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2nd inoVEC

Conference

"Tackling vectors of emerging arboviruses through Research & Innovation"

October 07-08, 2026

Agropolis International
Montpellier, France

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2nd INOVEC Conference: Tackling vectors of emerging arboviruses through Research & Innovation

1. Background

Vector-borne diseases, which account for approximately 17% of infectious diseases, currently represent a major global public health challenge. Long associated with countries in the Global South, they have experienced a resurgence worldwide, particularly mosquito-borne arboviral diseases (dengue, Zika, chikungunya), driven by the combined effects of urbanization, increased global mobility, and climate change. These dynamics have led to an unprecedented expansion of vectors, notably *Aedes albopictus* and *Aedes aegypti*.

Prevention of these diseases still relies largely on vector control. However, the global resurgence of arboviral diseases — particularly dengue — highlights the limitations of currently available tools and underscores the urgent need to develop more sustainable, innovative, accessible, and community-engaged vector control strategies grounded in a One Health approach. These approaches must simultaneously integrate improvements in population health and well-being, biodiversity conservation, environmental protection, and local ownership of control actions.

During the 1st International INOVEC Conference held in Dar es Salaam (Tanzania) in August 2024[1], several key gaps and recommendations were identified, notably the need to strengthen intersectoral and international collaboration in order to foster innovation and accelerate the implementation of new chemical, biological, and genetic vector control methods. The discussions also highlighted the importance of policy advocacy to facilitate the integration of these new tools into existing public health strategies, as well as the critical role of community engagement and operational research in deploying sustainable solutions adapted to local contexts.

These themes will therefore be addressed during the 2nd INOVEC Conference, which aims to present the latest advances and innovations in the surveillance and control of vectors of emerging arboviral diseases. By leveraging multidisciplinary approaches — spanning biological sciences, social and human sciences, geography, and engineering — the conference will convene leading actors from research and innovation, industry, and public health to drive practical, sustainable, and context-specific solutions for the control of arboviral disease vectors across Europe and worldwide.

[1] Poinsignon A, Fournet F, Ngowo HS, Franco Martins Barreira V, Pinto J, Bartumeus F, Kaindoa EW, Corbel V. Advances in surveillance and control methods for Aedes-borne diseases and urban vectors: report of the International Conference, August 2024, Tanzania. Parasit Vectors. 2025 Jun 6;18(1):212. doi: 10.1186/s13071-025-06838-4. PMID: 40481523; PMCID: PMC12142953.

2. Scope of the conference

The 2nd International Conference, organized by IRD with the support of the Horizon Europe INOVEC project, will provide a platform for exchange and dialogue among key actors involved in the prevention and control of vectors of emerging arboviral diseases. The conference aims to review emerging evidence on vector ecology, biology and control, strengthen scientific and operational partnerships, and promote both basic and translational research, with the ultimate goal of reducing the burden of vector-borne diseases. The scientific programme will be structured around three thematic areas, as outlined in Section 8.

3. Objectives of the INOVEC Conference

i) To foster knowledge sharing in the biology, ecology and genetics of vectors of arboviral diseases in Europe and beyond;

ii) To assess the effectiveness of innovative tools, approaches and technologies for vector control, and to identify key gaps, challenges and research priorities;

iii) To strengthen intersectoral and international collaboration, and to facilitate dialogue leading to actionable outcomes that support improved public health responses to vector-borne diseases.

4. Format of the conference

The conference will be held at **Agropolis International in Montpellier, France**, and will consist of two days of scientific presentations. Keynote speakers will be invited to provide internationally recognised expertise and strategic perspectives in the field. A call for abstracts will be launched to ensure broad participation and a balanced representation of speakers. In addition, a round-table discussion will explore how innovation can be effectively translated into vector control policies. Finally, an industry session will allow companies to present the latest advances in vector control products and technologies. The conference will be free of charge, but registration will be mandatory.

5. Keynote Speakers

"INOVEC: a research and Innovation Partnership for enhancing the surveillance and control of mosquito Vectors of emerging arboviruses"

Vincent Corbel (Institut de Recherche pour le Développement/IOC-Fiocruz, Rio de Janeiro, Brésil)

With over 20 years of experience in medical entomology, he has worked in Africa, Asia, and South America. In 2016, he launched the WIN network, supported by WHO NTD & TDR, to assist member states in timely insecticide resistance surveillance and vector control strategies. Building on its success, he initiated the WIN-SA network with Fiocruz to coordinate insecticide resistance research in South America. Since 2023, he has coordinated the EU-HORIZON-MCSA INOVEC consortium to develop and promote new tools for the surveillance and control of emerging arbovirus vectors in Europe and beyond.

