Accelerating psychiatric genetics research in Latin American populations: Consortia efforts and Novel findings

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There is a pressing need to engage traditionally underrepresented research participants and researchers to diversify both genomics studies and the genetics workforce. For this, collaborative and coordinated are crucial. The Latin American Genomics Consortium (LAGC), established in 2019, aims to accelerate psychiatric genetics research and expand the workforce of Latin American populations. The LAGC has over 150 active members, representing 9 different Latin American countries. Ongoing efforts include a meta-genome-wide association study of alcohol consumption in 55,518 individuals of Latin American origin from US- and Latin America-based cohorts. We identified 304 genome-wide significant (GWS) single nucleotide polymorphisms (SNPs) associated with alcohol consumption; many of these mapping to the ADH region. We also performed a transcriptome-wide association analysis, identifying six significantly associated genes, including well-known associations such as ADH1B, ADH1C, and ADH7, and three potentially novel mapping to IQCF1, VEGFC, and FRG2B. Our findings revealed both well-known and potentially novel genetic associations for alcohol consumption in Latin American populations. Ongoing efforts expands this work to smoking-related traits. Our consortium initiative not only empowers Latin American researchers to conduct genomic analyses addressing the enormous underrepresentation in the psychiatric genomics workforce, but also diversifies GWAS to ensure that the benefits of GWAS findings are shared beyond European populations.