

## **The Spit for Science project: Characterizing Genetic and Environmental Influences on Patterns of Substance Use in College Students**

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Risky substance use among college students is widespread, and associated with far-reaching consequences. Longitudinal data demonstrate concerning changes in substance use patterns among college students, with alcohol use regularly occurring alongside other illicit drug use now, most commonly marijuana. Despite these changes, nearly all universities focus their substance use programming exclusively on alcohol. Lack of a comprehensive and systematic program of research focused on mapping the risk factors associated with patterns of substance use among college students, and translating this knowledge into more effective prevention and intervention programming to address rising rates of drug use in college students is a critical gap in the field. We launched the Spit for Science project to address that gap.

Spit for Science is a unique data collection pipeline and registry for studying genetic and environmental influences on patterns of substance use and related outcomes across a critical developmental period. All incoming freshmen are invited to complete on-line surveys in the fall semester of their freshman year (and provide a saliva sample for extraction of DNA), with survey follow-ups each spring thereafter. We are currently following >10,000 students (5 cohorts of incoming freshmen) across their college years and beyond. Nearly 70% of all eligible individuals participate. All data are entered into a Registry, with participants consenting to recontact, making it possible to conduct more intensive spin-off studies on selected groups of students. Spin-off projects have included neuroimaging high-risk binge drinking students, ecological momentary assessments of smoking behavior, and lab-based protocols with trauma-exposed individuals. The first three cohorts have been genotyped on the Affymetrix Biobank Array, with genotyping for the fourth cohort underway on the Smokescreen array. Spit for Science registry data are available to any eligible investigator, and we encourage broad sharing of this resource.