110.6, 78.7, 48.9, 41.5, 36.9 ppm. ESI-MS: *m/z* calcd: 255.14, found: 256.15 $[M+H]^+$. HPLC (method A): 95%.

1,3-Dimethyl-2-(thiophen-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol 9o. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-(thiophen-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7o** (430 mg, 1.57 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(thiophen-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9o** (358 mg, 88%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a white foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.44 (s, OH), 7.44 (dd, *J* = 4.9, 3.0 Hz, 1H), 7.05 (dd, *J* = 1.9, 1.0 Hz, 1H), 6.87 (dd, *J* = 5.0, 1.1 Hz, 1H), 6.55 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.48 (d, *J* = 8.7 Hz, 1H), 6.33 (d, *J* = 2.6 Hz, 1H), 4.87 (s, 1H), 3.56 (d, *J* = 16.2 Hz, 1H), 3.32 (d, *J* = 15.3 Hz, 1H), 2.83 (s, 3H), 2.33 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.1, 142.2, 136.5, 126.8, 126.0, 122.3, 119.4, 114.0, 113.7, 110.7, 77.4, 49.6, 41.2, 36.8 ppm. ESI-MS: *m/z* calcd: 260.10, found: 261.1 $[M+H]^+$. HPLC (method A): 96%.

1,3-Dimethyl-2-(thiophen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-ol 9p. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-(thiophen-2-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7p** (400 mg, 1.5 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(thiophen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9p** (249 mg, 66%) was obtained after crystallization from a mixture of EtOAc and Et_2O as a yellow solid; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.47 (s, OH), 7.40 (dd, *J* = 5.0, 1.2 Hz, 1H), 6.91 (dd, *J* = 5.0, 3.5 Hz, 1H), 6.76 (dt, *J* = 3.4, 0.9 Hz, 1H), 6.55 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.49 (d, *J* = 8.7 Hz, 1H), 6.34 (d, *J* = 2.6 Hz, 1H), 5.09 (s, 1H), 3.70 (d, *J* = 16.3 Hz, 1H), 3.38 (d, *J* = 16.3 Hz, 1H), 2.88 (s, 3H), 2.34 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.6, 144.3, 135.8, 126.2, 125.6, 125.2, 119.4, 114.1, 113.6, 111.2, 77.2, 49.3, 41.0, 37.1 ppm. ESI-MS: *m/z* calcd: 260.10, found: 261.1 $[M+H]^+$. HPLC (method A): 100%.

2-(Furan-3-yl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9q. According to GP3, starting from 2-(furan-3-yl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7q** (300 mg, 1.16 mmol, 1 equiv) the title compound 2-(furan-3-yl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9q** (221 mg, 78%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow solid; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.45 (s, OH), 7.56 (t, *J* = 1.7 Hz, 1H), 7.36 - 7.23 (m, 1H), 6.53 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.46 (d, *J* = 8.7 Hz, 1H), 6.34 (d, *J* = 2.7 Hz, 1H), 6.19 (dd, *J* = 1.7, 0.7 Hz, 1H), 4.76 (s, 1H), 3.65 (d, *J* = 16.2 Hz, 1H), 3.37 (d, *J* = 16.2 Hz, 1H), 2.79 (s, 3H), 2.32 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.7, 143.7, 140.9, 137.0, 124.9, 120.2, 114.5, 114.0, 111.7, 110.2, 74.7,

50.2, 41.5, 37.2 ppm. ESI-MS: *m/z* calcd: 244.12, found: 245.2 $[M+H]^+$. HPLC (method A): 97%.

1,3-Dimethyl-2-(1*H*-pyrrol-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol 9r. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-(1*H*-pyrrol-3-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7r** (400 mg, 1.56 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(1*H*-pyrrol-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9r** (151 mg, 40%) was obtained after column chromatography (DCM:MeOH = 9:1) as a white solid; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 10.53 (br, NH), 8.35 (s, OH), 6.61 (dd, *J* = 4.7, 2.5 Hz, 1H), 6.50 (dd, *J* = 8.6, 2.8 Hz, 1H), 6.41 (d, *J* = 8.7 Hz, 1H), 6.38 (d, *J* = 1.8 Hz, 1H), 6.31 (d, *J* = 2.7 Hz, 1H), 5.77 (dd, *J* = 4.1, 2.5 Hz, 1H), 4.68 (s, 1H), 3.68 (d, *J* = 15.9 Hz, 1H), 3.29 (d, *J* = 16.0 Hz, 1H), 2.74 (s, 3H), 2.28 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.2, 137.9, 122.1, 120.5, 117.9, 116.4, 114.2, 114.0, 111.1, 107.0, 76.8, 50.4, 41.6, 37.2 ppm. ESI-MS: *m/z* calcd: 243.14, found: 244.2 $[M+H]^+$. CHN-anal: calcd: (M + 0.2 H_2O) C: 68.10; H: 7.10; N: 17.02; found: C: 68.14; H: 7.10; N: 16.89.

1,3-Dimethyl-2-(naphthalen-1-yl)-1,2,3,4-tetrahydroquinazolin-6-ol 9s. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-(naphthalen-1-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7s** (400 mg, 1.26 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(naphthalen-1-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9s** (314 mg, 82%) was obtained after column chromatography (petroleum ether:EtOAc = 2:1) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.47 (br, OH), 8.27 (d, *J* = 7.9 Hz, 1H), 7.96 - 7.87 (m, 1H), 7.82 (d, *J* = 8.2 Hz, 1H), 7.58 - 7.41 (m, 2H), 7.41 - 7.22 (m, 1H), 7.05 (d, *J* = 7.0 Hz, 1H), 6.67 - 6.48 (m, 2H), 6.34 (d, *J* = 2.4 Hz, 1H), 5.50 (s, 1H), 3.50 (d, *J* = 16.3 Hz, 1H), 3.23 (d, *J* = 16.3 Hz, 1H), 2.86 (s, 3H), 2.52 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.3, 137.4, 136.0, 134.4, 131.2, 128.7, 128.6, 126.1, 126.0, 125.4, 125.2, 124.1, 118.6, 114.7, 114.7, 109.9, 79.2, 49.7, 41.9, 36.9 ppm. ESI-MS: *m/z* calcd: 304.16, found: 305.2 $[M+H]^+$. HPLC (method A): 100%.

1,3-Dimethyl-2-(naphthalen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-ol 9t. According to GP3, starting from 6-hydroxy-1,3-dimethyl-2-(naphthalen-2-yl)-2,3-dihydroquinazolin-4(1*H*)-one **7t** (494 mg, 1.55 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(naphthalen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9t** (410 mg, 87%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a purple foam; ^{1}H NMR (400 MHz,

DMSO-d_6): δ = 8.44 (br, OH), 7.91 - 7.83 (m, 2H), 7.83 - 7.77 (m, 1H), 7.58 (s, 1H), 7.51 - 7.43 (m, 2H), 7.40 (dd, *J* = 8.5, 1.6 Hz, 1H), 6.67 - 6.56 (m, 2H), 6.34 (d, *J* = 1.9 Hz, 1H), 4.98 (s, 1H), 3.54 (d, *J* = 16.1 Hz, 1H), 3.30 (d, *J* = 16.1 Hz, 1H), 2.91 (s, 3H), 2.40 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.4, 139.4, 137.1, 133.0, 133.0, 128.4, 128.3, 127.9, 126.5, 126.3, 126.0, 126.0, 119.7, 114.7, 114.4, 110.8, 81.5, 50.0, 42.2, 37.5 ppm. ESI-MS: *m/z* calcd: 304.16, found: 305.2 $[M+H]^+$. HPLC (method A): 96%.

2-(2,6-Dichlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol 9u. According to GP3, starting from 2-(2,6-dichlorophenyl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1*H*)-one **7u** (520 mg, 1.55 mmol, 1 equiv) the title 2-(2,6-dichlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9u** (437 mg, 88%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a pale yellow solid; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.45 (br, OH), 7.45 (d, *J* = 7.9 Hz, 2H), 7.38 - 7.26 (m, 1H), 6.54 (dd, *J* = 8.6, 2.8 Hz, 1H), 6.48 - 6.36 (m, 2H), 5.26 (s, 1H), 3.66 (d, *J* = 14.8 Hz, 1H), 3.35 (d, *J* = 15.9 Hz, 1H), 2.58 (s, 3H), 2.23 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.4, 137.7, 135.2, 130.4, 121.4, 114.6, 114.0, 111.1, 80.2, 53.3, 42.0, 35.5 ppm. ESI-MS: *m/z* calcd: 322.06, found: 323.05 $[M+H]^+$. HPLC (method A): 99%.

