



EARLY MORNING SESSION • SESSION 4

International Meeting on Emerging Diseases and Surveillance 2011

Room: Klimt Ballroom 2&3 • Upper Level

Saturday, February 5, 2011

07:00–08:00

GIDEON

Chair: Daniel Lucey, USA

4.001 GIDEON: A global web-based system for disease simulation and informatics in the field of geographic medicine

S. Berger
Tel Aviv (Israel)



PARALLEL SESSION • SESSION 5

International Meeting on Emerging Diseases and Surveillance 2011

Room: Park Congress • Ground Level

Saturday, February 5, 2011

08:30–10:30

H1N1 Pandemic

Co-Chairs: Ilaria Capua, Italy
Howard Markel, USA

5.001 The 2009 A/H1N1 influenza pandemic and the “Blame Game”: A brief history

H. Markel
Ann Arbor, MI (USA)

5.002 Influenza transmission: Pigs to people and back

K. Van Reeth
Ghent (Belgium)

5.003 Pandemic influenza: The early days in New York City

A. Fine
New York, NY (USA)

5.004 One health, one flu?

I. Capua¹, C. Giovanni²
¹Padua (Italy), ²Legnaro (Italy)

10:30–11:00 **Coffee Break** (Ground Level AND Upper Level)



PARALLEL SESSION • SESSION 6

International Meeting on Emerging Diseases and Surveillance 2011

Room: Klimt Ballroom 2&3 • Upper Level

Saturday, February 5, 2011

08:30–10:30

Vectorborne Diseases (Oral Presentations)

Co-Chairs: Jack Woodall, Brazil
Natalia Pshenichnaya, Russia

6.001 Transgenic mosquitoes to control dengue and chikungunya in Malaysia

S. Vasan, N.W. Ahmad, H. L. Lee
Kuala Lumpur (Malaysia)



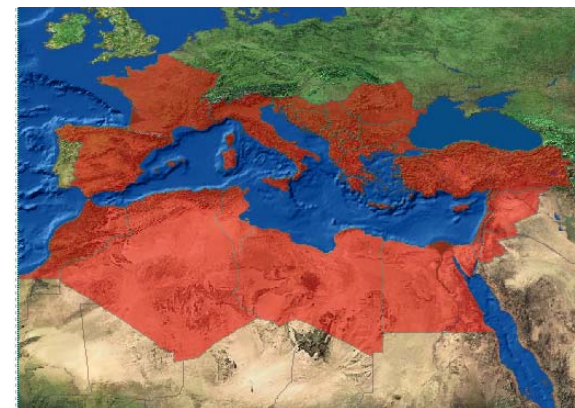
Room: Klimt Ballroom 2&3 • Upper Level

Saturday, February 5, 2011

08:30–10:30

- 6.002 First report of concomitant leptospirosis and hantavirus nephropathy, and of an as yet unknown hantavirus in Sri-Lanka
J. Clement¹, N. Sunil-Chandra², M. Van Esbroeck³, P. Maes¹, M. Van Ranst¹
¹Louvain (Belgium), ²Kelaniya (Sri Lanka), ³Antwerp (Belgium)
- 6.003 West Nile Outbreak in the Mediterranean region, August–November 2010
P. Barboza¹, S. Ios¹, **F. Ait- El-Belghiti**¹, V. Gauthier¹, G. La Ruche¹, I. Capek¹, M. Dente², R. Vorou³, M. Gastellu¹
¹St Maurice (France), ²Italy (Italy), ³Athens (Greece)
- 6.004 Mosquito flavivirus survey in Portugal, 2006–2009
L. Zé-Zé¹, H. C. Osório¹, F. Amaro¹, I. M. Chelo², REVIVE Workgroup¹, M.-J. Alves¹
¹Águas de Moura (Portugal), ²Oeiras (Portugal)
- 6.005 Characterization of Chikungunya infection in an in vitro primary human skeletal muscle model
K. Mohamed Hussain, M. L. Ng, J. J. H. Chu
Singapore (Singapore)
- 6.006 Detection of rickettsia and anaplasma in lizards ticks, Algeria
H. Soualah-Alila, A. Belabed, Z. Bouslama
Annaba (Algeria)
- 6.007 First autochthonous dengue virus infections in south-east France in a context of a sharp increase in imported dengue cases in 2010
S. Ios¹, G. La Ruche¹, Y. Souares¹, A. Armangaud¹, P. Despres², I. Leparç Goffart³, M. Debryne⁴, G. Denoyel⁵, S. Brichler⁶, S. Plumet³, D. Dejour Salamanca¹, M. Grandadam², M. Gastellu¹
¹St Maurice (France), ²Paris (France), ³Marseilles (France), ⁴St Ouen l'Aumone (France), ⁵Lyons (France), ⁶Bobigny (France)
- 6.008 Laboratory based surveillance of dengue viral infection in a tertiary care hospital of Pakistan
cancelled **T. Ijaz**¹, Z. Salahuddin¹, S. Aslam², B. M. Ahmad³, S. Ijaz¹, M. K. Shahzad³, S. A. Raja¹
¹Lahore (Pakistan), ²Lahore (Pakistan), ³Lahore, Punjab (Pakistan)
- 6.009 Re-emerging mosquito-borne diseases in Europe
W. Van Bortel, E. Warns-Petit, K. Leitmeyer, T. Mollet, H. Zeller
Stockholm (Sweden)
- 6.010 West Nile: An emerging viral disease in North East India
S. Khan, P. Dutta, P. Chowdhury, J. Borah, J. Mahanta
Dibrugarh, Assam (India)
- 6.011 Emergence and explosive spread of West Nile virus infections in Europe—
A matter of both public health and veterinary concern
N. Nowotny¹, T. Bakonyi²
¹Vienna (Austria), ²Budapest (Hungary)
- 10:30–11:00 **Coffee Break** (Ground Level AND Upper Level)

