



American College of Neuropsychopharmacology

EMBARGOED FOR RELEASE:
9:00 am (EST), Saturday, December 8, 2007

Contact: Amy Levey (202) 745-5116
Sharon Reis (202) 745-5103

New Studies Suggest Brain Overgrowth in One-Year-Olds Linked to Development of Autism

*Researchers Observe Link between Post-Natal Behavioral Symptoms
and Brain Development*

Boca Raton, FL, December 8, 2007 – Boca Raton, FL, December 8, 2007 – Brain overgrowth in the latter part of an infant's first year may contribute to the onset of autistic characteristics, according to research presented today at the American College of Neuropsychopharmacology (ACNP) annual meeting. These findings support concurrent research which has found brain overgrowth in autistic children as young as two years old.

Lead researcher Joseph Piven, M.D., Director of the Neurodevelopmental Disorders Research Center at the University of North Carolina, Chapel Hill and an ACNP member, says that behavioral studies of infants at high risk for autism suggest that the onset of most behavioral symptoms which define the disorder, such as problems with and social interaction, also occur at about age one. "One reason these findings are important is because early post-natal onset raises the possibility that there may be a window for early treatment and prevention that could be identified by future studies," Piven says.

Autism, a pervasive developmental disorder characterized by severe deficits in social interaction and communication, is associated with a restricted range of activities and interests, as well as stereotyped repetitive behaviors such as lining up toys in a certain way or requiring basic routines.

In normal brain development, neuronal connections are eliminated through a process called "pruning." This process refines normal brain connections and increases the efficiency of remaining connections in the brain. Piven says one possibility is that there is less pruning in children with autism and therefore, their brains become larger than in children without autism.

Piven cautions that while the study seems to suggest a link between brain overgrowth and autism, there are many variants of autism among children, so the ways in which autistic children develop and are affected by brain growth can vary greatly.

Piven says he will continue to study brain development in autism through a study which is part of the new Autism Centers of Excellence funded by the National Institutes of Health. This study will examine more than 500 infant siblings of autistic individuals with magnetic resonance imaging at the University of North Carolina, Children's Hospital of Philadelphia, Washington University of St. Louis and the University of Washington in Seattle. Siblings of autistic children will be examined at 6, 12 and 24 months. Some of them are expected to develop autistic behavior during the course of the study.

Previous studies of both brain development on MRI and behavioral development have not been conducted in children this young, at risk for an autism spectrum disorder. This study will provide important new information on brain changes in infancy that are associated with the development of autistic symptoms.

ACNP, founded in 1961, is a professional organization of more than 700 leading scientists, including four Nobel Laureates. The mission of ACNP is to further research and education in neuropsychopharmacology and related fields in the following ways: promoting the interaction of a broad range of scientific disciplines of brain and behavior in order to advance the understanding of prevention and treatment of disease of the nervous system including psychiatric, neurological, behavioral and addictive disorders; encouraging scientists to enter research careers in fields related to these disorders and their treatment; and ensuring the dissemination of relevant scientific advances.

###