3-*iso*-Propyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-ol 10a. According to GP3, starting from 6-hydroxy-3-*iso*-propyl-1-methyl-2-phenyl-2,3-dihydroquinazolin-4(1*H*)-one **8a** (340 mg, 1.15 mmol, 1 equiv) the title compound 3-*iso*-propyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-ol **10a** (163 mg, 50%) was obtained after column chromatography (petroleum ether:EtOAc= 7:2) as a brown foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.36 (br, OH), 7.34 - 7.25 (m, 2H), 7.25 - 7.19 (m, 1H), 7.15 (d, *J* = 7.2 Hz, 2H), 6.54 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.44 (d, *J* = 8.6 Hz, 1H), 6.32 (d, *J* = 2.7 Hz, 1H), 5.15 (s, 1H), 3.52 (d, *J* = 16.7 Hz, 1H), 3.44 (d, *J* = 16.7 Hz, 1H), 2.85 (s, 3H), 2.84 - 2.75 (m, 1H), 1.14 (d, *J* = 6.3 Hz, 3H), 1.05 (d, *J* = 6.4 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.1, 142.9, 138.0, 128.5 (2C), 127.5, 127.2 (2C), 120.8, 114.4, 113.9, 109.9, 76.9, 50.1, 44.5, 36.9, 22.0, 21.6 ppm. ESI-MS: *m/z* calcd: 282.17, found: 282.20 $[M+H]^+$. CHN-anal: calcd: C: 76.56; H: 7.85; N: 9.92, found: C: 76.21; H: 7.82; N: 10.13.

1-Methyl-2-phenyl-3-*n*-propyl-1,2,3,4-tetrahydroquinazolin-6-ol 10b. According to GP3, starting from 6-hydroxy-1-methyl-2-phenyl-3-*n*-propyl-2,3-dihydroquinazolin-4(1*H*)-one **8b** (270 mg, 0.91 mmol, 1 equiv) the title compound 1-methyl-2-phenyl-3-*n*-propyl-

1,2,3,4-tetrahydroquinazolin-6-ol **10b** (129 mg, 50%) was obtained after column chromatography (petroleum ether:EtOAc= 7:2) as a brown foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.37 (s, OH), 7.33 - 7.26 (m, 2H), 7.26 - 7.19 (m, 1H), 7.14 (d, *J* = 7.1 Hz, 2H), 6.55 (dd, *J* = 8.6, 2.7 Hz, 1H), 6.49 (d, *J* = 8.7 Hz, 1H), 6.31 (d, *J* = 2.6 Hz, 1H), 4.96 (s, 1H), 3.47 (d, *J* = 16.5 Hz, 1H), 3.32 (d, *J* = 15.9 Hz, 1H), 2.88 (s, 3H), 2.58 - 2.53 (m, 1H), 2.42 (dt, *J* = 12.3, 7.1 Hz, 1H), 1.55 (hex, *J* = 7.3 Hz, 2H), 0.92 (t, *J* = 7.3 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.1, 142.2, 137.4, 128.6 (2C), 127.6, 127.3 (2C), 119.6, 114.5, 114.5, 110.1, 79.5, 55.1, 47.4, 37.3, 21.2, 12.3 ppm. ESI-MS: *m/z* calcd: 282.17, found: 283.20 $[M+H]^+$. HPLC (method A): 96%.

3-Benzyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-ol 10c. According to GP3, starting from 3-benzyl-6-hydroxy-1-methyl-2-phenyl-2,3-dihydroquinazolin-4(1*H*)-one **8c** (320 mg, 0.93 mmol, 1 equiv) the title compound 3-benzyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-ol **10c** (155 mg, 50%) was obtained after column chromatography (petroleum ether:EtOAc= 7:2) as a yellow foam; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.41 (br, OH), 7.43 - 7.35 (m, 4H), 7.32 - 7.20 (m, 4H), 7.15 (d, *J* = 7.2 Hz, 2H), 6.60 (dd, *J* = 8.6, 2.5 Hz, 1H), 6.56 (d, *J* = 8.7 Hz, 1H), 6.28 (d, *J* = 2.4 Hz, 1H), 4.88 (s, 1H), 3.77 (d, *J* = 13.3 Hz, 1H), 3.67 (d, *J* = 13.3 Hz, 1H), 3.51 (d, *J* = 16.5 Hz, 1H), 3.28 (d, *J* = 17.0 Hz, 1H), 2.89 (s, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 148.3, 142.0, 139.6, 137.1, 129.2 (2C), 128.8 (2C), 128.7 (2C), 127.7, 127.5, 127.1 (2C), 119.1, 114.8, 114.5, 110.4, 78.8, 57.3, 47.2, 37.4 ppm. ESI-MS: *m/z* calcd: 330.17, found: 331.20 $[M+H]^+$. HPLC (method A): 97%.

2-(4-Chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2b. According to GP4, starting from 2-(4-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9b** (150 mg, 0.52 mmol, 1 equiv) the title compound 2-(4-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2b** (126 mg, 57%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.51 (t, *J* = 5.6 Hz, NH), 7.41 - 7.36 (m, 2H), 7.17 (d, *J* = 8.4 Hz, 2H), 6.82 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.63 (d, *J* = 8.9 Hz, 1H), 6.61 (d, *J* = 2.7 Hz, 1H), 4.97 (s, 1H), 3.50 (d, *J* = 16.3 Hz, 1H), 3.34 (d, *J* = 17.2 Hz, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.92 (s, 3H), 2.39 (s, 3H), 1.50 - 1.40 (m, 2H), 1.34 - 1.23 (m, 8H), 0.87 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.1, 141.1, 140.3, 140.0, 132.0, 128.7 (2C), 128.3 (2C), 120.7, 120.2, 117.9, 109.0, 79.8, 48.4, 41.5, 40.4, 36.7, 31.2, 29.2,

28.4, 26.2, 22.0, 13.9 ppm. ESI-MS: *m/z* calcd: 429.22, found: 430.2 $[M+H]^+$. HPLC (method C): 95%.

2-(3-Chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2c. According to GP4, starting from 2-(3-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9c** (150 mg, 0.52 mmol, 1 equiv) the title compound 2-(3-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2c** (117 mg, 53%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a yellow solid; mp 107-109 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.51 (t, *J* = 5.7 Hz, NH), 7.39 - 7.31 (m, 2H), 7.21 - 7.15 (m, 1H), 7.09 (dt, *J* = 3.6, 1.4 Hz, 1H), 6.83 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.64 (d, *J* = 8.9 Hz, 1H), 6.62 (d, *J* = 2.7 Hz, 1H), 5.01 (s, 1H), 3.51 (d, *J* = 16.4 Hz, 1H), 3.35 (d, *J* = 16.3 Hz, 1H), 3.01 (dd, *J* = 13.0, 6.8 Hz, 2H), 2.94 (s, 3H), 2.40 (s, 3H), 1.49 - 1.39 (m, 2H), 1.33 - 1.22 (m, *J* = 15.4 Hz, 8H), 0.87 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 144.2, 141.7, 140.7, 133.5, 130.7, 128.0, 127.2, 125.8, 121.2, 120.7, 118.3, 109.6, 80.3, 48.9, 42.0, 40.9, 37.3, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 429.22, found: 430.2 $[M+H]^+$. HPLC (method C): 98%.

2-(2-Chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2d. According to GP4, starting from 2-(2-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9d** (150 mg, 0.52 mmol, 1 equiv) the title compound 2-(2-chlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2d** (130 mg, 58%) was obtained after column chromatography (petroleum ether:EtOAc = 4:1) as a white solid; mp 140-143 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.53 (t, *J* = 5.6 Hz, NH), 7.49 (dd, *J* = 7.8, 1.1 Hz, 1H), 7.33 (td, *J* = 7.6, 1.7 Hz, 1H), 7.26 (t, *J* = 7.0 Hz, 1H), 7.01 - 6.94 (m, 1H), 6.85 (dd, *J* = 8.6, 2.6 Hz, 1H), 6.71 - 6.59 (m, 2H), 5.12 (s, 1H), 3.58 (d, *J* = 16.4 Hz, 1H), 3.35 (m, 1H), 3.02 (dd, *J* = 13.0, 6.6 Hz, 2H), 2.81 (s, 3H), 2.43 (s, 3H), 1.49 - 1.40 (m, 2H), 1.34 - 1.21 (m, 8H), 0.87 (t, *J* = 6.7 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 141.7, 141.1, 138.0, 133.2, 130.7, 129.9, 127.8, 127.2, 121.3, 120.7, 118.1, 109.1, 78.6, 48.5, 42.3, 40.9, 36.3, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 429.22, found: 430.25 $[M+H]^+$. HPLC (method A): 98%.

