

# Desarrollo de una agenda de investigación en temas prioritarios. El desarrollo tecnológico en torno al Zika.

Taller Regional Andino, Lima Perú,  
Junio 26, 2017

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*Pan American Health Organization*



Organización  
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de la Salud



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Mundial de la Salud

OFICINA REGIONAL PARA LAS Américas

# Agendas de Investigación sobre Zika

**THE LANCET**  
**Infectious Diseases**  
Volume 17, Issue 3, March 2017, Pages e101–e106

Personal View  
**Epidemic arboviral diseases: priorities for research and public health**

Prof Annetes Wilder-Smith, MD<sup>1,2,3,4</sup>, Prof Duane J Gubler, ScD<sup>1</sup>, Prof Scott C Weaver, PhD<sup>5</sup>, Prof Thomas P Monath, MD<sup>6</sup>, Prof David L Heymann, MD<sup>7</sup>, Prof Thomas W Scott, PhD<sup>8</sup>

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**PAHO/WHO Regional Research Agenda related to Zika virus infection**

Development of a research agenda for characterizing the Zika virus outbreak and its public health implications in the Americas

Pan American Health Organization | World Health Organization

**ZIKA VIRUS RESEARCH AGENDA**  
OCTOBER 2016

World Health Organization

**Zika Infection**

**Research Priorities**

What are the key research priorities for Zika virus infection? This workshop identified key research priorities for Zika virus infection, including: understanding the natural history of the virus, identifying high-risk populations, and developing interventions to reduce transmission.

**THE LANCET**  
Volume 387, Issue 10022, 5–11 March 2016, Pages 919–921

Comment  
**Zika virus and microcephaly in Brazil: a scientific agenda**

Mauricio L Barreto<sup>1\*</sup>, Manoel Barral-Neto<sup>2</sup>, Rodrigo Stabeli<sup>3</sup>, Naomar Almeida-Filho<sup>4</sup>, Pedro F C Vasconcelos<sup>5</sup>, Mauro Teixeira<sup>6</sup>, Paulo Buss<sup>7</sup>, Paulo E Gadelha<sup>8</sup>

[Show more](#)

May 10, 2016

**The Emerging Zika Virus Epidemic in the Americas Research Priorities**

Helen M. Lazear, PhD<sup>1</sup>; Elizabeth M. Stringer, MD<sup>2,3</sup>; Aravinda M. de Silva, PhD<sup>1,3</sup>

[Author Affiliations](#) | [Article Information](#)

JAMA. 2016;315(18):1945–1946. doi:10.1001/jama.2016.2899

THE NATIONAL ACADEMIES PRESS

This PDF is available at <http://www.nap.edu/23404>

Potential Research Priorities to Inform Public Health and Medical Practice for Domestic Zika Virus: Workshop in Brief

**DETAILS**  
8 pages | 8.5 x 11  
ISBN 978-0-309-43781-3 | DOI: 10.17726/23404

**AUTHORS**  
Justin Smair, Jack Herrmann, Lisa Brown, Scott Wollek, Erin Balogh, and Kimberly Maxwell Rappaport, Board on Health Sciences Policy, Institute of Medicine, Division on Earth and Life Studies, National Academies of Sciences, Engineering, and Medicine

## PRIORIDADES DE COOPERACIÓN INTERNACIONAL DEL SECTOR SALUD PARA COMBATIR EL VIRUS DEL ZIKA - Ministerio de Salud y Protección Social - Colombia

**RESEARCH & INNOVATION**  
Health

Current Commission | Research & Innovation | Health | Research Areas | Zika

**Key Research Areas**

**Zika**  
Zika is a mosquito-borne viral disease caused by the Zika virus (ZIKV) that has spread through the South Pacific and through large parts of Latin America since March 2015. There is scientific consensus that Zika virus is a cause of disease congenital brain malformations in infants born to mothers infected during pregnancy. In addition, evidence indicates that the virus also may cause Guillain-Barre syndrome in adults. The transmission of a novel mosquito-borne virus to the Americas was highlighted by The WHO Director-General in February 2016 that the novel outbreak of microcephaly cases and other neurological disorders is a public health emergency of international concern.

On 11 October 2016, WHO stated that 67 countries and territories have reported evidence of microcephaly (the virus transmission from 2015 onwards), and 52 have reported neurological and other central nervous system malformations that are potentially associated with Zika virus infection.

**EU-funded research projects**

### Special Communication

May 2017

## Bridging Knowledge Gaps to Understand How Zika Virus Exposure and Infection Affect Child Development

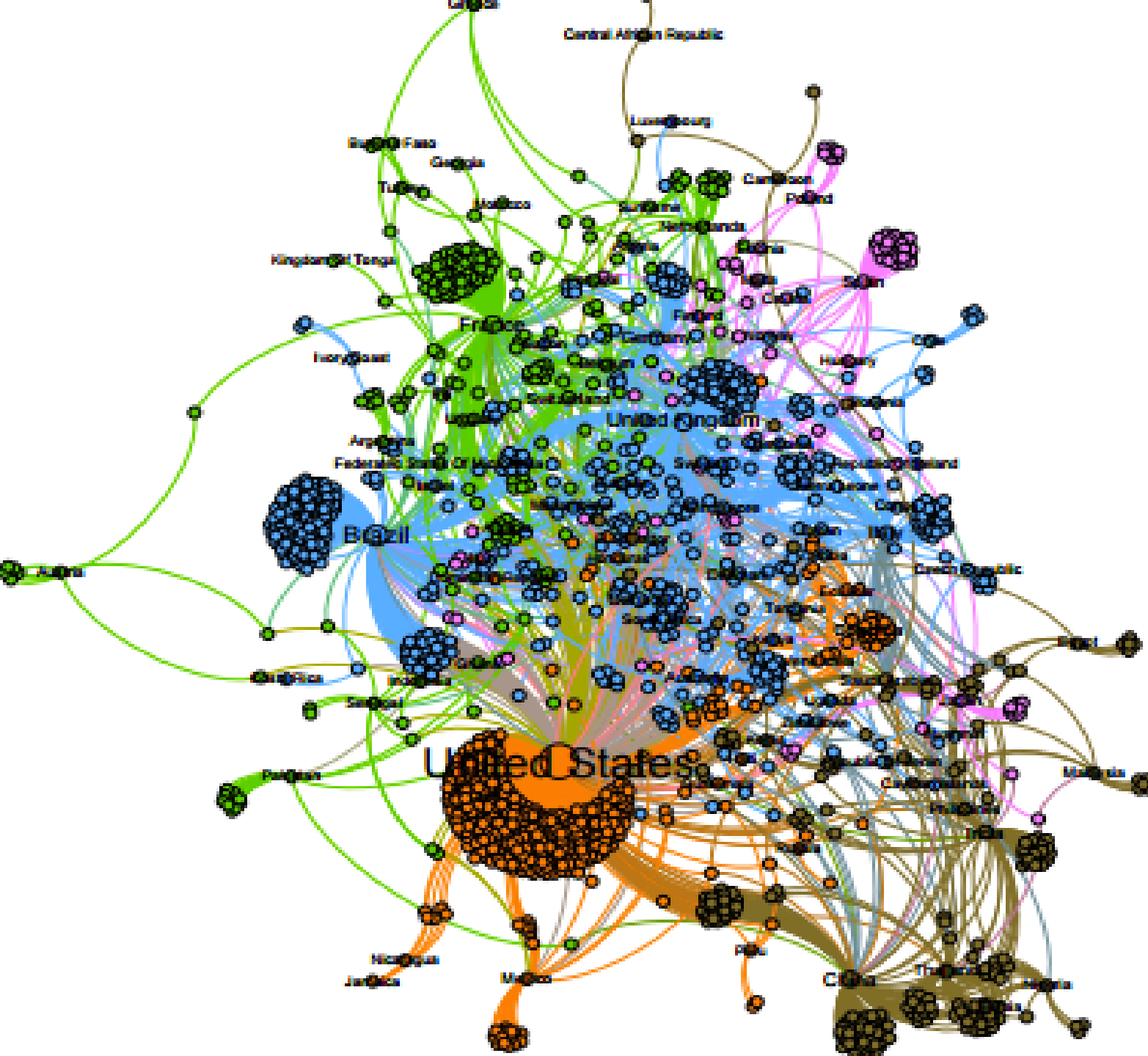
Bill G. Kogut, MD<sup>1</sup>; Nahida Chakhtoura, MD<sup>1</sup>; Rohan Hazra, MD<sup>1</sup>; et al.

