

Supplemental Tables

Table S1. ANOVA statistics for main group comparisons, related to Figures 4 and 5

	Degrees of Freedom	Sum of Squares	Mean Square	F value	Significance (p)
PFC-Hb FA: 3 (Group: CTL, CUD+, CUD-) × 2 (Side: left, right) ANOVA (Figure 4a)					
Group	2	0.0043	0.0022	6.06	.003
Side	1	0.0003	0.0003	0.94	.333
Group × Side	2	0.0003	0.0002	0.45	.638
Residuals	112	0.0401	0.0004		
PFC-Hb S1 FA: 3 (Group: CTL, CUD+, CUD-) × 2 (Side: left, right) ANOVA (Figure 5)					
Group	2	0.0013	0.0006	0.73	.484
Side	1	0.0002	0.0002	0.17	.677
Group × Side	2	0.0003	0.0001	0.16	.854
Residuals	112	0.0965	0.0009		
PFC-Hb S2 FA: 3 (Group: CTL, CUD+, CUD-) × 2 (Side: left, right) ANOVA (Figure 4b)					
Group	2	0.0250	0.0125	6.66	.002
Side	1	> 0.0001	> 0.0001	>0.01	.981
Group × Side	2	0.0069	0.0034	1.82	.166
Residuals	112	0.0019	0.0019		
PFC-Hb S3 FA: 3 (Group: CTL, CUD+, CUD-) × 2 (Side: left, right) ANOVA (Figure 5)					
Group	2	0.0077	0.0038	1.92	.152
Side	1	0.0001	0.0001	0.03	.857
Group × Side	2	0.0047	0.0023	1.18	.312
Residuals	112	0.2245	0.0020		
PFC-Hb FA: 3-way (Group: CUD+, CUD-, HUD) ANOVA (Figure 6B)					
Group	2	0.0002	> 0.0001	0.32	.724
Residuals	52	0.0154	> 0.0001		

Supplemental Figures

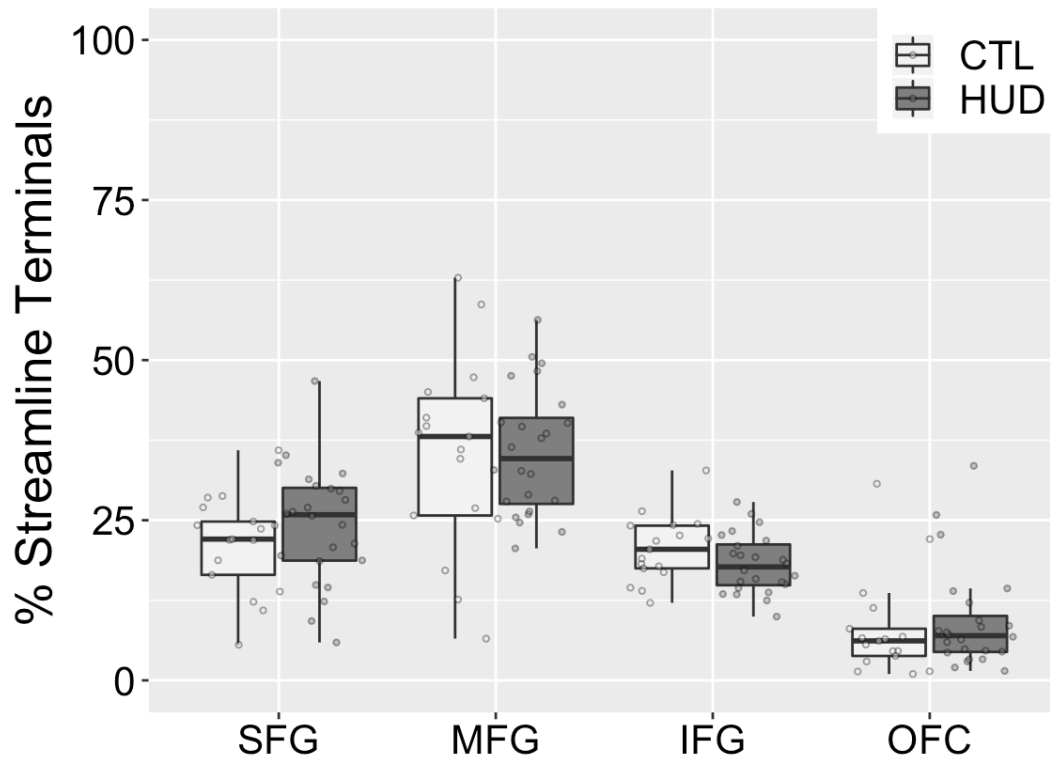


Figure S1. HUD vs. CTL group comparisons of the distribution of streamline terminals from the Hb seed, related to Figure 3. SFG = superior frontal gyrus; MFG = middle frontal gyrus; IFG = inferior frontal gyrus; OFC = orbitofrontal cortex; CTL = control individuals; HUD = heroin-addicted individuals. Boxplots represent the median (center line), interquartile range (box), and 1.5x the interquartile range (whiskers).

