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Poster Presentation

The Role of Genes in ASD

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Abstract

Autism Spectrum Disorder (ASD) is a heterogeneous group of neurological disorders that is determined solely by their behavior. In this disease, a large part of the neurological disorder and neural controls disorder are observed. Researchers believe that over expressions changes in many genes are the cause of autism. Our goal is to investigate the genetic factors affecting ASD and its treatment by umbilical cord. Most genes that cause the disease have only little effect on the disease, but in general, their interaction with other known or unknown genes, or some of the environmental factors, determines the ultimate cause for a person who has Autism. Studies shows that copy number variation of the UBE3A gene and over expression of the gene, product E6AP protein is a common cause of autism spectrum disorders (ASDs). During brain development, dendritic growth and remodeling play crucial roles in neuronal connectivity and information integration. Laboratories experiments indicates that overexpression of E6AP in primary neurons in autism mouse brain leads to significant loss of dendritic arborization. This effect is mediated by the ubiquitination of XIAP by E6AP, subsequent activation of caspases, leading to local degeneration and retraction at the tips of dendritic branches. These findings demonstrate dysregulation in neuronal structural stability as a major cellular neuropathology in ASD. For the treatment of autism, using of CD34 (stem cell) of umbilical cord and MSC is effective.

Keywords: ASD, Neurology Disorder, UBE3A

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