

**7T proton magnetic resonance spectroscopy of the anterior cingulate cortex in
minimally-treated first-episode schizophrenia**

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Supplementary Material

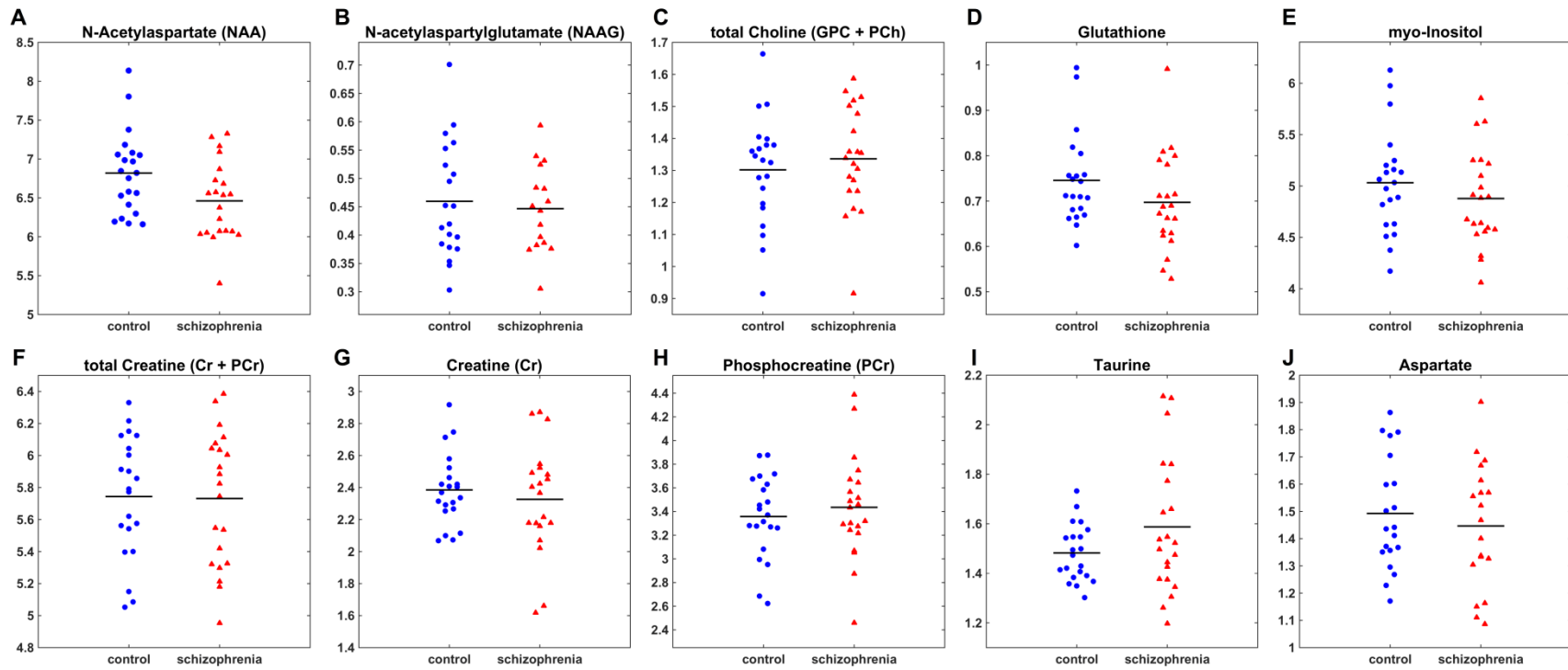


Figure S1. Metabolite levels in the dorsal anterior cingulate cortex (ACC) in controls and people with schizophrenia. (A) N-acetylaspartate (NAA), n.s. (B) N-acetylaspartylglutamate (NAAG), n.s. (C) Total choline (GPC + PCh), n.s. (D) Glutathione, n.s. (E) myo-Inositol, n.s. (F) Total creatine (Cr + PCr), n.s. (G) Creatine, n.s. (H) Phosphocreatine, n.s. (I) Taurine, n.s. (J) Aspartate, n.s.

