



# Emerging and Dangerous Pathogens Laboratory Network (EDPLN)

Laboratory network for early detection and rapid containment of outbreaks due to emerging and dangerous pathogens

## → Emerging dangerous pathogens : a major challenge to global health security

The continuing emergence and re-emergence of novel and dangerous pathogens of epidemic potential (e.g. Ebola, Rift valley fever, Plague, Monkeypox, Lassa fever, SARS, Tularemia, MERS-CoV, Nipah, legionellosis, borreliosis, Melioidosis, etc.) is a permanent threat to the health of populations around the world and a major challenge to global health security.

## → Laboratories Network

The WHO Emerging and Dangerous Pathogens Laboratory Network (EDPLN) is made up of global and regional EDPLN networks of high security human and veterinary diagnostic laboratories.

EDPLN is coordinated with the Global Outbreak Alert and Response Network (GOARN) for laboratory preparedness and response.

## → Partners

The World Health Organization (WHO), the United Nations Food and Agriculture Organization (FAO) and the Office International des Epizooties (OIE) are actively and jointly working towards outbreak prevention and control.

Additional partners include:

- Defense Threat Reduction Agency (DTRA)
- Global Partnership Program (GPP),
- Foreign Affairs and International Trade Canada (DFAIT),

## → Mandate and goals

WHO EDPLN was established to assist WHO in:

- enhancing both the readiness and response of countries for timely laboratory detection and management of outbreaks of novel, emerging and re-emerging pathogens,
- facilitating the transfer of safe and appropriate diagnostic technologies, practices, and training to laboratories in affected countries, as outlined in the IHR(2005).

EDPLN network provides evidence-based strategies, tools and practices for rapid detection and containment of outbreaks of novel, emerging and dangerous pathogens in order to minimize their impact on public health, health systems and economies of affected areas.

## → 4 strategic axes

## Major achievements

### 1. Real-time communication

**So that...** outbreak information and laboratory investigation results are shared immediately to trigger, orient and enhance outbreak control measures.

- Formalization of a network of high security laboratories collaborating and sharing their knowledge, biological materials, and experimental research results in a real-time framework.
- Establishment of regional networks in AFRO and SEARO.

### 2. Scientific and technical expertise

**So that...** effective and scalable laboratory capabilities are deployed when outbreaks occur and are made available to improve clinical care of patients, surveillance activities and outbreak control operations.

- Promote the development of External Quality Assurance programmes to evaluate laboratory diagnosis capacities at regional and global levels.
- Conduct ecological studies at the human-animal interface.
- Provide high quality laboratory field platform to support Research & Development (e.g. New Ebola vaccines and treatments) for dangerous pathogens with epidemic potential.
- Engage with partner in operational research to review or confirm prevention and control strategies (e.g. new mode of Ebola transmission, real-time gene sequencing analysis, ...).

### 3. Technology transfer and training

**So that...** Rapid Diagnostic Tests (RDT) and Nucleic Acid Tests (NAT) are appropriately evaluated and transfer of technology to regional networks and countries is implemented.

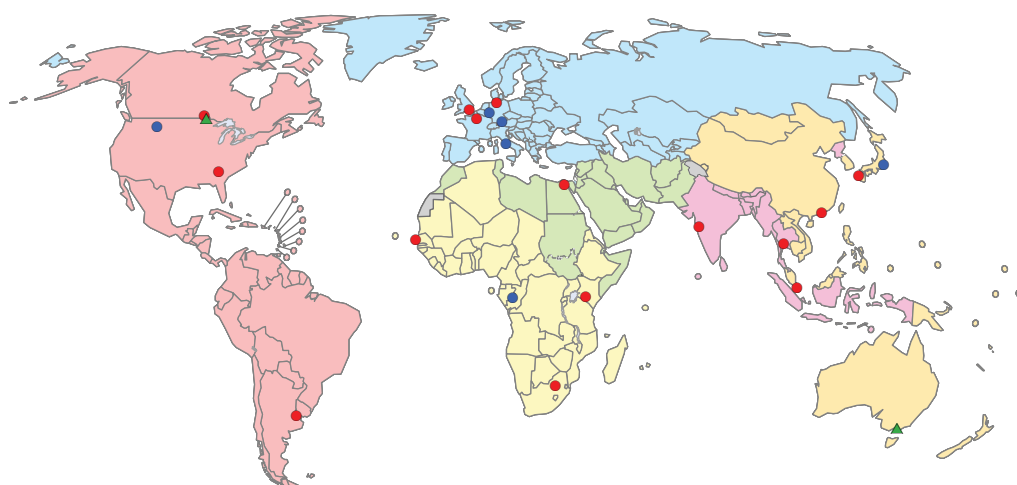
- Support international and regional workshops and trainings to ensure transfer of technology and knowhow.
- Coordinate the production of reagents and facilitate their distribution and pre-positioning.
- Provide laboratory field operational platform for the appropriate assessment of point of care Ebola RDTs and NATs.

### 4. Forum for collaborative environment

**So that...** sharing of knowledge in emerging and dangerous pathogens, laboratory science and tools, and disease ecology is promoted.

- Establish a permanent EDPLN secretariat and forum for improving coordination of activities.
- Collaboration and/or partnership with other international and regional Lab networks e.g. AFR- EDPLN, the European ENIVD and EVAg networks, the Laboratory Network of the GHSAG, and the Biobanking and BioMolecular resources Research Infrastructure, European Research Infrastructure Consortium (BBMRI-ERIC).

### EDPLN - 23 members globally



**More information is available on the WHO website:**  
<http://www.who.int/csr/bioriskreduction/laboratorynetwork>

The department of **Pandemic and Epidemic Diseases (PED)** develops strategies, initiatives, and mechanisms to address priority emerging and re-emerging epidemic diseases, including outbreaks, thereby reducing their impact on affected populations and limiting their international spread.

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**PED**  
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