

Supplementary to:

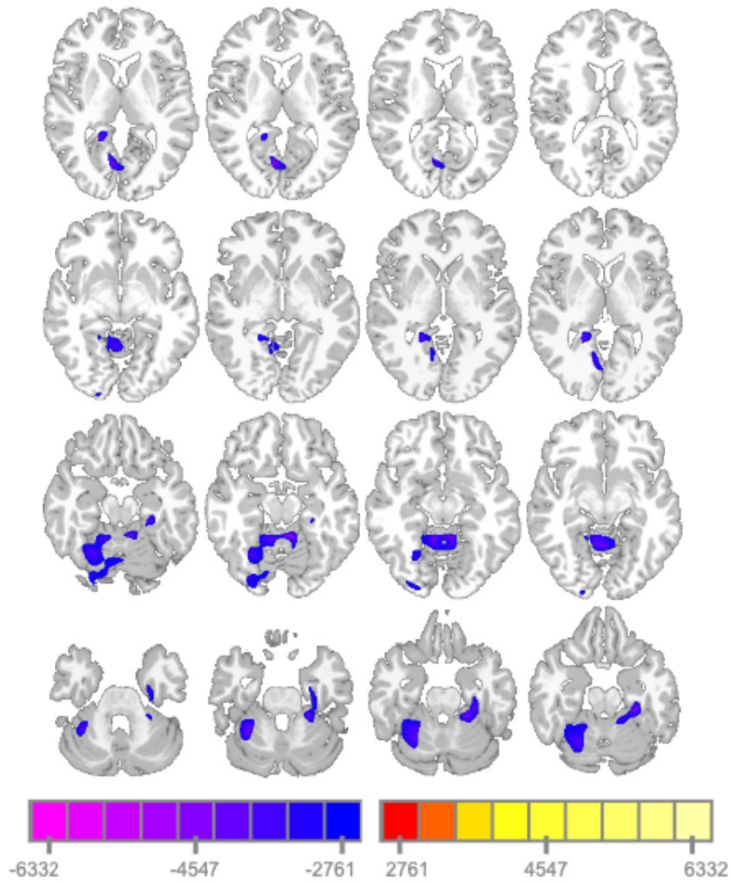
**Ketamine normalizes the structural alterations of inferior frontal gyrus in depression**

Supplementary table 1. Overview of significant results of comparison between pre and post-ketamine administration in the All MDD (including MDD/PTSD) group. T-tests,  $p < 0.001$ , FWE corrected.

Regions	Size(voxels)	Peak MNI			Peak t-score	Volume difference
		x	y	z		
Precentral_R, Postcentral_R	1763	42	-25	61	-9143.2	T-test pre > post-infusion
Left cerebrum, Angular_L, Parietal_Inf_L, Cingulum_Mid_L, Occipital_Mid_L, SupraMarginal_L, Precuneus_L	6347	-38	-51	33	4801.7	T-test pre < post-infusion

Supplementary table 2. Overview of significant results of comparison between pre and post-ketamine administration in the MDD group. T-tests,  $p < 0.001$ , FWE corrected.

Regions	Size(voxels)	Peak MNI			Peak t-score	Volume difference
		x	y	z		
Pons, brainstem, midbrain	3535	4	-31	-33	-12721	T-test pre > post-infusion
Postcentral_R, Rolandic_Oper_R, SupraMarginal_R, Insula_R, Frontal_Inf_Oper_R	2846	35	-14	25	6741.9	T-test pre < post-infusion



Supplementary figure 1. Results for the comparison of pre- and post-ketamine administration in the HC group.  $P < 0.01$ , FWE corrected. However, there is no significant volume change when  $p < 0.001$ . Color bar represents the t-score of Jacobian values. Voxels with decreased volume after ketamine administration were in cerebellum areas (peak MNI coordinate: -8, -47, -16); Voxels with increased volume were not found.