Subjects will consist of 10 recently detoxified patients, meeting DSM-IV criteria for cocaine dependence referred for clinical neuropsychological evaluation by their psychiatrist due to suspicion of cognitive compromise. Subjects received a systematic and comprehensive neuropsychology protocol that included tests of memory and executive functioning. If subjects were deemed compromised based on their test results, they were referred for head SPECT study at Faulkner Hospital in Boston, Massachusetts. The studies were interpreted by a neuroradiologist at the facility. Exclusion criteria included serious head injury or neurodegenerative disease.

Results of the first four subjects indicates fairly specific functional abnormalities in frontal and temporal areas according to SPECT, and cognitive deficits in memory and executive functioning according to neuropsychological testing.

Recently detoxified cocaine dependent patients identified with cognitive deficits (memory and executive functioning deficits) on neuropsychological testing demonstrate cerebral hypoperfusion on the head SPECT study in the frontal and temporal areas. Cocaine dependence associated with neurotoxicity may be manifested as both cognitive dysfunction and cerebral hypoperfusion.

Lesniak-Karpiak, K., Mazzocco, M. M., Lanham, D. C., & Denckla, M. B.
Behavioral Assessment of Social Skills in Children with Turner Syndrome or Fragile X.
Social skills impairments in children with Turner syndrome or Fragile X syndrome are well-documented, as assessed by paper-and-pencil social competence measures. Based on parental reports, difficulty understanding social cues, anxiety, and shyness characterize children with Turner syndrome, whereas social withdrawal, avoidance of social interaction, and social anxiety are often reported for females with Fragile X syndrome. Anxiety disorder in these two populations is a potential framework for understanding social skills impairments. In this research project, girls with Turner syndrome (n = 14) or Fragile X syndrome (n = 15) ages 6 to 22 years were compared to girls with neither disorder (n = 14) on videotaped simulated role-plays with adult strangers. Behavioral anchors used in the present study were drawn from those that have been previously found to correlate highly with global ratings of social anxiety. These included eye contact maintenance, speech length, and level of discomfort, as observed during interactions over a 105-second period. The results indicate that there are no significant differences on these behavioral measures of social performance between the three groups, suggesting that these ratings do not differentiate socially adequate and less skilled social performance. Although children with Fragile X required more time than children with Turner syndrome to initiate role-play interactions, they did not differ in the total amount of time not socially engaged. Across the three groups of girls, self-report measures of anxiety were not significantly correlated with behavior ratings of social performance, with the exception of frequency of extremity movement being positively correlated with total score on a global measure of anxiety. Need for examining qualitative measures of social discourse in girls with Turner or Fragile X syndrome and neuropsychological correlates of social difficulties are implicated.

Lanham, D. C., Mazzocco, M. M., & Denckla, M. B.
Depression and Anxiety in Girls with Fragile X or Turner Syndrome.
Fragile X and Turner syndromes are two distinct genetic disorders associated with a wide array of neuropsychological and psychosocial difficulties. Previous research has been inconsistent in its depiction of the psychosocial profile associated with these disorders. In this study, the prevalence of depression and anxiety in girls with Fragile X or Turner syndrome was investigated. Girls with the Fragile X full mutation (n = 32) or
Turner syndrome (n = 39) were group-matched on age (7 to 17 years) and full scale IQ (70–118) with 38 girls who had neither disorder. In the context of a larger study, each girl and her parent(s) was administered the Child Depression Inventory (CDI) and the Revised Children’s Manifest Anxiety Scale (RCMAS), and a semi-structured psychological interview (the DICA-R). The three groups of girls, overall, did not rate themselves as clinically depressed on any of the CDI subscales, and there were no significant group differences on this measure. There were group differences on parent CDI ratings of their daughters, with parents of girls with Fragile X or Turner syndrome reporting more anhedonia relative to parents of girls in the comparison group. The ratings themselves were not in the clinically significant range, and there was no group difference in the incidence of depression. On the RCMAS, there were no group differences in girls’ self-report ratings. Parents of girls with Fragile X reported significantly higher ratings of their daughter’s psychophysiological aspects of anxiety, worrying, and social concerns. The discrepancy between a parent’s report and the child’s report was significant only for social concerns. The results from child and parent data suggest that a diagnosis of Fragile X or Turner syndrome does not imply increased risk for mood disorder. The results from the anxiety measures indicate that either (a) girls with Fragile X have higher ratings on selected aspects of anxiety, which they underreport relative to parent ratings; or (b) parents of girls with Fragile X attribute to their daughters, or perceive in their daughters, more anxiety than their daughters experience. Girls with Turner syndrome were not rated as anxious, by themselves or their parents.

Wong, M. H., Smith, T. E., & Willson, D. F.  
Neurocognitive Functioning and Social Problem-Solving Skills in Schizophrenia.  
We examined the relationship between neurocognitive functioning and social skill deficits in schizophrenia. A neuropsychological battery was administered to 45 outpatients with schizophrenia. Social problem-solving was assessed using structured vignettes that were designed to evoke the participant’s ability to generate, evaluate, and apply solutions to social problems. Data analysis revealed a significant relationship between verbal memory skill and identification of response appropriateness in the social problem-solving modules, r(44) = .30, p < .05. This finding suggests that verbal memory may be an important factor in encoding information and effectively evaluating alternative social responses. The implications of integrating neuropsychological evaluation, targeted cognitive interventions, and social skills rehabilitation in psychiatric settings will be discussed.

Askinazi, L. S., Tracy, J. I., Christensen, H. C., & Josiassen, R. C.  
The causal factors and precise neurobiology of the so called “speech disorder” in schizophrenia are unknown. From one perspective, the “speech disorder” represents a purely cognitive, that is, “thought” disorder whereby the odd speech merely reflects aberrant thought and cognition. By another view, the “speech disorder” reflects a primary disturbance in language such as compromised semantic networks. This study takes an alternative perspective and argues that the “speech disorder” in schizophrenia is a natural case example of how language and cognitive processes interact in the expression of a single symptom.  
To test this model, data on selected cognitive (i.e., attention, working memory, executive function) and language measures (semantic and phonologic fluency, word association, typicality judgment) were collected in a sample of chronic schizophrenia patients. Subjects were 31 schizophrenic subjects from the Eastern Pennsylvania Psychiatric Insti-