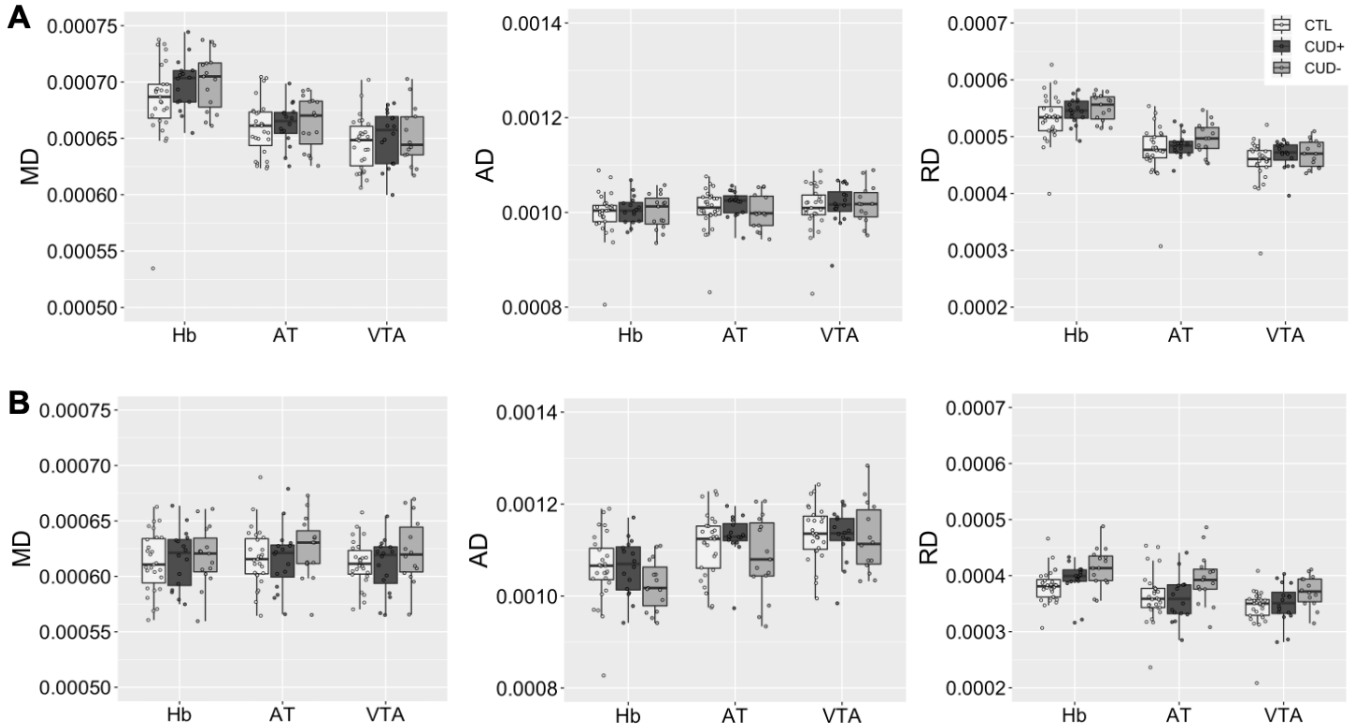


Figure S2. Group comparisons of MD, AD, and RD, related to Figure 4 showing FA, averaged across the entire PFC tract (A) and within the ALIC subsection (B). * $p < .05$, ** $p < .01$, *** $p < .001$. MD = mean diffusivity; AD = axial diffusivity; RD = radial diffusivity; Hb = habenula; AT = anterior thalamus; VTA = ventral tegmental area; CTL = control individuals; CUD+ = currently using cocaine-addicted individuals; CUD- = short-term abstinent cocaine-addicted individuals. Boxplots represent the median (center line), interquartile range (box), and 1.5x the interquartile range (whiskers).