Supplemental Table 1. Statistical Parametric Mapping of increased mGluR5 availability in alcohol-dependent subject after 6 months of abstinence compared to the baseline condition ($p_{height} < 0.001$).

Cluster Level		Voxel Level		Peak Voxel MNI coordinate			Location	
K_E	***P value***	***T***	***P value***	**x**	**y**	**z**	**Anatomical area**	**Hemisphere**
6058	$6.1 \cdot 10^{-5}$*	22.98	0.004	-18	44	-12	Sup Orbitofront gyr	Left
		15.60	0.018	30	42	-10	Mid Orbitofront gyr	Right
		13.61	0.031	34	12	34	Mid frontal gyr	Right
		8.48	$3.1 \cdot 10^{-5}$	-2	0	26	Middle Cing	Left
		8.47	$3.2 \cdot 10^{-5}$	36	4	20	Insula	Right
		8.36	$3.4 \cdot 10^{-5}$	0	30	-4	Ant Cing Cortex	Right
		7.86	$5.1 \cdot 10^{-5}$	40	-36	38	Supramarginal gyr	Right
		7.64	$6.1 \cdot 10^{-5}$	14	-42	26	Post Cing Cortex	Right
1344	0.034*	10.59	$7.3 \cdot 10^{-6}$	16	-8	-16	ParaHpc gyr	Right
		6.14	$2.4 \cdot 10^{-4}$	28	-2	4	Putamen	Right

BA, Brodmann area; K_E, cluster size extent (number of 2 x 2 x 2 mm3 voxels); mGlu5, metabotropic glutamate receptor subtype 5; MNI, Montreal Neurological Institute; gyr, gyrus.

* Corrected for familywise error.

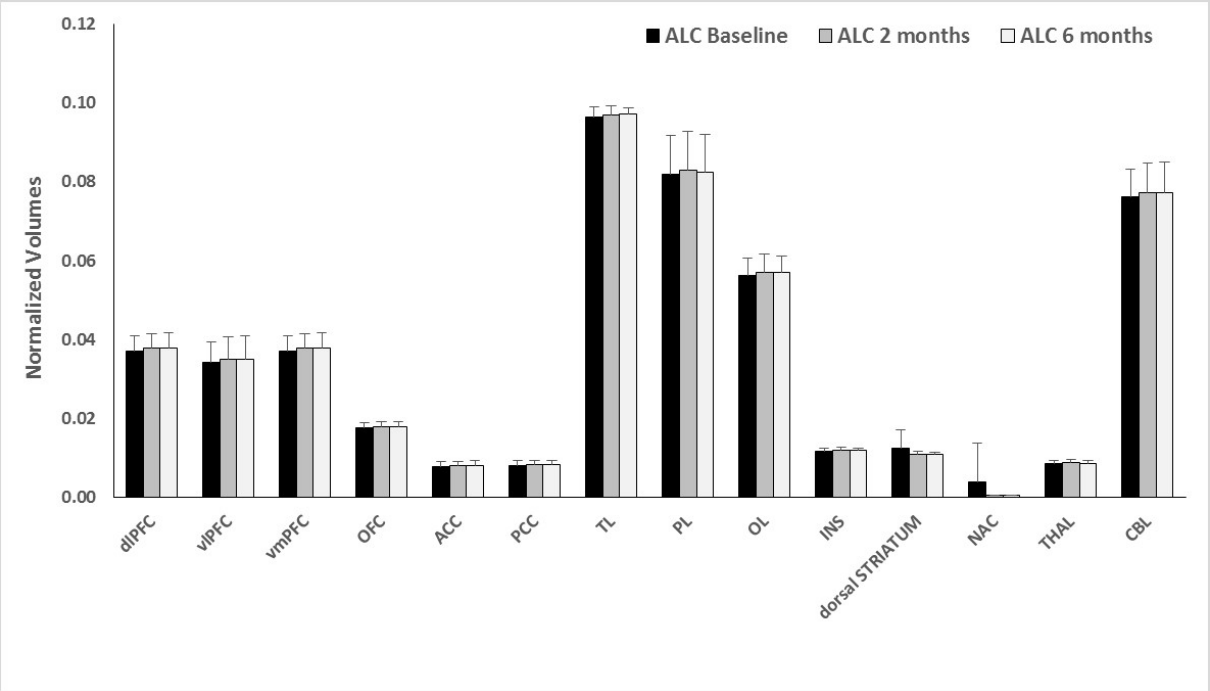
Supplemental Table 2. Effect of baseline mGluR5 availability ([^{18}F]FPEB V_T) on the number of drinks consumed per week during follow-up.

