

# International Symposium on Zika Virus Research Marseille - France, 4-6<sup>th</sup> June 2018



EUROPEAN SOCIETY  
for VIROLOGY

*Auditorium Toga  
Faculty of Medicine - La Timone*

*27, Boulevard Jean Moulin  
13005 Marseille  
France*

## Scientific Programme

*This event is organised by the EU funded Zika project*



*In collaboration with the three EU funded Zika projects*



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ZIKAction Grant Agreement no. 734857 - ZIKAVAX Grant Agreement no. 732432

## Monday June 4<sup>th</sup>, 2018

08.15 – 09.00

### Registration

09.00 – 09.15

### Welcome note

*Xavier de Lamballerie, Inserm (ZIKAlliance coordinator)*

*Marion Koopmans, European Society for Virology - Erasmus Medical Centre - ZIKAlliance*

*Annelies Wilder-Smith, Umeå University (ZikaPLAN coordinator)*

*Carlo Giaquinto, PENTA Foundation (ZIKAction coordinator)*

*Frédéric Tangy, Pasteur Institute (ZIKAVAX member)*

09.15 – 11.00

### Session 1: Surveillance, burden estimates, modelling

*Chair: Simon Cauchemez, Pasteur Institute - ZIKAlliance*

*Co-chair: Oliver Brady, London School of Hygiene & Tropical Medicine - ZIKAlliance*

#### 1. Zika in the Americas

##### **Seroprevalence studies in Martinique/Guadeloupe (5')**

*Speaker: Pierre Gallian, Inserm - ZIKAlliance*

##### **Seroprevalence studies in Bolivia (5')**

*Speaker: Mariela Saba Villaroel\*, Inserm – ZIKAlliance*

##### **High seroprevalence against Zika virus in Salvador, north-eastern Brazil limits the potential for further outbreaks (5')**

*Speaker: Andres Moreira-Soto\*, Charité University Berlin - ZIKAlliance*

##### **Seroprevalence studies in Surinam (5')**

*Speaker: Thomas Langerak\*, Erasmus Medical Centre – ZIKAlliance*

##### **Endemicity and emergence of arboviruses in Colombia: Insight from population based serological studies (5')**

*Speaker: Isabel Rodriguez-Barraquer\*, University of California/ Industrial University of Santander – ZIKAlliance*

### Q & A (5')

#### 2. Zika in Africa & Asia

##### **Zika in Mali (5')**

*Speaker: Issa Diarra\*, Unité des Virus Emergents – ZIKAlliance*

##### **Zika in Cameroon/Congo (5')**

*Speaker: Elif Nurtop\*, Unité des Virus Emergents - ZIKAlliance*

##### **Zika in Burkina Faso (5')**

*Speaker: Nico Fischer\*, University of Heidelberg – ZIKAlliance*

##### **Low Zika virus seroprevalence in Vientiane, Laos, 2003-2015 (5')**

*Speaker: Audrey Dubot-Pérès, Unité des Virus Emergents- ZIKAlliance*

##### **High baseline prevalence of microcephaly in Zika-epidemic and non-epidemic regions: data from sub-Saharan Africa, Asia, and the Antilles (10')**

