The International Society for Neglected Tropical Diseases

ISNTD Bites 2013
Royal Geographical Society
October 15th 2013

### Plenary Sessions (Ondaatje Lecture Theatre)

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### Plenary sessions schedule

#### 8.30
Registration and networking breakfast reception

#### 9.00
Welcome from the ISNTD & opening address
Pr. Simon Hay (University of Oxford) - The Global Distribution and Burden of Dengue

#### 9.15
**Session 1 - Epidemiology & surveillance technologies**
- Dr. Anthony Solomon (London School of Hygiene & Tropical Medicine) - Global Trachoma Mapping Project
- Dr. Josep Jansa (European Centre for Disease Prevention & Control - ECDC)
- Dr. Mark Perkins (FIND Diagnostics) - FIND malaria test & malaria and Chagas LAMP projects
- Dr. Edward Wright (Viral Pseudotype Unit) - Pseudotyped viruses for emerging and zoonotic infections: a flexible tool for serosurveillance
- Dr. Miguel Luengo-Oroz (MalariaSpot) - Using an online game & crowdsourcing for malaria parasite quantification

#### 10.15
Panel Discussion 1

#### 11.00
Coffee break

**“Malaria: Poems” screening: Cameron Conaway (Wellcome Trust Poet-in-Residence 2012, Mahidol Oxford Tropical Medicine Research Unit, Thailand)**

#### 11.30
**Session 2 – Innovation in vector control**
- Mr. Philip Wege (Syngenta) – IVCC Product Development Partnerships: New Options for Vector Control
- Dr. Tarek El-Tayeb (Cairo University) - Sunlight active formulated extract (SAFE): an Egyptian invention for malaria vector control
- Dr Andy McKemey (Oxitec) - Field Trials in Innovative Insect Control
- Pr. David Rollinson (Natural History Museum) - Innovations needed for snail control & molluscicides
- Mr. Kevin J Sweeney (Office of Pesticide Programmes, Environmental Protection Agency, USA Gov)

#### 12.45
Panel Discussion 2

#### 13.15
Lunch

#### 14.00
**Session 3 – Impact of resistance**
- Pr. Janet Hemingway (Liverpool School of Tropical Medicine) - Innovative Vector Control Consortium
- Mr. Mark Birchmore (Syngenta)
- Pr. Matt Thomas (Penn State University) - Impact of environmental conditions on vectors
- Dr. Helen Pates Jamet (Vestergaard-Frandsen) - IR Mapper: mapping insecticide resistance in malaria vectors

#### 15.30
Coffee Break & “Malaria: Poems” screening: Cameron Conaway (Wellcome Trust - MORU Thailand)
16.00  Session 4 - Focus on dengue
- Mr. Pat Copeland (Google) - Google Dengue Tracker
- Dr. Raman Velayudhan (World Health Organisation) - Global Strategy for Dengue Control
- Dr. Muhammad Mukhtar (Ministry of Health Pakistan) - National malaria and dengue vector control programs

16.45  Panel Discussion 4 + Action Points Discussion

17.15  Concluding remarks

Panel 1 Epidemiology & surveillance technologies
- Dr. Josep Jansa (ECDC)
- Dr. Miguel Luengo-Oroz (MalariaSpot)
- Dr. Jolyon Medlock (Public Health England)
- Dr. Mark Perkins (FIND)
- Dr. Anthony Solomon (LSHTM)
- Dr. William Wint (EDENext & University of Oxford)
- Dr. Edward Wright (VPU)

Panel 2 Innovation in vector control
- Dr. Tarek El-Tayeb (Cairo Univ.)
- Dr. Shizhu Li (National Institute of Parasitic Diseases, China CDC)
- Dr. Andy McKemey (Oxitec)
- Pr. David Rollinson (NHM)
- Mr. Kevin Sweeney (US EPA)
- Dr. Edward Wright (VPU)

Panel 3 Impact of resistance
- Mr. Mark Birchmore (Syngenta)
- Pr. Janet Hemingway (LSHTM)
- Dr. Helen Pates Jamet (Vestergaard-Frandsen)
- Pr. Matt Thomas (Penn State University)

Panel 4 Focus on dengue
- Mr. Nicholas Brooke (Break Dengue Initiative)
- Mr. Pat Copeland (Google)
- Pr. Simon Hay (University of Oxford)
- Dr. Muhammad Mukhtar (Ministry of Health Pakistan)
- Dr. Paula Vasconcelos (Ministry of Health Portugal)
- Dr. Raman Velayudhan (World Health Organisation)

Workshops
A. Insect repellents
- Dr. James Logan (LSHTM)
- Dr. Vanessa Chen-Hussey (LSHTM)
- Ms. Ulla Obermayr (Biogents AG)
- Mr. Kevin Sweeney (EPA)

B. Thermal and ULV Aerosol Fogging as part of integrated vector control: IGEBA
- Dr. Alberto Sabatani (IGEBA)
- Mr. Joerg Heckel (IGEBA)

C. Transgenic mosquitoes: Oxitec & Innovative Insect Control
- Dr. Camilla Beech (Oxitec)
- Dr. Andrew McKemey (Oxitec)
- Chair: Dr. Julian Entwistle (Xenex Associates)

