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# Issue Highlights

**Levandowski and colleagues** used a unique imaging technique, diffusion tensor spectroscopy to measure brain metabolites in schizophrenia and bipolar disorder. Significant elevations were seen in creatine and choline diffusion in patients with schizophrenia, and elevations of choline diffusion in patients with bipolar disorder; These abnormalities might reflect alterations in glia, and may clarify the neuroprogressive nature of white matter changes in the early course of psychotic disorders.

**Adamczyk and colleagues** investigated humor-related neural networks underlying schizophrenia, a condition where humor comprehension is often impaired. Specifically, they focused on the fronto-temporo-parietal circuit. in 40 schizophrenia outpatients and 40 matched healthy controls assessed with an EEG punchline-based humor comprehension task (written and cartoon jokes). They observed that humor processing in schizophrenia may engage alternative circuits, perhaps due to reduced activity of the right hemisphere in fronto-temporo-parietal regions.

**Parker and colleagues** examined whether auditory steady state response (aSSR) deviations (20-80 Hz) across a large sample of psychotic disorders in the BSNIP study. Dimensional reductions in aSSR were seen across the psychosis spectrum and were not specific to aSSR frequency. Deviant auditory steady-state responses (aSSRs) in the gamma range may be translational biomarkers for psychotic disorders.

**Hall and colleagues** applied three separate predictors (positive symptoms, negative symptoms, and soft neurological signs) to identify outcome trajectories in patients with 369 patients with first episode psychosis. Four distinct functional outcome trajectories emerged: "Poor", "Intermediate", High" and "Catch-up". Individuals with male gender; ethnic minority status; low premorbid adjustment; low executive function/IQ, low SES, personality disorder, substance use history were risk factors for poor recovery.

**Sabherwal and colleagues** investigated plasma apolipoprotein expression levels in patients with psychotic experiences that persist into adulthood vs those with transient psychotic experiences. ApoE, a protein which regulates cholesterol metabolism in the brain, was significantly up regulated ($p < 0.003$) in those with persistent psychotic experiences. Apolipoproteins, also play important roles in innate immunity and synaptic signaling, and are worth studying further in relation to psychotic disorders.

**Wang and colleagues** conducted a 24-week, randomized, double-blind parallel-controlled trial to test whether buspirone improves cognitive deficits in schizophrenia. Patients were randomly assigned to either co-treatment buspirone with antipsychotics (n=99) or monotherapy with antipsychotics (n=97). They observed significant differences between the two groups in some cognitive measures, including arithmetic, similarities, picture completion, and block design. Buspirone may offer promise as an adjunct treatment for schizophrenia-associated cognitive deficits.

**Sanfratello and colleagues** investigated dynamic functional network connectivity in schizophrenia vs. healthy controls using resting state magnetoencephalography (MEG) data. They extend their previous work showing a relationship between schizophrenia symptomology and neural meta-states (patterns of network correlations which overlap in time). Clustering of the meta-state metrics separated subgroups with distinct schizophrenia symptoms.

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