1,3-Dimethyl-2-*p*-tolyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2e. According to GP4, starting from 1,3-dimethyl-2-*p*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol **9e** (150 mg, 0.56 mmol, 1 equiv) the title compound 1,3-dimethyl-2-*p*-tolyl-1,2,3,4-

tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2e** (192 mg, 84%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.50 (t, *J* = 5.6 Hz, NH), 7.12 (d, *J* = 7.9 Hz, 2H), 7.03 (d, *J* = 8.0 Hz, 2H), 6.81 (dd, *J* = 8.7, 2.6 Hz, 1H), 6.64 - 6.53 (m, 2H), 4.90 (s, 1H), 3.53 (d, *J* = 16.2 Hz, 1H), 3.31 (d, *J* = 16.0 Hz, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.90 (s, 3H), 2.37 (s, 3H), 2.27 (s, 3H), 1.49 - 1.39 (m, 2H), 1.34 - 1.21 (m, 8H), 0.87 (t, *J* = 6.7 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.1, 140.9, 140.7, 137.9, 136.6, 128.8 (2C), 126.7 (2C), 120.4, 120.1, 118.1, 108.8, 80.4, 48.5, 41.5, 40.4, 36.6, 31.2, 29.2, 28.3, 26.2, 22.0, 20.6, 13.9 ppm. ESI-MS: *m/z* calcd: 409.27, found: 410.3 $[M+H]^+$. HPLC (method C): 97%.

1,3-Dimethyl-2-*m*-tolyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2f. According to GP4, starting from 1,3-dimethyl-2-*m*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol **9f** (150 mg, 0.49 mmol, 1 equiv) the title compound 1,3-dimethyl-2-*m*-tolyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2f** (51 mg, 23%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a yellow oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.50 (t, *J* = 5.6 Hz, NH), 7.19 (t, *J* = 7.6 Hz, 1H), 7.07 (d, *J* = 7.5 Hz, 1H), 7.01 (s, 1H), 6.90 (d, *J* = 8.2 Hz, 1H), 6.81 (dd, *J* = 8.7, 2.6 Hz, 1H), 6.67 - 6.49 (m, 2H), 4.90 (s, 1H), 3.55 (d, *J* = 16.2 Hz, 1H), 3.29 (m, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.91 (s, 3H), 2.38 (s, 3H), 2.27 (s, 3H), 1.50 - 1.37 (m, 2H), 1.35 - 1.22 (m, 8H), 0.87 (t, *J* = 6.7 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 141.5, 141.4, 141.1, 137.8, 128.7, 128.5, 128.0, 124.2, 121.1, 120.6, 118.5, 109.3, 81.1, 49.1, 42.1, 40.9, 37.2, 31.7, 29.7, 28.8, 26.6, 22.5, 21.6, 14.4 ppm. ESI-MS: *m/z* calcd: 409.27, found: 410.3 $[M+H]^+$. HPLC (method C): 97%.

1,3-Dimethyl-2-*o*-tolyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2g. According to GP4, starting from 1,3-dimethyl-2-*o*-tolyl-1,2,3,4-tetrahydroquinazolin-6-ol **9g** (150 mg, 0.56 mmol, 1 equiv) the title compound 1,3-dimethyl-2-*o*-tolyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2g** (135 mg, 59%) was obtained after column chromatography (petroleum ether:EtOAc = 3:1) as a yellow solid; mp 130-133 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.51 (t, *J* = 5.6 Hz, NH), 7.20 (d, *J* = 6.2 Hz, 1H), 7.16 (td, *J* = 7.3, 1.2 Hz, 1H), 7.09 - 7.00 (m, 1H), 6.85 – 6.78 (m, 2H), 6.63 - 6.56 (m, 2H), 5.01 (s, 1H), 3.56 (d, *J* = 16.4 Hz, 1H), 3.30 (m, 1H), 3.02 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.84 (s, 3H), 2.43 (s, 3H), 2.40 (s, 3H), 1.51 - 1.38 (m, 2H), 1.34 - 1.20 (m, 8H), 0.87 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 141.5, 141.3, 138.8, 136.9, 131.4, 127.9, 125.7,

125.6, 121.1, 120.7, 117.9, 108.7, 78.9, 48.8, 42.0, 40.9, 36.5, 31.7, 29.8, 28.9, 26.7, 22.5, 18.9, 14.4 ppm. ESI-MS: *m/z* calcd: 409.27, found: 410.3 $[M+H]^+$. HPLC (method C): 95%.

2-(4-Methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2h. According to GP4, starting from 2-(4-methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9h** (150 mg, 0.53 mmol, 1 equiv) the title compound 2-(4-methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2h** (173 mg, 77%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.50 (t, *J* = 5.6 Hz, NH), 7.06 (d, *J* = 8.6 Hz, 2H), 6.87 (d, *J* = 8.7 Hz, 2H), 6.81 (dd, *J* = 8.7, 2.6 Hz, 1H), 6.66 - 6.55 (m, 2H), 4.88 (s, 1H), 3.72 (s, 3H), 3.54 (d, *J* = 16.2 Hz, 1H), 3.31 (d, *J* = 16.0 Hz, 1H), 3.01 (dd, *J* = 12.9, 6.6 Hz, 2H), 2.89 (s, 3H), 2.36 (s, 3H), 1.50 - 1.39 (m, 2H), 1.34 - 1.21 (m, 8H), 0.93 - 0.81 (m, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 158.6, 155.1, 140.9, 140.7, 132.8, 127.9 (2C), 120.6, 120.0, 118.1, 113.6 (2C), 108.8, 80.2, 55.0, 48.6, 41.4, 40.4, 36.6, 31.2, 29.3, 28.4, 26.2, 22.0, 13.9 ppm. ESI-MS: *m/z* calcd: 425.27, found: 426.3 $[M+H]^+$. HPLC (method C): 98%.

2-(3-Methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2i. According to GP4, starting from 2-(3-methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9i** (150 mg, 0.52 mmol, 1 equiv) the title compound 2-(3-methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2i** (93 mg, 41%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.50 (t, *J* = 5.6 Hz, NH), 7.24 (t, *J* = 7.9 Hz, 1H), 6.88 - 6.78 (m, 2H), 6.75 - 6.67 (m, 2H), 6.65 - 6.56 (m, 2H), 4.92 (s, 1H), 3.70 (s, 3H), 3.56 (d, *J* = 16.3 Hz, 1H), 3.39 - 3.31 (m, 1H), 3.01 (dd, *J* = 13.0, 6.6 Hz, 2H), 2.92 (s, 3H), 2.39 (s, 3H), 1.50 - 1.41 (m, 2H), 1.32 - 1.22 (m, 8H), 0.87 (t, *J* = 6.7 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 159.7, 155.6, 143.1, 141.5, 141.1, 129.8, 121.1, 120.6, 119.4, 118.6, 113.2, 113.0, 109.3, 81.0, 55.4, 49.1, 42.1, 40.9, 37.2, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 425.27, found: 426.3 $[M+H]^+$. HPLC (method B): 98%.

2-(2-Methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2j. According to GP4, starting from 2-(2-methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9j** (150 mg, 0.53 mmol, 1 equiv) the title compound 2-(2-methoxyphenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2j**

(159 mg, 71%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a yellow oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.51 (t, J = 5.7 Hz, NH), 7.30 - 7.23 (m, 1H), 7.04 (d, J = 8.2 Hz, 1H), 6.88 - 6.77 (m, 3H), 6.64 (d, J = 2.7 Hz, 1H), 6.58 (d, J = 8.8 Hz, 1H), 5.17 (s, 1H), 3.82 (s, 3H), 3.64 (d, J = 16.2 Hz, 1H), 3.31 (m, 1H), 3.02 (dd, J = 13.0, 6.7 Hz, 2H), 2.73 (s, 3H), 2.36 (s, 3H), 1.53 - 1.41 (m, 2H), 1.34 - 1.22 (m, 8H), 0.87 (t, J = 6.9 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 157.4, 155.6, 141.8, 141.4, 129.5, 128.3, 126.7, 121.1, 120.5, 120.1, 118.4, 111.9, 108.9, 75.6, 56.0, 48.9, 42.4, 40.9, 36.2, 31.7, 29.8, 28.9, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 425.27, found: 426.30 $[M+H]^+$. HPLC (method A): 98%.

