Informing a rapid response to Brazil’s Zika epidemic

Mosquito-borne diseases such as Zika virus are on the rise. In 2016 a Zika outbreak in Brazil spread to North and South America and the World Health Organisation declared the outbreak a Public Health Emergency of International Concern, as evidence grew that Zika can cause birth defects as well as neurological problems.

A research collaboration Fundação Oswaldo Cruz Recife (Fiocruz) and the MRC-University of Glasgow Centre for Virus Research played a major role in Brazil’s response to the Zika epidemic. The first in the world to focus on Zika virus epidemiology, the project informed policy and resulted in basic understanding of the virus.

The research team was among the first to push for recognition of the link between Zika and microcephaly in babies and researchers trained staff at the Ministry of Health to use a new diagnostic method.

The project had a significant impact on Glasgow University’s capacity to undertake Zika research, due to the availability of the virus, and both institutions have since set up new partnerships and received additional funding to investigate the previously neglected disease.

Zika thrives in densely populated areas with poor sanitation. In the short-term, the research helped affected individuals – particularly poorer ones, with limited access to healthcare services – receive low-cost and rapid diagnostics. The findings from this project have enabled other research projects – including one looking into the creation of a vaccine – so the research could have a long-term impact at a global level.

“This award allowed us to closely collaborate with our colleagues at Fiocruz Recife at a critical time at the start of the Zika outbreak. We could move forward rapidly, doing our part of the work with a virus isolate provided by our colleagues in Recife. Data such as the viral sequence we generated from their isolate was critical for our experimental design, but was also useful to establish a molecular test that is currently used at routine clinical laboratory diagnosis of Zika suspect cases.”
Professor Alain Kohl

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