New genetic approaches for early diagnosis and treatment of autism spectrum disorders

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Autism spectrum disorders (ASD) are common heterogeneous neurodevelopmental disorders, characterized by disruptions in social interactions, communication and limitations in behaviour. Early diagnosis is an important step to prevent progression of ASD. Recent developments in genetic technology provide useful tools to investigate molecular mechanisms involved in autism. Despite a number of noteworthy studies, there is not yet enough understanding of the genetic aetiology of ASD. Research should focus on multidisciplinary approaches to improve early diagnosis and intervention of autism. It is important to study combinatorial effects of genetic, epigenetic, environmental factors. Current research in ASD highlights the importance of identifying new approaches such as next generation sequencing (NGS) and microRNA (miRNA) technologies to develop new biomarkers and drugs. Our study focus on identify common gene variation in ASD patients and also novel genes for early diagnosis using NGS.

Biography

Meryem Alagöz completed her BSc studies in Medical Biology at Cerrahpaşa Medical School, and pursued her MSc studies in Molecular Biology and Genetic Engineering at University of Sussex. She attained her PhD from University of Sussex. Her PhD Project involved in the investigation of genetic alterations in human breast and ovarian cancer. She had worked as a Post-doctoral research fellow at Kings College and Imperial College. She worked at University of Sussex for 7 years as a research fellow and still collaborating with them for her research. She has been investigating the molecular mechanisms involved in the development of human diseases such as cancer and brain disorders. She has been working as an assistant professor at Molecular Biology and Genetics Department of Biruni University since February 2017. She has been setting up the research and diagnostic laboratories at the Genome Centre employing advances technologies such as Next generation sequencing. In near future, she would like to focus on DNA damage and repair field where she gained extensive experience during her studies and research. She will employ these experiences to research into broader area of genetic disorders.

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