2-(4-Fluorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2k. According to GP4, starting from 2-(4-fluorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9k** (150 mg, 0.55 mmol, 1 equiv) the title compound 2-(4-fluorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2k** (93 mg, 41%) was obtained after column chromatography (petroleum ether:EtOAc = 2:1) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.51 (t, J = 5.7 Hz, NH), 7.23 - 7.10 (m, 4H), 6.82 (dd, J = 8.7, 2.7 Hz, 1H), 6.62 (d, J = 9.0 Hz, 1H), 6.60 (d, J = 2.8 Hz, 1H), 4.97 (s, 1H), 3.51 (d, J = 16.3 Hz, 1H), 3.32 (m, 1H), 3.01 (dd, J = 13.0, 6.7 Hz, 2H), 2.92 (s, 3H), 2.38 (s, 3H), 1.49 - 1.38 (m, 2H), 1.33 - 1.20 (m, 8H), 0.87 (t, J = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 161.9 (d, J = 243.3 Hz), 155.6, 141.5, 140.9, 137.6 (d, J = 2.8 Hz), 129.2 (d, J = 8.2 Hz, 2C), 121.1, 120.6, 118.4, 115.5 (d, J = 21.3 Hz, 2C), 109.5, 80.4, 48.9, 42.0, 40.9, 37.2, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 413.25, found: 414.3 $[M+H]^+$. HPLC (method C): 100%.

1,3-Dimethyl-2-(4-(trifluoromethyl)phenyl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2l. According to GP4, starting from 1,3-dimethyl-2-(4-(trifluoromethyl)phenyl)-1,2,3,4-tetrahydroquinazolin-6-ol **9l** (150 mg, 0.47 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(4-(trifluoromethyl)phenyl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2l** (154 mg, 72%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.70 (d, J = 8.2 Hz, 2H), 7.51 (t, J = 5.6 Hz, NH), 7.38 (d, J = 8.1 Hz, 2H), 6.84 (dd, J = 8.7, 2.6 Hz, 1H), 6.66 (d, J = 8.8 Hz, 1H), 6.61 (d, J = 2.6 Hz, 1H), 5.09 (s, 1H), 3.48 (d, J = 16.5 Hz, 1H), 3.36 (d, J = 17.0 Hz, 1H), 3.01 (dd, J = 13.0, 6.7 Hz, 2H), 2.96 (s, 3H), 2.43 (s, 3H), 1.50 - 1.39 (m, 2H), 1.27 (m, 8H), 0.87 (t, J = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ =

155.6, 146.3, 141.7, 140.7, 128.6 (q, *J* = 31.8 Hz), 128.2 (2C), 125.7 (q, *J* = 3.8 Hz), 121.3, 120.7, 118.3, 109.6, 80.4, 48.9, 42.1, 40.9, 37.2, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 463.24, found: 464.2 $[M+H]^+$. HPLC (method B): 99%.

1,3-Dimethyl-2-(pyridin-4-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2m. According to GP4, starting from 1,3-dimethyl-2-(pyridin-4-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9m** (150 mg, 0.59 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(pyridin-4-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2m** (123 mg, 53%) was obtained after column chromatography (DCM:MeOH = 9:1) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.53 (dd, *J* = 4.4, 1.6 Hz, 2H), 7.52 (t, *J* = 5.7 Hz, NH), 7.16 - 7.11 (m, 2H), 6.84 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.66 (d, *J* = 8.9 Hz, 1H), 6.61 (d, *J* = 2.7 Hz, 1H), 5.04 (s, 1H), 3.48 (d, *J* = 16.6 Hz, 1H), 3.37 (d, *J* = 16.4 Hz, 1H), 3.01 (dd, *J* = 13.1, 6.8 Hz, 2H), 2.97 (s, 3H), 2.43 (s, 3H), 1.48 - 1.38 (m, 2H), 1.32 - 1.21 (m, 8H), 0.87 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.5, 150.3 (2C), 150.1, 141.7, 140.6, 122.5 (2C), 121.3, 120.7, 118.2, 109.7, 79.9, 49.0, 42.1, 40.9, 37.3, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 396.25, found: 397.2 $[M+H]^+$. HPLC (method C): 98%.

1,3-Dimethyl-2-(pyridin-3-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2n. According to GP4, starting from 1,3-dimethyl-2-(pyridin-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9n** (150 mg, 0.59 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(pyridin-3-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2n** (134 mg, 58%) was obtained after column chromatography (DCM:MeOH = 9:1) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.48 (dd, *J* = 4.7, 1.4 Hz, 1H), 8.38 (d, *J* = 1.9 Hz, 1H), 7.55 - 7.46 (m, NH + 1H), 7.35 (dd, *J* = 7.7, 4.8 Hz, 1H), 6.84 (dd, *J* = 8.7, 2.6 Hz, 1H), 6.65 (d, *J* = 8.8 Hz, 1H), 6.62 (d, *J* = 2.6 Hz, 1H), 5.08 (s, 1H), 3.50 (d, *J* = 16.4 Hz, 1H), 3.38 (d, *J* = 16.5 Hz, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.95 (s, 3H), 2.42 (s, 3H), 1.51 - 1.38 (m, 2H), 1.34 - 1.21 (m, 8H), 0.87 (t, *J* = 6.7 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.0, 148.8, 148.5, 141.2, 140.3, 136.1, 134.4, 123.4, 120.8, 120.2, 117.8, 109.3, 78.5, 48.3, 41.5, 40.4, 36.7, 31.2, 29.2, 28.4, 26.2, 22.0, 13.9 ppm. ESI-MS: *m/z* calcd: 396.25, found: 396.9 $[M+H]^+$. HPLC (method B): 99%.

1,3-Dimethyl-2-(thiophen-3-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2o. A solution of 1,3-dimethyl-2-(thiophen-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9o** (150 mg, 0.58 mmol, 1 equiv) in DCM (5 mL) was treated with *n*-heptyl isocyanate (101 µL,

0.63 mmol, 1.1 equiv) and triethylamine (88 µL, 0.63 mmol, 1.1 equiv). The mixture was stirred for 6 h. For workup, the mixture was diluted with ethyl acetate (30 mL), washed with water (10 mL) and washed with brine (10 mL). The organic phase was dried over Na_2SO_4 and the solvent was evaporated under reduced pressure. The crude product was purified by column chromatography (petroleum ether:EtOAc = 1:1) to yield 1,3-dimethyl-2-(thiophen-3-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2o** (96 mg, 42%) as a yellow oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.54 - 7.44 (m, NH + 1H), 7.11 - 7.05 (m, 1H), 6.91 (dd, *J* = 5.0, 1.1 Hz, 1H), 6.80 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.62 - 6.55 (m, 2H), 4.99 (s, 1H), 3.60 (d, *J* = 16.3 Hz, 1H), 3.37 (d, *J* = 16.3 Hz, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.93 (s, 3H), 2.36 (s, 3H), 1.48 - 1.38 (m, 2H), 1.33 - 1.22 (m, 8H), 0.94 - 0.77 (m, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 143.0, 141.6, 140.9, 127.0, 126.9, 122.9, 121.0, 120.5, 118.6, 109.8, 77.9, 49.4, 41.6, 40.9, 37.1, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 401.21, found: 402.2 $[M+H]^+$. HPLC (method C): 99%.

1,3-Dimethyl-2-(thiophen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2p. A solution of 1,3-dimethyl-2-(thiophen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9p** (150 mg, 0.58 mmol, 1 equiv) in DCM (5 mL) was treated with *n*-heptyl isocyanate (101 µL, 0.63 mmol, 1.1 equiv) and triethylamine (88 µL, 0.63 mmol, 1.1 equiv). The mixture was stirred for 6 h. For workup, the mixture was diluted with ethyl acetate (30 mL), washed with water (10 mL) and washed with brine (10 mL). The organic phase was dried over Na_2SO_4 and the solvent was evaporated under reduced pressure. The crude product was purified by column chromatography (petroleum ether:EtOAc = 1:1) to yield 1,3-dimethyl-2-(thiophen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2p** (133 mg, 58%) as a white powder; mp 81 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.51 (t, *J* = 5.6 Hz, NH), 7.44 (dd, *J* = 5.0, 1.0 Hz, 1H), 6.93 (dd, *J* = 5.0, 3.5 Hz, 1H), 6.80 (dd, *J* = 8.7, 2.6 Hz, 1H), 6.77 (d, *J* = 3.4 Hz, 1H), 6.65 - 6.56 (m, 2H), 5.21 (s, 1H), 3.76 (d, *J* = 16.5 Hz, 1H), 3.43 (d, *J* = 16.4 Hz, 1H), 3.07 - 2.95 (m, 5H), 2.37 (s, 3H), 1.50 - 1.38 (m, 2H), 1.34 - 1.21 (m, 8H), 0.87 (t, *J* = 6.7 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.0, 144.8, 141.4, 139.9, 126.4, 125.9, 125.0, 120.5, 120.0, 118.2, 109.6, 77.1, 48.7, 40.9, 40.4, 36.9, 31.2, 29.2, 28.4, 26.2, 22.0, 13.9 ppm. ESI-MS: *m/z* calcd: 401.21, found: 402.3 $[M+H]^+$. HPLC (method B): 100%.

