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# Genes in Autism Spectrum Disorder: A Literature Review

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**ABSTRACT** A regulated interaction between genes and environment helps to control a wide range of symptoms in complicated neurodevelopmental disorder, autism spectrum disorder (ASD). The knowledge of genetic variability, neurobiological changes helps one to better understand the processes behind ASD. A critical review of recent studies on the genetic foundation of ASD was carried out, with an emphasis on important genes including FOXP1, PARK2, SHANK2, DPP6, and SYNGAP1. The researchers looked at studies that used animal models, control models, and sophisticated diagnostic techniques like next-generation sequencing and variations of the polymerase chain reaction (PCR). Disruptions in neurotransmission, synaptic density and aberrant brain functions brought on by proapoptotic chromosomal changes that impact important brain areas are associated with genetic variability in ASD. Interplay between genetics and environment is highlighted by the rising incidence of ASD. There is hope for better management and results, thanks to cutting-edge diagnostic tools and creative therapies.