**Supplemental Table 1a** Summary of coefficient of determination ($R^2$) in goodness-of-fit analyses of one-site model of $[^3]$HWIN 38,428 binding dissociation in WT-hDAT and mutated hDAT in the presence of cocaine and SRI-20041

| Drug                  | WT-hDAT       | Y470H-hDAT    | Y470F-hDAT    | Y88F-hDAT    |
|-----------------------|---------------|---------------|---------------|--------------|
| Condition 1 (cocaine alone) | 0.948 ± 0.041 | 0.901 ± 0.044 | 0.983 ± 0.007 | 0.988 ± 0.005 |
| Condition 2 (cocaine + SRI-20041) | 0.775 ± 0.056 | 0.915 ± 0.026 | 0.911 ± 0.035 | 0.914 ± 0.18  |
Supplemental Table 1b Summary of coefficient of determination ($R^2$) in goodness-of-fit analyses of one-site model of $[^3H]$WIN 38,428 binding dissociation in WT-hDAT and mutated hDAT in the presence of cocaine and SRI-30827

| Drug                      | WT-hDAT          | Y470H-hDAT       | Y88F-hDAT       |
|----------------------------|------------------|------------------|------------------|
| Condition 1 (cocaine alone) | 0.892 ± 0.062    | 0.794 ± 0.079    | 0.975 ± 0.011    |
| Condition 2 (cocaine + SRI-30827) | 0.828 ± 0.058  | 0.676 ± 0.159    | 0.885 ± 0.056    |