

1st Symposium on "Research and Innovation for the control of vectors of emerging arboviruses»

Montpellier-Agropolis
14th February 2023



Organised by





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Agropolis International - Montpellier
14 February 2023

Context of the symposium

Background

Over the past 10 years, arboviral diseases, such as dengue, Zika, chikungunya and yellow fever, have (re)emerged with increasing prevalence and severity. In the absence of effective vaccines and treatments, preventing these diseases at the global scale continues to depend largely on controlling mosquito vector populations, interrupting human–vector contact or both. Unfortunately, the recent resurgence of Aedes transmitted arboviral diseases worldwide including in Europe highlights the limitations of current vector control to prevent epidemics and to reduce the incidence of diseases. Consequently, new, affordable, scalable and community-based vector control measures are urgently needed to prevent the introduction, spread and establishment of Aedes-borne diseases and contribute to better health and human well-being.

Objective of the symposium

This symposium organised by INOVEC and its partners aims to **review the performances of new tools, technologies and strategies for the control of invasive vectors, identify gaps, and promote collaborative research and exchanges across sectors and disciplines.** The symposium aims also to foster private-public partnership for creating novel pathways for product development.

Expected outcomes

The symposium is expected to enhance our knowledge and understanding on the potential of new diagnostic tools, Vector Control Tools and Citizen science-based approaches for the surveillance and control of invasive mosquito vectors. The symposium also aims to create a “mutual culture” of research & innovation in vector control by stimulating new connections between companies, biologists and social scientists.

Targeted audience

The scientific community, public health sectors, stakeholders, donor agencies, industries, international organisations involved in the surveillance and control of mosquito-borne diseases.





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Scientific programme

Tuesday 14 February, 2022
- Agropolis International-

08:30-09:00 Registration

09:00-09:15 Welcome notes

Welcome address from the French National Research Institute for Sustainable Development (IRD)

Yves Martin Prével & Frédéric Simard (IRD), France

Welcome address from the Organisers

Anne Poinsignon & Vincent Corbel (IRD), France

09:15-10:30 **Aedes borne diseases: Challenges, Prevention and Control**

Chair persons

- | | | |
|-------------|--|---|
| 09:15-09:30 | The WHO Global Vector Control responses for preventing vector borne diseases; review of progress | Raman Velhudhan, WHO-NTD, Switzerland |
| 09:30-09:45 | Risk of expansion of the arbovirus vectors <i>Aedes aegypti</i> and <i>Ae. albopictus</i> in Europe and beyond | Moritz UG Kraemer, University of Oxford, UK |
| 09:45-10:00 | Insecticide resistance in major arbovirus vectors: status, challenges and prospects | Jean-Philippe David, CNRS, France |
| 10:00-10:15 | Portfolio of innovative vector control tools developed by IVCC | Mathias Mondy, IVCC, UK |
| 10:15-10:30 | Contribution of social sciences in vector control | Javier Lezaun, University of Oxford, UK |

10:30-11:00 Coffee break





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11:00-12:30

Initiatives & networks for strengthening the surveillance and control of Vectors and vector borne diseases

Chair persons:

11:00-11:15	Vectopole Sud: A network of research infrastructures on emerging disease vectors and crop pests	Fabrice Chandre, IRD, France
11:15-11:30	Défi Clé RIVOC: Infectious risks and vectors in Occitania	Didier Fontenille, IRD, France
11:30-11:45	Arbo-France: Multidisciplinary and multi-institutional French network for monitoring, surveillance and research on human and animal arboviroses	Bernadette Murgue, ARBO-France, France
11:45-12:00	Initiatives from the WHO-Special Programme for Research and Training in Tropical Diseases (TDR)	Florence Fouque, WHO-TDR, Switzerland
12:00-12:15	The Worldwide Insecticide resistance Network (WIN) & the Research and INNOvation Partnership for enhancing the surveillance and control of mosquito VECTors of emerging arboviruses (INOVEC)	Vincent Corbel, IRD-FIOCRUZ, Brazil
12:15-12:30	Discussion	
12:30: 14:00	Lunch – Group photo	

14:00-15:30

Innovations in Mosquito control and surveillance: Part 1

Chair persons:

14:00-14:15	Citizen sciences to investigate and control disease-carrying mosquitoes	Frederic Bartumeus, CSIC, Spain
14:15-14:30	Multiplexing molecular diagnostic tools for vector incrimination	John Vontas, FORTH, Greece
14:30-14:45	Review of Sterile Insect Technique (SIT) trials against Aedes Mosquitoes	Jeremy Bouyer, AIEA, Austria





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14:45-15:00	Use of densovirus as potential biological control agents	Aurélie Perrin, University of Montpellier, France
15:00-15:15	RNAi-based bioinsecticides for Aedes control	Paulo Ribolla, UNESP, Brazil
15:15-15:30	Challenges and prospects for the use of synergistic agents in mosquito control	Bruno Lapied, University of Angers, France

15:30-16:00 Coffee break

16:00-18:00 Innovations in Mosquito control and surveillance: Part 2

Chair persons:

16:00-16:10	Intelligent traps for real time surveillance of <i>Aedes</i> mosquitoes	Joao Encarnaco, IRIDEON, Spain
16:10-16:20	New and repurposed insecticides for mosquito control	Melanie Nolden, ENVU, Germany
16:20-16:30	Long lasting formulations of Ivermectine in the fight against vectors	Christophe ROBERGE, MEDINCELL, France
16:30-16:40	Intelligent incorporated treated fabrics for enhancing personal protection against mosquito bites	Jean Christophe Gnonlonfoun, JMT-KAIRSTONE, France
16:40-16:50	The potential of drones for realising sterilised <i>Aedes</i> mosquitoes	Rafael Argilés, MAPA Technology, Spain
16:50-17:00	Latest development in mass trapping tools for mosquito control	Andreas Rose, BIOGENT, Germany

17:00-18:00 General discussion and conclusion

18:00-21:00 Cocktail at Agropolis International

End of the symposium

