MCTFR Post-Doctoral Associate
Position Description (for posting 307816)

The Minnesota Center for Twin and Family Research seeks to hire a “Post-Doctoral Associate” (9742R5: Researcher 5) interested in studying the effects of substance use on brain development in our ongoing longitudinal studies of twins who have been prospectively evaluated from preadolescence through young adulthood. Candidate expectations are: (1) Ph.D. in psychology, neuroscience or related field; (2) neuroimaging experience; and (3) expertise as demonstrated through publications or funded research. The applicant will join an interdisciplinary team of researchers (including neuroscientists, geneticists, psychopathologists, developmental psychologists, and statisticians) interested in the development of substance use and other common mental disorders. The MCTFR dataset is unique in terms of the breadth of its assessment (e.g., a rich set of clinical, personality, and endophenotypic measures), developmental informativeness (participants have been assessed every 3-4 years, spanning ages 11 through 34), comprehensive measurement of environmental risk (e.g., prenatal, familial, peer group, neighborhood), inclusion of biological measures (e.g., anatomical, resting state, functional MRI; DTI; dense array EEG/ERP; neuropsychological function) and extensive coverage of molecular genetic variants in a prospectively studied samples of twins (1800 pairs). In addition, the MCTFR is now the twin research hub for the NIH Adolescent Brain and Cognitive Development (ABCD) project, a 10-year longitudinal study of nine-year old children designed to evaluate how substance use affects adolescent neurocognitive development (http://www.nih.gov/news-events/news-releases/nih-launches-landmark-study-substance-use-adolescent-brain-development). The MCTFR affords excellent opportunities for the person filling this position to develop an independent program of research in addition to working with these data.

Major Responsibilities
• (10%) Collaborate with MCTFR principal investigators, research associates, other post-doctoral associates, graduate students, and undergraduate students to develop and advance research topics;
• (20%) Process and analyze MRI data relevant to brain structure and function;
• (40%) Develop and complete hypothesis driven research focusing on MRI data and relating it to other MCTFR predicting, mediating, and moderating variables in composite datasets using epidemiological, behavior genetic, longitudinal and other data analysis methods;
• (10%) Prepare preliminary reports for MCTFR Principal Investigators and our research seminar;
• (20%) Publish at least four papers annually in top research journals.

Essential Qualifications
• Ph.D. in psychology, neuroscience or related field;
• One or more years of graduate school research training;
• Strong publication track record in top research journals.

Preferred Qualifications
• Neuroimaging experience;
• Prior experience preparing proposals for sponsored research funding.

Required Application Materials (Application attachments)
• An updated CV;
MCTFR/ABCD
The Minnesota Center for Twin and Family Research seeks to identify environmental and genetic influences on psychological traits. Focusing on adolescent children and their parents, the MCTFR includes studies of twins, adoptees, and biologically related adolescent siblings. MCTFR participants are involved in a variety of projects including: assessment of psychopathology, psychophysiology and collection of DNA samples in collaboration with the National Institute of Health's Genetics Consortium. The ABCD Study Consortium is a collaborative effort of 19 sites across the US that will seek to address many questions related to substance use and development that will help inform prevention and treatment research priorities, public health strategies, and policy decisions, including: (1) What is the impact of occasional versus regular use of marijuana, alcohol, tobacco, and other substances, alone or in combination, on the structure and function of the developing brain; (2) How does the use of specific substances impact the risk for using other substances; (3) What are the brain pathways that link adolescent substance use and risk for mental illnesses; (4) What impact does substance use have on physical health, psychological development, information processing, learning and memory, academic achievement, social development, and other behaviors; (5) What factors (such as prenatal exposure, genetics, head trauma, and demographics) influence the development of substance use and its consequences?

Appointment
MCTFR Post-Doctoral Associate appointed by the MCTFR’s Principal Investigators and reports to them. Position is 100%-time and classified as an academic professional appointment. It is contingent upon the availability of funds and/or work for the position. Appointment will provided health, dental, vacation and sick-time benefits plus is covered by Social Security and Faculty Retirement System. Position requires a background check and applicant must verify authorization to work in United States. Initial appointment is for one year but is renewable with acceptable performance. Salary is competitive and commensurate with education and experience.