

2nd WIN International Conference on

"Integrated approaches and innovative tools for combating insecticide resistance in arbovirus vectors"

October 01-03th, 2018

Grand Copthorne Waterfront Hotel

Singapore

Partners





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Institut de Recherche

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Organizers



o1- o3 October 2018, Grand Copthorne Waterfront hotel, Singapore

Scientific programme

| | Monday October 1 st , 2018 - Grand Copthorne Waterfront hotel- | |
|-------------|---|--|
| | · | |
| 08:15-09:00 | Registration | |
| 09:00-09:30 | Welcome notes | |
| Room: | Grand Ballroom, level 4 | |
| 09:00-09:05 | Welcome address from the National Environmental Agency | Mr. Derek Ho , Director-General Public Health, NEA, Republic of Singapore |
| 09:05-09:10 | Welcome address from the French Ministry of Foreign Affairs in Singapore | Mr. Marc Abensour, Ambassador of France to the Republic of Singapore |
| 09:10-09:15 | Welcome address from the DUKE-NUS medical school | Prof Patrick Casey , Senior Vice Dean, Research, DUKE, NUS, Republic of Singapore |
| 09:15-09:20 | Welcome address from the Department of Control of Neglected Tropical Diseases (NTD), World Health Organization | Dr. Raman Velayudhan, Coordinator, WHO-NTD, Switzerland |
| 09:20-09:25 | Welcome address from the The Special Programme for Research and Training in Tropical Diseases (TDR), World Health Organization | Dr. Florence Fouque, Team Leader on vectors, WHO-TDR Switzerland |
| 09:25-09:30 | Objectives of the conference | Dr. Julien Pompom , Duke-NUS Medical School, Republic of Singapore Dr. Vincent Corbel , Institut de Recherche pour le Développement, France |



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Monday October 1st, 2018 (continued)

| 09:30-12:30 | Scientific Session 1: Challenges and prospects for the control of emerging arboviral diseases | |
|----------------|--|---|
| Room: | Grand Ballroom, level 4 | |
| Chair persons: | Dr. Raman Velayudhan (NTD) / Dr. Florence Fouque (TDR) | |
| 09:30-09:50 | Public Health Priorities for Prevention and Control of Epidemic Arboviral Diseases | Dr. Duane Gubler, Duke-NUS Medical School, Singapore |
| 09:50-10:10 | The WHO global vector control response to reduce the burden of vector borne diseases | Dr. Raman Velayudhan , World health Organization, NTD, Switzerland |
| 10:10-10:30 | The use of Wolbachia to disrupt dengue, Zika and chiikungunya transmission by <i>Aedes aegypti</i> | Dr. Scott O'Neill , World Mosquito Program, Vietnam |
| 10:30-10:45 | Discussions | |
| 10:45-11:15 | Coffee break & Poster session | |
| Chair persons: | Assoc. Prof. Lee Ching Ng (NEA) / Dr. Greg Devine (QIMR) | |
| 11:15-11:35 | Arbovirus vectors in SEA: a plea against ignorance | Dr. Didier Fontenille, Institut Pasteur, Cambodia |
| 11:35-11:55 | Project Wolbachia Singapore – Exploring a novel tool for Aedes control | Assoc. Prof. Lee Ching Ng, National Environment Agency, Singapore |
| 11:55-12:15 | Detection of Resistance in Insects Vectors of Human Disease: The | Prof. Jeffrey Scott, Cornell |
| | Road Forward | University, USA |
| 12:15-12:30 | Road Forward Discussions | University, USA |



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Monday October 1st, 2018 (continued)