[Author Affiliations](#)

JAMA Pediatr. 2017;171(5):478–485. doi:10.1001/jamapediatrics.2017.0002



ORICINA REGIONAL PARA LAS Américas



# Evaluación de la implementación de la agenda: identificación de brechas

## Science & Society

### Zika Virus and Microcephaly: Challenges for a Long-Term Agenda

Claudia Nunes Duarte dos Santos<sup>1,\*</sup> and Samuel Goldenberg<sup>2</sup>

## Special Communication

May 2017

### Bridging Knowledge Gaps to Understand How Zika Virus Exposure and Infection Affect Child Development

Bill G. Kapogiannis, MD<sup>1</sup>; Nahida Chakhtoura, MD<sup>1</sup>; Rohan Hazra, MD<sup>1</sup>; [et al](#)

> Author Affiliations

JAMA Pediatr. 2017;171(5):478-485. doi:10.1001/jamapediatrics.2017.0002

Review

### Zika in the Americas, year 2: What have we learned? What gaps remain? A report from the Global Virus Network

Matthew T. Aliota<sup>b</sup>, Leda Bassit<sup>a, c</sup>, Shelton S. Bradrick<sup>a, d</sup>, Bryan Cox<sup>a, c</sup>, Mariano A. Garcia-Blanco<sup>a, d</sup>, Christina Gavegnano<sup>a, c</sup>, Thomas C. Friedrich<sup>b, e</sup>, Thaddeus G. Golos<sup>e, f, g</sup>, Diane E. Griffin<sup>a, h</sup>, [Show more](#)

Home » American Journal of Public Health (AJPH) » June 2017

### The Zika Virus Outbreak in Brazil: Knowledge Gaps and Challenges for Risk Reduction

Claudia Garcia Serpa Osorio-de-Castro ScD, Elaine Silva Miranda ScD, Carlos Machado de Freitas ScD, Kenneth Rochel de Camargo ScD, and Hilarie Hartel Cranmer MD, MPH

Influencia de Zika sobre casos de dengue?  
Cross-protective immunity ZIKV - Dengue ?  
Zika virus infection elicits protective immunity?

# Plataforma de protocolos sobre ZIKV



[Zika Research Projects List](#) [Knowledge Translation](#) [Zika website](#) [PAHO](#)

Published primary research studies and protocols



[Go back to Research Projects List](#)

## General Category

- Please Choose -

## Type of publication

- Please Choose -

## Zika Research Projects List

Filter

### Análise genômica e funcional para a compreensão dos efeitos teratogênicos do vírus Zika

2016-3. *Mayana Zatz*

Full text:

<http://aplicacao.saude.gov.br/plataformabrasil/login.jsf;jsessionid=E6F7E35A6ECE6D8AD2A4027D45B232DC.server-plataformabrasil-srvjpdf130>

### Avaliação da imunidade inata e resposta humoral autoimune na infecção por vírus Zika em pacientes com e sem síndrome Guillan-Barré (SGB)

2016-3. *Eloisa Silva Dutra de Oliveira Bonfa*

Full text:

<http://aplicacao.saude.gov.br/plataformabrasil/login.jsf;jsessionid=E6F7E35A6ECE6D8AD2A4027D45B232DC.server-plataformabrasil-srvjpdf130>

## Zika Resources

- Missions to support countries
- Events
- Epidemiological Alerts and Updates
- Guidance for reporting ZIKV
- Technical Reports and Guidelines
- Microcephaly
- News
- Countries with local transmission
- Communication Materials
- Resource Mobilization
- WHO website
- [Back to Zika page](#)

## PAHO Institutional Repository

## Information Resources about Zika

[Click here](#)

[Pan American Journal of Public Health / Revista Panamericana de Salud Pública](#)



## Virtual Health Library

 [Search in the VHL Portal.](#)  
[Click Here](#)

# Características de estudios incluidos en la Plataforma de protocolos de investigación de OPS n= 264

A. Classification of protocols by subtopic, N=264*	N (%)
Clinical management	90 (34.09)
Disease pathogenesis and consequences of infection	37 (14.02)
Epidemiology	79 (29.92)
Ethical aspects	3 (1.14)
Health systems and services response	8 (3.03)
Public health interventions	23 (8.71)
Research and development of products	13 (4.92)
Virus Vectors and Reservoirs	11 (4.17)

A. Type of study, N=76	N (%)
Basic research	10 (13.16)
Case control	13 (17.11)
Case report	4 (5.26)
Case series	5 (6.58)
Clinical trials	1 (1.32)
Cohort	32 (42.1)
Cross sectional	8 (10.53)
Experimental development	2 (2.64)
Review and cost estimation	1(1.32)