"Impact of climate change on vector-borne diseases and future challenges for control efforts"

Cyril Caminade (The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy)

Cyril Caminade is a climatologist by training with specialized expertise in spatial epidemiology and biogeography. His research focuses on the intersection of climate dynamics and vector-borne diseases (VBDs), encompassing a wide range of human and veterinary pathogens including malaria, dengue, Rift Valley fever, plague, bluetongue virus, and helminthiases. A multidisciplinary scientist, Cyril has established extensive collaborations across a broad spectrum of disciplines, working alongside biologists, statisticians, entomologists, epidemiologists, and public health experts. His work bridges the gap between environmental variables and disease transmission cycles in both human and animal populations. Currently, he is based at the International Centre for Theoretical Physics (ICTP) in Trieste, Italy. His present research focuses on the mechanistic modeling of climate impacts and the efficacy of vector control interventions on disease burden.

"These arboviral diseases that threaten Europe"

Anna-Bella Failloux (Arboviruses and Insect Vectors, Department of Virology, Institut Pasteur, Paris, France)

Anna-Bella Failloux, PhD, is professor of medical entomology and chief of the unit "Arboviruses and Insect Vectors" at the Institut Pasteur in Paris. Her work mainly focuses on investigations of arbovirus–mosquito interactions in order to decipher the factors leading to the viral emergence. Failloux develops three complementary lines of research: (i) intervene on the front line of emergence by offering her scientific expertise for public health actions, (ii)

contribute to research activities by deciphering molecular mechanisms that modulates arbovirus infections in mosquitoes, and (iii) propose alternative control strategies to mitigate insecticide-based control measures. Failloux has an extended expertise on vectors of alphaviruses, flaviviruses and phleboviruses. She participates actively in teaching medical entomology as director of several courses and a MOOC.

"Community participation in the prevention and control of vectors of emerging arboviruses"

Jocelyn Raude (École des hautes études en santé publique, Rennes, France)

Jocelyn Raude est professeur des universités en psychologie de la santé à l'Ecole des Hautes Etudes en Santé Publique (Rennes) et chercheur au sein de l'équipe de recherche sur les services de santé de l'UMR ARENES (Université de Rennes, CNRS, INSERM). Après une thèse de doctorat soutenue en 2006 à l'Ecole des Hautes en Sciences Sociales (EHESS, Paris), il a travaillé dans une perspective interdisciplinaire sur les comportements de prévention des maladies infectieuses émergentes en milieu tropical, notamment dans le cadre d'un séjour postdoctoral à la London School of Economics (2008) puis comme chercheur en accueil à l'Institut de Recherche pour le Développement (2016-2018). Ses principaux travaux de recherche portent sur la réponse des populations aux épidémies de maladies infectieuses, c'est-à-dire sur la manière dont ces phénomènes influencent les comportements individuels et collectifs qui ont une incidence sur leur transmission (hygiène, interactions sociales, vaccination). Depuis une dizaine d'années, il travaille plus particulièrement sur les processus d'adaptation sociale et cognitive aux risques et aux incertitudes liés aux maladies infectieuses émergentes, ainsi que sur les stratégies d'intervention qui permettent de favoriser l'adoption de comportements favorables à la santé dans les sociétés contemporaines.

"Integrating for impact: Network approaches to addressing shared vector threats"

Audrey Lenhart (U.S. Centers for Disease Control and Prevention)

Audrey Lenhart, PhD, MPH, is the Chief of the Entomology Branch at the U.S. Centers for Disease Control and Prevention in Atlanta, Georgia, USA. The Entomology Branch works with

partners worldwide regarding vector surveillance and control, including providing technical guidance to the U.S. President's Malaria Initiative (PMI). Dr. Lenhart also leads CDC's VecNet Program, which supports regional public health entomology networks in 6 regions across the globe. She previously led the Entomology Branch's Insecticide Resistance and Vector Control Team, heading a research group that focused on the biology and control of mosquitoes and laboratory activities centered on the molecular mechanisms that cause insecticide resistance in mosquito vectors of human disease. She is an Honorary Research Fellow at the Liverpool School of Tropical Medicine and adjunct faculty in the Department of Environmental Sciences at Emory University.