*Speaker: Anna Louise Funk\*, Pasteur Institute – ZIKAlliance*

### Q & A (5')

	<p><b>3. Modelling approaches to predict Zika epidemics at a local &amp; continental scale</b>  <i>Real-time assessment of healthcare requirements during the Zika virus epidemic in Martinique (10')</i>  <i>Speaker: Alessio Andronico, Pasteur Institute - ZIKAlliance</i></p> <p><b>Modelling &amp; predicting Zika circulation in Latin America (10')</b>  <i>Speaker: Oliver Brady, London School of Hygiene &amp; Tropical Medicine – ZIKAlliance</i></p>
	<p><b>Q &amp; A (5')</b></p> <p><b>4. Genetic &amp; epidemiological analysis of Yellow Fever in Latin America to better understand the transmission cycle (10')</b>  <i>Speaker: Nuno Faria, University of Oxford – ZIKAlliance</i></p>
	<p><b>Q &amp; A (5')</b></p> <p style="text-align: right;"><i>Total: 105' (1h45')</i></p>
<b>11.00 – 11.30</b>	<b>Coffee Break</b>
<b>11.30 – 12.25</b>	<p><b>Session 2: ZIKA: Clinical biology (part 1)</b>  <i>Chair: Marion Koopmans, Erasmus Medical Centre - ZIKAlliance</i>  <i>Co-chair: Rosanna Peeling, London School of Hygiene &amp; Tropical Medicine - ZikaPLAN</i></p> <p><b>1. <u>Key-note lecture: Zika virus diagnostics, the challenge!</u> (15')</b>  <i>Speaker: Marion Koopmans, Erasmus Medical Centre – ZIKAlliance</i></p> <p><b>2. The grim reality from a clinical researcher perspective (10')</b>  <i>Speaker: Vivian Avelino-Silva, University of Sao Paolo - ZIKAlliance</i></p> <p><b>3. The diagnostic challenge of congenital Zika virus infection: lessons from TORCH pathogens (10')</b>  <i>Speaker: Bettie Voordouw, Dutch National Institute for Public Health &amp; the Environment - ZIKAlliance</i></p> <p><b>4. Glimpses of hope: towards more specific serology (10')</b>  <i>Speaker: Isabelle Viana, Oswaldo Cruz Foundation - ZIKAlliance</i></p>
	<p><b>Q &amp; A (10')</b></p> <p style="text-align: right;"><i>Total: 55'</i></p>
<b>12.25 – 14.00</b>	<b>Lunch break</b>
<b>14.00 – 15.10</b>	<p><b>Session 2: ZIKA: Clinical biology (part 2)</b>  <i>Chair: Marion Koopmans, Erasmus Medical Centre - ZIKAlliance</i>  <i>Co-chair: Rosanna Peeling, London School of Hygiene &amp; Tropical Medicine -ZikaPLAN</i></p> <p><b>5. Multiplex serology: new tools for complex problems (10')</b>  <i>Speaker: Jessica van Homwegen, Pasteur Institute – ZIKAlliance</i></p> <p><b>6. Models for biobanking for rapid assessment of diagnostics in emerging disease outbreaks (10')</b>  <i>Speaker: Rosanna Peeling, London School of Hygiene &amp; Tropical Medicine – ZikaPLAN</i></p>

**7. Identification of a putative unique immunogenic Zika NS2b epitope for differential diagnosis and surveillance (10')**

*Speaker: Isabelle Viana\*, Oswaldo Cruz Foundation – ZIKAlliance*

**Q & A (5')**

**8. Studying hypotheses for antibody enhancement in a cohort context (10')**

*Speaker: Barry Rockx, Erasmus Medical Centre – ZIKAlliance*

**9. ZIKV cellular immune responses (10')**

*Speaker: Vincent Vieillard, INSERM – ZIKAlliance*

**10. CD8 T cell immunity to Zika virus in humans is shaped by prior DENV exposure and associated with an IFN gamma/cytotoxic signature (10')**

*Speaker: Daniela Weiskopf, La Jolla Institute- ZikaPLAN*

**Q & A (5')**

*Total: 70' (1h10')*

**15.10 – 15.40** **Coffee Break**

**15.40 – 17.40** **Session 3: Vectors & vector control**

*Chair: Anna-Bella Failloux, Pasteur Institute - ZIKAlliance*

*Co-chair: Louis Lambrechts, Pasteur Institute - ZikaPLAN*

**1. Domestic Culex species & Zika vector transmission (15')**

*Speaker: Ricardo Lourenço-de-Oliveira, Oswaldo Cruz Foundation – ZIKAlliance*

**Q & A (5')**

**2. A new high-throughput tool to screen mosquito-borne viruses in Zika virus endemic/epidemic areas (10')**

*Speaker: Sara Moutailler, Anses – ZIKAlliance*

**Q & A (5')**

**3. Global analysis of the virome in Aedes aegypti mosquitoes: arthropod borne-viruses & beyond (10')**

*Speaker: Roenick Olmo, Federal University of Minas Gerais – ZIKAlliance*

**Q & A (5')**

**4. Has Zika burnt itself out of Brazil? Preparedness tools for the next outbreak (10')**

*Speaker: Eduardo Massad, University of Sao Paulo – ZikaPlan*

**Q & A (5')**

**5. Potential of Aedes albopictus as a bridge vector at urban-forest interface in Brazil (7')**

*Speaker: Taissa Santos\*, IRD – ZIKAlliance*

**6. Worldwide survey of Aedes aegypti susceptibility to multiple strains of Zika virus (7')**

*Speaker: Fabien Aubry\*, Pasteur Institute – ZikaPLAN*

**7. Vector competence to Zika virus of mosquitoes from the Pacific region (7')**

*Speaker: Elodie Calvez\*, Pasteur Institute New Caledonia – ZIKAlliance*

**8. Optimization of odour-baited trapping systems for the surveillance & control of *Aedes aegypti* in Paramaribo, Surinam (7')**