West Nile Outbreak in the Mediterranean region: August – November 2010.



**F. Aït El Belghiti, P. Barboza, S. Ioos, V. Gauthier, G. La Ruche,
I. Capek, M. Dente, R. Vorou, M. Gastellu-Etchegorry**

for the EpiSouth network

Department of International and Tropical Diseases
Institut de Veille Sanitaire (InVS), France

- In summer 2010, West Nile (WN) spread all around the Mediterranean region and several countries reported outbreaks.
- WN was 1st isolated (woman) in 1937 in the West Nile district of Uganda
 - Carried by birds and transmitted by mosquitoes
 - Affect birds, horses and humans
 - Human: 20% symptomatic
 - Less than 1% develop serious/fatal forms (meningitis, encephalitis)
- Since 1st documented outbreak in 1957 in Israel, circulation was documented almost worldwide (Balkans, Middle-East, North Africa, South Europe)
- In the region, large human outbreaks:
 - Romania (1996-1997) Tunisia (1997); Israel (2000)
 - Also in neighboring areas : Russia (1999)
- WNV circulation underestimated by number of neurological reported cases and not all countries have specific surveillance system



EpiSouth

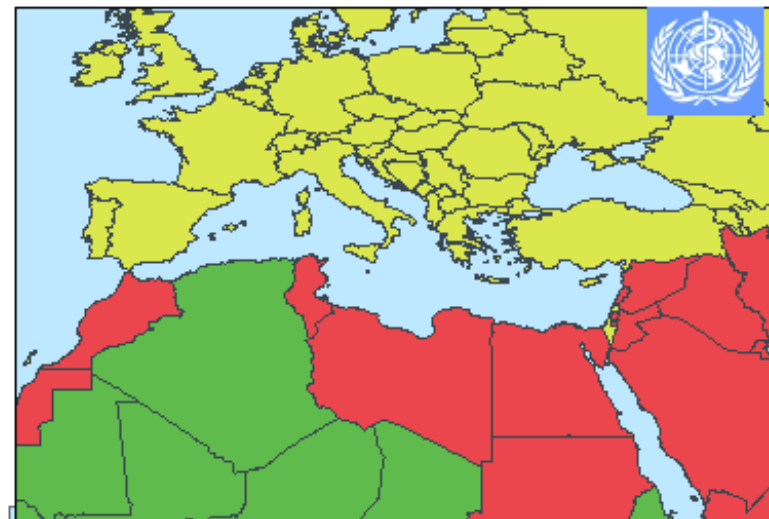


27 Participating countries

- 9 EU
- 6 Middle East
- 5 North-Africa
- 7 Balkans

- ❖ **EpiSouth** is a network for the communicable disease control in the Mediterranean region
- ❖ **27 countries**
- ❖ 7 workpackages
- ❖ Cross-border **epidemic intelligence** programme and specific regional early warning system
- ❖ Collaborating with supranational partners