D. Diagnostics for Disease Surveillance: TwistDx
- Dr. Matthew Forrest (TwistDx)
- Dr. Oliver Nentwich (TwistDx)

Oral poster presentations
Dr. Danial Arkwell & Dr. Lilly Turner (Sentinel Diagnostics) - Real-time PCR based kit for the diagnosis of leishmania infection
Dr. Caroline Bell, Dr Chloe Ross Sandwell and Birmingham Hospitals NHS Trust - Just Another Case of Rabies?
Dr. Sabah Boufkhed (Institut Pasteur) - EpiSouth plus project (http://www.episouthnetwork.org/)
Dr. Derek K-H. Ho, Dr Christian K. Sawicki, Professor Nicholas Grassly (Imperial College London) - Antibiotic resistance in Streptococcus pneumoniae after azithromycin trachoma treatment: a systematic review
Jake Shepherd, Professor James Newell, Elena Schmidt, Emma Jolly, Joseph Oye and Andy Cassels-Brown (University of Sheffield, UK) - Investigating the Successes and Challenges of an integrated CDTi (Community Directed Treatment with Ivermectin) Programme in South-West Cameroon
Dr. Sarah Pett (St Vincent’s Hospital & The Kirby Institute, University of New South Wales, Australia) - Chagas disease in Australia, an emerging health issue: a case report and estimation of the population at risk
Dr. Anand Odedra, C Bocanega, A Churra, HK Li, C Lindsay, L Lsk, G Opoki, R Le Redj, O Smith, J Smith (University of Cambridge) - Children are better than doctors when screening for macroscopic haematuria in a high prevalence area for Schistosomiasis haematobium
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Poster displays
Ali Al-Janabi (University of Cambridge) - Trypanosoma cruzi Persistence in the Pathogenesis of Chronic Chagas Cardiomyopathy

Dr. Elena Ferran & Dr. Dionisio Izquierdo - Congenital Chagas disease – a literature review on the evidence to support a screening programme in Europe

Joerg Heckel & Alberto Sabatani (IGEBA) – Thermal & ULV Fogging as Part of Integrated Vector Control

Dr. Anand Odedra, C Bocanega, A Churra, HK Li, C Lindsay, L Lsk, G Opoki, R Le Redj, O Smith, J Smith (University of Cambridge) - Children are better than doctors when screening for macroscopic haematuria in a high prevalence area for Schistosomiasis haematobium

Dr. Sarah Pett (St Vincent’s Hospital & The Kirby Institute, University of New South Wales, Australia) - Chagas disease in Australia, an emerging health issue: a case report and estimation of the population at risk

Dr. Diara Rocha (Instituto de Higiene e Medicina Tropical, Lisbon), Matos, O.C., Moiteiro, C., Figueiredo A. C., Cabral, M. & Novo, M.T - Insecticidal activity of tropical and mediterranean plant product against Aedes aegypti larvae

Charlotte Seneschall (University of Cambridge) - An account of a successful multidisciplinary, public health system for controlling rabies in Trujillo, La Libertad, Peru

India Wheeler (University of Birmingham) - The Management of Dengue Fever and Dengue Haemorrhagic Fever in Adults at Karapitiya Teaching Hospital in Sri Lanka
Abstract

**Title** How is the EpiSouth Mediterranean Regional Laboratory Network contributing to the preparedness to face the possible emergence of Dengue in the Mediterranean region?

**Background** The EU-funded EpiSouth Plus project\(^1\) aims at enhancing and strengthening the preparedness to face common health threats and biosecurity risks among the Mediterranean area and South-East Europe, in the framework of the International Health Regulations. Established in 2006, the EpiSouth network involves Public Health Institutions and Ministry of Health of the 27 participating countries. The work package 4 (WP4) of this project aims at establishing a Mediterranean Regional Laboratory Network (MRLN) to strengthen the surveillance in the EpiSouth countries.

**Method** To set up and sustain this laboratory network, the methods used were: 1/ Identification of priority issues for the MRLN; 2/ Involvement of international experts in the selection of the relevant laboratories; 3/ Needs assessment of the member laboratories; 4/ Organisation of capacity building and networking activities.

**Results** The WP4 identified Dengue, West Nile and Biosafety as priority issues for the MRLN. To date, 24 laboratories, one per country, are involved. The initial needs assessment revealed that only half of the laboratories performed a diagnosis of Dengue. Hence, the WP4 organised a tailored training on “Dengue and Biosafety in the laboratory” at the Institut Pasteur in July 2012. An external quality assessment of the molecular diagnosis of Dengue viruses is currently ongoing.

**Key messages** The inception in 2011 of the EpiSouth MRLN has extended the trust and collaboration among national Public Health Institutions and officials to the laboratory. Thus, by enhancing diagnostic capacities and cooperation, the MRLN could be a cornerstone of the preparedness to face a possible emergence of other neglected tropical diseases in the Mediterranean Region.