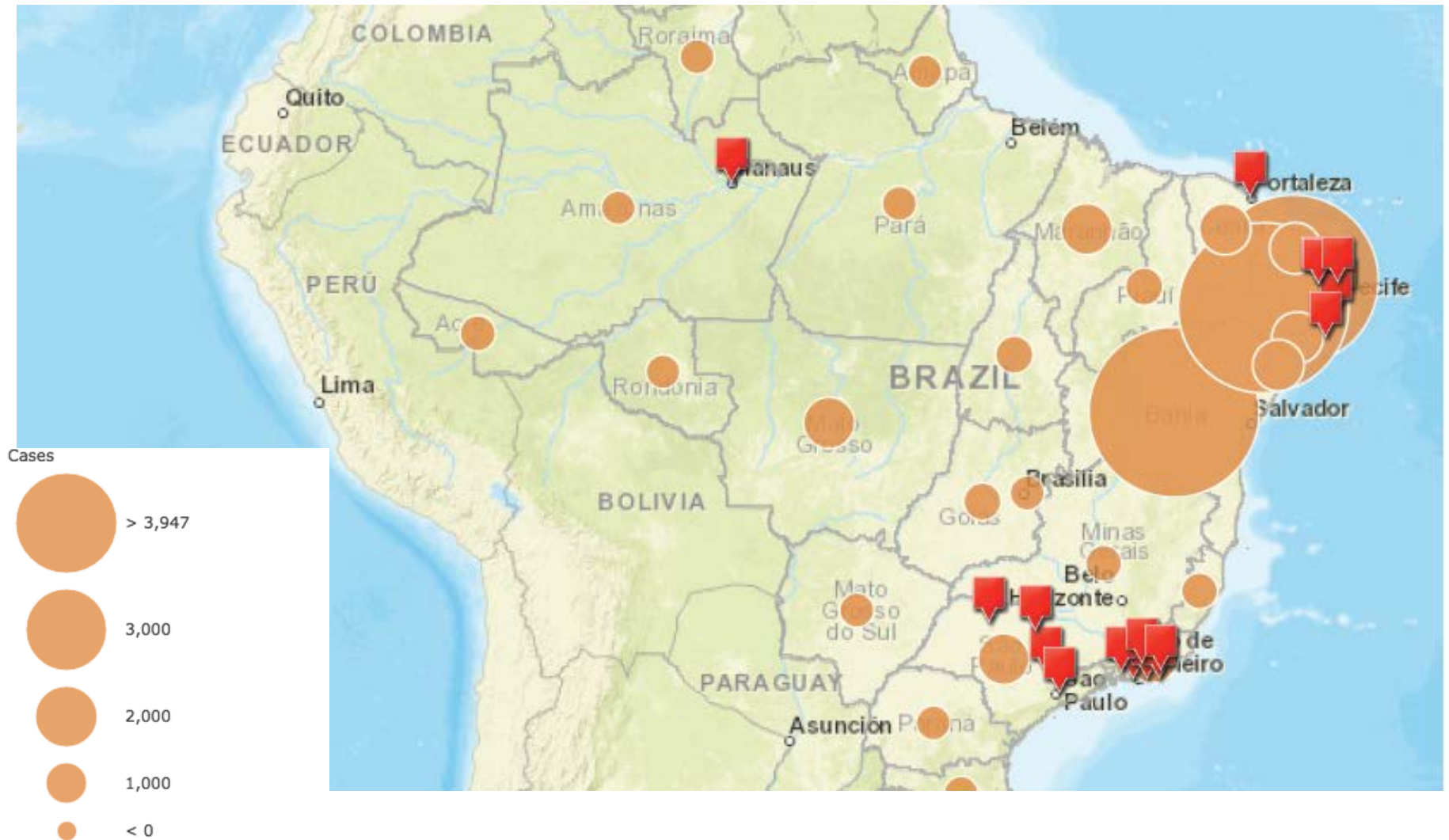
A. Classification of protocols by subtopic, N=264*	N (%)
Children	19 (8.92)
Children presenting microcephaly	61 (28.64)
GBS	17 (7.98)
General population	53 (24.88)
Health workers	5 (2.35)
Macaques	2 (0.94)
Men	5 (2.35)
Military and families	1 (0.47)
Placenta	2 (0.94)
Pregnant women	16 (7.51)
Pregnant women and children	31 (14.55)
Women of reproductive age	1 (0.47)



# Estudios de cohorte N=36

Children presenting microcephaly (n=2)	Characterize the clinical condition and describe the neurocognitive growth and development	2 years	HC* ≤ 32 cm born with 37-42 weeks or HC ≤ percentile 3 (2 SD) on Fenton's growth curve and CT findings consistent with congenital CNS infection	Children born with normal HC	Visual/ hearing impairment, Epilepsy Hospitalizations Mortality
Pregnant women (n=14)	Estimate the RR for congenital malformations in pregnant women	Birth	Pregnant women presenting rash Asymptomatic cases Zika+ though PCR	Absence of rash No clinical symptoms of ZIKV infection Negative laboratory result for ZIKV	Miscarriage/stillbirth Pregnancy complications Microcephaly and other abnormalities of the central nervous system
Pregnant women and their children (n=19)	Estimate the RR for congenital malformations in pregnant women and adverse outcomes in pregnancy, childbirth and babies	6 weeks-3 years	Pregnant woman with rash and fever Zika+ confirmed by clinical or laboratory High risk pregnant woman without symptoms, pregnant woman with rash and fever, and pregnant women with abortions HIV positive	Pregnant women	Microcephaly Congenital malformations Adverse outcomes in children
Arbovirus+ patients (n=1)	Demographic, clinical, biological, virologic, immunologic genetic factors associated with arbovirus infections.	12 weeks	Suspected of infectious by an arbovirus Acute febrile/ rash illness consistent with arbovirus	-	Adverse outcomes: shock, internal bleeding, failure of one or several organs or systems Changes in quality of life
ZIKA+ patients (n=1)	To assess the presence and duration of infectious ZIKV and related markers	4 weeks	Positive RT-PCR for ZIKV in a serum or urine	-	Incidence rate of ZIKV persistence in semen

# Cohortes sobre Zika en Brazil





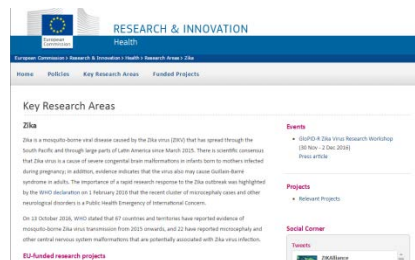
# Six standardized protocol designs for the study of ZIKV

- 1) Cross-sectional seroprevalence study of ZIKV infection in the general population
- 2) *Prospective longitudinal cohort study of ZIKV-infected patients to measure the persistence of ZIKV in body fluids*
- 3) *Prospective longitudinal cohort study of women and newborns exposed to ZIKV during the course of pregnancy*
- 4) *Prospective longitudinal cohort study of newborns and infants born to mothers exposed to ZIKV during pregnancy*
- 5) Case-control study to assess potential risk factors related to microcephaly, including ZIKV infection during pregnancy
- 6) Case-control study to assess potential risk factors related to Guillain-Barre Syndrome (GBS), including ZIKV infection

# Financiamiento de la Investigación sobre Zika

## Zika epidemic fast-tracks research funding in Brazil

March 02, 2016



**Basic Research**

NIAD is supporting basic research to better understand the Zika virus' natural history and evolution, viral biology, structure, replication, transmission, and pathogenesis (ability to cause disease) as well as the virus' interactions with mosquitoes and the human immune response to Zika. Currently, NIAD is developing animal models that could be used to test and evaluate candidate therapeutics and vaccines.

[Read more about Zika virus basic research >](#)

**Vaccines**

NIAD is actively working on vaccine candidates to prevent Zika virus infection. Fortunately, NIAD scientists had already created vaccine platforms for other flaviviruses that can be used as a starting point for a Zika vaccine. Specifically, NIAD is currently pursuing several vaccine approaches.

[Read more about Zika virus vaccines >](#)

**Diagnosis**

Accurate diagnostic tests for Zika virus infection are needed to distinguish it from other flavivirus infections and to identify women who have been infected with Zika virus during pregnancy and may be at risk for developing fetal complications. Blood, organ and tissue donor screening tests are also needed to assure the safety of transfusion and transplantation in areas of active mosquito-borne virus transmission.