2-(Furan-3-yl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2q. According to GP4, starting from 2-(furan-3-yl)-6-hydroxy-1,3-dimethyl-2,3-dihydroquinazolin-4(1H)-one **9q** (150 mg, 0.49 mmol, 1 equiv) the title compound 2-(furan-

3-yl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2q** (71 mg, 30%) was obtained after column chromatography (petroleum ether:EtOAc = 1:2) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.58 (dd, *J* = 8.0, 6.4 Hz, 1H), 7.50 (t, *J* = 5.6 Hz, NH), 7.34 (s, 1H), 6.78 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.60 (d, *J* = 2.6 Hz, 1H), 6.55 (d, *J* = 8.8 Hz, 1H), 6.25 (d, *J* = 1.0 Hz, 1H), 4.87 (s, 1H), 3.72 (d, *J* = 16.4 Hz, 1H), 3.41 (d, *J* = 16.3 Hz, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.89 (s, 3H), 2.34 (s, 3H), 1.51 - 1.39 (m, 2H), 1.34 - 1.15 (m, 8H), 0.87 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 144.0, 141.7, 141.0, 140.9, 125.6, 120.9, 120.4, 118.8, 110.1, 109.9, 74.7, 49.5, 41.4, 40.9, 36.9, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 385.24, found: 386.3 $[M+H]^+$. HPLC (method B): 98%.

1,3-Dimethyl-2-(1*H*-pyrrol-3-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2r. According to GP4, starting from 1,3-dimethyl-2-(1*H*-pyrrol-3-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9r** (100 mg, 0.49 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(1*H*-pyrrol-3-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2r** (38 mg, 15%) was obtained after column chromatography (DCM:MeOH = 9:1) as a yellow oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 10.60 (s, NH), 7.49 (t, *J* = 5.7 Hz, CONH), 6.76 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.64 (dd, *J* = 4.7, 2.4 Hz, 1H), 6.57 (d, *J* = 2.7 Hz, 1H), 6.51 (d, *J* = 8.8 Hz, 1H), 6.45 - 6.38 (m, 1H), 5.81 (dd, *J* = 4.0, 2.4 Hz, 1H), 4.82 (s, 1H), 3.77 (d, *J* = 16.0 Hz, 1H), 3.35 (m, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.85 (s, 3H), 2.32 (s, 3H), 1.50 - 1.37 (m, 2H), 1.35 - 1.18 (m, 8H), 0.87 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 141.6, 141.3, 122.4, 120.7, 120.2, 119.1, 118.2, 116.4, 109.6, 106.7, 76.8, 49.6, 41.40, 40.9, 37.0, 31.7, 29.8, 28.9, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 384.25, found: 385.30 $[M+H]^+$. HPLC (method A): 95%.

1,3-Dimethyl-2-(naphthalen-1-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2s. According to GP4, starting from 1,3-dimethyl-2-(naphthalen-1-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9s** (150 mg, 0.49 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(naphthalen-1-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2s** (131 mg, 60%) was obtained after column chromatography (petroleum ether:EtOAc = 7:2) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 8.27 (d, *J* = 8.1 Hz, 1H), 7.96 - 7.89 (m, 1H), 7.85 (d, *J* = 8.2 Hz, 1H), 7.60 - 7.48 (m, 2H+NH), 7.42 - 7.34 (m, 1H), 7.03 (d, *J* = 7.1 Hz, 1H), 6.87 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.68 (d, *J* = 8.9 Hz, 1H), 6.61 (d, *J* = 2.7 Hz, 1H), 5.63 (s, 1H), 3.52 (d, *J* = 16.5 Hz, 1H), 3.28 (m, 1H), 3.02 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.94 (s, 3H),

2.56 (s, 3H), 1.51 - 1.39 (m, 2H), 1.33 - 1.22 (m, 8H), 0.87 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 141.5, 141.4, 135.8, 134.4, 131.1, 128.7, 128.7, 126.2, 126.1, 125.4, 125.2, 123.9, 121.2, 120.8, 117.7, 108.9, 79.1, 49.1, 41.9, 40.9, 36.8, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 445.27, found: 446.3 $[M+H]^+$. HPLC (method B): 97%.

1,3-Dimethyl-2-(naphthalen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2t. According to GP4, starting from 1,3-dimethyl-2-(naphthalen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-ol **9t** (150 mg, 0.49 mmol, 1 equiv) the title compound 1,3-dimethyl-2-(naphthalen-2-yl)-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2t** (155 mg, 71%) was obtained after column chromatography (petroleum ether:EtOAc = 1:1) as a clear oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.92 - 7.86 (m, 2H), 7.86 - 7.79 (m, 1H), 7.57 (br, NH), 7.55 - 7.44 (m, 3H), 7.41 (dd, *J* = 8.5, 1.6 Hz, 1H), 6.86 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.69 (d, *J* = 8.9 Hz, 1H), 6.61 (d, *J* = 2.7 Hz, 1H), 5.12 (s, 1H), 3.56 (d, *J* = 16.2 Hz, 1H), 3.36 (d, *J* = 16.1 Hz, 1H), 3.10 - 2.91 (m, 5H), 2.44 (s, 3H), 1.49 - 1.38 (m, 2H), 1.32 - 1.22 (m, 8H), 0.90 - 0.82 (m, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 141.5, 141.1, 139.2, 133.05, 133.0, 128.6, 128.4, 127.9, 126.6, 126.5, 125.8, 125.8, 121.2, 120.6, 118.6, 109.5, 81.3, 49.3, 42.1, 40.9, 37.3, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 445.27, found: 446.3 $[M+H]^+$. HPLC (method C): 96%.

2-(2,6-Dichlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 2u. According to GP4, starting from 2-(2,6-dichlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-ol **9u** (150 mg, 0.47 mmol, 1 equiv) the title compound 2-(2,6-dichlorophenyl)-1,3-dimethyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **2u** (64 mg, 30%) was obtained after column chromatography (petroleum ether:EtOAc = 4:1) as a yellow oil; ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.61 - 7.45 (m, 2H+NH), 7.46 - 7.32 (m, 1H), 6.85 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.75 (d, *J* = 2.7 Hz, 1H), 6.56 (d, *J* = 8.8 Hz, 1H), 5.42 (s, 1H), 3.75 (d, *J* = 15.0 Hz, 1H), 3.46 (d, *J* = 15.0 Hz, 1H), 3.08 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.70 (s, 3H), 2.33 (s, 3H), 1.58 - 1.44 (m, 2H), 1.41 - 1.25 (m, 8H), 0.92 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 141.8, 141.5, 134.9, 130.5, 121.1, 120.3, 120.1, 109.8, 79.8, 52.5, 42.0, 40.9, 35.2, 31.7, 29.8, 28.9, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 463.18, found: 464.20 $[M+H]^+$. HPLC (method A): 96%.

3-*iso*-Propyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 3a. According to GP4, starting from 3-*iso*-propyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-ol **10a** (100 mg, 0.35 mmol, 1 equiv) the title compound 3-*iso*-propyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **3a** (72 mg, 48%) was obtained after column chromatography (petroleum ether:EtOAc= 5:1) as a white solid; mp 132-133 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.48 (t, *J* = 5.7 Hz, NH), 7.36 - 7.28 (m, 2H), 7.28 - 7.21 (m, 1H), 7.16 (d, *J* = 7.2 Hz, 2H), 6.79 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.60 (d, *J* = 2.7 Hz, 1H), 6.56 (d, *J* = 8.8 Hz, 1H), 5.25 (s, 1H), 3.60 (d, *J* = 16.4 Hz, 1H), 3.46 (d, *J* = 16.8 Hz, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.93 (s, 3H), 2.86 - 2.74 (m, 1H), 1.49 - 1.38 (m, 2H), 1.34 - 1.21 (m, 8H), 1.16 (d, *J* = 6.3 Hz, 3H), 1.06 (d, *J* = 6.3 Hz, 3H), 0.87 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 142.7, 142.0, 141.2, 128.7 (2C), 127.6, 127.1 (2C), 120.9, 119.9, 119.8, 108.8, 76.8, 50.1, 44.3, 40.9, 36.8, 31.7, 29.8, 28.8, 26.7, 22.5, 22.0, 21.7, 14.4 ppm. ESI-MS: *m/z* calcd: 423.29, found: 424.30 $[M+H]^+$. HPLC (method C): 99%.

