

Mild to murderous: Zika's one mutation evolution

Zika has been around for some time – first identified in 1947 in Uganda – but it was never really given much thought. It was around in Africa and Southeast Asia and those who were infected experienced vague, non-specific or mild symptoms.

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Everyone seemed to be stumped – what the heck made this virus all of a sudden decide to transition from a bratty younger sibling to a raging psychopath? A new study published in Science, researchers from a variety of Chinese institutions in collaboration with the University of Texas Medical Branch in Galveston, Texas, aimed to answer just this question. Was it something environmental or a genetic cause for this change.

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In human cultures of NPCs, the S139N mutation was found to cause more extensive cell death as well as in cultures of mouse NPCs. This same S139N substitution, when introduced to mouse fetuses at the second trimester, resulted in severe microcephaly and a thinner cortex.

Viral genome analyses revealed that this one substitution mutation emerged around May, 2013 and this correlated with timing of reports of microcephaly and other neurological conditions such as Guillan-Barre syndrome.

In concluding their paper, the investigators admit that the Asian ancestral strain was not completely devoid of neurovirulence, therefore, this one mutation likely isn't solely responsible for the pathological congenital findings.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [How Zika Evolved Into A Raging Psycho](#)