

Research strengthens link between Epstein-Barr virus and multiple sclerosis

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Many risk factors for multiple sclerosis (MS), which causes damage to the central nervous system, have been identified. However, it is still unknown why the disease occurs. In recent years, the herpesvirus Epstein-

Barr virus (EBV) has been established as the leading risk factor.

"Over 90% of the [population](#) is latently infected with EBV, and we still do not know why some of the infected develop MS," says Viktor Grut, Ph.D. student in Peter Sundström's research group at Umeå University.

To investigate which factors are decisive for the development of MS, the research group has used [blood samples](#) from the biobanks at the Swedish university hospitals.

By linking data from the MS register with the biobank registers, they have identified blood samples from individuals who developed MS later in life. Using these samples, Peter Sundström's research group has previously shown that individuals with antibodies against human herpesvirus 6A (HHV-6A) have a higher risk of developing MS.

Connection strengthens the hypothesis

In a study, [published in the journal *Brain*](#), they have worked further on the connection between HHV-6A and MS.

"In blood samples from individuals who later developed MS, we could see that antibodies against HHV-6A were linked to higher levels of NfL, a marker of brain damage. We also saw rising levels of HHV-6A [antibodies](#) before rising levels of NfL. These two connections strengthen the hypothesis that HHV-6A is important for MS," says Viktor Grut.

More information: Viktor Grut et al, Human herpesvirus 6A and axonal injury before the clinical onset of multiple sclerosis, *Brain* (2023). [DOI: 10.1093/brain/awad374](https://doi.org/10.1093/brain/awad374)

Provided by Umea University

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