The Underlying Cause of Multiple Sclerosis

May 7
Tuesday, 12:30 pm
Billings Building—Rosedale Room

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Abstract

Multiple sclerosis is the most common neurologic disease of young adults. Over the past 30 years, a working model for the disease has emerged based on: 1) the genetic architecture investigated by genome-wide associate scans with 233 common genetic variants found predominantly in immune pathways; 2) identification of inflamed myelin reactive T cells in the circulation of patients with MS; 3) loss of immune regulation with dysfunction of FoxP3+ regulatory CD4 cells; (Tregs) 4) epigenetic studies indicating a central role of T cells, Tregs, and B cells in the disease; 5) epidemiologic data strongly indicating that EBV is an environmental factor that may trigger the disease; and finally, the extremely high efficacy of B cell depletion in early relapsing remitting MS with novel mechanisms revealed by this immune intervention. Evidence for this model will be presented and I will explore the question as to whether we know the cause of MS!

Publications:


International Multiple Sclerosis Genetics Consortium; MultipleMS Consortium Locus for severity implicates CNS resilience in progression of multiple sclerosis Nature. 2023 Jun 28.
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