

## Identification of genetic variants increasing risk of Autism Spectrum Disorders

Several rare mutations within genes and some very small deletions or duplications of particular DNA sections appear to leave some individuals predisposed to autism. This indicates that many genetic variants could contribute to autism and my research is focused upon finding these variants.

Genes normally produce proteins, one of the building blocks of our nerve cells, and small molecules, called microRNAs, control the amount of protein genes produce. MicroRNAs operate on particular target genes, and microRNAs in the central nervous system regulate protein production from genes involved in the development and function of nerve cells in the brain. Therefore, microRNAs may well have a role in psychiatric and neurological disorders.

I am currently examining microRNAs and the regions of the target genes they operate on to find rare genetic variants. Such variants may well have an adverse effect on those genes' normal functions. This should help us to understand the processes involved in autism, and, in the longer-term, may help us identify potential targets for therapy.



**Dr Janine Lamb**  
**Centre for Integrated Genomic Medical Research (CIGMR)**  
**Manchester Academic Health Science Centre**  
**The University of Manchester**