WHO Regions



EURO

EMRO

AFRO

- Mid August 2010 increased WNV circulation detected
- 2nd September → EpiSouth survey on
 - WN surveillance systems, availability of national WNV laboratory
 - Epidemiological context; cases definition and recent cases...
- 24 countries participated + data from OIE, MoH, Greece (WP8)
- 1st July and 7th Oct. → 8 countries reported WN outbreaks

■ 373 human confirmed cases including 41 deaths in 6 countries

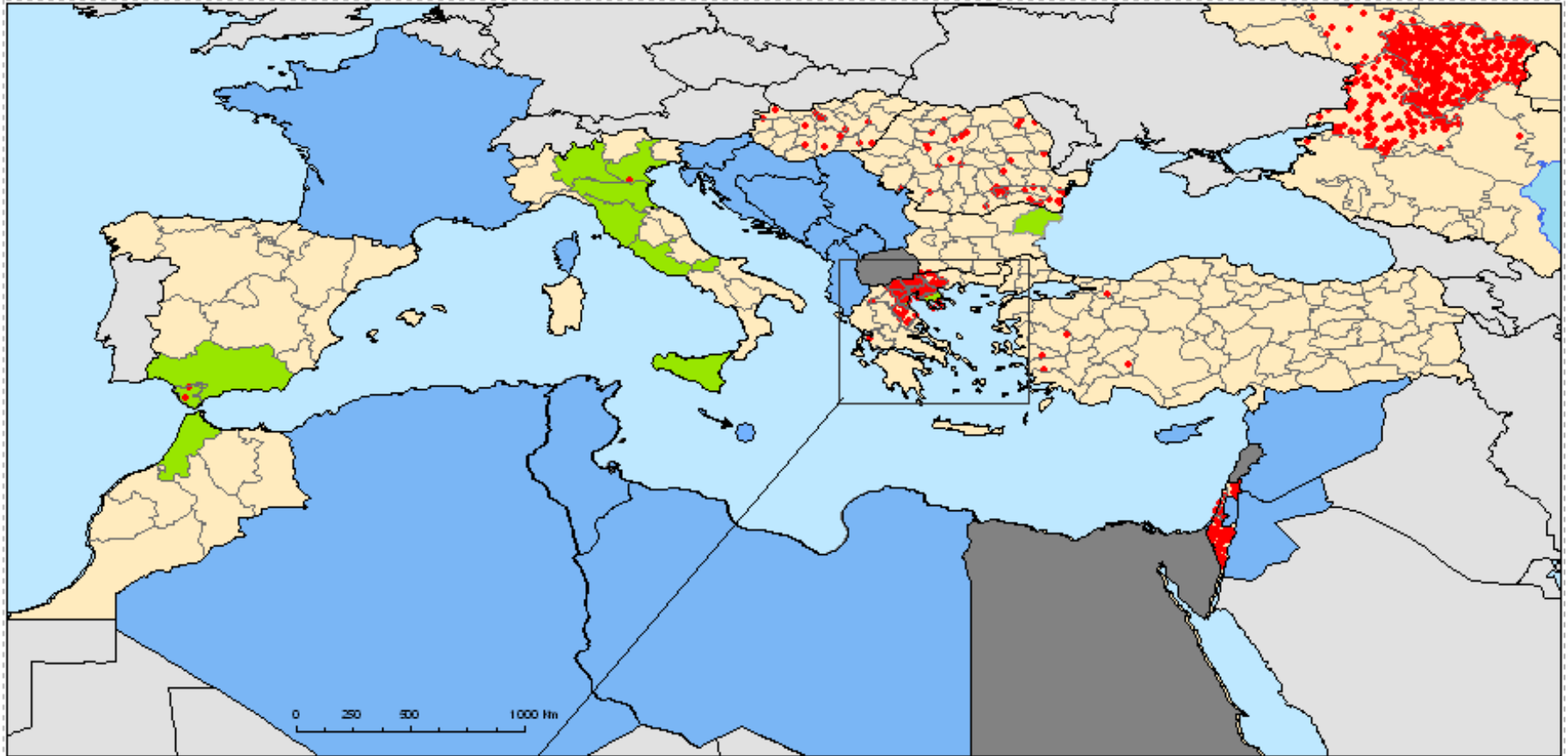
❖ Greece*	257 cases	(31 deaths)
❖ Israel	65 cases	(3 deaths)
❖ Romania	41 cases	(4 deaths)
❖ Turkey*	7 cases	(3 deaths)
❖ Spain	2 cases	(0 death)
❖ Italy	1 case	(0 death)

For Greece and Turkey, there are the 1st WN human infections first ever.

