

**3[^] International Workshop on *Aedes albopictus*, the Asian tiger mosquito
Palazzo Vistarino, Pavia, Italy**

PROGRAM

Monday, April 10th 2017

8.30-9.15 Opening Remarks: Academic Authorities

**Session 1: Surveillance and intervention strategies against *Aedes albopictus*
MODERATOR: GIULIANO GASPERI**

- **Surveillance of *Ae. albopictus* and new surveillance tools**

9.30-10 - Chen Xiao-guang, Southern Medical University of Guangzhou, China
The evaluation on methodology and techniques for surveillance of *Aedes albopictus*

10-10.30 - Della Torre Alessandra, Sapienza University in Rome, Italy
Monitoring *Aedes albopictus* for research and control purposes: constraints and perspectives.

10.30-11 Coffee Break

11-11.30 - Simard Frederic, MIVEGEC (IRD224-CNRS5290-UM), Montpellier, France
Invasion of *Aedes albopictus* in forests of Central Africa and the risk of emergence of new zoonotic arboviruses

- **Surveillance and SIT**

11.30 – 12 Rosa' Roberto, Fondazione Edmund Mach, San Michele all'Adige, Trento, Italy
Temporal dynamics of *Aedes albopictus* and *Culex pipiens* in northern Italy: the effect of interspecific competition

12 – 12.30 Bellini Romeo, Agriculture and Environment Centre «G.Nicoli», Crevalcore, Italy
Recent progresses in the application of SIT methods for the suppression of *Aedes albopictus*

12.30 – 13 - Calvitti Maurizio, ENEA Centro Ricerche Casaccia, Roma, Italy
Room Exploitation of ARWP *Aedes albopictus*: facts and perspectives for future implementations

13-14.30 Lunch Break

- **SIT and Genetically-modified mosquitoes**

14.30-15 Capurro Margareth, University of Sao Paulo, Italy
Aedes aegypti control programmes in Brazil

15-15.30 Crawford Jacob, Verily Life Sciences, USA
Debug project

Session 2-New Advances in Genomics
MODERATOR: JEFFREY POWELL

- **Present and future of the *Aedes albopictus* genome**

15.30-16 Black William C. 4th, Colorado State University
The limits of unassembled genomes

16-16.30 Coffee break

16.30-17 Waterhouse Robert, Universite de Geneve, Switzerland
Current and future genomics resources for *Aedes albopictus*

17-17.30 Sharakhova Maria, Virginia Tech
Application of mitotic chromosomes in genomic studies of *Aedes albopictus*

17.30-18 Sharakov Igor, Virginia Tech, USA
Exploring heterochromatin structure and cytogenetic mechanisms of male hybrid sterility in the *Anopheles gambiae* complex

Tuesday April 11th

Session 3 – Population genetics and genomics of *Aedes* mosquitoes
MODERATOR: ANNA MALACRIDA

9-9.30 Powell Jeffrey, Yale University USA
Lessons from *Aedes aegypti*

9.30-10 Caccone Gisella, Yale University, USA
Genomic insights into the recent worldwide invasion of the Asian mosquito *Aedes albopictus*

10-10.30 Gasperi Giuliano, Department of Biology and Biotechnology, University of Pavia, Pavia, Italy
Demographic history of *Aedes albopictus* populations and arbovirus transmission

10.30-11 Coffee Break

Session 4-New Advances in ecological studies and adaptation genomics

MODERATOR: BILL BLACK

11 -11.30 Armbruster Peter, Georgetown University, USA

Genetic and metabolic underpinnings of photoperiodic diapause in the Asian tiger mosquito, *Aedes albopictus*

11.30-12 Lombardo Fabrizio, Sapienza University, Rome, Italy

Deciphering the olfactory repertoire of the tiger mosquito *Aedes albopictus*

12-12.30 Gomulski Ludvik M. Olfaction as a window between *Aedes albopictus* and the environment: the chemosensory gene repertoire of wild populations

12.30-13 Bonizzoni Mariangela, University of Pavia, Italy

Viral integrations are abundant in the genome of *Aedes* mosquitoes

13-14.30 Lunch

Session 5-Virus-vector interaction

MODERATOR: MARGARETH CAPURRO

- **Insect immunity and vector competence**

14.30-15 Failloux AnnaBella, Institut Pasteur Paris, France

Aedes albopictus and Dengue, chikungunya, zika

15-15.30 Lavillette Dimitri, Institut Pasteur Shanghai, China

Interaction between Flaviviruses and Alphaviruses during coinfection

15.30- 16 Van Rij Ronald, Radboud Institute for Molecular Life Sciences, The Netherlands

Dissecting small RNA biogenesis in *Aedes albopictus*

16-16.30 Coffee break

16.30-17 Imler Jean-Luc, Universite de Strasbourg, France

Surveillance of the virome in *Aedes* mosquitoes using virus-derived small RNAs

17 -17.30 Myles Kevin, Texas A&M University, USA

The yellow fever virus capsid protein is a potent suppressor of RNA silencing that binds double stranded RNA

17.30- 18 Maga Giovanni, Institute of Molecular Genetics CNR, Pavia, Italy

Reflections at the mirror: looking back from the host to the vector for new strategies in controlling flavivirus infections

Wednesday April 12th

Session 5-Virus-vector interaction
MODERATOR: ANNA-BELLA FAILLOUX

- **Mosquito microbiota**

9 -9.30 Mavigui Patrick, Lyon CNRS and Universite de Lyon 1, France
Aedes albopictus as a holobiont model to decipher transmission

9.30-10 Favia Guido, University of Camerino, Italy
The microbiota of *Aedes albopictus*: a tool for control?