| 14:00-18:00 | Scientific Session 2: Insecticide resistance, operational consequences and options for management | |
|----------------|---|---|
| Room: | Grand Ballroom, level 4 | |
| Chair persons: | Dr. Fabrice Chandre (IRD) / Dr. Shinji Kasai (NIID) | |
| 14:00-14:15 | Insecticide susceptibility status and activity of detoxifying enzymes in larvae and adult <i>Aedes albopictus</i> from six regions of Madagascar | Dr. Fara N. Raharimalala, Institut Pasteur, Madagascar |
| 14:15-14:30 | Insecticide resistance status of arbovirus vectors, <i>Aedes aegypti</i> and <i>Ae. albopictus</i> in Laos: distribution, levels and mechanisms | Dr. Sébastien Marcombe, Institut Pasteur, Lao PDR |
| 14:30-14:45 | Alarming <i>Aedes aegypti</i> resistance in Cambodia: Skirting resistance with an integrated vector management in an entomological / epidemiological approach | Dr. Sébastien Boyer , Institut Pasteur, Cambodia |
| 14:45-15:00 | The last frontier: origin and insecticide susceptibility of a recently introduced <i>Aedes albopictus</i> population from Portugal | Dr. João Pinto, Instituto de Higiene e Medicina Tropical, Portugal |
| 15:00-15:15 | Insecticide Resistance Monitoring in <i>Aedes aegypti</i> from Brazil after Zika outbreak | Dr. Ademir Martins, FIOCRUZ, Brasil |
| 15:15-15:30 | Systematizing insecticide resistance testing for <i>Aedes</i> spp. in Latin America: What will it take? | Dr. Nelson Grisales, Abt associates, USA |
| 15:30-15:45 | Discussions | |
| 15:45-16:15 | Coffee break & Poster session | |
| Chair persons: | Dr. Julien Pompon (DUKE-NUS) / Dr. Jean-Philippe David (CNRS) | |
| 16:15-16:30 | A geographical perspective on insecticide resistance and mechanisms in the major <i>Aedes</i> vectors of arboviruses infecting humans | Dr. David Weetman, Liverpool School of Tropical Medicine, UK |
| 16:30-16:45 | Novel DNA markers of insecticide resistance in Arbovirus vectors for improving resistance monitoring and management | Dr. Jean-Philippe David, Centre National de la Recherche Scientifique, France |



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Monday October 1st, 2018 (continued)

| 16:45-17:00 | First detection of a Vssc allele V1016G in <i>Aedes albopictus</i> collected from Asia and Europe: A new emerging threat to controlling arboviral diseases | Dr. Shinji Kasai, National Institute of Infectious Diseases, Japan |
|-------------|--|---|
| 17:00-17:15 | Insecticide resistance and its operational implications for dengue control on the Indonesian island of Bali | Mrs Erly Sintya Dewi , Universitas Warmadewa, Indonesia |
| 17:15-17:30 | Pyrethroid-resistant mosquitoes compromise Australia's aircraft disinsection procedures | Dr. Gregor Devine , QIMR Berghofer Medical Research Institute, Australia |
| 17:30-17:45 | Management of insecticide resistance in arbovirus mosquito vectors: advances and challenges | Dr. Fabrice Chandre, Institut de Recherche pour le Développement, France |
| 17:45-18:00 | Discussions | |

Tuesday October 2nd, 2018 - Grand Copthorne Waterfront hotel -

| 09:00-12:30 | Scientific Session 3: New technologies and strategies for the control of invasive or insecticide-resistant vectors | |
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| Room: | Grand Ballroom, level 4 | |
| Chair persons: | Prof. Hassan Vatandoost (TUMS) / Dr. Joao Pinto (IHTM) | |
| 09:00-09:15 | Experimental evaluation of the impact of household aerosolized insecticides on pyrethroid resistant <i>Aedes aegypti</i> | Dr. Gabriela Gonzalez-Olivera, Universidad Autónoma de Yucatán, Mexico |
| 09:15-09:30 | Neighbors help neighbors control urban mosquitoes | Prof. Dina Fonseca, Rutgers University, USA |
| 09:30-09:45 | Gravitrap as a surveillance and control tool | Dr. Chee-Seng Chong, National Environment Agency, Singapore |
| 09:45-10:00 | Promising new tools to fight Aedes mosquitoes in Thailand | Dr. Alongkot Ponlawat , USAMD-AFRIMS, Thailand |



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Tuesday October 2nd, 2018 (continued)

| 10:00-10:15 | Integrated <i>Aedes</i> management (IAM) for the control of <i>Aedes</i> -borne diseases | Dr. David Roiz, Institut de Recherche pour le Développement, France |
|----------------------|---|--|
| 10:15-10:30 | Discussion | |
| 10:30-11:00 | Coffee break & Poster session | |
| Chair persons: | Dr. John Grieco (NDU) / Dr. Dina Fonseca (RU) | |
| 11:00-11:15 | Alternative Strategies for Arbovirus Control | Dr. Nicole Achee, Notre Dame U., USA |
| 11:15-11:30 | Overview of Auto-dissemination technology for mosquito controls | Dr. Devi Shankar Suman, Ministry of Environment, India |
| 11:30-11:45 | Targeted Indoor Residual Spraying (TIRS) for the control of <i>Aedes aegypti</i> | Dr. Gregor Devine, QIMR Berghofer Medical Research Institute, Australia |
| 11:45-12:00 | New developments in the use of the Sterile Insect Technique (SIT) | Dr. David Damiens, IRD- CYROI, La Réunion, France |
| 12:00-12:15 | Gene editing population sex determination pathway for vector control | Dr. Kyrou Kyros, Imperial College, UK |
| 12:15-12:30 | Discussion | |
| 12:30-14:00 | Lunch (Ballroom 2) | |
| 12:30-14:00 Room: | <u>Side-event</u> : Perspectives for the development of an insecticide testing laboratory (ITL) at Singapore Toucan | Private session (on invitation only) |



