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Webinar Series on Quantitative Genetics Tools for Mapping Trait Variation to Mechanisms, Therapeutics, and Interventions

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We have assembled a webinar series, *Quantitative Genetics Tools for Mapping Trait Variation to Mechanisms, Therapeutics, and Interventions*, with the goal of helping researchers transverse the path from trait variance to quantitative trait loci (QTL) to gene variant to molecular networks to mechanisms to therapeutic and interventions. Started in response to the pandemic restrictions, this webinar series was designed to engage a broad audience in the absence of in-person interactions via meetings and workshops. Ten recorded webinars are currently available on-demand (https://bit.ly/osga_YouTube) with webinar documents/discussion available through the Omics Portal for Addiction Research (<http://opar.io>). Popular topics within the series include introductions to QTL analysis, expression QTL analysis, and weighted gene co-expression network analysis. There are also several webinars on popular genetics resources used by the NIDA community including GeneNetwork, GeneWeaver, and PhenoGen. We have also covered more advanced topics such as including sex in QTL studies and causal inference in genetic studies. This spring the webinar series will include talks on genetically diverse rat populations, analysis of omics data (e.g., RNA-Seq and metabolomics), and tutorials on R and Jupyter notebooks. The webinars are presented in an interactive format with 50-60 minutes of lecture and 30 minutes of discussion with the audience. This webinar series and its archive can be a valuable tool for individual laboratories as a method for quickly onboarding new trainees to many of the methods and resources used for genetic analyses of substance use disorder. Sponsored by NIDA P30 DA044223.