

Scientists discover how dozens of genes may contribute to autism, discussing decades worth of research on the theory that one of the causes of autism may be due to “a disruption of the balance between two types of nerve cells found in the cerebral cortex.” In the study itself, scientists created clusters of cells that imitated the structure and function of the brain's subpallium and cerebral cortex. When the two clumps were separated into separate dishes that were placed near each other they fused as they would as neurons in the brain, which would then move down the cortex. Upon finding out the cells naturally fused as they would in the brain, they searched for genes that caused the failure of the interneurons to move down the cerebral cortex. Incredibly of the genes that caused it, were genes present in those with autism. What this means is that, to begin with, autism is not one singular disease but rather a cluster of disorders. And with this information known, there is hope that there can be a treatment designed to where this fusion can be done, manually, and allow the brain development to continue without being impaired. Similarly, according to the Autism Research Review, research reports that “in samples from individuals with ASD, they saw changes across the cerebral cortex, “affecting many neural cell types and specific biological processes.” Where it was concluded that autism occurs as changes in the molecular level present throughout the cerebral cortex.

Johnson, Mark. Scientists discover how dozens of genes may contribute to autism. *The Washington Post*;

<https://www.washingtonpost.com/science/2023/10/05/autism-genes-brain-development/>

Gandel, Micheal J, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. *Nature*;

<https://autism.org/widespread-changes-detected-in-the-cerebral-cortex-in-autism/>