
# Zika virus outbreaks: Research and response

Ministério da Saúde
FIOCRUZ
Fundação Oswaldo Cruz
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December 4, 2018

# National Public Health Emergency

Nov 11, 2015

Dilma Rousseff durante reunião com governadores no Planalto (Foto: Roberto Stuckert Filho/Presidência)


# Public Health Emergency of International Concern


February 1st, 2016

DOI:10.2105/ Miranda et al. American Journal of Public Health - 2016

# Initial Description of the Presumed Congenital Zika Syndrome

*Demócrito de Barros Miranda-Filho, PhD, Celina Maria Turchi Martelli, PhD, Ricardo Arraes de Alencar Ximenes, PhD, Thalia Velho Barreto Araújo, PhD, Maria Angela Wanderley Rocha, MsC, Regina Coeli Ferreira Ramos, MsC, Rafael Dhalia, PhD, Rafael Freitas de Oliveira França, PhD, Ernesto Torres de Azevedo Marques Júnior, PhD, and Laura Cunha Rodrigues, PhD*

# Confirming the Zika-Microcephaly link

**Association between microcephaly, Zika virus infection, and other risk factors in Brazil: final report of a case-control study**

Lancet Infect Dis. 2017

## Study Design

- Case-control
- Prospectively recruited:

91 microcephaly cases and 173 controls

- Molecular and serological tests ZIKV

## Results

- 35% of cases lab-confirmed ZIKV
- No controls had ZIKV
- Odds ratio =73·1 (95% CI 13·0–∞) for microcephaly and Zika virus infection

- Neither vaccination during pregnancy or use of the larvicide pyriproxyfen was associated with microcephaly

Commission européenne

*Research and Innovation actions*
*Innovation actions*

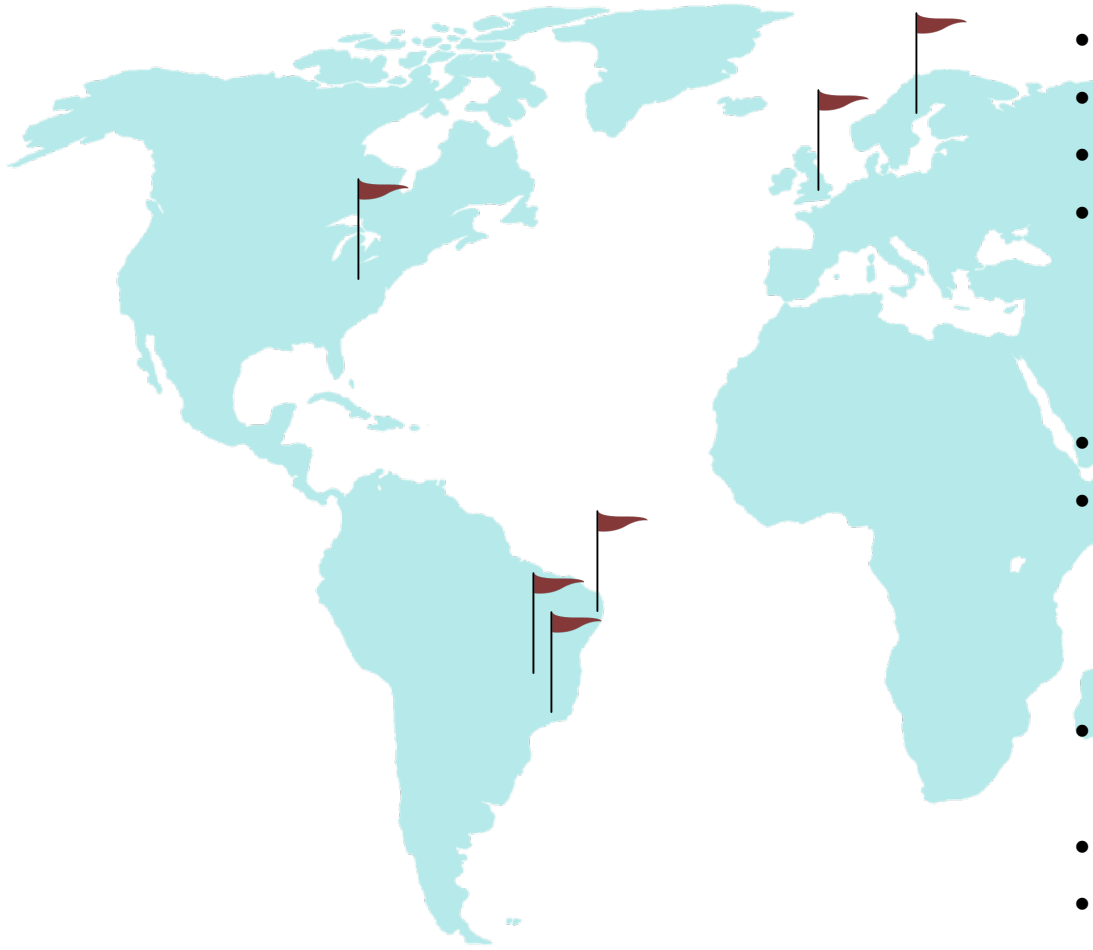
# Zika Preparedness Latin American Network

