

Laboratory manager: Dr. Sareh Asadi

Our research is focused on the genetics, epigenetics, and pharmacogenetics of nervous system disorders including Autism Spectrum Disorder (ASD), Parkinson's Disease (PD), and Obsessive Compulsive Disorder (OCD). We've applied linkage analysis to identify the pathogenic mutations in families with several affected members using whole exome sequencing. To investigate the genetics architecture of complex disorders in Iran, we've collected two banks of DNA samples from Iranian patients with OCD and PD as well as control subjects. Meanwhile, we established the Neuro-autism Research Group to study the genetics of Iranian patients with ASD and to investigate the underlying mechanisms. The approach of our research group is extracting the most important factors (genetics and environmental) in pathogenesis and treatment of complex disorders using data mining methods.

Lab Methods:

- Molecular biology techniques: DNA and RNA extraction, PCR, PCR-RFLP, Real-time PCR, Whole exome sequencing, Biochemical analyses, ELISA.
- Histology techniques: IHC, H&E, Nissl staining
- Epigenetics: miRNA extraction, Primer design, miRNA quantification using Real-time PCR
- Neuroimaging
- Bioinformatics
- Data mining methods