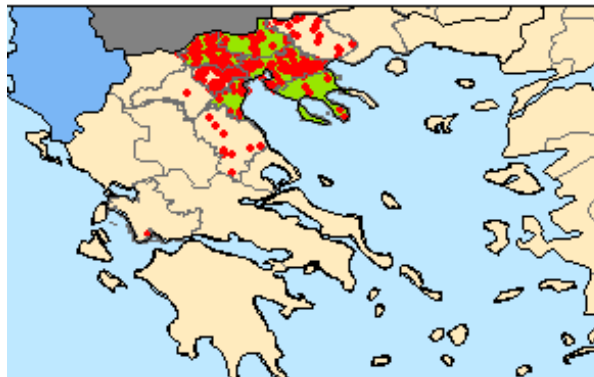
■ 5 countries reported 140 equine WN cases:

❖ Bulgaria*
❖ Greece
❖ Italy
❖ Morocco
❖ Spain*







** For Bulgaria & Spain, the 1st equine cases reported to OIE*



Source Data EpiSouth Countries, and MoH for non-EpiSouth Countries / Map EpiSouth



Legend:

Recent West Nile circulation	Human Cases / Region
 Information pending	 1 point=1 Human case
 No recent WNV	cases randomly located within administrative unit
 Recent WNV Circulation	Animal WNV cases (Horses/Birds)
 No information/Non EpiSouth Country	 Recently affected region

WN Reference Laboratory

- 15 have operational national WN ref. laboratory,
- 6 have a **non** functional ref. laboratory (not yet in position to perform WN test)
- 1 has identified an external ref. lab and 1 has not identified ref. lab

Human Surveillance:

- 15 countries have a specific human surveillance
 - 9 maintain permanent (year long) passive surveillance,
 - 2 have a seasonal surveillance only
 - 3 permanent surveillance + enhanced seasonal system in at-risk areas.

Veterinary surveillance

- 11 countries maintain permanent equine surveillance
- 3 have only seasonal surveillance in equine
- 6 countries have implemented a **bird** sentinel surveillance






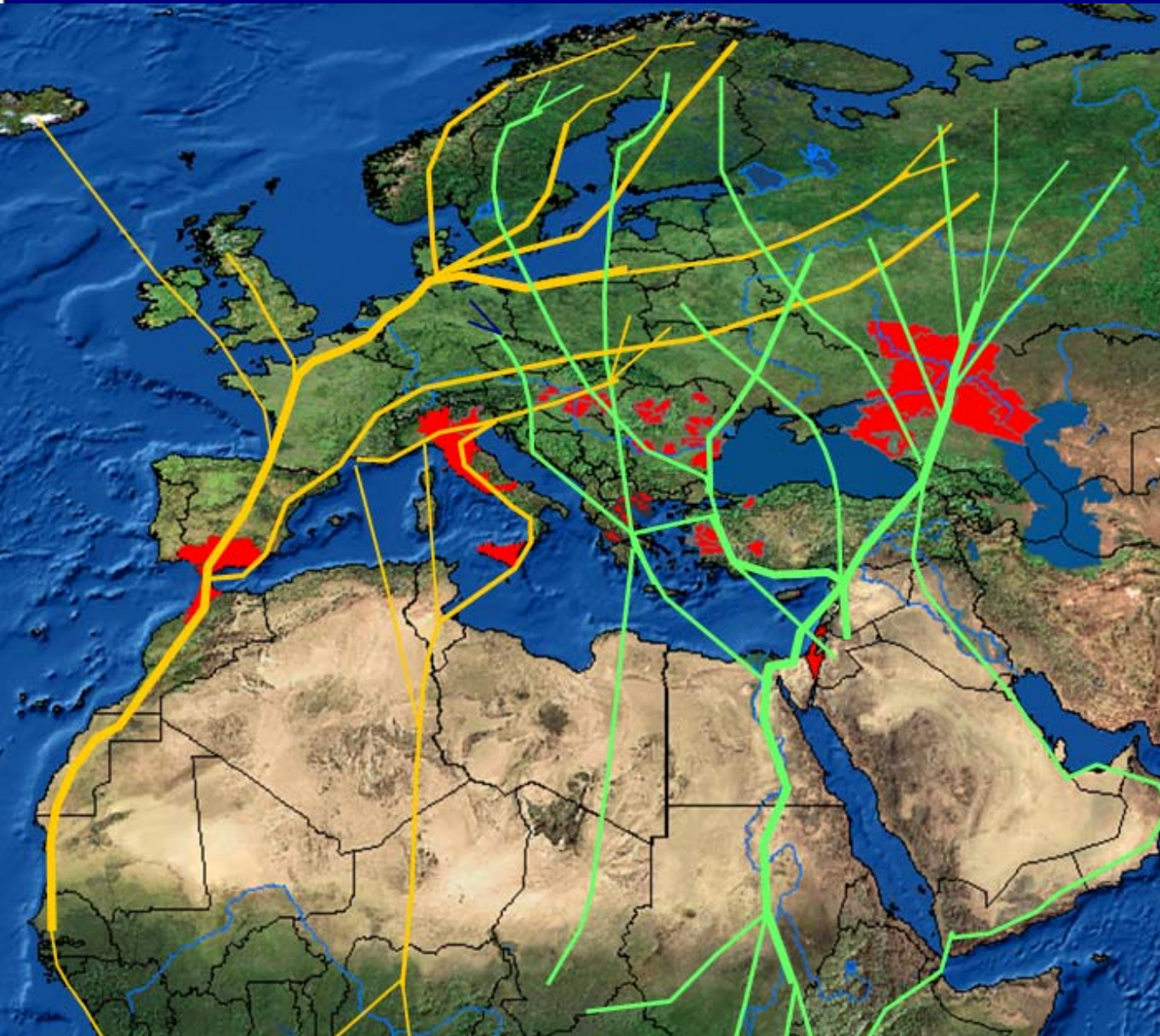
Human WNV surveillance (areas or whole country)

