**Supplementary table S1.** Pharmacokinetic parameters according to CYP3A genotypes and phenotype in every individual drug included.

### Ambrisentan

| Gene   | Genotype/phenotype | AUC/dW (ng·h·Kg/mL·mg) | Cmax/dW (ng·kg/mL·mg) | T1/2 (h) | Tmax (h) | Cl (L/h·kg) | Vd (L/kg) |
|--------|--------------------|------------------------|-----------------------|----------|----------|-------------|----------|
| CYP3A4 | Wild-type (n=22)   | 37059.3 (9472.6)       | 5295.7 (832.2)        | 11.8 (4.4) | 1.8 (1.0) | 0.03 (0.01) | 0.43 (0.13) |
|        | Mutated (n=1)      | 36619.2                | 5325.6                | 16.1      | 1.5      | 0.02        | 0.45      |
| p-value|                    | 0.964                  | 0.972                 | 0.351     | 0.772    | 0.447       | 0.837     |
| CYP3A5 | IM (n=1)           | 45314.2                | 4754.0                | 15.8      | 1.5      | 0.02        | 0.45      |
|        | PM (n=22)          | 36664.1 (9291.5)       | 5321.6 (823.3)        | 11.8 (4.3) | 1.8 (1.0) | 0.03 (0.01) | 0.43 (0.13) |
| p-value|                    | 0.373                  | 0.508                 | 0.379     | 0.772    | 0.454       | 0.860     |

### Amlodipine

| Gene   | Genotype/phenotype | AUC/dW (pg·h·Kg/mL·mg) | Cmax/dW (pg·Kg/mL·mg) | T1/2 (h) | Tmax (h) | Cl (L/h·kg) | Vd (L/kg) |
|--------|--------------------|------------------------|-----------------------|----------|----------|-------------|----------|
| CYP3A4 | Wild-type (n=23)   | 1909348.9 (377107.5)   | 58670.3 (10990.6)     | 34.6 (7.0) | 5.5 (1.8) | 0.41 (0.11) | 19.9 (3.0) |
|        | Mutated (n=2)      | 2123474.6 (91340.7)    | 60134.8 (5097.6)      | 40.3 (10.5) | 5.0 (1.4) | 0.33 (0.01) | 19.4 (4.7) |
| p-value|                    | 0.440                  | 0.856                 | 0.296     | 0.707    | 0.351       | 0.846     |
| CYP3A5 | NM (n=1)           | 1175122.2              | 43408.7               | 24.5      | 6.0      | 0.74        | 26.4      |
|        | IM (n=5)           | 2052800.7 (284277.7)   | 55850.7 (10584.0)     | 38.5 (8.1) | 6.6 (2.1) | 0.36 (0.09) | 19.2 (2.2) |
|        | PM (n=19)          | 1932781.4 (353788.7)   | 60369.7 (10306.7)     | 34.8 (6.7) | 5.1 (1.7) | 0.40 (0.09) | 19.7 (2.9) |
| p-value|                    | 0.086                  | 0.240                 | 0.197     | 0.291    | 0.003       | 0.079     |

