

Center for BrainHealth

***Successful Classification of Cocaine Dependence
Using Brain Imaging: A Generalizable
Machine Learning Approach—Supplement***

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Additional file 1



Figure S1. 1500 voxels in 30 clusters in axial sections (R-L), which is used to classify cocaine-dependent and controls participants. Figure shows sagittal sections of region-of-interest within 1500 voxels, where 100% model, 89% Leave-one-out, and 88% 10-fold cross validation accuracies are obtained. Numbers are z-axis coordinates in MNI space. Red identifies clusters of increased regional cerebral blood flow (rCBF) in cocaine-dependent participants relative to controls. Blue identifies clusters of decreased rCBF in cocaine-dependent participants relative to controls. MNI coordinates are provided below.

Table S1. MNI Coordinates of Clusters Identified in Figure S1. P-values for each cluster were less than 0.002.

Cluster		# of Voxels	MNI		
Increased rCBF			X	Y	Z
1.	L superior parietal gyrus	292	-24	-50	50
2.	L transverse temporal gyrus (Heschl’s gyri)	68	-32	-32	10
3.	L cerebellum, posterior lobe	66	-10	-56	-14
4.	R postcentral gyrus	65	22	-30	68
5.	L cuneus	55	-20	-72	8
6.	L inferior parietal lobule (angular gyrus)	48	-48	-56	50
7.	R postcentral gyrus	47	8	-28	60
8.	R paracentral lobule	42	0	-42	64
9.	L precentral gyrus	41	-14	-28	58
10.	L thalamus	40	-14	-12	0
11.	R middle temporal gyrus	39	70	-40	-2
12.	L parahippocampal gyrus	36	-22	-50	0
13.	R lingual gyrus	34	8	-94	2
14.	L posterior cingulate	32	0	-42	26
15.	L postcentral gyrus	31	-38	-30	60
16.	L superior frontal gyrus	30	-20	54	14
17.	R cerebellum, anterior lobe	27	24	-56	-28
18.	R cerebellum, posterior lobe	27	16	-60	-18
19.	R precuneus	27	20	-60	50
20.	L precentral gyrus	25	-20	-24	64
21.	R precentral gyrus	24	32	0	30
22.	R lingual gyrus	22	24	-74	-2
23.	L inferior parietal lobule	22	-48	-32	34
24.	L posterior cingulate	21	-10	-36	28
25.	brainstem	20	0	-24	-20
26.	L thalamus	20	-2	-16	0
27.	L inferior parietal lobule	20	-50	-50	46
Decreased rCBF					
28.	L lateral orbitofrontal cortex	134	-26	18	-18
29.	L superior temporal gyrus	89	-42	16	-28
30.	R superior temporal gyrus	56	30	16	-36