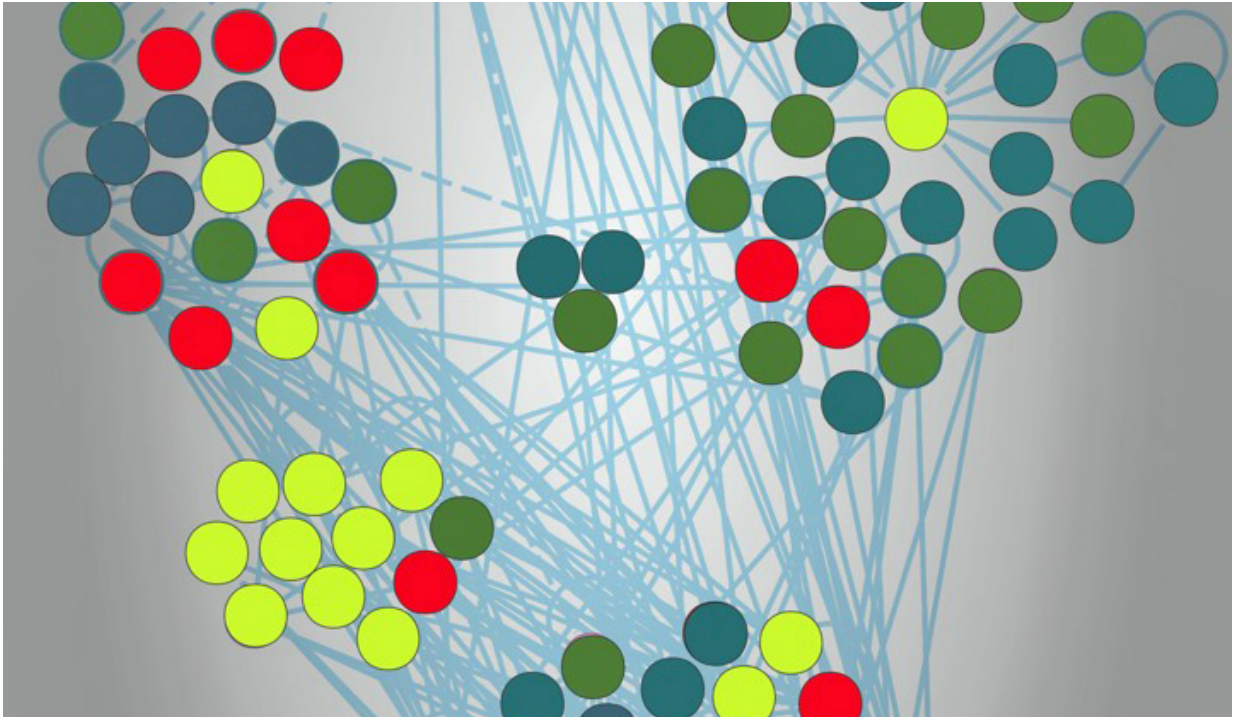


# Researchers solve multiple sclerosis puzzle

May 14 2015, by Bill Hathaway

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Credit: MIT

Evidence has long suggested multiple sclerosis (MS) is an autoimmune disease, but researchers have been puzzled because they found the same T cells that attack the myelin sheathing around nerve cells in MS patients are present in healthy subjects as well.

Now researchers from the Yale School of Medicine and colleagues at the Massachusetts Institute of Technology (MIT) report that auto-reactive T

cells in MS patients produce different types of inflammatory hormones called cytokines than they do in healthy subjects.

"In most people, these T cells are acting to repair tissue, but in MS patients, they do damage to the nervous system," said Dr. David Hafler, the William S. and Lois Stiles Edgerly Professor of Neurology and senior author of the study, published May 14 in the journal *Science Translational Medicine*.

The Yale-led team analyzed T cell populations from 23 MS patients and 22 healthy controls. Existing drugs target the MS-specific cytokines identified in the study and should be a promising new treatment for the disease, the authors say.

Hafler also noted that the same sort of process might be found in other [autoimmune diseases](#), such as rheumatoid arthritis and Type 1 diabetes.

**More information:** "Functional inflammatory profiles distinguish myelin-reactive T cells from patients with multiple sclerosis." *Sci. Transl. Med.* [DOI: 10.1126/scitranslmed.aaa8038](https://doi.org/10.1126/scitranslmed.aaa8038)

Provided by Yale University

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