6. Conference Themes

SN	THEME	DESCRIPTION	RELATED RESEARCH ACTIVITIES/TOPICS
1	**Biology, Ecology & Genomics of Vectors**	This theme focuses on the biological and ecological characteristics of vectors, including genomics and population genetics findings, with the aim of improving understanding of their behavior and spatial distribution, in order to support the development of more targeted and effective control strategies.	**Behavioral ecology of vectors:** host-seeking behavior, feeding preferences and patterns, daily activity and resting behavior; **Reproductive biology:** breeding habitats and preferences, reproductive cycles and strategies, factors influencing reproductive success; **Vector competence:** ability to transmit specific pathogens, factors influencing vector competence, and evolutionary aspects of vector competence; **Impact of environmental factors:** influence of climate on vector distribution and abundance, effects of urbanization on breeding sites, ecological impacts of anthropogenic activities on vector habitats; **Population dynamics and genetics:** population structure and dynamics of vectors, genetic diversity and gene flow, and evolutionary aspects of vector populations; **Insecticide resistance:** distribution, intensity, underlying mechanisms, and implications for vector control interventions; **Spatial ecology and movement patterns:** movement patterns of vectors, dispersal capabilities and range, and spatial analysis of vector population distribution.
2	**Integrated Approaches for the Control of vectors of Arboviral Diseases**	This theme explores integrated approaches to control vector populations and more broadly the diseases they transmit.	**Multi-disease vector control strategies:** development and implementation of strategies addressing multiple disease vectors and approaches for controlling urban vectors; **Multi-sectoral collaboration:** collaboration between health and non-health sectors in vector control, and involvement of agriculture, environmental, and other relevant sectors in integrated approaches;

			Integrated surveillance and monitoring: latest technologies in vector surveillance, including Artificial Intelligence tools, and strategies providing a holistic view of vector populations; **Capacity building and training:** training programs for healthcare workers, community members, and policymakers; **Policy and governance:** development of policies supporting integrated vector control and Governance structures that facilitate collaboration between different sectors.
3	**Advances and Innovation in Vector Control**	This theme reviews progress and remaining knowledge gaps in vector control strategies, including novel technologies and citizen science-based approaches, while acknowledging the contributions of both the private sector and research institutions.	**Novel strategies for vector control:** examining innovative approaches to vector control beyond traditional methods, discussing the use of biological control agents, genetic modification, and novel pesticides; **Public-private partnerships in vector management:** discussing the role of industry in the research, production, and distribution of vector control tools; **Community engagement and empowerment:** focusing on actively involving communities in integrated vector control programs by understanding and influencing human behaviors, thereby enhancing participation, ownership, and the overall effectiveness of disease prevention and control efforts.

7. Organization Committees

6.1 Scientific Committee

Vincent Corbel	IRD, France	vincent.corbel@ird.fr
João Pinto	UNL, Portugal	jpinto@ihmt.unl.pt
Anne Poinsignon	IRD, France	anne.poinsignon@ird.fr
Florence Fournet	IRD, France	florence.fournet@ird.fr
Pie Müller	Swiss TPH, Switzerland	pie.mueller@swisstph.ch
Camille Simon-Chane	ENSEA, France	camille.simon-chane@ensea.fr

6.2 Logistic Committee (Bureau)

Vincent Corbel	IRD, France	vincent.corbel@ird.fr
Anne Poinsignon	IRD, France	anne.poinsignon@ird.fr
Florence Fournet	IRD, France	florence.fournet@ird.fr
Victoria Franco	IRD, France	victoria.franco@ird.fr
Valérie Delplanque	IRD, France	valerie.delplanque@ird.fr

8. The INOVEC project

The INOVEC project is a large pan-European, cross-sectoral and multidisciplinary network actively developing, optimizing and promoting integrated approaches and innovative tools for the surveillance and control of mosquito vectors of emerging arboviruses. INOVEC gathers 25 academic and non-academic institutions specialized in vector biology, social sciences and product development to stimulate basic and applied research, strengthen capacities, promote career development and facilitate knowledge and technology transfer to countries at increasing risk of arboviral diseases.

INOVEC has the commitment to coordinate and integrate sectors in order to maximize impact, raise awareness of policy makers and stakeholders, and participate in the improvement of innovation potential at the European and global level. INOVEC contributes to international efforts to improve global health and human well-being by reducing the burden of vector borne diseases.

