

Supplementary Material

Test-retest of Glx/tCr and GABA/tCr

The test-retest reproducibility of Glx/tCr and GABA/tCr ratio measurements using MEGA-PRESS at Prisma for a $2 \times 2 \times 2 \text{ cm}^3$ voxel in the IDLPFC was evaluated independently at our center. Five healthy volunteers were scanned with a MEGA-PRESS sequence following the IRB-approved protocol described in Section 2.2 of the main body of the manuscript. Each volunteer was scanned on 2 different days. The time gap between the 2 sessions was initially 2 ± 2 days; however, 2 volunteers had unacceptable motion in their scans and had to return for rescanning, which increased the gap to 14 ± 15 days.

Data analysis for the test-retest cohort was performed following the method described in Section 2.3 of the main body of the manuscript. The scan from 1 of the volunteers who returned for rescanning was still motion corrupted and had to be discarded. Test-retest intraclass coefficient (ICC) and test-retest variability (TRV, within-volunteer variability) were determined following the procedure described by Parsey et al.(1)

For the 4 volunteers with acceptable data, Glx/tCr ratios at the 2 visits were 0.16 ± 0.04 and 0.17 ± 0.05 ; GABA/tCr ratios were 0.10 ± 0.03 and 0.09 ± 0.01 . The ICC for Glx/tCr and GABA/tCr were 0.91 and 0.80 respectively, while the TRV values were 9.2% for Glx/tCr and 16.6% for GABA/tCr.

1. Parsey RV, Slifstein M, Hwang DR, Abi-Dargham A, Simpson N, Mawlawi O, et al. Validation and reproducibility of measurement of 5-HT_{1A} receptor parameters with [carbonyl-¹¹C]WAY-100635 in humans: comparison of arterial and reference tissue input functions. *J Cereb Blood Flow Metab.* (2000) 20:1111-33. doi: 10.1097/00004647-200007000-00011.