[Read more about Zika virus diagnosis >](#)

**Treatment**

NIAD used its existing antiviral drug screening program for other flaviviruses, such as dengue, West Nile, yellow fever, and Japanese encephalitis, to create a test that could examine drug compounds for potential antiviral activity against Zika virus. To date, the test has been used to evaluate more than 60 antiviral compounds for activity against Zika. 15 of these compounds have been found to have moderate to high activity and are undergoing further evaluation.

[Read more about Zika virus treatment >](#)



## Who is funding zika published research?

### Methods:

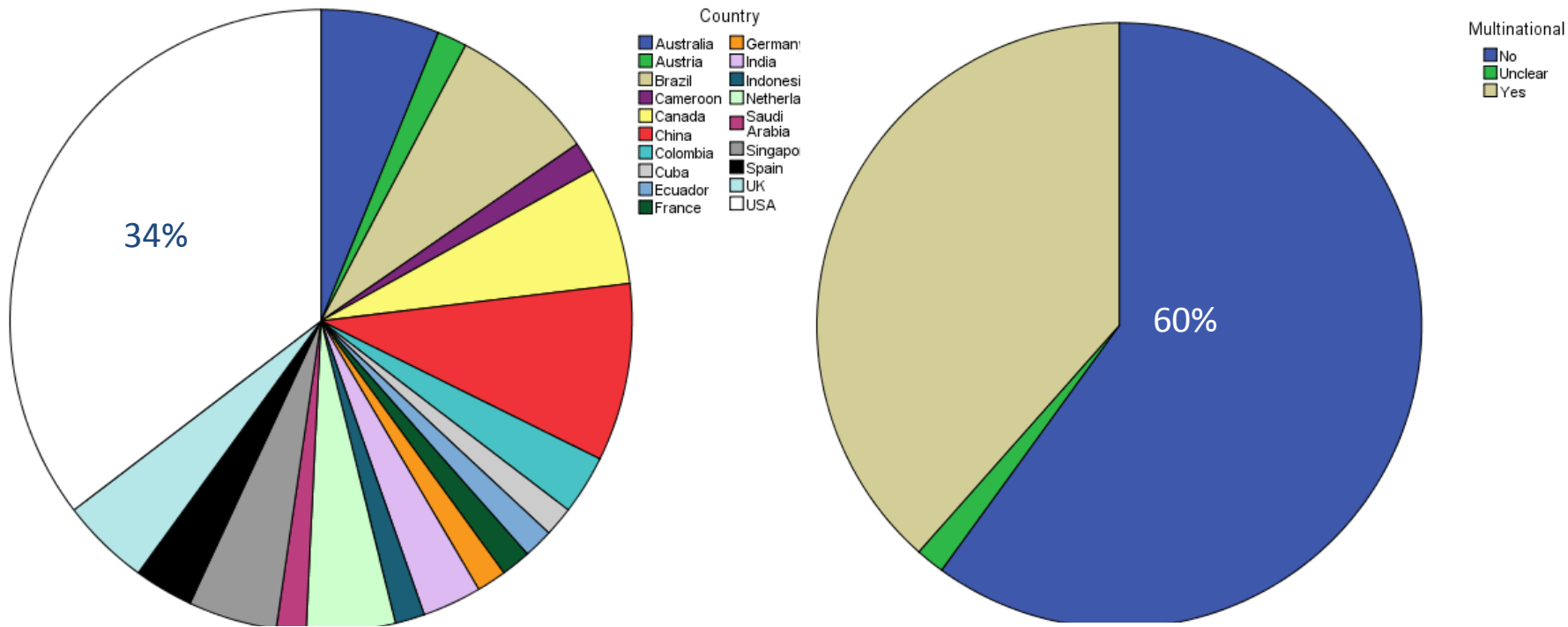
- A cross sectional study of primary research
- Articles on primary studies investigating Zika virus published from January 2007 to October 2016

### Results:

- 268 met the inclusion criteria
- 48 countries with Brazil 49/268 (18.3%) and USA 59/268 (22.0%) conducting the majority of the research
- The laboratory study design 80/268 (29.9%); case reports 68/268 (25.4%) and case series 54/268 (20.1%); research involving animals 22/268 (8.2%).
- 60% reported source of funding; 57% public funding;
- 146 funding bodies are represented as the primary financial source of assistance for Zika Virus research. National Institute of Health (NIH) represents 22.6%.

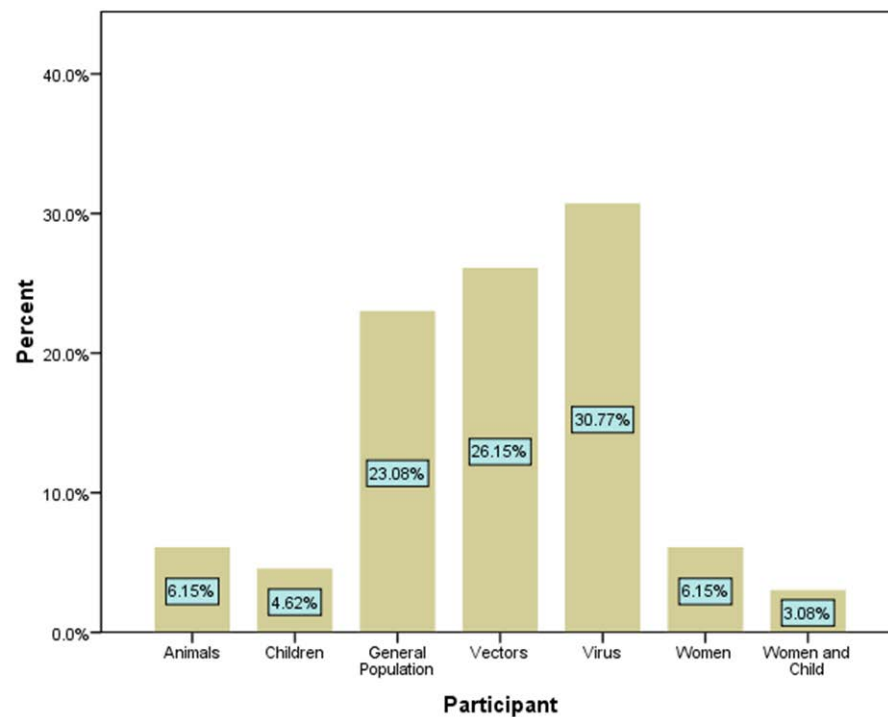
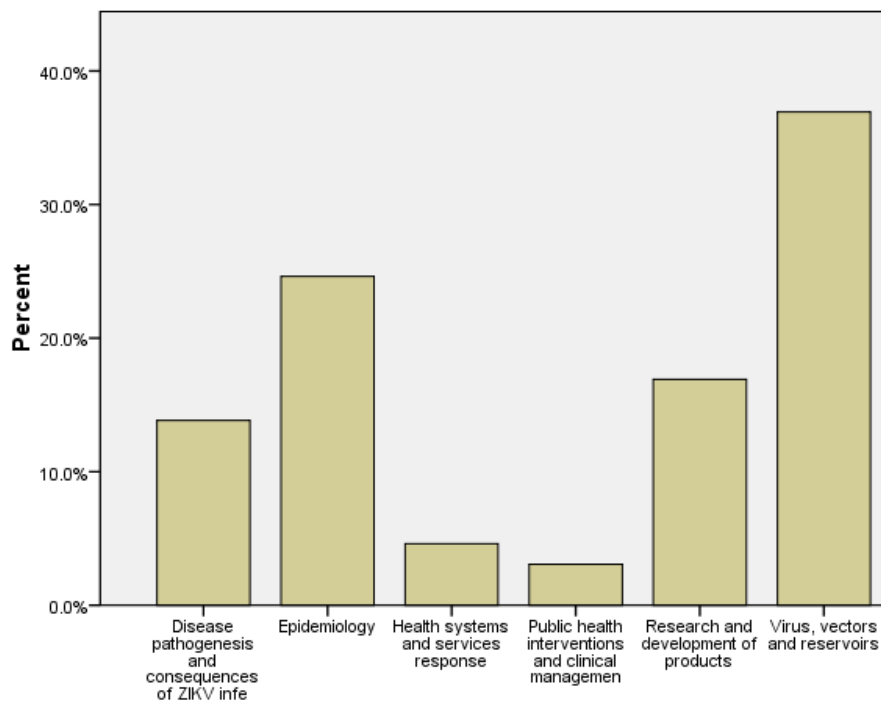


