Alternative control: what's WASp doing in the nucleus?

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Public Summary:

Scientific Abstract:
Wiskott-Aldrich syndrome (WAS) is a rare X-linked recessive immunodeficiency disorder of childhood that is caused by mutations in the WAS gene. WAS encodes WASp, a protein that is known to function in the cytoplasm of hematopoietic cells and is required for the induced differentiation of CD4+ T helper type 1 (TH1) lymphocytes. Now, a paper in Science Translational Medicine describes another mechanism for impaired immunity in WAS by showing that WASp localizes in the nucleus and regulates histone modifications and chromatin structure, thereby modulating expression of the TH1 master gene TBX21 (TBET).