

## This may explain why women are more likely to develop lupus

Every year, 16,000 cases of [lupus](#) are reported in the United States — 9 out of 10 of them in women. Scientists have long believed sex differences help explain women's predisposition for the autoimmune disease. But researchers said last week that they may now have one explanation for why exactly the presence of two X chromosomes increases the chances that a person will develop lupus.

Dozens of genes have been associated with lupus, but in [a new study](#), researchers focused on the overexpression of the gene Tlr7, which sits on the X chromosome.

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For their study, researchers studied the immune cells of healthy women, measuring the expression of Tlr7. They found that in some cells, both copies of the gene were making the protein TLR7.

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The researchers also discovered that the overexpression of Tlr7 — what is called biallelism, because both alleles are being expressed — led to changes in the cells and the proteins they produce that could induce autoimmune issues.

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[Researcher Jean-Charles] Guéry said his research did not show how or why exactly Tlr7 avoids X chromosome inactivation, but that it suggested limiting TLR7 levels might offer a new [therapeutic avenue](#) to treating lupus — a step that would be easier than trying to inactivate the second copy of the Tlr7 gene.

**Read full, original post:** [New study points to why so many more women develop lupus than men](#)