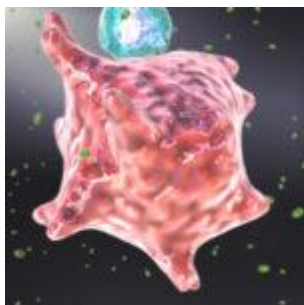


# Inflammatory markers during pregnancy is linked with autism



In the recent 24th May 2016 article from Molecular Psychiatry, researchers examined maternal mid-gestational serum samples of multiple cytokines and chemokines to identify any correlations with increased risks of autism spectrum disorders (ASD). Samples were taken from three different study groups: i) mothers of children with ASD; ii) mothers of children with developmental delays (DD); iii) general population (GP) controls. The ASD group was then further divided into those with intellectual disabilities (ASD+ID) and those without (ASD-noID). Higher levels of granulocyte macrophage colony-stimulating factor (GM-CSF), IL-1 $\alpha$ , IL-6 and IFN- $\gamma$  were highly correlated with an increased risk of ASD+ID compared to the other groups.

These results indicate that higher levels of pro-inflammatory cytokines and chemokines in the mother during gestation are correlated with a higher risk of ASD+ID in their children. The profile of different inflammatory markers appears to be unique to autism with intellectual disabilities and is not seen with ASD without intellectual impairment or with children with delayed development. The authors propose that gestational inflammation involving these specific cytokines/chemokines may lead to alterations in the neurodevelopment of the fetus during pregnancy. However, this correlation does not imply a causal link and is possibly a marker related to other causes.

The authors state “These findings contribute to the ongoing efforts toward identification of early biological markers specific to subphenotypes of ASD.”

[Jones, K. et al, 2016. Autism with intellectual disability is associated with increased levels of maternal cytokines and chemokines during gestation. \*Molecular Psychiatry\*.](#)