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Tuesday October 2nd, 2018 (continued)

| 14:00-18:00 | Session 4: Public / private initiatives to foster innovation in public health | | |
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| Room: | Grand Ballroom, level 4 | | |
| Chair persons: | Dr. K. Raghavendra (NIMR) / Dr. W. Juntarajumnong (KU) | | |
| 14:00-14:15 | Filling the resistance management gap: the power of intrinsic resistance management in Bacillus thuringiensis israelensis strain AM65-52 protects public health with effective control of organophosphate and pyrethroid resistant vectors | Mr. Peter DeChant , Valent Bioscience, USA | |
| 14:15-14:30 | Fludora Co-Max [®] : A new space spray combination for mosquito resistance management programs. | Mr. Jason Nash, Bayer, Singapore | |
| 14:30-14:45 | Effective Aedes Control based on resting behaviour & New IRS Tools | Mr. Iñigo Garmendia, Goizper spraying, Spain | |
| 14:45-15:00 | Innovative formulation for long lasting residual insecticides | Mr. Siao Jing Sam, Syngenta, Singapore | |
| 15:00-15:15 | Managing <i>Aedes</i> spp. with push-pull tactics: how non-repellent chemistries may mitigate behavior and vectorial capacities | Mr. James Austin, BASF, USA | |
| 15:15-15:30 | Friendly [™] mosquitoes for efficient and safe vector control | Dr. Kevin Gorman , Oxitec, UK | |
| 15:30-15:45 | Discussion | | |
| 15:45-16:15 | Coffee break & Poster session | | |
| Chair persons: | Dr. Dominic Schuler (WHO-PQT) / Dr. Vincent Corbel (IRD) | | |
| 16:15-16:30 | Innovation to Impact: Update on progress and future priorities | Dr. Angus Spiers, 121, UK | |
| 16:30-16:45 | Overview of the prequalification of vector control products | Mr. Dominic Schuler, WHO- PQT, Switzerland | |
| 16:45-17:00 | Building a vector control toolbox for Integrated Vector Management (IVM) | Dr. Nick Hamon, Innovative Vector Control Consortium, UK | |



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Tuesday October 2nd, 2018 (continued)

| 17:00-17:15 | Legislative framework for vector control: the situation for European countries, including overseas territories | Dr. Florence Fouque , WHO-TDR, Switzerland |
|-------------|--|---|
| 17:30-17:45 | VectorBase.org's PopBioMap: An online resource for insecticide resistance data | Dr. Samuel Rund, Notre-Dame University, USA |
| 17:45-18:00 | Toward a global partnership for the control of insecticide resistant Arbovirus vectors: The WIN initiative | Dr. Vincent Corbel, IRD, France |
| 17:45-18:00 | Discussion | |
| 10100 22120 | Cacktail & dippor (at Hatal Bromonado) | |

19:00 -22:30 Cocktail & dinner (at Hotel Promenade)

| | Wednesday October 3 rd , 2018 - Grand Copthorne Waterfront hotel - | |
|----------------------|--|---------------------------------|
| 09:00-12:30 | Round tables | |
| 09:00-10:00 Room: | <u>Round table 1</u> : Are SDGs for dengue and other arboviral diseases achievable with existing vector control tools? Grand Ballroom, level 4 | All members |
| | Dr. Raman Velayudhan, WHO-NTD, Switzerland Dr. Nicole Achee, NDU, USA | |
| 10:00-11:00 Room: | <u>Round table 2</u> : Insecticide resistance: a trick or a real threat for vector control? Where's the proof that it's having an operational impact? Grand Ballroom, level 4 | All members |
| | Dr. Greg Devine, QIMR, Australia Dr. Dave Weetman, LSTM, UK | |
| 11:00-11:45 | Coffee break | |
| 11:45-12:15 | Conclusions / Recommendations | Rapporteurs of each round table |



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Wednesday October 3rd, 2018 (continued)

| 12:15-12:30 | Official closure of the conference | Dr. Florence Fouque , WHO- TDR, Switzerland |
|-------------|------------------------------------|---|
| 12:30-14:00 | Lunch (Ballroom 2) | |
| 14:00-18:00 | WIN internal meeting | |
| Room: | Canary | |
| 14:00-17:00 | WIN General Assembly | WIN members |
| 17:00-18:00 | WIN steering committee meeting | WIN members |