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\(^1\) For more details about the EpiSouth plus project: [www.episouthnetwork.org](http://www.episouthnetwork.org)
How is the EpiSouth Mediterranean Regional Laboratory Network contributing to the preparedness to face the possible emergence of Dengue in the Mediterranean region?

Sabah BOUFKHED
Institut Pasteur, Paris, France

WP4 Coordination: Dr. Kathleen Victoir & Dr. Gülay Korukluoğlu
On behalf of the EpiSouth Network
PLAN

• Background
• Methods
• Results
• Key messages
PLAN

• Background

• Methods

• Results

• Key messages
From the EpiSouth project...

• **Collaboration** among the PH officers on epidemiological issues to CDs surveillance
• Emerging zoonoses as a priority
• Awareness / Cross-border issues
• Epidemiological capacities

⇒ **Strong demand for a Laboratory network**
... to the EpiSouth Plus project (2010-13)

“To enhance and strengthen the preparedness to face common health threats and biosecurity risks among the Mediterranean area and SE Europe, in the framework of the IHR”

- 2 National Focal Points / country
- 3 transversal Work packages (WP 1→3)
  - Coordination, Dissemination, Evaluation
- 4 cross-cutting WP
  - WP4 - Setting-up a Mediterranean Regional Lab Network
  - WP5 - Generic Preparedness and Risk management plans
  - WP6 - Cross-border Epidemic Intelligence
  - WP7 - Facilitating IHR implementation (WHO co-leader)
PLAN

• Background
• Methods
• Results
• Key messages
Organisation of the WP4

• WP4 team
  – **France**: Institut Pasteur
    • Kathleen Victoir
    & Sabah Boufkhed
  – **Turkey**: Turkish Public Health Institutions
    • Gülay Korukluoğlu
    & Handan Kalaycioğlu

• WP4 Steering team
  – Croatia
  – Cyprus
  – France
  – Italy
  – Jordan
  – Tunisia
  – Turkey
Identification of priority issues → MRLN set-up

• Dengue, West Nile, Biosafety in the lab
• Expert committee
  – ECDC
  – EBSA (Eur. biosafety association)
  – ENIVD (Eur. Net. for “imported” viral diseases)
  – EuroWestNile project
  – NRL / endemic
  – WHO-CC
  – PHI / other WPs

• Questionnaire to assess lab capacities

Expert meeting Institut Pasteur Jan. 2012

Questionnaire (I) analysis

21 labs identified
PLAN

• Background

• Methods

• Results

• Key messages
1st Meeting with the Heads of lab
Turkish Public Health Institution, March 2012

• 13 labs represented

• Topics discussed
  – Surveillance systems / Dengue & West Nile
  – Strengths & Needs of labs
  – Expectations / MRLN activities
Figure 1: Map of the 24 laboratories of the EpiSouth MRLN

(as per Sept. 2013)
Graph 1: Proportion of EpiSouth MRLN labs by different types of lab diagnosis performed for Dengue (N=24)
Needs & expectations of the labs / MRLN

- **Needs expressed by the labs**
  - Funding
  - Diagnostic capacity
  - Training on diagnosis
  - Emergence of "new" pathogens
  - Method harmonisation

- **Services expected / WP4 activities**
  - Identification & typing
  - Training
  - Expert advice
Capacity building activities

• **Trainings**
    → 17 countries
    → in-house ELISA & RT-PCR
    → WHO certification / Infectious Substances Shipping Training
    → Lectures / different fields (Epidemiology, entomology, etc.)
  – “WN & Biosafety II” ISCIII, Madrid, June 2013

• **EQA on Dengue diagnosis Aug/Sept 2013**
MRLN inputs to meet the lab needs

• Supportive labs identified / confirmation
• Board of experts available
• Fostering the sharing of Experience
  – Meetings with the Heads of lab (Mar. & Dec. 2012)
  – Website private area + e-mail
PLAN

• Background

• Methods

• Results

• Key messages
Trust & collaboration to get prepared!

- Preparedness
- Surveillance systems
- Early warning capacities
- Laboratory capacities

Other partners
WHO, ENIVD, etc.

Other sectors
Veterinarians, Entomologists

EpiSouth MRLN
↓↑
EpiSouth PHI/MoH
Thank you

WP4 team and Steering team
All the MRLN members
Our colleagues from the other WPs
All the EpiSouth National Focal points
All the partners of the EpiSouth network
Acknowledgements

The EpiSouth-Plus project is co-funded by the European Union DG SANCO/EAHC and EuropeAid together with the participating national partner Institutions.

The financial support of the Italian Ministry of Health and ECDC is also acknowledged. The Project is led by The Italian National Institute of health and counseled by an Advisory Board composed by EC, ECDC, WHO and other international experts.

The contents of this presentation are the sole responsibility of the authors and can in no way be taken to reflect the views of the European Union.
Thank you for your attention...

For more information: www.episouthnetwork.org
Contact for the MRLN: episouthwp4@pasteur.fr
Contact for the EpiSouth project: episouth@iss.it
How is the EpiSouth Mediterranean Regional Laboratory Network contributing to the preparedness to face the possible emergence of Dengue in the Mediterranean region?

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