

Supporting Information

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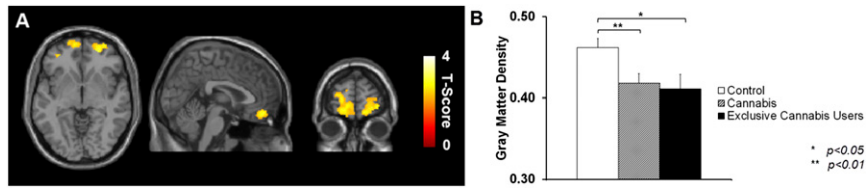


Fig. S1. (A) Group comparison of the gray matter volume by SPM8 plus DARTEL analysis demonstrates significant reduction of gray matter volume in bilateral orbitofrontal gyri (AAL atlas) in marijuana users compared with controls. (B) The bar plot shows the gray matter density (measured as cubic millimeter of GM per voxel) in control, cannabis, and exclusive cannabis users.

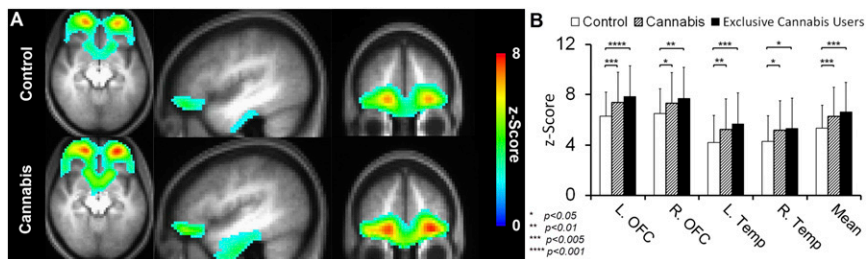


Fig. S2. (A) The average functional connectivity maps (i.e., OFC network; bilateral OFC and temporal gyri) of the control and cannabis groups are superimposed on their average T1-weighted image. For illustration purposes, the z-score maps were arbitrarily thresholded (z score ≥ 2 , $k \geq 50$) to qualitatively visualize the difference in the intensity and cluster size. (B) Mean fcMRI z scores are shown for the orbitofrontal network for control, cannabis, and exclusive cannabis users groups. The cannabis and exclusive cannabis users group showed higher resting activity in the bilateral OFC and temporal gyri compared with the control group.

Table S1. Forceps minor and forceps major tracts DTI parameters (mean \pm SD)

DTI parameter	Control	Cannabis	Exclusively cannabis users
Forceps minor (automated)			
FA	0.551 \pm 0.028	0.570 \pm 0.032***	0.568 \pm 0.029*
AD	1.39e ⁻⁰³ \pm 6.68e ⁻⁰⁵	1.40e ⁻⁰³ \pm 4.27e ⁻⁰⁵	1.40e ⁻⁰³ \pm 3.78e ⁻⁰⁵
RD	5.32e ⁻⁰⁴ \pm 4.60e ⁻⁰⁵	5.14e ⁻⁰⁴ \pm 4.11e ^{-05*}	5.18e ⁻⁰⁴ \pm 3.93e ⁻⁰⁵
MD	8.19e ⁻⁰⁴ \pm 4.79e ⁻⁰⁵	8.09e ⁻⁰⁴ \pm 3.45e ⁻⁰⁵	8.11e ⁻⁰⁴ \pm 3.30e ⁻⁰⁵
Forceps minor (manual)			
FA	0.549 \pm 0.025	0.569 \pm 0.025****	0.569 \pm 0.026***
AD	1.34e ⁻⁰³ \pm 5.36e ⁻⁰⁵	1.35e ⁻⁰³ \pm 3.56e ⁻⁰⁵	1.36e ⁻⁰³ \pm 3.82e ⁻⁰⁵
RD	5.19e ⁻⁰⁴ \pm 3.47e ⁻⁰⁵	4.99e ⁻⁰⁴ \pm 3.14e ^{-05***}	5.02e ⁻⁰⁴ \pm 3.19e ^{-05*}
MD	7.94e ⁻⁰⁴ \pm 3.53e ⁻⁰⁵	7.82e ⁻⁰⁴ \pm 2.75e ^{-05*}	7.85e ⁻⁰⁴ \pm 2.71e ⁻⁰⁵
Forceps major (manual)			
FA	0.643 \pm 0.029	0.651 \pm 0.020	0.652 \pm 0.020
AD	1.59e ⁻⁰³ \pm 5.75e ⁻⁰⁵	1.59e ⁻⁰³ \pm 5.38e ⁻⁰⁵	1.59e ⁻⁰³ \pm 6.25e ⁻⁰⁵
RD	4.70e ⁻⁰⁴ \pm 3.84e ⁻⁰⁵	4.60e ⁻⁰⁴ \pm 3.14e ⁻⁰⁵	4.61e ⁻⁰⁴ \pm 3.25e ⁻⁰⁵
MD	8.41e ⁻⁰⁴ \pm 3.27e ⁻⁰⁵	8.34e ⁻⁰⁴ \pm 3.22e ⁻⁰⁵	8.35e ⁻⁰⁴ \pm 3.53e ⁻⁰⁵

* $P \leq 0.05$; ** $P < 0.01$; *** $P < 0.005$; **** $P < 0.001$.