*Speaker: Tessa Visser\*, Wageningen University – ZIKAlliance*

**9. Identifying genomic changes associated with insecticide resistance in the dengue mosquito *Aedes aegypti* by next-generation sequencing (7')**

*Speaker: Julien Cattel\*, CNRS – ZIKAlliance*

**Q & A (15')**

**10. The Infravec2 Infrastructure Project: Providing Vector Researchers with No-cost Resources, Services and Facility Access (5')**

*Speaker: Eva Veronesi, University of Zurich – ZIKAlliance*

*Total: 120' (2h')*

**20.30**

**Dinner at Fort Ganteaume (upon registration)**

## Tuesday June 5<sup>th</sup>, 2018

08.35 – 10.30

### Session 4: Cohort Studies

Chair: Thomas Jaenisch, University of Heidelberg - ZIKAlliance

Co-chair: Patricia Brasil, Oswaldo Cruz Foundation – ZIKAlliance

**1. Key-note lecture: Clinical outcome of congenital infections: lessons from a congenital CMV cohort (15')**

Speaker: Ann Vossen, Leiden University Medical Center - ZIKAlliance

**Q & A (5')**

**2. Do we still need the cohorts? (15')**

Speaker: Thomas Jaenisch, University of Heidelberg – ZIKAlliance

**Q & A (5')**

**3. Conflicting evidence on the risk estimate of complications after ZIKV infection in pregnancy – why is the Rio estimate so high? (15')**

Speaker: Patricia Brasil, Oswaldo Cruz Foundation – ZIKAlliance

**Q & A (5')**

**4. Updated data from the pregnant women cohort in the French Territories in the Americas (15')**

Speaker: Bruno Hoen, Inserm – ZIKAlliance

**Q & A (5')**

**5. Limitations of case and exposure definition in epidemiological studies of ZIKV infection (10')**

Speaker: Ricardo Ximenes, University of Pernambuco – ZikaPLAN

**Q & A (5')**

**6. First results from ZIKAlliance – Ultrasound monitoring of at risk pregnancies – how many Ultrasounds & when were they carried out (5')**

Speaker: Julius Schretzmann\*, Heidelberg University Hospital – ZIKAlliance

**Q & A (5')**

**7. Zika and other arbovirolosis in times of humanitarian crisis: The case of Venezuela**

Speaker: Adriana Tami, University Medical Centre Groningen – ZIKAlliance

**Q & A (5')**

Total: 115' (1h55)

10.30 – 11.00

### Coffee Break

11.00 – 12.30

### Session 5: Lessons from imported cases

Chair: Denis Malvy, Central Hospital of the University of Bordeaux - ZIKAlliance

Co-chair: Antoni Soriano-Arandes, Barcelona University Hospital Vall d'Hebron – ZIKAction

**1. Key-note lecture: ZIKA imported cases (15')**

Speaker: Denis Malvy, Central Hospital of the University of Bordeaux – ZIKAlliance

**Q & A (5')**

**2. Zika & pregnant women (10')**

Speakers: Carlota Rodó, Barcelona University Hospital Vall d'Hebron - ZIKAction

\* Young researchers

### 3. Zika & microbiologic diagnostic challenges (10')

Speakers: Elena Sulleiro Igual & Ariadna Rando\*, Barcelona University Hospital Vall d'Hebron - ZIKAction

### 4. Serological response and clinical outcomes of children exposed to Zika virus during gestation: preliminary results of a prospective paediatric cohort study in a non-endemic country (10')

Speakers: Antoni Soriano-Arandes, Barcelona University Hospital Vall d'Hebron – ZIKAction, Ana Alarcón-Allen, Sant Joan de Déu University Hospital - ZIKAction

### 5. Zika & adult travellers: Travel-associated risk for local transmission (10')

Speakers: Diana Pou, Barcelona University Hospital Vall d'Hebron - ZIKAction

#### Q & A (5')

### 6. Zika virus incidence and diagnostic tools accuracy in French international travelers visiting Latin America and the Caribbean during the summer 2016 - The ZIKAMERICA cohort study (10')