# Publicaciones recientes de estudios primarios sobre zika



N=65 estudios primarios / 167 referencias indexadas recientemente por Pubmed

# Publicaciones recientes de estudios primarios sobre zika

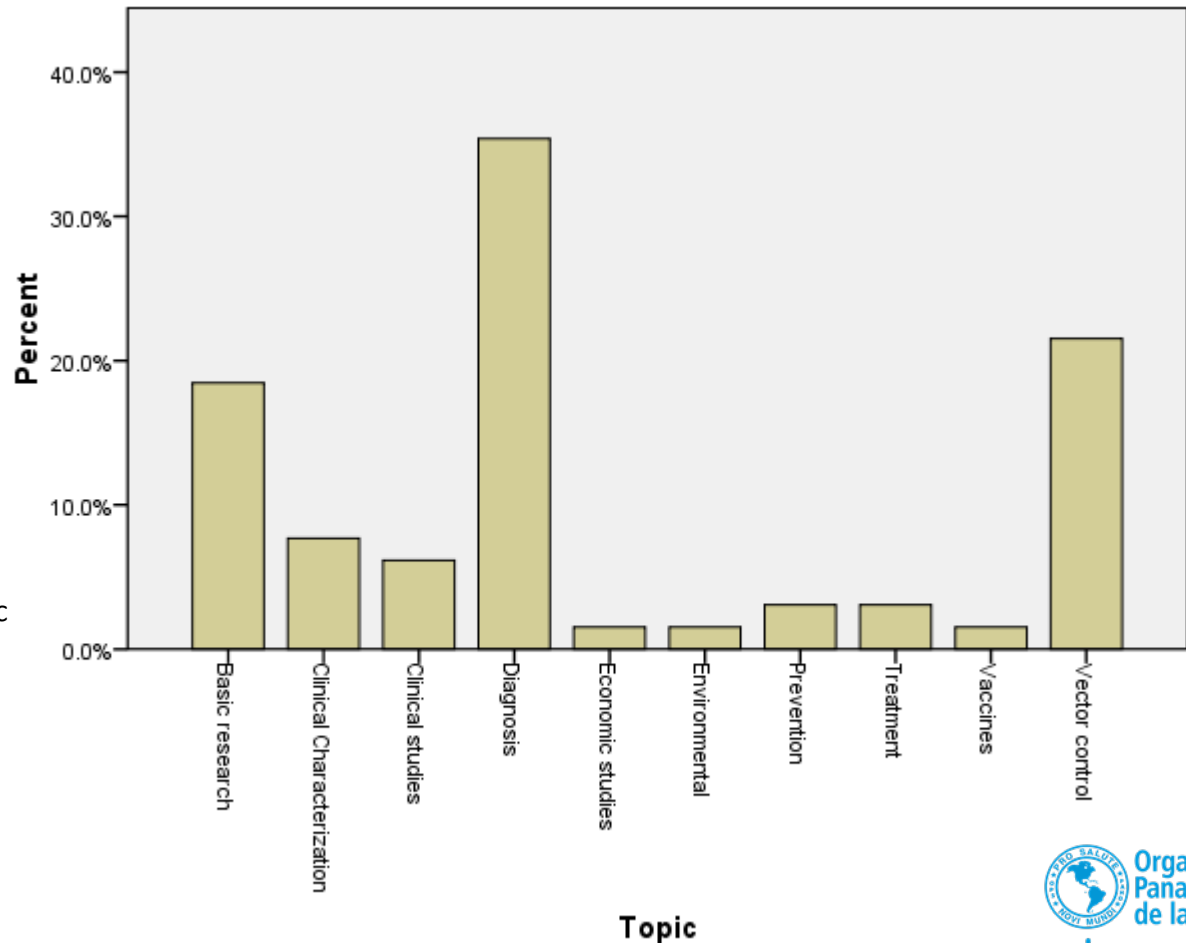


N=65 estudios primarios / 167 referencias indexadas recientemente por Pubmed

# Publicaciones recientes de estudios primarios sobre zika

Current literature:

- Clinical manifestations and epidemiology of ZIKV
- Isolation and Characterization of ZIKV
- Development of animal models to study ZIKV infection, host immune responses against ZIKV,
- Current state of development of vaccines and therapeutics against ZIKV
- Diagnostics: serological test; nucleic acid amplification tests; imaging
- Vector control



# Estudios sobre tratamiento:

NIAID utiliza su programa de tamizaje sobre antivirales para evaluar su efectos sobre Zika. Asimismo se evalúan los medicamentos aprobados por la FDA.

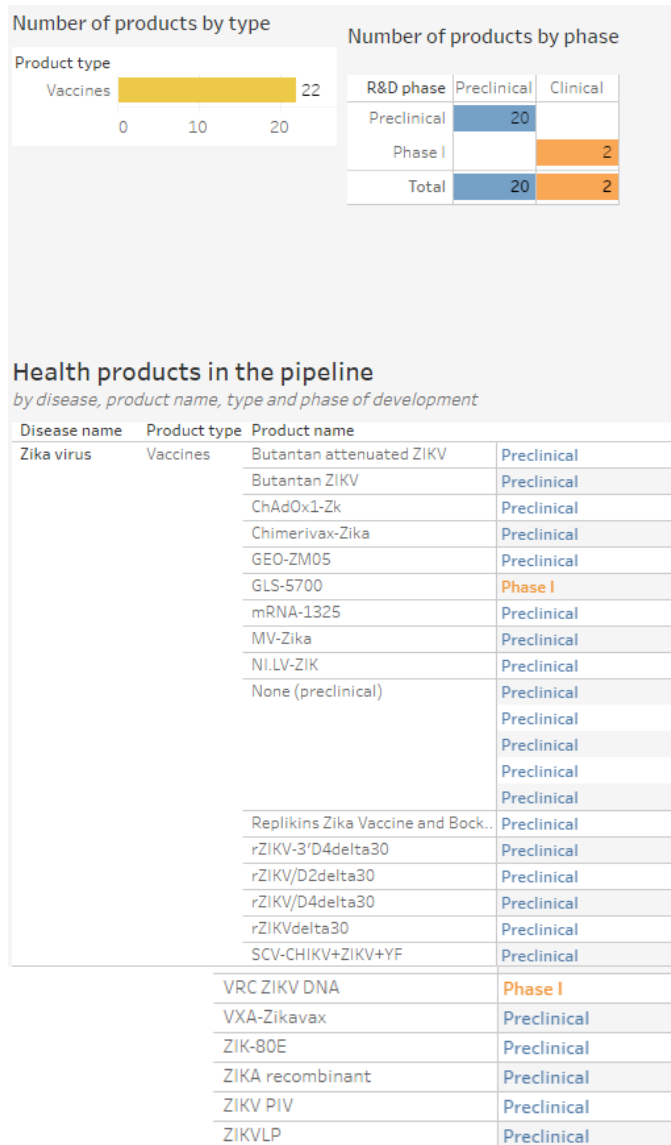
**“Number of NIH compounds and FDA approved drugs such as have shown potent anti-ZIKV activity *in vivo* as well as *in vitro*” :**