31 Oct 2016

Preparedness Latin American Network
ZikaPLAN

https://zikaplan.tghn.org/


1st ZikaPlan meeting. Recife, Oct 2016



- Celina Maria Turchi Martelli
- Thalia Velho Barreto de Araújo
- Demócrito Miranda-Filho
- Ricardo AA Ximenes
- Wayner Vieira de Souza
- Ulisses Ramos Montarroyos

- Marília Dalva Turchi
- Luiza Emylce Pela Rosado

- Maria Elisabeth Lopes Moreira

- Laura C. Rodrigues
- Elizabeth B. Brickley
- Annelies Wilder-Smith
- Hannah Kuper

**Work Package 1**

# Specific Tasks

**Task 1**

- Cohorts of pregnant women with rash

**Task 2**

- Cohorts of children with Congenital Zika Syndrome-CZS

**Task 3**

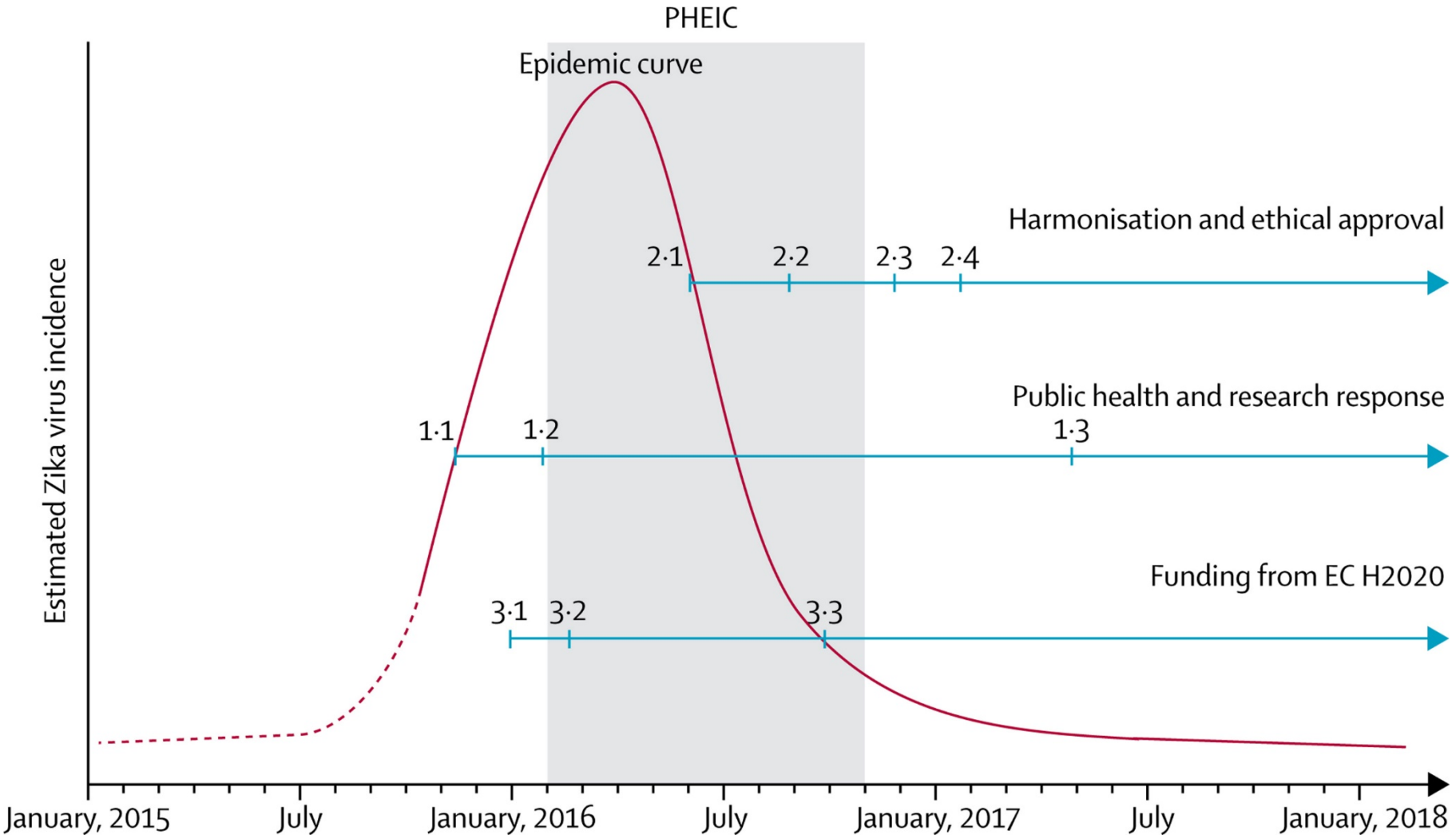
- Evaluation of social & economic impact of CZS

# Contributing to Joint Analyses


***Individual Participant Data Meta-analyses***

***WP 14: Zika Data Share***

# Timeline of funding and harmonisation of protocols




*The Lancet Infectious Diseases* DOI: (10.1016/S1473-3099(18)30497-3

# Prioritizing Severe Emerging Diseases for Research and Development

## Epidemic threat

1. Human transmission
2. Medical countermeasures
3. Severity or case fatality rate
4. The human/animal interface
5. The public health context
6. Potential societal impacts
7. Evolutionary potential