Speaker: Thierry Pistone, Bordeaux University Hospital – Inserm - ZIKAlliance

### 7. What did we learn from European diagnostic labs (10')

Speakers: Marion Koopmans, Erasmus Medical Centre - ZIKAlliance

#### Q & A (5')

Total: 90' (1h30)

12.30 – 14.00 **Lunch break/poster session**

14.00 – 15.45 **Session 6: Social & ethical implications of Zika**

Chairs: Nisia Verônica Trindade Lima, Oswaldo Cruz Foundation & Jocelyn Raude, Inserm - ZIKAlliance

Co-chair: George Haringuizen, Dutch National Institute for Public Health & the Environment - COMPARE

### 1. Key-note lecture: Zika Outbreak in Brazil: Challenges for Science, Public Health & Society (10')

Speaker: Nisia Verônica Trindade Lima, Oswaldo Cruz Foundation - ZIKAlliance

### The sharing of pathogen genetic resources under the Nagoya Protocol: What are the ethical implications for international research on the ZIKAV? (10')

Speaker: George Haringuizen, Dutch National Institute for Public Health & the Environment - COMPARE

### 3. Narratives on Zika epidemic in Brazil: Challenges to science, politics & society (10')

Speaker: Gustavo Matta, Oswaldo Cruz Foundation - ZIKAlliance

### 4. The construction of the social representation of a health threat: Zika virus in the French press (10')

Speaker: Sylvain Délouvé, Rennes University - ZIKAlliance

### 5. Repercussions of Zika Virus Epidemic on the National Health System in Brazil and households (10')

Speaker: Claudia Pereira, Oswaldo Cruz Foundation - ZIKAlliance

**6. Zika and the state's policy trail: a document review on the Ministry of Health's responses (10')**

*Speaker: Carolina de Oliveira Nogueira et al., Oswaldo Cruz Foundation – ZIKAlliance*

**7. Health promotion in the context of Zika epidemic: actors & scenarios in decision-making processes (10')**

*Speaker: Paulo Peiter, Oswaldo Cruz Foundation - ZIKAlliance*

**8. Production & circulation of knowledge about Zika: from scientists to social media users (10')**

*Speaker: Elaine Rabello, Oswaldo Cruz Foundation - ZIKAlliance*

**9. The cognitive & emotional representations of Zika & other mosquito-borne diseases in French Guiana (10')**

*Speaker: Jocelyn Raude et al., Inserm – ZIKAlliance*

**Q & A (15')**

*Total: 105' (1h45)*

**15.45 –16.15 Coffee Break**

**16.15 – 18.05 Session 7: Other important questions + “late birds” presentations**

*Chair: Patricia Sequeira, Oswaldo Cruz Foundation- ZIKAlliance*

*Co-chair: Ilana Lowy, Oswaldo Cruz Foundation – ZIKAlliance*

**1. Sexual transmission- interdisciplinary sub-session**

**Key-note lecture: Sexual transmission of Zika virus: the current state of affairs (15')**

*Speaker: Ralph Huits, Antwerp Institute of Tropical Medicine - ZikaPLAN*

***The gender gap in the ZIKV infection: A social & behavioral perspective (10')***

*Speaker: Anna Friedler\*, Inserm – ZIKAlliance*

***Zika virus infects the human testis and germline (10')***

*Speaker: Nathalie Dejuq-Rainsford, Inserm – ZIKAlliance*

***Origin of Zika virus in semen (10')***

*Speaker: Laurent Houzet\*, Inserm - ZIKAlliance*

***Potential effect of Zika virus infection on human male fertility (5')***

*Speaker: Vivian Avelino Silva, University of Sao Paulo - ZIKAlliance*

**Q & A (5')**

**2. Other questions**

***Zika control in an ethical & legal context: the importance of fast data-sharing and the barriers hampering it (10')***

*Speaker: Carolina dos Santos Ribeiro, Dutch National Institute for Public Health & the Environment – COMPARE*