### Aripiprazole

| Gene   | Genotype/phenotype | AUC/dW (ng·h·Kg/mL·mg) | Cmax/dW (ng·Kg/mL·mg) | T1/2 (h) | Tmax (h) | Cl (mL/h·kg) | Vd (mL·kg) |
|--------|--------------------|------------------------|-----------------------|----------|----------|-------------|-----------|
| CYP3A4 | Wild-type (n=25)   | 10148.9 (2535.4)       | 326.5 (95.3)          | 56.3 (23.9) | 3.0 (2.3) | 0.07 (0.03) | 4.6 (0.9) |
|        | Mutated (n=1)      | 13098.4                | 393.6                | 79.0      | 1.0      | 0.04        | 4.3       |
| p-value|                    | 0.265                  | 0.497                 | 0.362     | 0.413    | 0.332       | 0.751     |
| CYP3A5 | NM (n=1)           | 11792.4                | 498.1                | 65.9      | 2.0      | 0.04        | 4.4       |
| Gene | Genotype/phenotype | AUC/dW (pg·h·Kg/mL·mg) | Cmax/dW (pg·Kg/mL·mg) | T1/2 (h) | Tmax (h) | Cl (L/h·kg) | Vd (L/kg) |
|------|-------------------|------------------------|------------------------|----------|----------|-------------|-----------|
| **Donepezil** | | | | | | | |
| CYP3A4 | Wild-type (n=21) | 3045037.2 (531336.9) | 126941.9 (30473.0) | 44.0 (16.0) | 2.2 (1.0) | 0.24 (0.06) | 14.0 (2.6) |
| Mutated (n=2) | 2717340.1 (246516.0) | 141017.6 (14280.3) | 38.3 (0.4) | 2.0 (0.0) | 0.27 (0.03) | 14.9 (1.8) |
| NM (n=1) | 2105891.8 | 82787.2 | 35.8 | 2.0 | 0.35 | 18.0 |
| IM (n=5) | 3171300.6 (609051.7) | 141307.2 (27436.9) | 51.0 (20.3) | 1.8 (0.40) | 0.21 (0.07) | 14.3 (2.9) |
| PM (n=16) | 3015422.9 (452807.3) | 126074.0 (28528.9) | 41.2 (13.3) | 2.3 (1.1) | 0.24 (0.06) | 13.7 (2.4) |
| **Atorvastatin** | | | | | | | |
| CYP3A4 | Wild-type (n=44) | 135931.4 (70279.7) | 39656.5 (32807.8) | 8.7 (2.5) | 1.7 (1.2) | 8.6 (2.8) | 108.5 (49.7) |
| Mutated (n=6) | 115568.0 (33782.7) | 22946.6 (7334.4) | 8.5 (1.6) | 1.2 (0.5) | 9.2 (3.0) | 114.1 (40.8) |
| NM (n=1) | 167855.0 | 40372.5 | 8.0 | 0.7 | 5.9 | 67.6 |
| IM (n=5) | 161978.3 (99720.8) | 48787.7 (65431.8) | 9.9 (3.3) | 2.1 (2.2) | 7.9 (4.1) | 110.9 (55.1) |
| PM (n=44) | 129469.2 (63713.7) | 36324.0 (26499.6) | 8.5 (2.3) | 1.6 (1.0) | 8.8 (2.7) | 109.9 (48.4) |
| **Fentanyl** | | | | | | | |
| CYP3A4 | Wild-type (n=33) | 736.7 (377.2) | 142.7 (44.6) | 13.5 (6.0) | 1.0 (0.4) | 15.3 (0.8) | 25.0 (11.6) |
| Gene | Genotype/phenotype | AUC/dW (ng·h·Kg/mL·mg) | Cmax/dW (ng·Kg/mL·mg) | T1/2 (h) | Tmax (h) | Cl (L/h·kg) | Vd (L/kg) |
|------|------------------|------------------------|-----------------------|----------|----------|-------------|-----------|
| CYP3A4 | Wild-type (n=11) | 607.7 (1303.6) | 392.0 (79.7) | 12.3 (1.7) | 3.4 (1.3) | 0.17 (0.04) | 2.9 (0.5) |
|       | Mutated (n=1)    | 918.3 | 555.8 | 16.0 | 1.5 | 0.10 | 2.4 |
|       | p-value          | 0.046 | 0.077 | 0.072 | 0.196 | 0.148 | 0.321 |
| CYP3A5 | IM (n=1)         | 8178.3 | 438.0 | 16.1 | 3.0 | 0.11 | 2.7 |
|       | PM (n=11)        | 6168.9 (1487.9) | 402.7 (93.3) | 12.3 (1.7) | 3.22 (1.4) | 0.17 (0.04) | 2.9 (0.5) |
|       | p-value          | 0.225 | 0.724 | 0.060 | 0.880 | 0.271 | 0.753 |
| CYP3A5 | Wild-type (n=12) | 608.6 (225.9) | 60.6 (18.0) | 8.3 (2.4) | 5.6 (0.7) | 1.9 (0.8) | 23.0 (14.3) |
|       | Mutated (n=1)    | 298.3 | 30.4 | 7.1 | 6.0 | 3.3 | 34.5 |
|       | p-value          | 0.214 | 0.135 | 0.650 | 0.637 | 0.119 | 0.457 |
| CYP3A5 | IM (n=5)         | 659.0 (293.2) | 134.8 (40.2) | 12.4 (8.7) | 1.0 (0.3) | 16.8 (10.2) | 20.8 (6.0) |
|       | PM (n=44)        | 773.8 (389.9) | 146.7 (45.4) | 13.7 (5.4) | 1.0 (0.4) | 14.5 (8.1) | 25.2 (12.1) |
|       | p-value          | 0.535 | 0.588 | 0.641 | 0.676 | 0.575 | 0.440 |
| Olanzapine | Wild-type (n=25) | 2974478.5 (569795.8) | 103677.2 (26770.0) | 32.3 (9.3) | 4.4 (2.3) | 0.27 (0.06) | 859.2 (207.2) |
|       | NM (n=1)         | 2322306.8 | 107603.6 | 23.9 | 2.5 | 0.38 | 13.0 |
|       | IM (n=12)        | 3022146.2 (499342.1) | 101261.4 (24583.9) | 32.3 (6.9) | 4.4 (1.9) | 0.26 (0.05) | 12.0 (2.1) |
### Quetiapine

| Gene     | Genotype/phenotype | AUC/dW (ng·h·Kg/mL·mg) | C<sub>max</sub>/dW (ng·kg/mL·mg) | T<sub>1/2</sub> (h) | T<sub>max</sub> (h) | Cl (L/h·kg) | Vd (L/kg) |
|----------|--------------------|-------------------------|---------------------------------|-------------------|-----------------|-------------|-----------|
| CYP3A4   | Wild-type (n=17)   | 588.9 (272.6)           | 199.4 (106.3)                  | 4.8 (1.1)         | 1.2 (1.1)       | 2.1 (1.1)   | 14.2 (8.6) |
|          | Mutated (n=2)      | 1107.7 (376.1)          | 334.1 (92.0)                   | 4.5 (0.8)         | 2.2 (2.5)       | 0.9 (0.3)   | 6.2 (3.1)  |
|          | p-value            | 0.024                   | 0.106                          | 0.668             | 0.305           | 0.173       | 0.218     |
| CYP3A5   | IM (n=6)           | 548.5 (211.0)           | 203.9 (78.0)                   | 4.2 (1.5)         | 0.7 (0.2)       | 2.1 (1.1)   | 11.3 (3.4) |
|          | PM (n=13)          | 687.4 (354.7)           | 218.0 (126.0=                  | 5.1 (0.8)         | 1.6 (1.4)       | 1.9 (1.2)   | 14.4 (10.0)|
|          | p-value            | 0.390                   | 0.806                          | 0.112             | 0.135           | 0.737       | 0.482     |

Abbreviation: AUC, area under the curve; C<sub>max</sub>, maximum plasma concentration; T<sub>max</sub>, time to reach the maximum plasma concentration; T<sub>1/2</sub>, half-life; Cl, total drug clearance adjusted for bioavailability; Vd, volume of distribution adjusted for bioavailability; CYP, cytochrome p450 oxidase; dW, corrected by dose/weight.