



National Institute
on Alcohol Abuse
and Alcoholism



CONCEPT: SECONDARY ANALYSES OF EXISTING ALCOHOL RESEARCH DATA

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Purpose



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The purpose of this future solicitation in the form of Notice of Special Interests (NOSI) is to encourage the submission of applications on secondary data analyses to enhance our understanding

- the patterns and trajectories of alcohol consumption,
- the epidemiology and etiology, including genetics, of alcohol-related problems and disorders

Types of grant applications

- innovative analyses of existing alcohol research data
 - answer novel research hypotheses and questions
 - develop and test advanced analytical methodologies
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Background



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- Increasing cost of data collection on human subjects
 - Rich existing data recourses yet to be fully utilized
 - Secondary data analysis is a cost-efficient way to conduct research
 - Linkage/combination of data sets increases statistical power, expands the scope and impact of research
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Scope/Research Goals



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- Develop, improve and validate effective measurement of underage drinking, high-intensity binge drinking, drinking during pregnancy, adult alcohol misuse and alcohol use disorders
 - Big data approaches
 - a) integrate and harmonize qualitative and quantitative measurements from various study designs and sources,
 - b) develop comprehensive analytical methods for the study of alcohol misuse and progression to alcohol use disorder
 - Develop effective data analytical approaches for real-time assessment of alcohol consumption and related behaviors
 - Develop machine learning and other artificial intelligence algorithms to study drinking patterns, identify and predict risky drinking behaviors, and enable timely targeted preventive interventions
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Scope/Research Goals (continued)



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- Develop a common metric of alcohol-related phenotypic and environmental measures across study designs
 - Develop and engage new genetic analysis methods such as pathway, network and multi-omics analyses
 - Use new and novel Genetic/Genomics analytical tools to relate AUD GWAS (Genome-Wide Association Study) data with brain expression data to establish their relationships
 - Use novel bioinformatic tools to perform cross species genomics or comparative genomics to detect new eQTL (Expression Quantitative Trait Loci) related to AUD
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Data Sources



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Data Sources:

- Public domains
- NIH funded research studies
- Other: health records, etc.

A list of available data sources:

- Alcohol Epidemiologic Data Directory (<http://pubs.niaaa.nih.gov/publications/datasys.htm>)
 - Alcohol Policy Information System (<https://alcoholpolicy.niaaa.nih.gov/>)
 - NIAAA Data Archive (<https://nda.nih.gov/niaaa>)
 - NIDA Data Share for clinical trials (<https://datashare.nida.nih.gov/>)
 - NIH Data Repositories(https://www.nlm.nih.gov/NIHbmic/nih_data_sharing_repositories.html)
 - Data Base of Genotypes and Phenotypes at NCBI (<https://www.ncbi.nlm.nih.gov/gap/>)
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Thank you

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