***A Zika virus research toolbox for ZIKAlliance & beyond (10')***

*Speaker: Martijn Van Hemert, Leiden University Medical Center – ZIKAlliance*



**Improving serological diagnosis of Zika virus to understand NeuroZika in Brazil (10')**

*Speaker: Raquel Medialdea Carrera, University of Liverpool - ZikaPLAN*

**Zika virus infection perturbs osteoblast function (10')**

*Speaker: Noreen Mumtaz\*, Erasmus Medical Centre – ZIKAlliance*

**Latest Zika virus outbreak: improve preparedness of disease control from the perspective of the "European Virus Archive goes Global (EVAg)" EU funded consortium (10')**

*Speaker: Jean-Louis Romette, Aix-Marseille University – EVAg*

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**Q & A (5')**

*Total: 110' (1h50)*

## Wednesday June 6<sup>th</sup>, 2018

08.45 – 10.30	<b>Session 8: Basic research &amp; antivirals</b> <i>Chair: Marc Lecuit, Inserm/Institut Pasteur - ZIKAlliance</i> <i>Co-chair: Johan Neyts, University of Leuven – ZIKAlliance &amp; ZikaPLAN</i> <b>1. ZIKA virus replication in human placenta (10')</b> <i>Speaker: Therese Couderc, Inserm – ZIKAlliance</i>
	<b>Q &amp; A (5')</b>
	<b>2. Stress-induced unfolded protein response contributes to Zika virus-associated microcephaly (10')</b> <i>Speaker: Laurent Nguyen, University of Liège – ZIKAlliance</i>
	<b>Q &amp; A (5')</b>
	<b>3. Therapeutics for microcephaly (10')</b> <i>Speaker: Ivan Gladwynng*, University of Liège – ZIKAlliance</i>
	<b>Q &amp; A (5')</b>
	<b>4. ZIKV infection disregulates neurogenesis through the Notch pathway in human neural progenitor cells (10')</b> <i>Speaker: Pauline Ferraris*, IRD – ZIKAlliance</i>
	<b>Q &amp; A (5')</b>
	<b>5. Development of highly potent Zika/Flavivirus inhibitors; lessons from HCV drug development (10')</b> <i>Speaker: Johan Neyts, University of Leuven – ZIKAlliance &amp; ZikaPLAN</i>
	<b>Q &amp; A (5')</b>
	<b>6. Tomatidine, a novel antiviral compound against dengue &amp; chikungunya virus" (10')</b> <i>Speaker: Jolanda Smit, UMCG – ZIKAlliance</i>
	<b>Q &amp; A (5')</b>
	<b>7. "ZIKV NS5: target-based drug development" (10')</b> <i>Speaker: Bruno Canard, Aix-Marseille University – ZIKAlliance</i>
	<b>Q &amp; A (5')</b>
	<i>Total: 105' (1h45)</i>
10.30 – 11.00	<b>Coffee Break</b>
11.00 – 12.30	<b>Session 9: Zika vaccine</b> <i>Chair: Frédéric Tangy, Pasteur Institute - ZIKAVAX &amp; Nicola Viebig, European Vaccine Initiative - ZIKAVAX</i> <b>1. <u>Key-note lecture</u>: Introduction to Zika vaccines &amp; to the ZIKAVAX project (10')</b> <i>Speaker: Frédéric Tangy, Pasteur Institute – ZIKAVAX</i>
	<b>Q &amp; A (5')</b>
	<b>2. NHP Zika infection model (10')</b> <i>Speaker: Romain Marlin*, CEA – ZIKAVAX</i>
	<b>Q &amp; A (5')</b>

\* Young researchers

**3. Talk 1: First generation MV-Zika vaccine – fast track clinical development (10')**

*Speaker: Sabrina Schrauf, Themis – ZIKAVAX*

**Q & A (5')**

**4. A YFV-17D based chimeric live-attenuated Zika virus vaccine is highly effective against lethal Zika disease in a mouse model (10')**

*Speaker: Kai Dallmeier, University of Leuven – ZIKAlliance & ZikaPLAN*

**Q & A (5')**

**5. Zika vaccine roadmap: obstacles & opportunities (10')**

*Speaker: Annelies Wilder-Smith, Umeå University – ZikaPLAN*

**Q & A (5')**

**6. Phase II/III clinical trials: endpoints, clinical trial sites/(target) study population & ethical considerations (10')**

*Speaker: Thomas Jaenisch, University of Heidelberg – ZIKAlliance*

**Q & A (5')**

*Total: 90' (1h30)*

**END OF THE SYMPOSIUM**

**12.30 – 14.00**

**Lunch break**