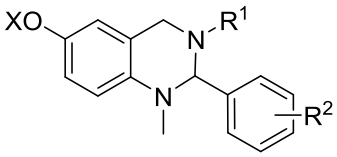
1-Methyl-2-phenyl-3-*n*-propyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 3b. According to GP4, starting from 1-methyl-2-phenyl-3-*n*-propyl-1,2,3,4-tetrahydroquinazolin-6-ol **10b** (100 mg, 0.35 mmol, 1 equiv) the title compound 1-methyl-2-phenyl-3-*n*-propyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **3b** (58 mg, 39%) was obtained after column chromatography (petroleum ether:EtOAc= 5:1) as a white solid; mp 106-108 °C. ^{1}H NMR (400 MHz, DMSO-d_6): δ = 7.49 (br, NH), 7.37 - 7.29 (m, 2H), 7.29 - 7.19 (m, 1H), 7.19 - 7.09 (m, 2H), 6.81 (d, *J* = 7.6 Hz, 1H), 6.65 - 6.51 (m, 2H), 5.07 (s, 1H), 3.49 (d, *J* = 16.3 Hz, 1H), 3.40 (d, *J* = 17.0 Hz, 1H), 3.06 - 2.88 (m, 5H), 2.46 - 2.37 (m, 2H), 1.57 (dd, *J* = 13.8, 6.7 Hz, 2H), 1.49 - 1.38 (m, 2H), 1.35 - 1.19 (m, 8H), 0.93 (t, *J* = 7.0 Hz, 3H), 0.90 - 0.81 (m, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 142.0, 141.4, 141.3, 128.7 (2C), 127.8, 127.1 (2C), 121.0, 120.6, 118.6, 109.1, 79.5, 55.0, 47.0, 40.9, 37.2, 31.7, 29.7, 28.8, 26.7, 22.5, 21.2, 14.4, 12.2 ppm. ESI-MS: *m/z* calcd: 423.29, found: 424.30 $[M+H]^+$. HPLC (method C): 100%.

3-Benzyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate 3c. According to GP4, starting from 3-benzyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-ol **10c** (100 mg, 0.36 mmol, 1 equiv) the title compound 3-benzyl-1-methyl-2-phenyl-1,2,3,4-tetrahydroquinazolin-6-yl *n*-heptylcarbamate **3c** (79 mg, 55%) was obtained after column chromatography (petroleum ether:EtOAc= 5:1) as a white solid; mp 104-106 °C. ^{1}H NMR

(400 MHz, DMSO-d_6): δ = 7.50 (t, *J* = 5.7 Hz, NH), 7.43 - 7.23 (m, 8H), 7.16 (d, *J* = 7.3 Hz, 2H), 6.85 (dd, *J* = 8.7, 2.7 Hz, 1H), 6.68 (d, *J* = 8.8 Hz, 1H), 6.56 (d, *J* = 2.6 Hz, 1H), 4.96 (s, 1H), 3.78 (d, *J* = 13.3 Hz, 1H), 3.67 (d, *J* = 13.3 Hz, 1H), 3.54 (d, *J* = 16.6 Hz, 1H), 3.37 (d, *J* = 17.3 Hz, 1H), 3.01 (dd, *J* = 13.0, 6.7 Hz, 2H), 2.96 (s, 3H), 1.49 - 1.39 (m, 2H), 1.31 - 1.20 (m, 8H), 0.86 (t, *J* = 6.8 Hz, 3H) ppm. ^{13}C NMR (101 MHz, DMSO-d_6): δ = 155.6, 141.7, 141.5, 141.2, 139.4, 129.2 (2C), 128.8 (4C), 127.9, 127.6, 127.0 (2C), 121.3, 120.7, 118.2, 109.4, 78.7, 57.2, 46.9, 40.7, 37.3, 31.7, 29.7, 28.8, 26.7, 22.5, 14.4 ppm. ESI-MS: *m/z* calcd: 471.29, found: 472.30 $[M+H]^+$. HPLC (method C): 97%.

IC_{50} Values with Confidence Intervals

Table S1. Cholinesterase inhibition of the synthesized test compounds.[a] Phenols were incubated for 4.5 min and carbamates for 30 min.



Moiety	X = H	IC_{50} [μM] or % inhibition (95% confidence interval)		X = (C=O)NH*n*-Hept	IC_{50} [μM] or % inhibition (95% confidence interval)	
		BChE	AChE		BChE	AChE
R^1 = Me; R^2 = H	**9a**	39.9 (31.5-50.5)	327.0 (258.2-414.2)	**2a**	0.106 (0.095-0.118)	4%[d]
4-Cl-Ph-	**9b**	13.8 (12.3-15.4)	235.6 (198.7-279.2)	**2b**	0.115 (0.088-0.149)	24%[d]
3-Cl-Ph-	**9c**	2.1 (1.9-2.3)	242.4 (200.9-292.5)	**2c**	0.096 (0.090-0.103)	39%[d]
2-Cl-Ph-	**9d**	56.0 (43.6-71.9)	60%[b]	**2d**	0.474 (0.406-0.555)	48%[e]
4-Me-Ph-	**9e**	22.6 (19.4-26.3)	109.9 (98.4-122.9)	**2e**	0.231 (0.217-0.247)	9%[d]
3-Me-Ph-	**9f**	17.4 (14.2-21.3)	437.0 (376.6-507.1)	**2f**	0.199 (0.181-0.220)	27%[d]
2-Me-Ph-	**9g**	92.4 (79.9-106.8)	143.4 (119.1-172.6)	**2g**	0.251 (0.211-0.298)	18%[e]
4-MeO-Ph-	**9h**	39.5 (27.4-57.0)	103.8 (68.4-157.5)	**2h**	0.875 (0.769-0.997)	14%[d]
3-MeO-Ph-	**9i**	7.8 (5.4-11.2)	61%[b]	**2i**	0.208 (0.185-0.233	10%[d]
2-MeO-Ph-	**9j**	9.9 (8.3-11.8)	192.8 (167.7-221.6)	**2j**	0.238 (0.202-0.281)	47%[e]
4-F-Ph-	**9k**	58.9 (49.6-69.9)	143.4 (119.1-172.6)	**2k**	0.044 (0.035-0.055)	1.61 (0.94-2.77)
4-CF_3-Ph-	**9l**	64.6 (56.5-73.9)	nd[c]	**2l**	2.7 (1.7-4.3)	59%[d]
4-pyridyl-	**9m**	2.1 (1.9-2.3)	242.4 (200.9-292.5)	**2m**	0.723 (0.656-0.797)	16%[d]
3-pyridyl-	**9n**	70.7 (57.9-86.2)	61%[b]	**2n**	0.565 (0.478-0.666)	18%[d]
3-thiophenyl-	**9o**	193.7 (148.1-253.4)	52%[b]	**2o**	0.022 (0.021-0.023)	13%[d]
2-thiophenyl	**9p**	63.2 (56.3-71.0)	225.8 (189.1-269.6)	**2p**	0.014 (0.012-0.016) 0.013*	0%[d]

					(0.009-0.019)*	
3-furyl-	**9q**	196.1 (176.1-218.3)	341.7 (294.1-397.1)	**2q**	0.083 (0.072-0.095)	12%[d]
3-pyrrolyl-	**9r**	15.3 (13.2-17.8)	115.9 (104.7-128.3)	**2r**	0.023 (0.021-0.026)	0.852 (0.75-0.98)
1-naphthyl-	**9s**	2.8 (2.6-3.2)	341.7 (294.1-397.1)	**2s**	36.2 (25.2-52.1)	8%[e]
2-naphthyl-	**9t**	16.5 (14.7-18.5)	9%[c]	**2t**	0.374 (0.315-0.444)	5%[e]
2,6-dichloro-	**9u**	7.1 (6.6-7.8)	13.5 (11.2-16.4)	**2u**	0.531 (0.464-0.608)	33%[e]
R^2 = Ph; R^1 =						
i-Pr-	**10a**	55.8 (47.7-65.2)	253.0 (249.2-256.8)	**3a**	0.021 (0.019-0.024)	33%[d]
*n*Pr-	**10b**	22.8 (20.3-25.5)	279.3 (261.9-297.8)	**3b**	0.040 (0.035-0.045)	46%[d]
benzyl-	**10c**	14.8 (13.2-16.7)	16%[c]	**3c**	0.034 (0.030-0.038)	17%[e]
	15	98.1 (82.4-116.8)	20%[b]	**16**	1.8 (1.2-2.8)	22%[d]
				physostigmine	0.078 (0.073-0.084)	0.032 (0.03-0.04)

[a]Experiments were performed in triplicate at AChE from human erythrocytes and BChE from equine serum. [b-e] % Inhibition at a concentration of [b]500 μM; [c]50 μM; [d]100 μM; [e]10 μM.

* Values determined at human BChE.

