Episouth plus Project
Mediterranean Regional Lab Network (MRLN)

Algeria experience

Final Conference
Rome, 20 November 2013

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Member of Episouth project initiative since the 01st call,
Algeria & Episouth plus project

Two national focal points:

- Institut National de Santé Public (INSP)
  WP5: Preparedness Plan and Risk Management

- Institut Pasteur d’Algerie (Virology Department)
  WP4: Mediterranean Regional Laboratory Network
Institution profile

- health Governmental Agency
- Member of International Network of Pasteur Institutes
- Main Missions:
  - National Reference: Surveillance and diagnosis of infectious diseases (parasites, viruses, bacteria,..)
  - Research: national and international
  - Training and education
Depart. Immunology

Depart. Bacteriology

Depart. Parasitology

Depart. Virology

Production Depart.

Admin. Depart.

Director General

Vaccin. Center

QC of Lab

1894

2012

Human resources

Commercial Division (vaccines etc...)

Supplies Division

Veterinary and Human Rabies vaccines

Antisera

Imunochemical Diagnosis Lab

Genetic Diseases Lab

Bact. diagnosis and Antibiotics Lab (WHO)

Tuberculosis and Mycobacteria Lab (WHO)

Quality of Food and water Lab

Parasitological Diagnosis Lab

Mycology Lab

Parasitological Ecology Lab

Hapatitis viruses Lab

Respiratory viruses Lab (WHO Flu NIC)

Retroviruses Lab

Oncogenic viruses Lab

Enteroviruses Lab (NPL WHO)
Institution expertise on viral diseases

- Satisfactory experience in the lab diagnosis of many viral infections such as poliomyelitis, Influenza, HIV, hepatitis, measles, Rubella,…etc.
- Good background on different lab techniques: cell culture, serology, NAAT,…etc

However; gaps on:

- Strong expertise in the field of viral vector-borne diseases
- Biosafety and biosecurity: BSL3 practices
- Bioinformatics: data mining, alignment, phylogeny,….
MRLN objectives

- Capacity building of the Episouthplus members on validated priority areas:
  - **West Nile virus, Dengue and Biosafety.**
- Have the most adapted methods set-up to the most relevant questions/needs in the region.
- Networking and optimize exchange (protocols, standards) between Episouth member and international organizations.

Fully address our needs and gaps
Capacity building : Trainings

- **Training n° 01 : Dengue and biosafety in the lab**

  02-06 July 2012 – Training Centre, Institut Pasteur, Paris (France)

**Organized on theoretical and practical sessions ;**

- Dengue as emerging threat in Mediterranean area
- Epidemiology and surveillance
- Laboratory diagnosis of Dengue :
  - Lecture & lab practice (sample reception/treatment, in house and commercial ELISA, qRT-PCR, case study)
- Biosafety in the lab : Waste, sample and quality management
- International shipping of dangerous substances
  - (06 modules / WHO Certificate)
Capacity building: Trainings (2)

- Training n° 02: West Nile virus and biosafety II in the lab
  24-28 June 2013 – Instituto de Salud Carlos III, Madrid (Spain)

  theoretical and practical sessions;

  - West Nile infections overview (virology & clinical aspects)
  - Epidemiology and surveillance in Mediterranean.
  - Round table of sharing experience
  - Laboratory diagnosis of WNV infection: Lecture & practice
    (ELISA tests comparison, Multiplex qRT-PCR, case study)
  - Biosafety in the lab: Risk assessment, facility design and maintenance (focus on BSL-3)
  - Sequencing: sequence editing & assembly, data mining, alignment and phylogeny tree
Capacity building: Trainings (3)

- Training n° 03: BSL-3 practice implementation
  
  Country need-specific training

  22 September - 11 October 2013 – CIBU, Institut Pasteur, Paris (France)

  - BSL-3 SOP review and explanation with training tutor.
  - Lectures on biosafety in level 3 laboratory.
  - BSL-3 best practice specific coaching:
    Lab entrance & exit, dressing/undressing, BSCII usage, waste management (solid & liquid, decontamination), protocols manipulation (lysis, inoculation,..)
  - Lab accident simulation/management: spill of biological agent
  - Personal protective equipment's choice: Protocol risk assessment.
  - BSL-3 management and maintenance: A talk with IP maintenance team of BSL-3 labs (general view)
Local Project ad-values

- **At lab level**
  - **For WNV and Dengue:**
    - Set-up of molecular tests.
    - Exchange of protocols and standards
      exp: in house ELISA & PRNT protocol (IP, ISS)
    - Networking: Sharing of information & advices
  - **For BSL-3**
    - In progress implementation of BSL-3 SOP.
    - Specific PPE and disinfectant ordering: under way
    - Training for lab staff (future users of BSL-3)
    - Tips for our maintenance team: BSL-3 maintenance & qualification contract preparation.
    - Opening is planned for the 1st quarter 2014.
Local project outcomes (2)

- **At health public level**
  - WP4 focal point member of national committee of Arbovirus diseases control and prevention.
  - Active involvement in setting-up national WNV human infections surveillance protocol.
Sustainability and perspective

- Development of specific surveillance and control program for emerging viruses (vector-borne and respiratory) in Mediterranean.
- Assistance for local implementation of international rules and standards on biosafety/biosecurity.
- Develop program to address BSL-3 maintenance issues.
- Feasibility to extend ENVID activities and program to Mediterranean area (ECA, protocols,…etc).
- More and more training on bioinformatics (phylogeny, primer design,…).
Thank you for your attention

Merci de votre attention

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