More information on:

https://inovecproject.com/ | https://twitter.com/inovec_project |

https://www.linkedin.com/company/inovec-project/

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9. Programme of the conference

DAY	SESSION	TIME	DESCRIPTION OF ACTIVITIES	SPEAKER
DAY 1				
1	A	**Opening Ceremony** **Chairs:** Vincent Corbel (IRD) & Florence Fournet (IRD)		
		8:30 9:00	Registration	
		9:00 9:15	A welcome statement, acknowledging the guests, introduction to the conference	**IRD representative**
		9:15 9:30	"INOVEC: a research and Innovation Partnership for enhancing the surveillance and control of mosquito Vectors of emerging arboviruses"	**Vincent CORBEL** Institut de Recherche pour le Développement, Montpellier, France
1	B	**Scientific Session I:** Biology, Ecology & Genomics of Vectors **Chairs:** Anne Poinsignon (IRD) & João Pinto (UNL)		
		9:30 10:00	"Impact of climate change on vector-borne diseases and future challenges for control efforts"	**Cyril Caminade** The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy
		10:00 10:30	"These arboviral diseases that threaten Europe"	**Anna-Bella Failloux** Pasteur Institute, Paris, France
		10:30 11:00	Coffee Break	
		11:00 12:00	Presenter 1 (10'+5') Presenter 2 (10'+5') Presenter 3 (10'+5') Presenter 4 (10'+5')	
		12:00 12:30	Turbo Talk Session	

		12:30 14:00	Lunch Break	
1	**C**	**Scientific Session I:** Biology, Ecology & Genomics of Vectors **Chairs:** Anne Poinsignon (IRD) & João Pinto (UNL)		
		14:00 15:00	Presenter 5 (10'+5') Presenter 6 (10'+5') Presenter 7 (10'+5') Presenter 8 (10'+5')	
1	**D**	**Scientific Session II:** Integrated Approaches for the Control of *Aedes* and Other Vectors of Arboviral Diseases **Chairs:** Camille Simon-Chane (ENSEA)		
		15:00 16:00	Presenter 9 (10'+5') Presenter 10 (10'+5') Presenter 11 (10'+5') Presenter 12 (10'+5')	
		16:00 16:30	Coffee Break	
1	**E**	16:30 17:30	**Industry Session**	
		17:30 19:30	Cocktail	
DAY 2				
2	**A**	**Welcoming of the Participants**		
		8:30 9:00	Registration	
2	**B**	**Scientific Session II:** Integrated Approaches for the Control of *Aedes* and Other Vectors of Arboviral Diseases **Chairs:** Camille Simon-Chane (ENSEA)		
		9:00 9:30	"Community participation in the prevention and control of vectors of emerging arboviruses"	**Jocelyn Raude** École des hautes études en santé publique, Rennes, France

		9:30 10:00	"Integrating for impact: Network approaches to addressing shared vector threats"	**Audrey Lenhart** U.S. Centers for Disease Control and Prevention, Atlanta, Georgia, USA
		10:00 10:30	Coffee Break	
		10:30 11:30	Presenter 13 (10'+5') Presenter 14 (10'+5')	
			Presenter 15 (10'+5') Presenter 16 (10'+5')	
2	**C**	**Scientific Session III:** Advances and Innovation in Vector Control **Chairs:** Pie Müller (Swiss TPH)		
		11:30 12:30	Presenter 17 (10'+5') Presenter 18 (10'+5') Presenter 19 (10'+5') Presenter 20 (10'+5')	
		12:30 14:00	Lunch Break	
2	**D**	**Scientific Session III:** Advances and Innovation in Vector Control **Chairs:** Pie Müller (Swiss TPH)		
		14:00 15:00	Presenter 21 (10'+5') Presenter 22 (10'+5') Presenter 23 (10'+5') Presenter 24 (10'+5')	
		15:00 15:30	Coffee Break	
		15:30 16:30	Round Table	How to translate research & innovation into vector control policies?
		16:30 17:00	General Discussion	

10. Practical Information

Conference Details	
Location	1000 Av. Agropolis, 34090 Montpellier, France
Dates	7-8 October, 2026
Getting There	Tramway line 5, Agropolis Station

