

Immune protein fends off exotic virus

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A study published online on February 1 in the *Journal of Experimental Medicine* shows that antiviral proteins called type I interferons (IFNs) are needed to fend off infection with an exotic mosquito-borne virus called Chikungunya virus. This pathogen, which causes high fevers and severe joint pain, triggered a recent epidemic in Southeast Asia, infecting more than 30% of the population in some areas.

A team led by Marc Lecuit and Matthew Albert at the Pasteur Institute in Paris found that individuals infected with Chikungunya virus had increased levels of type I IFNs in their blood. But the source of the virus-fighting IFN proteins came as a surprise. Viruses related to Chikungunya trigger type I IFN production mostly from immune cells.

But during Chikungunya infection, [immune cells](#) neither produced nor responded to type I IFNs. Rather non-immune cells called fibroblasts—the main target of [virus infection](#)—provided the essential type I IFN.

This unique feature should be taken into consideration in future efforts to develop therapeutic strategies for controlling Chikungunya virus infection.

More information: Schilte, C., et al. 2010. *J. Exp. Med.*
[doi:10.1084/jem.20090851](https://doi.org/10.1084/jem.20090851)

Provided by Rockefeller University

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