

## **The Ambiguous Mystery**

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Zika virus is not new. The first case of human infection was detected in Uganda and Tanzania in 1952. This flavivirus was associated with diseases in 1964. The virus is spread mainly by the bite of an infected mosquito, and may also be transmitted sexually.

In early 2016, the first cases of Zika virus were seen in South America. The number of cases steadily increased, followed by a wave of microcephaly in newborns, triggering great fear among pregnant Brazilians. The World Health Organisation declared a Public Health Emergency of International Concern in February 2016. As of September 2016, twenty countries have reported microcephaly, potentially associated with Zika virus infection.

Microcephaly is a condition where baby's brain is abnormally small and underdeveloped that leads to developmental delay, intellectual disability, hearing loss, and visual problems. Severe microcephaly can also be life-threatening. This artefact shows the differential occipitofrontal circumference of infants with moderate or severe microcephaly associated with maternal Zika virus infection, compared to a normal newborn brain. The mirror reflection on the other hand, depicts the ambiguity of Zika virus alone in causing microcephaly. For example, previous Zika virus outbreaks did not cause a microcephaly wave, and more than 12,000 cases of Zika virus-infected mothers gave birth to healthy babies without microcephaly in Colombia. Until the biological mechanism is successfully revealed, the relationship linking Zika virus and microcephaly is complex, and the biological mechanism remains a mystery.







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