

OPINION

Related risk

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Common wisdom holds that exposure to a powerful immune response during a crucial time in development can't possibly be good for the brain, and there is data to back this up. For example, infection in the mother during pregnancy has famously been linked to a **higher risk of schizophrenia** and **autism** in the offspring.

An intriguing review article published 7 June in *Genes, Brains and Behavior* describes a twist on this correlation: a **complicated interplay** between a certain genetic variant and autism, schizophrenia and the autoimmune disorder rheumatoid arthritis.

In this case, according to epidemiological data, individuals who have rheumatoid arthritis are less likely to have schizophrenia than are typical controls, but more likely to give birth to a child who has autism.

That there is any link at all between rheumatoid arthritis and autism was news to me, but in the complex world of autism risk factors, I suppose it shouldn't have come as too much of a surprise.

The article hypothesizes that major histocompatibility complex class II, or **HLA-DRB1**, which plays a role in the immune system, is the common link among the three disorders.

The review summarizes studies that show that one HLA-DRB1 variant, HLA-DRB1*04, ups the risk of rheumatoid arthritis and autism but lowers the risk of schizophrenia. Another variant in the same gene, HLA-DRB1*13, has the opposite effect.

Identifying this risk variant in individuals with autism or schizophrenia would suggest that their disorder is mediated, at least in part, by the immune system, the reviewers say.

Whether this subset of individuals could be treated with immune-targeted therapies remains to be seen, but is a promising possibility.