- Permanent surveillance
- Seasonal surveillance
- Non specific surveillance
- No Human WNV surveillance



- * No Human WNV surveillance, but equine surveillance
- No information
- Non EpiSouth Countries

Lab, human & equine WNV cases

-  Functional WNV reference laboratory
-  WNV Human cases (Since Aug. 2010)
-  WNV equine cases (Since Aug. 2010)



Major flyways

-  Eastern Route
-  Western Route

Documented
WNV circulation
(human / animal)
1st Aug. 7th oct.
2010



❊ Limits :

- ❊ Information collected in a very short time, number of items limited and does not allow in-depth analysis.
- ❊ Bias of surveillance: “no specific WNV surveillance system - no reported case”
- ❊ Lack of virological data (lineage, phylogenetic...)

❊ **BUT the objective** was to: Share as rapidly as possible information for decision making (e.g. blood donors restriction)

- ❊ **Contributed to raise awareness** in providing broad perspective of WN circulation & available resources for WN surveillance
- ❊ Among **11** countries with surveillance and operational lab : **7** diagnosed cases
 - ❊ **None of** countries without specific WNV surveillance system reported case.
 - ❊ Now, 3 countries will (Serbia) or are considering (Malta and Syria) implementation a specific WN surveillance

- ➊ **Unprecedented** reported viral circulation in Mediterranean **in 2010**
- ➋ Origin of the high viral circulation is not clearly understood.
But, we observed that:
 - ➌ Outbreaks have been identified on all major bird's migratory routes crossing Mediterranean region and the Volga basin (Russia).
⇒ Further studies needed to document the viral circulation dynamic
 - ➍ WN surveillance systems and access to laboratory facilities **vary** across countries.
⇒ Need of strengthening WN surveillance systems and harmonising resources **among countries that share the same risks**
 - ➎ Early alerting and rapid information exchange is essential especially for countries **with limited facilities**.



A role for Regional networks that could pool internationally available capacities to strengthen health security



Acknowledgments

Network for Communicable Disease Control in Southern Europe and Mediterranean Countries

- **All EpiSouth Focal Points and WPs teams**
- **The WP6 steering team***

(*) WP6 Steering Team : E. Anis, M. Bromberg (Israel); A.Kalaveshi, N Ramadani (Kosovo) R. Haddadin, S. Abdullah Saleh (Jordan); C. Gauci, T. Mellilo Fenech, J. Maistre Mellilo (Malta); A. Rguig, M. Youbi (Morocco); D. Lausevic, Z. Vratnica (Montenegro); B. Madi , B. Rimawi (Palestine); M. Bejaoui, M Ben Gorbali (Tunisia).

- **The International and Tropical Department (DIT) and I. Capek at InVS**