Final stakeholder meeting of the IDAMS and DENFREE Consortium
in collaboration with WHO-TDR

Institut Pasteur, Paris
Duclaux Building
21-23 November 2016

The IDAMS and DENFREE consortium in collaboration with WHO-TDR are pleased to welcome you to our final stakeholder meeting, which will take place at the Institut Pasteur, Paris on the 21-23 November 2016. This joint meeting is part of a common dissemination strategy from these two projects. We aim at improving knowledge of dengue transmission, understanding protective immunity and disease pathogenesis, and develop innovative tools to improve disease surveillance and prediction of severe disease. Eventually, we would like to develop effective and affordable early warning and outbreak response systems and better protective strategy for vector control and vaccine development and implementation.

BACKGROUND

DENFREE :

The main objective of the programme was to focus on finding key factors determining dengue transmission and dynamics in order to develop new tools and strategies for controlling dengue transmission. We estimated the risk of spreading DENV to uninfected areas, especially in Southern Europe where susceptible vectors exist. The major tools generated are predictive models that enable specific interventions, whether concerning the environment, mosquito or human, to be made and that can undermine an epidemic. We aimed to develop an easy-to-use point of care diagnostic tool that is sensitive to detect virus in both human and mosquito samples, which improved DENV surveillance. Inherent in this approach was the belief that improved surveillance and diagnosis of the asymptomatic dengue carriers contributed to effective intervention, especially during early stages of pathogen invasion into a naïve

region. We generated improved biological knowledge on the dengue system by performing detailed studies in field sites where we have been working for several years.

IDAMS

The overall concept of the IDAMS research project was to assemble a consortium of international experts working together to develop new and innovative tools to be applied to the control of dengue in a global context. The core of the application focuses on parallel strategies aimed at:

- improving diagnosis and clinical management of dengue through two linked work packages designed **a)** to identify readily available clinical and laboratory parameters and/or viral and immunological markers, that differentiate between dengue and other common febrile illness within 3 days of fever onset, and **b)** to identify any of the available markers that are predictive of the likelihood of evolving to a more severe disease course

- assessing the risk of dengue spread though linked work packages focused on **a)** mapping and modelling techniques to define the current extent of dengue disease globally and to evaluate possible scenarios of spread or risk to previously uninfected regions in the future, and **b)** developing effective and affordable early warning and outbreak response systems.

OVERALL OBJECTIVE (AIM) AND SPECIFIC OBJECTIVES OF THE MEETING

1.   Aim:

To identify best practices in dengue risk assessment, management and surveillance as a contribution to the Global Strategy for Dengue Prevention and Control

2.   Objective:

1. To review, collate and summarize outputs of IDAMS and DENFREE which leading to:
   - Evidence supporting policy – to be passed onto global & country policy-makers for deliberation
   - Relevant implementation/operational research needs to facilitate the deployment and scale-up of evidence-supported measures
   - Gap in knowledge that have not been filled or have been highlighted by the 2 projects and will require more research
2. To discuss the evidence generated through the IDAMS and DENFREE Consortia regarding: a) Burden of disease studies; b) Studies on dengue surveillance including dengue alert for outbreaks and early response; c) Studies on clinical and laboratory warning signs for severe dengue; d) Studies on viral and immunological aspects of dengue; e) Vector surveillance and control.

3. To take notice of the current spread of other viral diseases transmitted by the same vector and identify further priority areas for research on dengue and Zika.

4. To develop, in a participatory approach with key stakeholders (particularly Ministries of Health, International Organizations such as WHO, RCCC and national dengue control services), recommendations for the adaptation of the global dengue guidelines according to the new evidence generated.

3. Structure of the workshop

See agenda in annex

DAY 1 21st November	Item	Speaker / Chair
8.30-9.00	Registration	
9.00-9.30	Welcome, Presentation of participants Opening: Purpose of the meeting	IP Vice-President development, DENFREE and IDAMS coordinator, TDR, EU officer
	Dengue burden **IDAMS WP4, DENFREE WP1**	
09.30-09.50	Role of evaluating and monitoring dengue burden in countries and WHO Regions	Raman Velayudhan, WHO
09.50-10.10	Global dengue burden re-assessed	O. Brady
10.10-10.30	**Coffee Break**	
10.30-10.50	Asymptomatic infection epidemiology	C. Fortas
10.50-11.10	Economic assessment of dengue burden	A. Farlow
11.10-11.30	Wrap up, uptake and use of data	
	Dengue case definition, dengue diagnostics, prediction of severe disease **IDAMS WP1 and WP2**	
11.30-12.00	Overall and diagnostic profile of the IDAMS observational prospective study	T. Jaenisch B. Wills C. Simmons M. Guzman
12.00-12.30	Clinical case definition for dengue & differentiation from other febrile diseases	B. Wills T. Jaenisch P. Lam K. Rosenberger

