

**Supplemental Table 1a** Summary of coefficient of determination ( $R^2$ ) in goodness-of-fit analyses of one-site model of [ $^3$ H]WIN 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
	$R^2$			
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 [ $^3\text{H}$ ]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
	$R^2$		
Condition 1 (cocaine alone)	$0.892 \pm 0.062$	$0.794 \pm 0.079$	$0.975 \pm 0.011$
Condition 2 (cocaine +SRI-30827)	$0.828 \pm 0.058$	$0.676 \pm 0.159$	$0.885 \pm 0.056$