

# Summer Research Program 2026 – Projects

## Project #4

**Title:** Identifying disease genes for Autism Spectrum Disorder (ASD) in Qatari population.

**Description:** Autism spectrum disorders (ASD) is a neurodevelopmental disorder characterized by deficits in social communication, social interaction and restricted, repetitive patterns of behavioral interests. Current research has evidence to prove that ASD is genetic in origin and WES/WGS in combination with in-silico comparative genome mapping from microarray result offers the opportunity to pinpoint the genetic variant in the affected subjects. The purpose of this project is to identify deleterious genetic variants in autism genes in Qatari autism families and compare with those in world-wide population to elucidate the underlying mechanism in cognitive dysfunction and designing therapeutic approaches or small molecule drugs.

The student is expected to get an insight to what does genetic research mean. How to carry out an experiment in a laboratory setting and interpret the scientific results. The researcher will also understand the basic idea of research in biomedical sciences.

**Mentor:** Dr. Jouke Jan Hottenga, Senior Scientist. Email: [jhottenga@hbku.edu.qa](mailto:jhottenga@hbku.edu.qa)

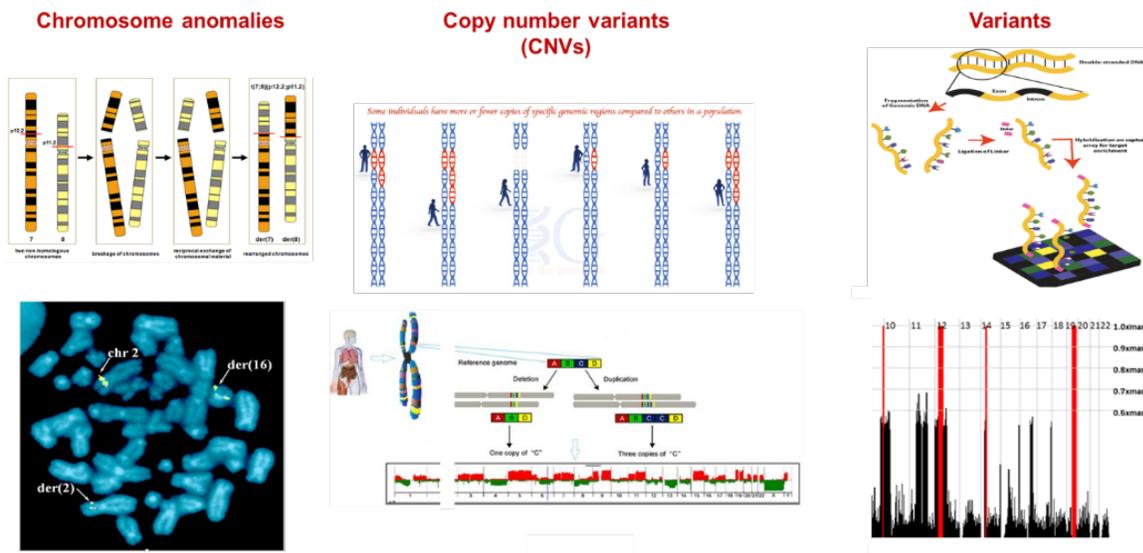


Figure1. Strategy of Autism Spectrum Disorder Genes Discovery