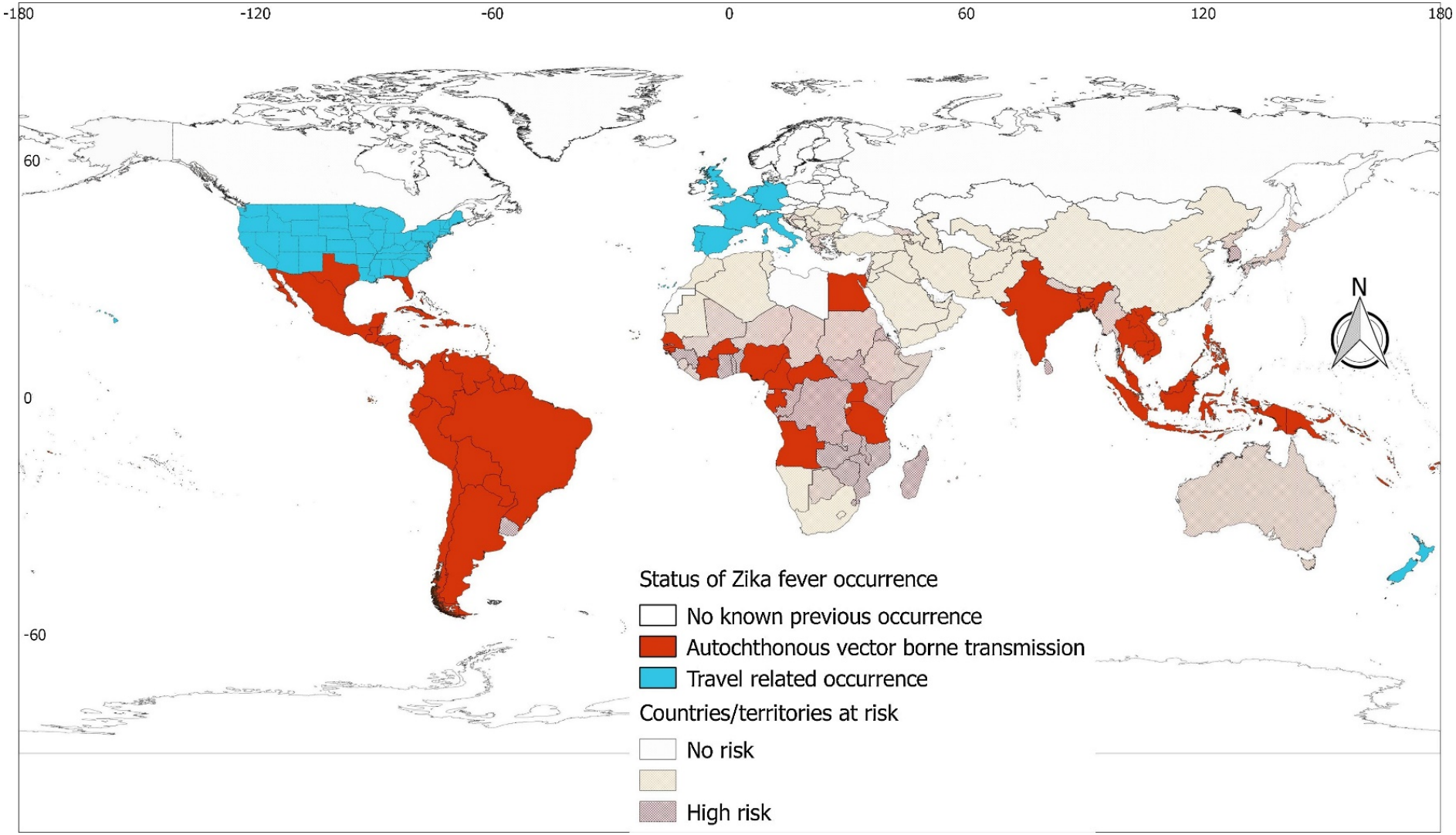
## Priority pathogens

- Zika
- Crimean-Congo Hemorrhagic Fever
- Ebola Viral Disease - Marburg Viral
- Lassa Fever
- MERS and SARS
- Nipah and henipaviral diseases
- Rift Valley Fever
- Disease X

World Health Organization

Feb. 2018

http://www.who.int/blueprint/priority-diseases/en/

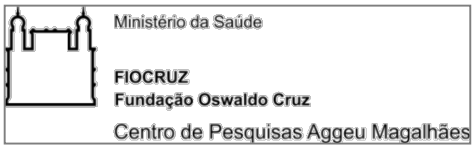



# Global risk mapping for major diseases transmitted by Aedes aegypti and Aedes albopictus

DOI: 10.1016/j.ijid.2017.11.026

# Partners


www.cpqam.fiocruz.br/merg









UFPE






# City at centre of Brazil's Microcephalic epidemic

**Recife in the north-east has seen a surge in cases of microcephaly** expected to expand Americas