Session 6 - INFRAVEC2
MODERATOR: ROBERT WATERHOUSE

10 – 10.30 Simard Frederic, MIVEGEC, Montpellier and **Anna-Bella Failloux**, Institut Pasteur, Paris, France
Explaining the INFRAVEC 2

Final Discussion

Poster session

The poster will remain in place for the entire period of the workshop

- **Estimating the probability of arbovirus outbreaks in non-endemic countries highly infested by *Aedes albopictus*: the case study of Rome**

Angelo Solimini, Mattia Manica, Roberto Rosà, Alessandra della Torre, Beniamino Caputo

¹Dipartimento di Sanità Pubblica e Malattie Infettive, Università “Sapienza”, Rome, Italy;

²Dipartimento di Biodiversità ed Ecologia Molecolare, Centro Ricerca e Innovazione, Fondazione Edmund Mach, San Michele all'Adige, TN, Italy

- **Identification of new bacterial species with insecticidal activities towards *Aedes albopictus* larvae**

Mamberti S.¹, Ursino E.¹, Barbieri G.¹, Gabrieli P.¹, Fiorentino G.¹, Leonardi C.¹, Tosini G.¹, Gasperi G.¹, Albertini A.M.¹

¹Department of Biology and Biotechnology “Lazzaro Spallanzani”, University of Pavia, Pavia, Italy.

- **Long-term signature of insectary adaptation in *Aedes albopictus***

Ruth Müller^{1,5}, Ann-Marie Oppold^{2,3}, Friederike Reuss^{2,3}, Kerstin Späth⁴, Aljoscha Kreß⁴, Joao B. Diogo², David Alexander Groneberg¹, Lynn Vanhaecke⁵, Michiel Vandegehuchte⁶, Ulrich Kuch¹

- **Toward the development of serological markers of human exposure to *Aedes* mosquitoes using *Aedes albopictus* salivary antigens: a work in progress**

Sara Buezo Montero¹, Francesco Severini², Leonardo Picci², Marco Di Luca², Marta Ponzi², Fabrizio Lombardo¹, Bruno Arcà¹

¹Department of Public Health and Infectious Diseases – Division of Parasitology, Sapienza University of Rome, Rome, Italy;

²Department of Infectious, Parasitic and Immune-Mediated Diseases, Istituto Superiore di Sanità, Rome, Italy.

- **Using CRISPR/Cas9 System to Establish C-Type Lectin-3 (GCL-3) Mutant Mosquito**

Hsing-Han Li, Jian-Chiuan Li, Hong-Da Wang, Chun-Hong Chen

Institute of Molecular and Genomic Medicine, National Health Research Institutes, Miaoli, Taiwan.
Institution of Biotechnology, National Tsing Hua University, Hsinchu, Taiwan.

- **Investigating olfactory proteins of the Asian Tiger mosquito, *Aedes albopictus***

Alessandro Di Cosimo¹, Mosè Manni^{1,3}, Ludvik Gomulski¹, Luigi Scietti¹, Matteo Campioni¹, Anna R. Malacrida¹, Jing-Jiang Zhou², Giuliano Gasperi¹, Federico Forneris¹

¹Department of Biology and Biotechnology, University of Pavia, Pavia, Italy; ²Department of Biological Chemistry and Crop Protection, Rothamsted Research, Harpenden, Herts AL5 2JQ, UK; ³Department of Ecology and Evolution, University of Lausanne, Switzerland.

- **Orthology-based genome annotation and interpretation**

Mosè Manni¹, Robert M. Waterhouse², Evgenia V. Kriventseva¹, Evgeny M. Zdobnov¹

¹University of Geneva Medical School & Swiss Institute of Bioinformatics, Switzerland; ²Department of Ecology and Evolution, University of Lausanne, Switzerland

- **Viral integrations in the genome of the Asian tiger mosquito *Aedes albopictus*: a new source of genomic variability?**

Elisa Pischedda¹, Federica Valerio¹, Umberto Palarini¹, Mariangela Bonizzoni¹

¹University of Pavia, Dept of Biology and Biotechnology, 27100 Pavia, Italy

- **Exploring ejaculate composition and function in the tsetse fly, *Glossina m. morsitans***

Francesca Scolari¹, Geoffrey M. Attardo², Grazia Savini¹, Giuliano Gasperi¹, Serap Aksoy², Anna R. Malacrida¹

¹University of Pavia, Dept of Biology and Biotechnology, 27100 Pavia, Italy ²Yale School of Public Health, Dept of Epidemiology of Microbial Diseases, 06520, New Haven, CT, USA

- **About LITE**

Helen Williams, Rosemary S. Lees

Liverpool School of Tropical Medicine, Liverpool L3 5QA, UK

