

# Adolescent Brain and Cognitive Development (ABCD) National Longitudinal Study NIDA, NIAAA, NCI, NICHD

*Ten year longitudinal study of 10,000 children from  
age 10 to 20 years to assess effects of drugs on  
individual brain development trajectories*



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Director



National Institute  
on Drug Abuse

# Adolescent Brain and Cognitive Development (ABCD) National Longitudinal Study



NIDA  
NIAAA  
NCI  
NICHD

- ✓ **Expert panel workshop** to develop recommendations on best large-scale designs and measures to assess developmental effects of substance exposure (beginning prior to exposure) during childhood through adolescence (in human subjects) – **May 27-28, 2014**
  - ✓ **A Request For Information** to get input on proposed study design/measures **July-August 2014**
- Revised design** based on input from RFI to be presented for further discussion at **satellite symposium at SfN**.
- FOA** to be released early in 2015

# Members of Expert Panel

**Louise Arseneault, Ph.D.**

King's College London  
Institute of Psychiatry

**Frank M. Biro, M.D.**

University of Cincinnati  
Cincinnati Children's Hospital  
Medical Center

**BJ Casey, Ph.D.**

Weill Cornell Medical College  
Cornell University

**Linda Chang, M.D.**

John A. Burns School of Medicine  
University of Hawai'i

**Michael E. Charness, M.D.**

VA Boston Healthcare System  
U.S. Department of Veterans Affairs

**Raquel Gur, M.D., Ph.D.**

Perelman School of Medicine  
University of Pennsylvania

**Rolf Loeber, Ph.D.**

School of Medicine  
University of Pittsburgh

**Robin J. Mermelstein, Ph.D.**

Institute for Health Research  
and Policy  
University of Illinois at Chicago

**Adolf Pfefferbaum, M.D.**

Center for Health Sciences  
SRI International

**For more information on the  
expert panel meeting, visit:**

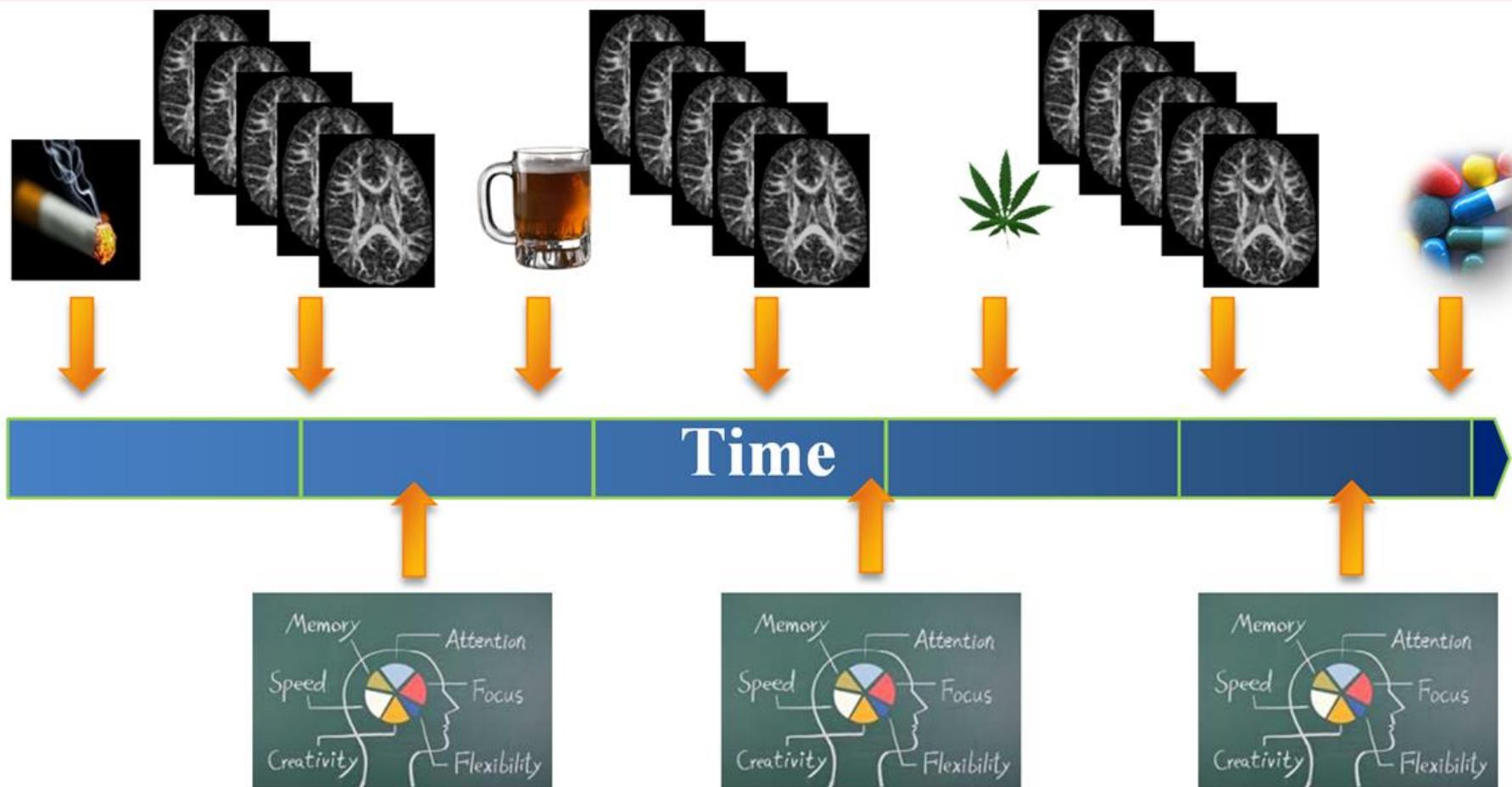
**[http://addictionresearch.nih.gov/  
summary-expert-panel-meeting](http://addictionresearch.nih.gov/summary-expert-panel-meeting)**

# Central Research Questions:

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- What is the impact of diverse patterns of use of marijuana, alcohol, nicotine and other substances on the structure and function of the developing brain, as revealed by brain imaging?
- What are the consequences of substance use on physical health, psychosocial development, information processing, learning, memory, academic achievement, motivation, emotional regulation, and other behaviors?
- How does drug use affect the expression of psychopathology, including substance use disorders, and how does the emergence of psychopathology influence drug use?
- What factors (prenatal exposure, genetic, epigenetic, neurobiological, psychosocial, family history) influence drug use and its consequences during development?
- In what way does use of each substance contribute to the use of others (gateway interactions)?

# Prospective cohort study of ~10,000 youth beginning ~ ages 9-10



Measures

**Substance use, Cognition, Emotion, Mental Health, Physical health, Executive Function, General Intelligence, Environment, Biospecimens: Genetics, Epigenetics**