Table S1. Correlations between metabolites and clinical variables^a

Clinical Measure ^b	Metabolite	Group	<i>n</i> ^b	<i>r</i>	<i>p</i> -value	Benjamini-Hochberg critical value ^c
RBANS Language	GABA	SZ	18	-0.600	0.008	0.001
RBANS Total	GABA	SZ	18	-0.510	0.031	0.002
RBANS Immediate Memory	Gln	HC	19	-0.493	0.032	0.003
RBANS Immediate Memory	GABA	SZ	18	-0.504	0.033	0.004
RBANS Delayed Memory	Glu	HC	19	-0.455	0.050	0.005
BPRS Positive	Glu	SZ	19	0.451	0.053	0.006
RBANS Visuospatial / Constructional	Glu	SZ	18	-0.459	0.055	0.007
RBANS Total	Gln	HC	19	-0.429	0.067	0.008
RBANS Delayed Memory	GABA	SZ	18	-0.384	0.116	0.009
RBANS Attention	GABA	SZ	18	-0.382	0.117	0.010
RBANS Language	Gln	HC	19	-0.346	0.146	0.011
RBANS Immediate Memory	Glu	SZ	18	-0.352	0.152	0.013
UPSA	GABA	SZ	17	-0.360	0.155	0.014
RBANS Total	Glu	SZ	18	-0.312	0.208	0.015
BPRS Negative	GABA	SZ	19	-0.247	0.308	0.016
RBANS Total	Glu	HC	19	-0.244	0.313	0.017
RBANS Visuospatial / Constructional	Gln	HC	19	-0.231	0.341	0.018
RBANS Immediate Memory	Gln	SZ	18	-0.225	0.369	0.019
RBANS Language	Glu	HC	19	-0.215	0.376	0.020
RBANS Language	GABA	HC	19	-0.211	0.385	0.021
RBANS Visuospatial / Constructional	GABA	HC	19	-0.191	0.434	0.022
BPRS Total	Gln	SZ	19	-0.189	0.439	0.023
RBANS Attention	GABA	HC	19	0.181	0.457	0.024
UPSA	Gln	SZ	17	-0.190	0.464	0.025
BPRS Negative	Gln	SZ	19	-0.173	0.478	0.026
BPRS Total	GABA	SZ	19	-0.170	0.486	0.028

Clinical Measure ^b	Metabolite	Group	<i>n</i> ^b	<i>r</i>	<i>p</i> -value	Benjamini-Hochberg critical value ^c
RBANS Visuospatial / Constructional	GABA	SZ	18	-0.175	0.486	0.027
RBANS Delayed Memory	Gln	SZ	18	-0.173	0.491	0.029
RBANS Visuospatial / Constructional	Gln	SZ	18	-0.172	0.494	0.030
RBANS Total	Gln	SZ	18	-0.172	0.495	0.031
RBANS Attention	Glu	SZ	18	-0.166	0.511	0.032
BPRS Total	Glu	SZ	19	0.120	0.624	0.033
BPRS Negative	Glu	SZ	19	-0.098	0.691	0.034
RBANS Delayed Memory	GABA	HC	19	0.096	0.695	0.035
RBANS Language	Gln	SZ	18	-0.085	0.739	0.036
BPRS Positive	GABA	SZ	19	0.079	0.747	0.038
RBANS Delayed Memory	Gln	HC	19	-0.070	0.775	0.039
RBANS Immediate Memory	Glu	HC	19	-0.067	0.786	0.040
RBANS Language	Glu	SZ	18	-0.067	0.792	0.041
UPSA	Glu	SZ	17	-0.065	0.803	0.042
BPRS Positive	Gln	SZ	19	0.056	0.821	0.043
RBANS Delayed Memory	Glu	SZ	18	-0.049	0.846	0.044
RBANS Attention	Gln	HC	19	-0.039	0.875	0.045
RBANS Attention	Glu	HC	19	-0.034	0.889	0.046
RBANS Total	GABA	HC	19	-0.033	0.894	0.047
RBANS Visuospatial / Constructional	Glu	HC	19	-0.031	0.899	0.048
RBANS Attention	Gln	SZ	18	0.022	0.932	0.049
RBANS Immediate Memory	GABA	HC	19	0.004	0.987	0.050

^a Abbreviations: BPRS: Brief Psychiatric Rating Scale, GABA: gamma-aminobutyric acid, Glu: glutamate, Gln: glutamine, HC: healthy control, RBANS: Repeatable Battery for the Assessment of Neuropsychological Status, SZ: schizophrenia, UPSA: UCSD Performance-Based Skills Assessment

^b RBANS was not available for 3 patients and 2 controls. BPRS was not available for 2 patients. UPSA was not available for 4 patients.

^c False discovery rate $p < 0.05$