

## Summer Research Program 2026 – Projects

### Project #5

**Title:** Generation of an Autism Spectrum Disorder (ASD) polygenic score within the Qatari population

**Description:** Autism spectrum disorder is an intricate neurodevelopmental disorder characterized by persistent difficulties in social communication and interaction, along with restricted and repetitive behaviors, interests, or activities. The disorder has a high heritability and a complex genetic background. In international studies, several genetic variants are known to be involved in the disorder. How these variants affect the Qatari population is still unclear. In this study we are going to estimate the frequency of the variants in a sample of known Autism cases and controls from Qatar. Using the estimated risk for each variant we will then generate a polygenic risk score for each individual representing his or her risk for the disorder, a possible key metric in personalized medicine. After that we will calculate how well this risk score predicts disease in the cases versus the controls.

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