Magnetic Resonance and Positron Emission Tomography Imaging of the Temporal Lobe in Schizophrenia.

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Magnetic Resonance and Positron Emission Tomography with Fluorodeoxyglucose (FDG) imaging were used to study the size, shape and metabolic rate of the temporal lobe of never medicated (n=16) or unmedicated (n=27) schizophrenics and normal controls (n=17). All subjects performed a visual attention task (a degraded version of the continuous performance test) during the FDG uptake period. The size of the temporal lobe was not significantly different between the groups. In schizophrenics, the temporal lobe was more active on the right while in contrast, it was more active on the left in controls ($F=4.16$, $df=1,56$, $p=.046$). In the schizophrenic patients, correlational analyses showed that increased asymmetry (left minus right) was related to clinical symptomatology indexed by total Brief Psychiatric Rating Scale (BPRS) scores. These findings are consistent with the literature which indicates temporal lobe pathology in schizophrenia. Analyses comparing the shape of the temporal lobe will also be presented.

GENDER DIFFERENCES IN REGIONAL BRAIN GLUCOSE METABOLISM IN ALZHEIMER'S DISEASE AND NORMAL AGING.

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Thirty-eight Alzheimer's disease (AD) patients and nineteen age- and sex-matched healthy elderly controls underwent 18-fluoro-2-deoxyglucose positron emission tomography while performing a verbal memory test. Patients had lower overall cortical glucose metabolic rate than controls but did not significantly differ from controls in gender metabolic differences. Female controls showed relatively high temporal metabolic activity, while males showed higher parietal metabolism. Since previous studies of healthy younger adults have shown no significant gender-related differences in the parieto-temporal balance of metabolism, this finding suggests that there is some gender difference in the age-related shift of this balance, which might be due to gender differences in hormonal changes late in life. Male AD patients showed a profound right greater than left asymmetry of cortical metabolism that was greater than that in controls and was absent in female patients. This finding suggests a propensity for left hemispheric involvement by the Alzheimer's disease process in males.

Placebo Controlled Double-Blind Trial of L-365,260 CCKB Antagonist in Panic Disorder

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Cholecystokinin has been found in high concentration in the brain, and has been observed to induce panic attacks in normal volunteers and patients with panic disorder. The purpose of this pilot study is to evaluate the efficacy and safety of L-365,260, a CCKB antagonist in patients with panic disorder. Following a 1 week placebo washout, 10 patients who had a minimum of 4 unexpected panic attacks and rated moderately ill on CGI, were randomized into 6 weeks double-blind treatment phase. Evaluations were done weekly both for safety and efficacy. PGIS was used as primary efficacy parameter. Patients rated ≥ 7 on PGIS were considered responders. Anxiety and depression were measured using the HAM-A and HAM-D scales. Five patients received L-365,260 and 5 received placebo. 60% of the patients on L-365,260 compared to 20% on placebo were improved according to PGIS scores. There was a greater reduction in the number of weekly panic attacks in treatment group thank in the placebo group; mean improvement of anxiety on the HAM-A was seen more on L-365,260 than on placebo. Overall, L-365,260 was well tolerated in the study. Only mild headache was reported. The results at this site tend to favor L-365,260 in patients with panic and anxiety disorder.

IDENTIFICATION OF NOVEL DEVELOPMENTALLY REGULATED GENES BY CHARACTERIZATION OF A SUBTRACTED EMBRYONIC MOUSE FOREBRAIN LIBRARY

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Characterization of a cDNA library, enriched for fragments of genes preferentially expressed in the embryonic day 14.5 mouse forebrain as compared to the adult forebrain, was performed using DNA sequencing and *in situ* RNA hybridization to sections of mouse embryos. One hundred and thirty different clones have been identified using DNA sequencing. Only 24 of these show homology or identity with either nucleotide or peptide databases. Sixty-five of the clones have also been evaluated by *in situ* RNA hybridization. Twenty-one clones show either enhanced or regionally specific CNS expression. A nearly full length cDNA was isolated and sequenced for one regionally restricted clone. This novel gene encodes a protein that has strong homology with the Brachyury protein, a known transcriptional regulator that is important in embryogenesis.

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