

Biomarker for Autism May Be On the Horizon

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Currently, physicians and medical scientists diagnose a child as possessing an [autism](#) spectrum disorders (ASD) by observing behavior patterns over the child's first three years of life.

New research from a Swedish University suggests advanced mass spectrometry can provide a rapid, inexpensive diagnostic method for ASD.

Investigators from Uppsala University have published their study, suggesting particular protein patterns or biomarkers can be used to detect ASD, in the journal *Nature Translational Psychiatry*.

These would be the first acknowledged biomarkers for autism.

Many diseases are caused by protein alterations inside and outside the body's cells. By studying protein patterns in tissue and body fluids, these alterations can be mapped to provide important information about underlying causes of disease.

Sometimes protein patterns can also be used as biomarkers to enable diagnosis or as a prognosticating tool to monitor the development of a disease. In the current study, disruptions of the nervous system were in focus when the scientists studied protein patterns in autism spectrum disorder (ASD).

Researchers performed a detailed protein analysis of blood plasma from children with ASD compared with a control group. Using advanced mass spectrometric methods, they succeeded in identifying peptides consisting of fragments of a protein whose natural function is in the immune system, the complement factor C3 protein.

The study is based on blood samples from a relatively limited group of children, but the results indicate the potential of the methodological strategy, said researcher Jonas Bergquist, Ph.D. There is already a known connection between this protein and ASD, which further reinforces the findings, he said.

The hope is that this new set of biomarkers ultimately will lead to a reliable blood-based diagnostic tool.

Source: [Uppsala University](#)