Enantiomeric Separation of Compound 2p

Enantiomeric resolution was performed on a Jasco HPLC system (pump PU-1580, gradient unit LG-980-02S, degasser DG-2080-53, autosampler AS-2055Plus, UV detector MD-2010Plus; Jasco Deutschland, Gross-Umstadt) equipped with an analytical Chiralpak® IA (Chiral Technologies Europe, 4.6 mm x 250 mm, 5 µm) column and coupled to a J-715 spectropolarimeter (Jasco Deutschland, Gross-Umstadt) for the online-CD measurements (scanning rate: 200 nm/min, bandwith: 5 nm, response time: 1 s). The enantiomeric resolutions were performed at room temperature with an isocratic solvent system of MTBE:MeOH (95:5 containing 0.1% $HNEt_2$) at 1 mL/min. Semi-preparative HPLC was performed on the same system with a semi-preparative Chiralpak® IA (Chiral Technologies Europe, 10 mm x 250 mm, 5 µm) column at 4.7 mL/min.

By HPLC on a chiral phase the racemic mixture (**Figure S1**) of compound **2p** was clearly resolved into its two enantiomers and analyzed chiroptically online, by HPLC-CD coupling (**Figures S2**, **S3** and **S4**). The two enantiomers proved to be configurationally unstable, undergoing rapid isomerization back to the racemic mixture during solvent evaporation.

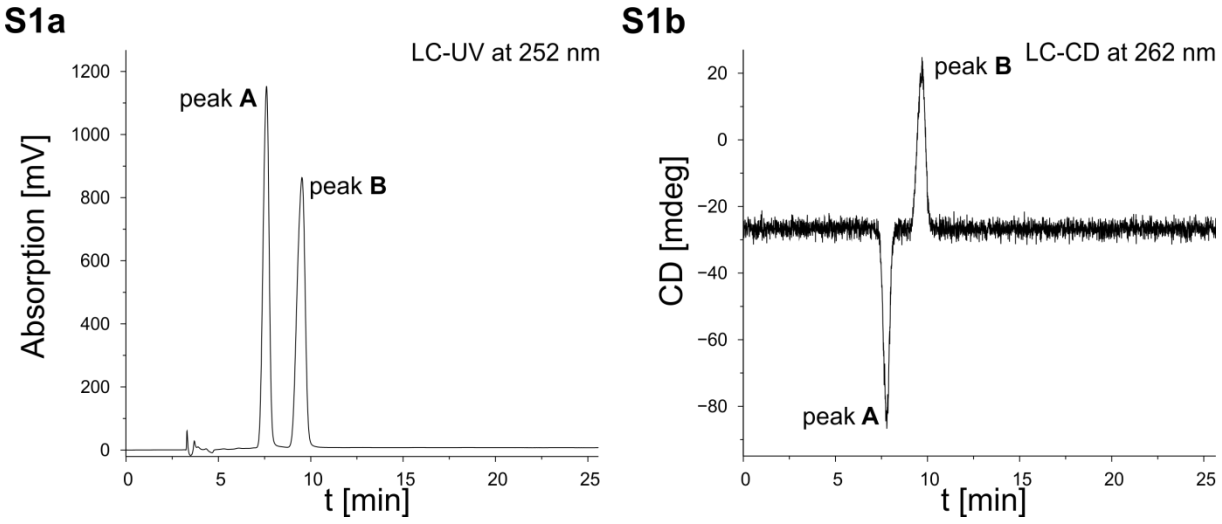


Figure S1. (S1a) HPLC-UVchromatogram of a racemic mixture of compound **2p** and (S1b) the corresponding LC-CD chromatogram.

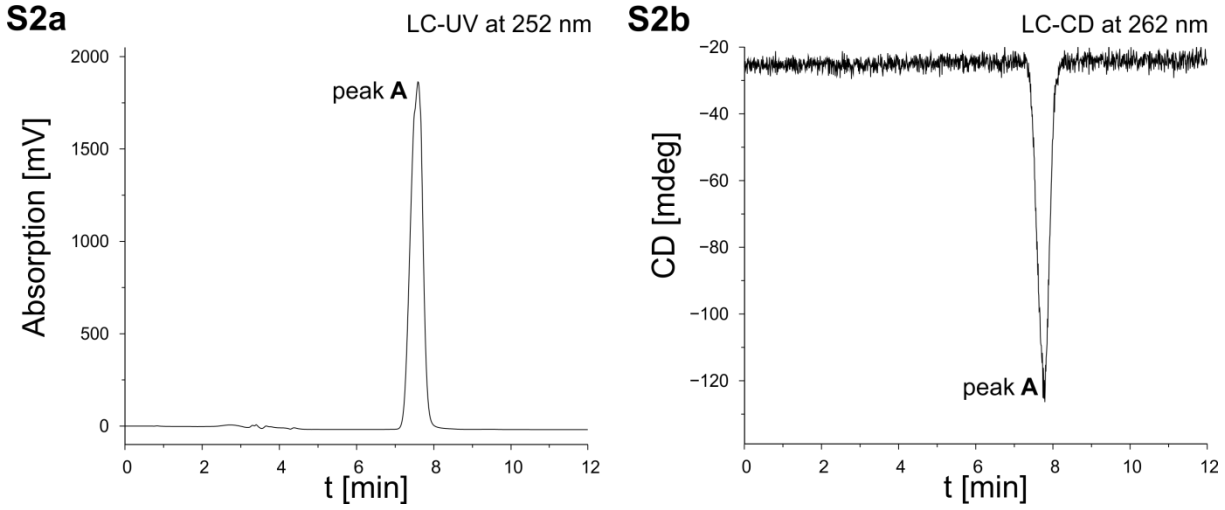


Figure S2. (S2a) HPLC-UV chromatogram of pure separated enantiomer **A** of compound **2p** and (S2b) its LC-CD chromatogram.

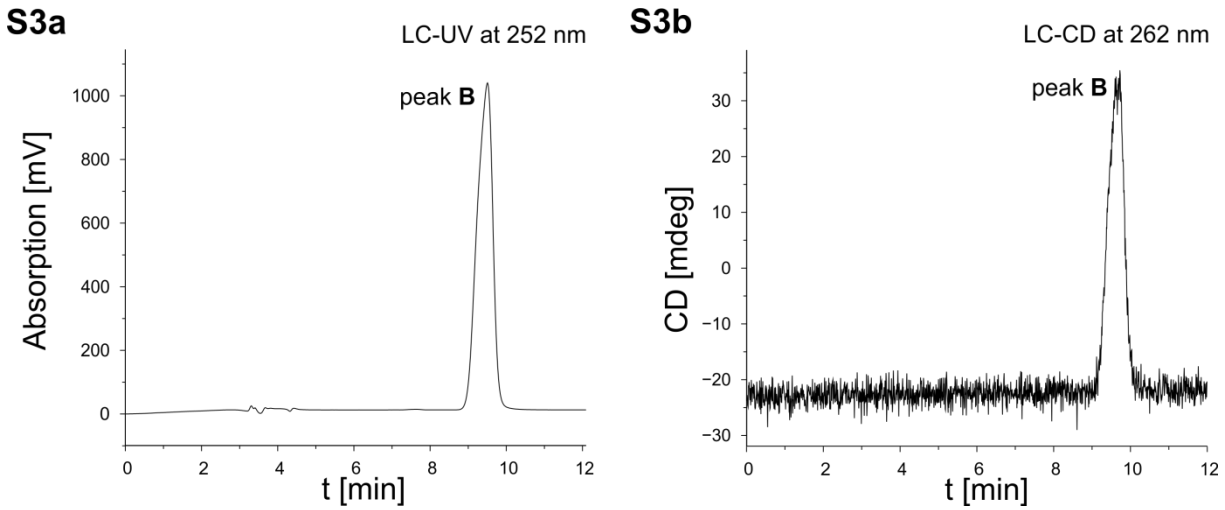


Figure S3. (S3a) HPLC-UV chromatogram of pure separated enantiomer **B** of compound **2p** and (S3b) its LC-CD chromatogram.

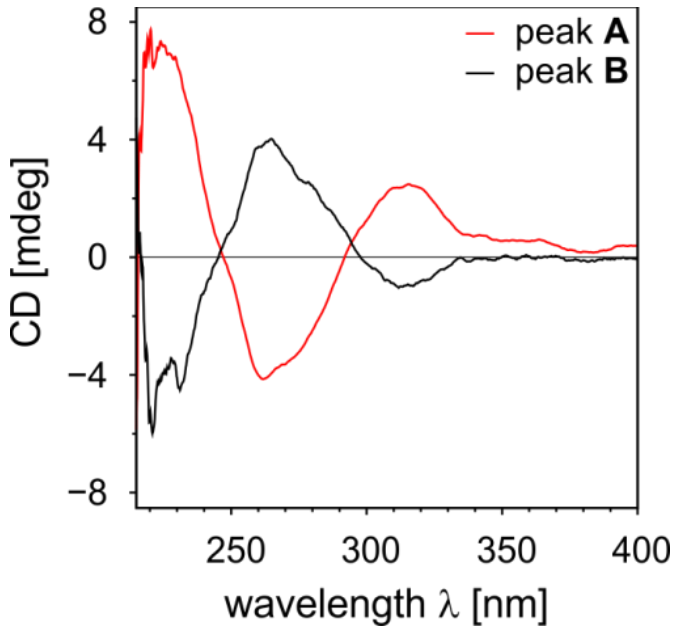
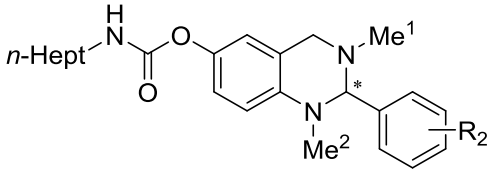


Figure S4. Overlay of the whole CD-spectra of the two separated enantiomers of compound **2p**.