VOI	**IRR (95% CI)**	***p***
PFC	0.94 (0.57; 1.57)	0.82
Dorsolateral PFC	0.99 (0.58; 1.72)	0.99
Ventrolateral PFC	0.91 (0.56; 1.49)	0.70
Ventromedial PFC	0.92 (0.62; 1.39)	0.71
Orbitofrontal cortex	0.96 (0.59; 1.55)	0.86
Anterior cingulate	0.95 (0.63; 1.43)	0.80
Posterior cingulate	0.92 (0.59; 1.46)	0.74
Insula	0.95 (0.61; 1.47)	0.80
Temporal lobe	0.90 (0.57; 1.43)	0.66
Hippocampus	0.93 (0.57; 1.51)	0.77
Amygdala	1.03 (0.72; 1.47)	0.87
Parietal lobe	0.89 (0.51; 1.53)	0.66
Occipital lobe	0.90 (0.52; 1.58)	0.72
Caudate nucleus	0.80 (0.42; 1.53)	0.49
Putamen	1.07 (0.67; 1.69)	0.77
Nucleus accumbens	1.03 (0.69; 1.54)	0.88
Thalamus	1.24 (0.59; 2.58)	0.56
Cerebellum	1.02 (0.40; 2.58)	0.96

For each patient, the average weekly consumption (number of drinks) was calculated per month. Results are presented as incidence rate ratios (with 95% CIs), expressing the percentage change in consumption associated with a one-unit increase of the predictor (V_T). IRR > (<) 1 indicates higher (lower) number of drinks with increasing V_T (e.g., IRR = 0.9 (1.1) means 10% decrease (increase) in number of drinks with 1 unit increase in V_T.

Abbreviations: IRR, incidence rate ratio; CI, confidence interval.

Supplemental Figure 1. Grey matter volumes normalized by the total intra-cranial volume in alcohol-dependent patients at baseline (ALC baseline, *n* = 16), at 2 and 6 months of abstinence follow-up (ALC 2 months, *n* = 10, and ALC 6 months, *n* = 8).

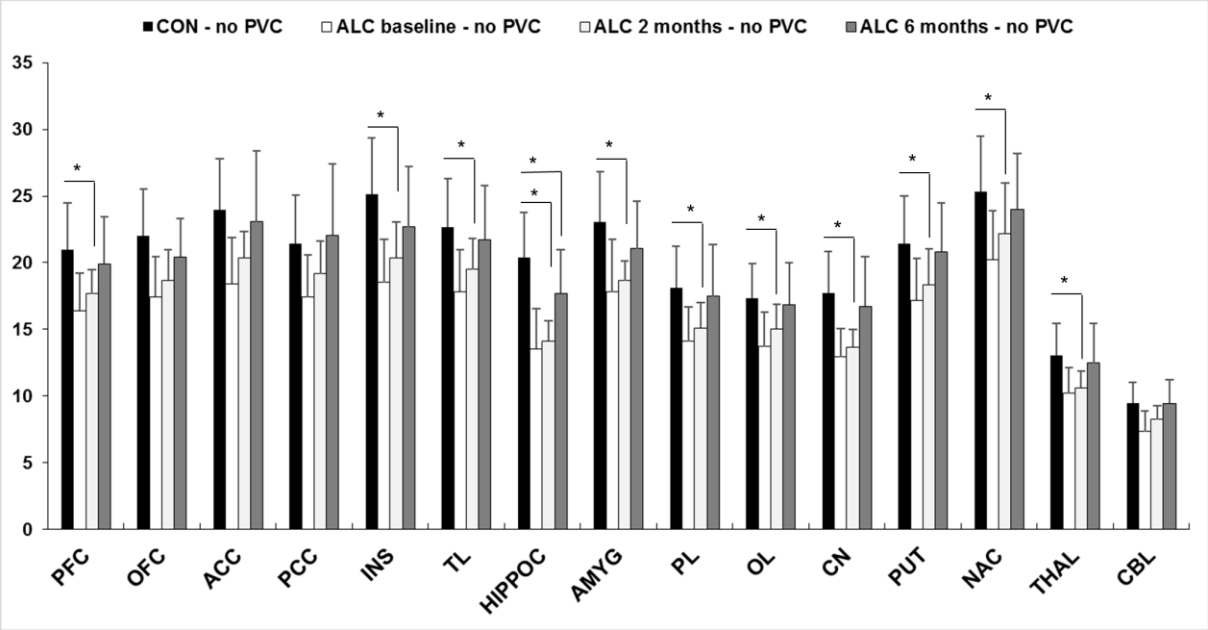


Abbreviations: dlPFC, dorsolateral prefrontal cortex; vlPFC, ventrolateral prefrontal cortex; vmPFC, ventromedial prefrontal cortex; OFC, orbitofrontal cortex; ACC, anterior cingulate cortex; PCC, posterior cingulate cortex; TL, temporal lobe; PL, parietal lobe; OL, occipital lobe; INS, insula; NAC, nucleus accumbens; THAL, thalamus; CBL, cerebellum.

Supplemental Figure 2. Average [^{18}F]FPEB V_T (no partial volume correction, no PVC) in healthy controls (CON, *n* = 32) and in alcohol-dependent subjects (ALC) at baseline (recent detoxification; *n* = 16) and at the 2-month (*n* = 10) and 6-month (*n* = 8) follow-up during abstinence. Error bars represent one SD.

Statistical significances were reported only for ALC 2 and 6 months compared to CON. ALC baseline versus Controls was reported in (7).

*p<0.05, Two-sided independent t-test;



Abbreviations: PFC, prefrontal cortex; OFC, orbitofrontal cortex; ACC, anterior cingulate cortex; PCC, posterior cingulate cortex; INS, insula; TL, temporal lobe; HIPPOC, hippocampus AMYG, amygdala; PL, parietal lobe; OL, occipital lobe; CN, caudate nucleus; PUT, putamen; NAC, nucleus accumbens; THAL, thalamus; CBL, cerebellum.