Background

• Cognitive enhancement therapies (CET) aim to treat cognitive symptoms of schizophrenia (SZ) [1,2]. However, little is known about the brain mechanisms underlying associated cognitive changes seen in clinical trials.

• The current study seeks to determine if CET significant effects cognitive markers such as the P300 [3,4] and neuropsychological testing scores, as targets for potential mechanisms for cognitive changes seen in clinical trials.

Methods

Single Blind Study of early cure SZ Patients

CET (n=18) EST (n=15)

Assessment Timepoints

Baseline 18-Month Followup

n=33 n=22 n=9

Mixed Model Analysis

P300 Peaks and latencies

Fz Cz

Timepoint, Treatment Type

Auditory CPT (Hit Ratios) MATRICS Behavioral Data

ERP Results: No significant group differences in P300 latency were found at Cz, or in P300 voltages at Fz or Cz.

Results, Continued

Neuropsychological Testing Results: No significant group differences were found in the Q3A Memory and Q3A Interference paradigms of the Auditory CPT, or MATRICS CPT, OCS, or SOP subscores.

Results, Continued

Discussion

• While there may be some effect of CET on P300 latency in SZ, the relationship is unclear. The analyses performed are preliminary, with more participants completing follow-up assessments in the coming weeks.

• Participants in the CET group showed smaller P300 latencies between baseline and 18 months, showing some promise for CET’s efficacy as measured by attentive-dependent ERPs.

• Those in the CET group had a higher hit-to-miss ratio on the QA paradigm of an auditory continuous performance task, which indicates that auditory attentive skills may be better-maintained in CET.

Works Cited

Please see handout for complete bibliography.