

Genetics and Epigenetics: the Addiction Phenotype, and the Adolescent Brain and Cognitive Development Study

Pamela A.F. Madden

Washington University, St. Louis, MO, U.S.A.

The Adolescent Brain and Cognitive Development (ABCD) Study is a large-scale, longitudinal study of brain development and child health in the U.S., now in its second year of data collection. Data from (1) brain imaging, (2) neurocognitive testing, (3) psychological and psychiatric interview, (4) self- and other reports on substance use/dependence, and bio-specimen collection for genetic and other testing are being obtained from a nationally representative sample of children, 9 to 10 years of age at baseline assessment. Plans are to enroll 10,000+ children and parent, with 9 years of follow-up. Presented will be a summary of the ABCD study (see ABCDStudy.org), including assessments, and bio-materials under collection and planned analyses (e.g., GWAS) that may be used for future genetic and epigenetic research. Summary data from the first data release from ABCD to the scientific community (planned for December, 2017) will be provided, including information on data accrued to date, data projections (especially in relation to addiction-related phenotypes). A discussion on how study data might be used in the future to: (1) advance genetics and epigenetics research; (2) refine addiction-related phenotypes; and (3) clarify relationships between problems related to substance use, neuroimaging and neurocognitive phenotypes will be included.