“SaliPhe, CID 91632869, NITD, pyrimidine synthesis inhibitors e.g, brequinar, 6-azauridine and finasteride, saliphenylhalamide, gemcitabine, obatoclox, kitasamycinm, lovastatin, 6-azauridine, palonosetron, 5-fluorouracil, emricasan, niclosamide, ten cyclin-dependent kinases specifically PHA-690509, PHA-690509, sofosbuvir, Type I Interferons, mycophenolic acid (MPA), chloroquine, 2'-C-methylated nucleosides, azithromycin, T-1105, 2'-C-methylcytidine (2CMC), CX4430 and GS-5734”

“Accumulating evidence suggest the potent anti-ZIKV activity of number of **monoclonal antibodies**. ZIKV-117 was found to be the most inhibitory antibody that prevented the replication of ZIKV and fetal disease in mice. Moreover, another study demonstrate that **administration of convalescent** serum from a subject recovered from ZIKV in pregnant mice resulted in suppression of ZIKV likewise, adoptive transfer of purified IgG from vaccinated mice triggered passive protection”.

Amjad Ali. Advances in research on Zika virus. Asian Pacific Journal of Tropical Medicine 2017; 10 (4) 321–331;

# Ensayos clínicos sobre vacunas:



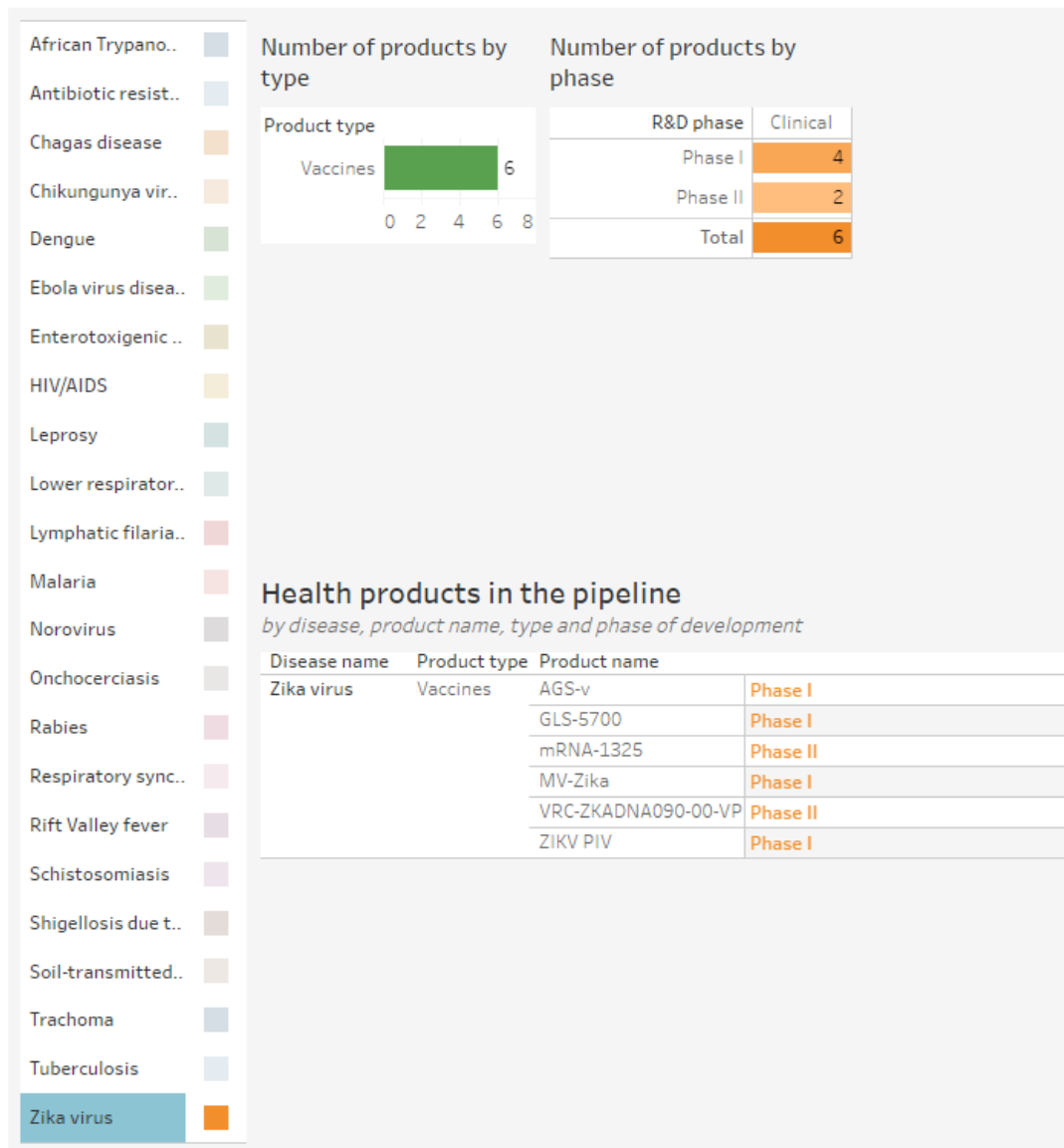
## Global Observatory on Health R&D

“Candidate health products (e.g. medicines, vaccines and diagnostics) that are currently under development are reported by disease, product name, type, and phase of development.

- Inactivated Whole Organism (with or without Adjuvant)
- DNA vaccines
- RNA vaccines
- Recombinant Viral Vector

# Ensayos clínicos sobre vacunas:

## Data visualization 1





# Ensayos clínicos sobre vacunas:

**Table 1.** Summary of anti-Zika virus (ZIKV) vaccine candidates currently in clinical trials.

Type of Vaccine	Developers/Collaborators	Candidate Vaccine Name (If Available)	Stage of Development	Clinical Trial Registration Number
Inactivated whole organism	WRAIR/BIDMC/Harvard/NIAID/Sanofi Pasteur		Clinical (Phase 1)	NCT02963909 NCT02952833 NCT02937233
DNA	GeneOne Life Science, Inc/Inovio Pharmaceuticals	GLS-5700	Clinical (Phase I)	NCT02809443 NCT02887482
DNA	VRC/NIAID	VRC ZIKV DNA	Clinical (Phase I)	NCT02840487 NCT02996461
Synthetic peptide	NIAID	AGS-v	Clinical (Phase I)	NCT03055000
Measles-vectored	Themis Bioscience	MV-ZIKA	Clinical (Phase I)	NCT02996890
mRNA	Valera (Moderna)	mRNA-1325	Clinical (Phase I)	NCT03014089

WRAIR: Walter Reed Army Institute of Research, BIDMC: Beth Israel Deaconess Medical Center, NIAID: National Institutes of Allergy and Infectious Diseases, VRC: Vaccine Research Center.