Comparison of the Respective Enantiomeric Forms in the Binding Model

To investigate a possible common enantiomeric preference for binding to BChE by the compounds in the postulated binding mode, the intermolecular interaction scores (obtained from the scoring function DSX[1]) and the conformational strain energies were evaluated and compared. The strain energy ΔE was obtained as the difference between the force field energy of the binding conformation of the ligand and its minimum conformation in the unbound state. As the *n*-heptyl chain was irrelevant in the context of this analysis, it was replaced by a methyl group to restrict the number of conformers and simplify the conformational search. To obtain the global energy minimum of the free ligand, a stochastic search was performed in MOE[2] with the MMFF94s force field[3] and a dielectric constant of 4, using 10,000 iterations and optimization to an rms gradient of 0.01 kcal/(mol·Å). A local 10-step minimization of the binding poses was performed with the Truncated Newton method in MOE using the same force field (MMFF94s). In **Table S2** the obtained ΔE values are shown for both enantiomers along with their DSX scores.

Table S2. Comparison of DSX scores and strain energies for the investigated compounds in the postulated BChE binding mode.



R	***R*-Enantiomer Me[1] "equatorial"**		***S*-Enantiomer Me[1] "axial"**	
	DSX Score	**ΔE [kcal/mol]**	**DSX Score**	**ΔE [kcal/mol]**
Phe (**2a**)	-125	4.38	-120	2.37
Thiophenyl (**2p**)	-110	4.34	-108	3.30
4-F-Ph- (**2k**)	-125	6.56	-121	2.91
3-Cl-Ph (**2c**)	-118	7.60	-101	1.78
4-OMe-Ph (**2h**)	-121	10.70	-127	1.42
3-OMe-Ph (**2i**)	-127	8.16	-100	3.60
4-CF_3-Ph (**2l**)	-113	13.13	-111	2.84
1-Naphthyl (**2s**)	-129	9.42	-110	6.34
Mean	-121	8.04	-112	3.07

On average, the strain energy of the *R*-enantiomers is 5 kcal/mol higher compared to the *S*-enantiomers. In general, this less favorable conformational energy is not counterbalanced by a sufficiently more favorable DSX score. Although a better score is shown by most of the *R*-

enantiomers, the average difference of 9 score units is not significant enough to assume a compensation by improved intermolecular interactions. In fact, as seen in redocking studies, docking poses of the ligands populating the same cluster (i.e., differing by less than 1.5 Å rmsd) show DSX scores varying over a range of 10 units. Accordingly, based on this model and the more favorable conformational energies, the *S*-enantiomers appear as the preferred forms for binding to BChE. However, contributions to activity from the *R*-enantiomers cannot be ruled out, in particular for those compounds where a small difference in the strain energy and a much more favorable (above average) DSX score is observed (i.e., compounds **2i** and **2s**).

Sequence Comparison

The pairwise sequence comparison was carried out using the progam Needle with the EBLOSUM62 matrix of EMBOSS v.6.3.1.[4] For comparison, the BChE and AChE sequences with the numbers D3DNN4 and P22303, respectively, were taken from the UniProt databank.[5]

```
#=======================================
# Aligned_sequences: 2
# 1:P22303_HUMAN
# 2:D3DNN4_HUMAN
# Matrix: EBLOSUM62
# Gap_penalty: 10.0
# Extend_penalty: 0.5
#
# Length: 650
# Identity:     316/650 (48.6%)
# Similarity:   428/650 (65.8%)
# Gaps:          43/650 ( 6.6%)
#=======================================

P22303_HUMAN   1 ----------------MRPPQCLLHTP-------------SLASPLLLL-  20
                                :.|...::.||             ::.|.:.::
D3DNN4_HUMAN   1 MSVQSNLQAGAAAASCISPKYYMIFTPCKLCHLCCRESEINMHSKVTIIC  50

P22303_HUMAN  21 ---LLW--LLGGGVGAEGREDAELLVTVRGGRLRGIRLKTPGGPVSAFLG  65
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P22303_HUMAN  66 IPFAEPPMGPRRFLPPEPKQPWSGVVDATTFQSVCYQYVDTLYPGFEGTE 115
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D3DNN4_HUMAN 100 IPYAQPPLGRLRFKKPQSLTKWSDIWNATKYANSCCQNIDQSFPGFHGSE 149

P22303_HUMAN 116 MWNPNRELSEDCLYLNVWTPYPRPTSPTPVLVWIYGGGFYSGASSLDVYD 165
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D3DNN4_HUMAN 345 EAFVVPYGTPLSVNFGPTVDGDFLTDMPDILLELGQFKKTQILVGVNKDE 394

P22303_HUMAN 366 GSYFLVYGAPGFSKDNESLISRAEFLAGVRVGVPQVSDLAAEAVVLHYTD 415
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P22303_HUMAN 416 WLHPEDPARLREALSDVVGDHNVVCPVAQLAGRLAAQGARVYAYVFEHRA 465
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P22303_HUMAN 516 RTGDPNEPRDPKAPQWPPYTAGAQQYVSLDLRPLEVRRGLRAQACAFWNR 565
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P22303_HUMAN 566 FLPKLLSATDTLDEAERQWKAEFHRWSSYMVHWKNQFDHY-SKQDRCSDL 614
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Binding Mode of 2l

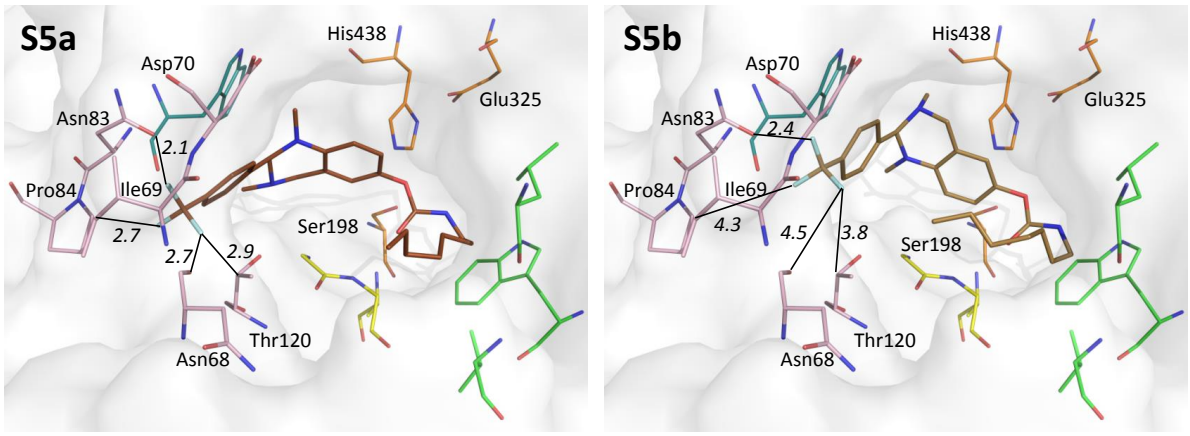

Figure S5. (S5a) Representation of the binding mode of **2l** (dark brown)in the *R*-enantiomeric form when forced to an analogous binding mode as the most active compound **2p**. (S5b) Representation of the binding mode for the *S*-enantiomer of **2l** (light brown). More clashes with distances below 3 Å are seen between the CF_3 group and the protein of the *R*-enantiomer in this rigid binding mode model. This implies that the actual binding mode especially for the *R*-enantiomer of **2l** is likely to differ from the common binding mode suggested for the other compounds. The contribution of the *R*-enantiomer of **2l** to the binding might be very low, whereas for the other compounds the *R*-enantiomeric form of the ligand might have a higher contribution to the activity due to suitable distances from ligand atoms to the protein. Residues of the acyl pocket are shown in green, the oxyanion hole in yellow, the CAS in orange, the choline binding site in turquoise, and parts of the side cavity in pink. Distances (black lines) are shown in italic numbers and are given in Å.

Additional References

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