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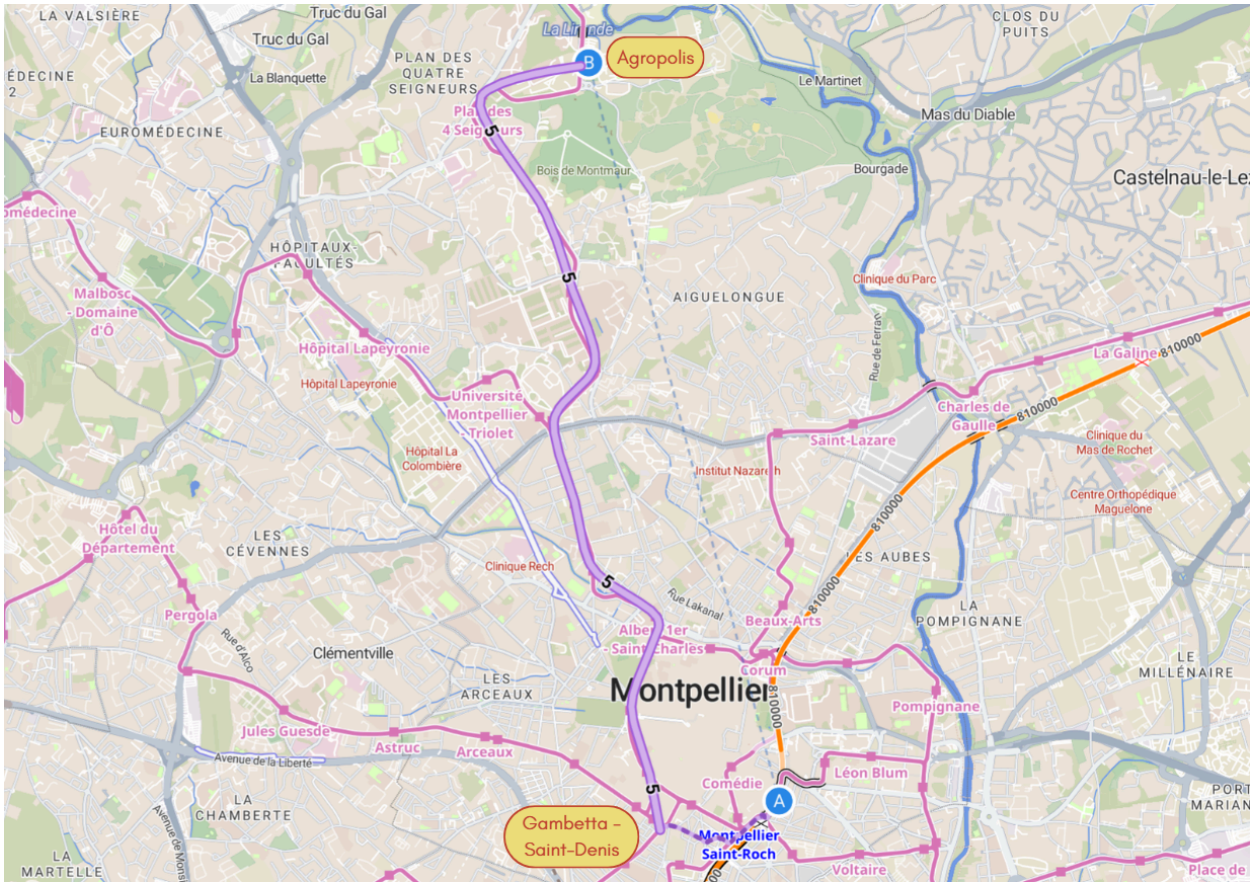
Recommended Hotels* (*Hotel reservations should be arranged directly with the hotel)	
Hôtel Eurociel Centre Comédie 3***	1 avenue du Pont Juvénal 34000 Montpellier
Reservations	+33 4 67 07 51 61 | 06 51 40 23 51 reception@hoteleurociel.fr



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From the Eurociel Hotel to Agropolis International, walk 900 m to the Gambetta-Saint-Denis tram stop and take Tram Line 5 towards Clapiers. Get off at Agropolis after 12 stops (about 39 min).

Alternatively, take Tram Line 1 towards Mosson from Du Guesclin and change to Line 5 at Stade Philippidès (about 37 min), or take Tram Line 4 towards Garcia Lorca from Gare Saint-Roch - République and change to Line 5 at Peyrou - Arc de Triomphe (about 43 min).

How to buy TramWay Tickets?	All information is available on the TaM website or mobile application. A single ticket costs €1.90. A 48-hour pass costs €10.00, and a 72-hour pass costs €12.00.