Monica A. McArthur Zika Virus: Recent Advances towards the Development of Vaccines and Therapeutics. *Viruses* 2017, 9, 143;

# Ensayos clínicos sobre vacunas: ICTRP

A Phase 1, Multicenter, Double-Blind, Placebo-Controlled, Randomized (Intra-Group) Clinical Trial to Evaluate Two Doses of Three Sequentially Escalating Cohort of Zika Virus Vaccine Inactivated (Adsorbed) (BBV121) in Healthy Adult Dengue Sero-Negative and Dengue Sero-Positive Volunteers [05-2017]

Country: India

Participants: Normal healthy male and female volunteers aged between 18 and 65 year

Intervention: Zika vaccine is an inactivated virus vaccine

Outcomes: safety (lab, AE, SAE post vaccination)

Sponsor: private

Not recruiting

A Phase 2/2B, Randomized Trial to Evaluate the Safety, Immunogenicity and Efficacy of a Zika Virus DNA Vaccine in Healthy Adults and Adolescents [03-2017]

Countries: Puerto Rico, United States

Participants: part A: 18 to 35; Part B: 15 to 35; Exclusion Criteria: Breast-feeding or planning to become pregnant while participating through 12 weeks after the last product administration

Intervention: VRC-ZKADNA090-00-VP

Outcomes: Antibody response 0 to 28 days post product administration; Confirmed cases of Zika Day 0 through Day 672

Sponsor: VRC, NIAID, NIH and private

Recruiting

# Ensayos clínicos sobre vacunas: ICTRP

A Non-blinded Cluster Randomised Controlled Trial to Assess the Efficacy of Wolbachia-infected Mosquito Deployments to Reduce Dengue Incidence in Yogyakarta, Indonesia [03-2017]

Country: Indonesia

Participants: 3-30 years old; Resided in the study area every night for the 10 days preceding illness onset

Intervention: Wolbachia-infected *Aedes aegypti* mosquitoes

Outcomes: Zika incidence rate ratio in Wolbachia-treated versus untreated clusters [Time Frame: 24 months participant enrolment]

Sponsor: University

Not recruiting

A Randomized, Double-Blind, Controlled, Parallel Group Study With the INTERCEPT Blood System for Red Blood Cells in Regions at Potential Risk for Zika Virus Transfusion-Transmitted Infections (RedeS Study) and Treatment Use Open-Label Extension Study [01-2017]

Countries: Puerto Rico, United States

Participants: 18 Patients who are required or expected to require a transfusion of RBC component(s).

Intervention: INTERCEPT Blood System for Red Blood Cells

Outcomes: Treatment emergent antibodies; AE; adjusted hemoglobin increment averaged over multiple transfusion

Sponsor: Private

Recruiting

# Ensayos clínicos sobre vacunas: ICTRP

A Phase 1/2, Randomized, Placebo-Controlled, Dose-Ranging Study to Evaluate the Safety and Immunogenicity of mRNA 1325 Zika Vaccine in Healthy Adults in a Non-endemic Zika Region[01-2017]

Country: United States

Participants: 18 to 49 years of age. - Women of childbearing potential must agree to be heterosexually inactive or agree to consistently use any of the following methods of contraception from at least 21 days prior to enrollment and through 3 months after the final vaccination; Male subjects must use an acceptable method of birth control throughout the entire study and agree to refrain from donation of sperm from the time of first vaccination until 3 months following the last vaccination

Intervention: mRNA-1325

Outcomes: Types, frequency, and severity of serious adverse events (SAE), adverse events of special interest (AESI) and adverse events considered related to study drug [Time Frame: Through 13 months of study participation]

Sponsor: Private

Recruiting

VRC 320: A Phase I, Randomized Clinical Trial to Evaluate the Safety and Immunogenicity of a Zika Virus DNA Vaccine, VRC-ZKADNA090-00-VP, Administered Via Needle and Syringe or Needle-free Injector, PharmaJet, in Healthy Adults [01-2017]

Countries: United States

Participants: 18 to 50 years; excludes female-specific: Breast-feeding or planning to become pregnant while participating through 12 weeks after the last study vaccination

Intervention: VRC-ZKADNA090-00-VP

Outcomes: safety and tolerability of v ZIKV DNA vaccine through 44 weeks of study participation; magnitude and the frequency of ZIKV-specific antibody response as measured by neutralization assay

Sponsor: NIAID

Not recruiting

# Ensayos clínicos sobre vacunas: ICTRP

Phase I, Randomized, Double-blinded, Placebo-Controlled Dose De-escalation Study to Evaluate Safety and Immunogenicity of Alum Adjuvanted Zika Virus Purified Inactivated Vaccine (ZPIV) in Adults in a Flavivirus Endemic Area [12-2016]

Country: Puerto Rico

Participants: Must be a male or non-pregnant, non-breastfeeding female between the age of 21 and 49 years, inclusive at the time of screening and enrollment

Intervention: Zika Virus Purified Inactivated Vaccine (ZPIV)

Outcomes: study withdrawals and discontinuation of study vaccination due to any reason between dosage groups and by pre-vaccination flavivirus immune status [Time Frame: Days 1 to 750]; AE;SAE; Frequency of seroconversion

Sponsor: Private

Recruiting

VRC 320: A Phase I, Randomized Clinical Trial to Evaluate the Safety and Immunogenicity of a Zika Virus DNA Vaccine, VRC-ZKADNA090-00-VP, Administered Via Needle and Syringe or Needle-free Injector, PharmaJet, in Healthy Adults [01-2017]

Countries: Puerto Rico, United States

Participants: 18 to 50 years; excludes female-specific: Breast-feeding or planning to become pregnant while participating through 12 weeks after the last study vaccination

Intervention: VRC-ZKADNA090-00-VP

Outcomes: safety and tolerability of v ZIKV DNA vaccine through 44 weeks of study participation; magnitude and the frequency of ZIKV-specific antibody response as measured by neutralization assay

Sponsor: NIAID

Recruiting

# Ensayos clínicos sobre vacunas: ICTRP

Phase I, Randomized, Double-blinded, Placebo-Controlled Dose De-escalation Study to Evaluate Safety and Immunogenicity of Alum Adjuvanted Zika Virus Purified Inactivated Vaccine (ZPIV) in Adults in a Flavivirus Endemic Area [12-2016]

Country: Puerto Rico

Participants: Must be a male or non-pregnant, non-breastfeeding female between the age of 21 and 49 years, inclusive at the time of screening and enrollment

Intervention: Zika Virus Purified Inactivated Vaccine (ZPIV)