12:30-13:30	**Lunch Break**	
13:30-14.00	Warning signs for severe dengue – rationale and findings	B. Wills T. Jaenisch P. Lam K. Rosenberger
14.00-14.20	Virological and genetic predictors of severe dengue	C. Simmons
14.20-14.50	Wrap up, uptake and use of data	
14.50-15.20	**Coffee break**	
	Virology, Immunology and genetics DENFREE WP 2,6,7,8, IDAMS WP2	
15.20-15.40	Human genetic susceptibility to dengue	B. Sierra L. Pereira
15.40-16.00	Viral population study in asymptomatic vs symptomatic dengue infection	V. Doung M. Vignuzzi
16.00-16.20	Antibody responses to dengue viruses	F. Sallusto C. Simmons
16.20-16.40	Highly potent broad spectrum anti-dengue antibodies	A. Rouvinski
16.40-17.00	Serotyping Dengue virus infections	M. Schreiber
17.00-17.20	Immunological profile of asymptomatic dengue infection	T. Cantaert A. Sakuntabhai
17.20-17.40	Wrap up uptake and use of data	
19.00	**Reception**	

Day 2 22nd November	Item	Speaker / Chair
	Mathematical modelling DENFREE WP3,4	
9.00-9.15	Forecast/Prediction dengue epidemics model	Nico Stollenwerk
9.15-9.30	Zika R0 in South Pacific	Bernard Cazelles
9.30-9.45	Successful & Unsuccessful examples in dengue prediction: Lessons for the recent chikungunya and Zika outbreaks	Xavier Rodo
9.45-10.00	Agent based model in Bangkok	E. Daudé A. Vaguet
10.00-10.15	Modeling Dengvaxia implementation	M. Aguiar
10.15-10.30	Dengue in Periodic Environments	J. Rocklov
10.30-10.45	Wrap up uptake and use of data	
10.45-11.00	**Coffee Break**	
	Outbreak response IDAMS WP3 and WP4,	
11.00-11.15	The expansion of dengue vectors	M. Kraemer O. Brady
11.15-11.30	Alarm signals for dengue outbreaks and early response	L. Bowman M. Petzold A. Kroeger
11.30-11.45	Country experiences with dengue alarm and early response: Brazil, Mexico, Malaysia,	G. Coelho G. Tejeda L. Hakim
11.45-12.00	Handbook for dengue outbreak detection & response (model contingency plan)	S. Runge Ranzinger

12.00-12.15	Wrap up uptake and use of data	
12.15-13.30	**Lunch Break**	
	Vector control: IDAMS WP4, DENFREE WP 5 and DengueTools	
13.30-13.45	A new tool for community involvement in dengue control	F. Monasso
13.45-14.00	Implementation of auto-dissemination in Il de Madeira	G. Devine
14.00-14.15	European vector competence and viral adaptation	Pei Shi YEN L. Lambrechts
14.15-15.00	DengueTools presentation 2	P. Reiter
15.00-15.15	Wrap up uptake and use of data	
15.15-15.40	**Coffee Break**	
	Dengue Futures & Zika	
15.40-16.00	Zika	NN, WHO
16.00-16.20	Dengue Futures and Zika risk mapping	J. Messina
16.20-16.40	Zika in Latin American IDAMS sites	E. Marques P. Brasil A. Tami
16.40-17.00	Harmonisation of tools and protocols for Zika research	T. Jaenisch
17.00-17.20	Zika-Dengue Interactions – title to be rephrased	J. Mongkolsapaya
17.20-17.40	Diagnostic challenges of Zika	C. Simmons M. Guzman E. Marques

17.40-18.00	Wrap up uptake, use of data and conclusion	
18.00-19.00	IDAMS and DENFREE executive board meeting	
19.30	**Social Evening**	

Day 3 23rd Nov	Working groups (in parallel)	Chair
8.30-10.00	1. Dengue burden – towards a global dengue report?	R. Velayudhan
	2. Case definitions & warning signs – implications for updating global and national guidelines	T. Jaenisch
	3. Outbreak response & vector control	P. Olliaro
	4. Cross-cutting: recommendations regarding further research	A. Sakuntabhai
10.00-10.30	**Coffee Break**	
10.30-11.00	Summary: dengue burden	
11.00-11.30	Summary: case definition, warning signs	
11.30-12.00	Summary: outbreak response & vector control	
12.00-12.30	Summary: recommendations regarding priority actions and further	
12.30-13.00	**Closing session**	Hosts, TDR, IDAMS, DENFREE
13.00-	**Lunch Break**	
End of Meeting		