Outcomes: study withdrawals and discontinuation of study vaccination due to any reason between dosage groups and by pre-vaccination flavivirus immune status [Time Frame: Days 1 to 750]; AE;SAE; Frequency of seroconversion

Sponsor: Private

Recruiting

Double Blinded, Randomized, Placebo Controlled, Dose Finding Trial to Evaluate the Optimal Dose of MV-ZIKA, a New Vaccine Against Zika Virus, in Regard to Immunogenicity, Safety, and Tolerability in Healthy Volunteers [12-2016]

Countries: Austria

Participants: healthy volunteers aged 18 to 55; subjects of child bearing potential must perform reliable method of contraception

Intervention: MV-ZIKA

Outcomes: Immunogenicity: Functional anti-Zika antibodies as measured by PRNT [Time Frame: 56 days]

Sponsor: Private

Recruiting

# Ensayos clínicos sobre vacunas: ICTRP

A Phase 1, First-in-human, Double-blinded, Randomized, Placebo-controlled Trial of a Zika Virus Purified Inactivated Vaccine (ZPIV) With Alum Adjuvant in Healthy Flavivirus-naive and Flavivirus-Primed Subjects.

Country: Puerto Rico

Participants: Must be a male or non-pregnant, non-breastfeeding female between the ages of 18 and 49 years, inclusive, at the time of screening and enrollment

Intervention: IXIARO; YF Vax 17D Strain; Zika Virus Purified Inactivated Vaccine (ZPIV)

Outcomes: AE; SAE; Anti- ZIKV NAb GMTs; Anti- ZIKV NAb seroconversion

Sponsor: Private

Recruiting

Phase 1, Double-blinded, Placebo-Controlled Dose De-escalation Study of the Safety and Immunogenicity of Alum Adjuvanted Zika Virus Purified Inactivated Vaccine (ZPIV) Administered by the Intramuscular Route in Flavivirus Naïve Adult Subjects [10 - 2016]

Countries: USA

Participants: Must be a male or non-pregnant, non-breastfeeding female between the age of 18 and 49 years, inclusive at the time of screening and enrollment; Women of childbearing potential\* must have a negative serum pregnancy test at screening and a negative urine pregnancy test immediately prior to each vaccination Note: All female subjects are considered of childbearing potential unless postmenopausal or surgically sterilized and  $\geq 3$  months have passed since sterilization procedure. Postmenopausal is defined as amenorrhea for  $\geq 12$  months without an alternative medical cause. Permanent female sterilization procedures include tubal ligation, bilateral salpingectomy, hysterectomy, bilateral oophorectomy, or successful Essure placement. Women of childbearing potential must use an acceptable method of contraception from one month (30 days) prior to the first vaccination until at least 60 days after the last vaccination; Acceptable methods of contraception include the following: ...

Intervention: Biological: Zika Virus Purified Inactivated Vaccine (ZPIV)

Outcomes: local or systemic reactogenicity; AE; SAE; GMT; seroconversion

Sponsor: (NIAID)

Recruiting



# Ensayos clínicos sobre vacunas: ICTRP

[A Phase 1, Randomized, Double-Blind Placebo-Controlled Clinical Trial to Evaluate the Safety and Immunogenicity of an Accelerated Vaccination Schedule With a Zika Virus Purified Inactivated Vaccine Plus Alum Adjuvant in Healthy Adults \[12-2016\]](#)

Country: Puerto Rico

Participants: Age 18-50 years old.

Intervention: Zika Virus Purified Inactivated Vaccine (ZPIV)

Outcomes: study withdrawals and discontinuation of study vaccination due to any reason between dosage groups and by pre-vaccination flavivirus immune status [Time Frame: Days 1 to 750]; AE;SAE; Frequency of seroconversion

Sponsor: Private

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[Double Blinded, Randomized, Placebo Controlled, Dose Finding Trial to Evaluate the Optimal Dose of MV-ZIKA, a New Vaccine Against Zika Virus, in Regard to Immunogenicity, Safety, and Tolerability in Healthy Volunteers \[12-2016\]](#)

Countries: Austria

Participants: healthy volunteers aged 18 to 55; subjects of child bearing potential must perform reliable method of contraception; 7. All female participants must be willing to undergo serum or urine beta human chorionic gonadotropin pregnancy tests at time points indicated in the Schedule of Procedures and must test negative prior to vaccination. All sexually active males (unless anatomically sterile) must be willing to use an effective method of contraception (such as consistent condom use) from the day of first vaccination until Week 12. If a woman of child-bearing potential, committed to use an effective method of contraception when sexually active with men until Week 12, including: Condoms (male or female) with or without spermicide; Diaphragm or cervical cap with spermicide; Intrauterine device; Hormonal contraception; Successful vasectomy in the male partner (considered successful if a woman reports that a male partner has [1] documentation of azoospermia by microscopy, or [2] a vasectomy more than 2 years ago with no resultant pregnancy despite sexual activity post-vasectomy).

Outcomes: Immunogenicity: AE; SAE [Time Frame: 56 days]; IFN- $\gamma$  ELISPOT responses to prM, Env, Cap, and NS1 peptides; Elisa titers, neutralization etc

Sponsor: National Institute of Allergy and Infectious Diseases (NIAID); Walter Reed Army Institute of Research

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# Ensayos clínicos sobre vacunas: ICTRP

Phase I, Placebo-Controlled, Double-Blind Study To Evaluate The Safety, Tolerability, AND Immunogenicity Of GLS-5700, Administered ID Followed By Electroporation In Dengue Virus-Seropositive Adults [08-2016]

Country: Puerto Rico

Participants: 18-65 years.

Intervention: GLS-5700

Outcomes: AE;SAE; Binding antibody titers to Zika envelope; Neutralizing antibody response against Zika virus

Sponsor: Private

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VRC 319: A Phase I/Ib, Randomized Clinical Trial to Evaluate the Safety and Immunogenicity of A Zika Virus DNA Vaccine, VRC-ZKADNA085-00-VP, in Healthy Adults [07-2016]

Countries: USA

Participants: 18 to 35 years old

Intervention: ZIKV DNA vaccine VRC-ZKADNA085-00-VP

Outcomes: safety and tolerability through 44 weeks of study participation]; magnitude and frequency of ZIKV-specific antibody response as measured by neutralization assay

Sponsor: National Institute of Allergy and Infectious Diseases (NIAID)

Phase I, Open-label, Dose-Ranging Study to Evaluate the Safety, Tolerability, and Immunogenicity of GLS-5700 Administered ID Followed by EP in Dengue Virus-Naïve Adults

Country: Canada; United States

Participants: Age 18-65 years; Women of child-bearing potential agree to use medically effective contraception(oral contraception, barrier methods, spermicide, etc.) or have a partner who is sterile from enrollment to 3 months following the last injection, or have a partner who is medically unable to induce pregnancy. Sexually active men who are considered sexually fertile must agree to use either a barrier method of contraception during the study, and agree to continue the use for at least 3 months following the last injection, or have a partner who is permanently sterile or is medically unable to become pregnant

Intervention: GLS-5700

Outcomes: SEA;AE; Binding antibody titers to Zika envelope; Neutralizing antibody response against Zika virus

Sponsor: Private