



2nd Meeting of the Eastern Africa Sub-Regional Network for Rabies Control

10 – 12 October 2023 Addis Ababa, Ethiopia

Overview of RABLAB and available support for countries

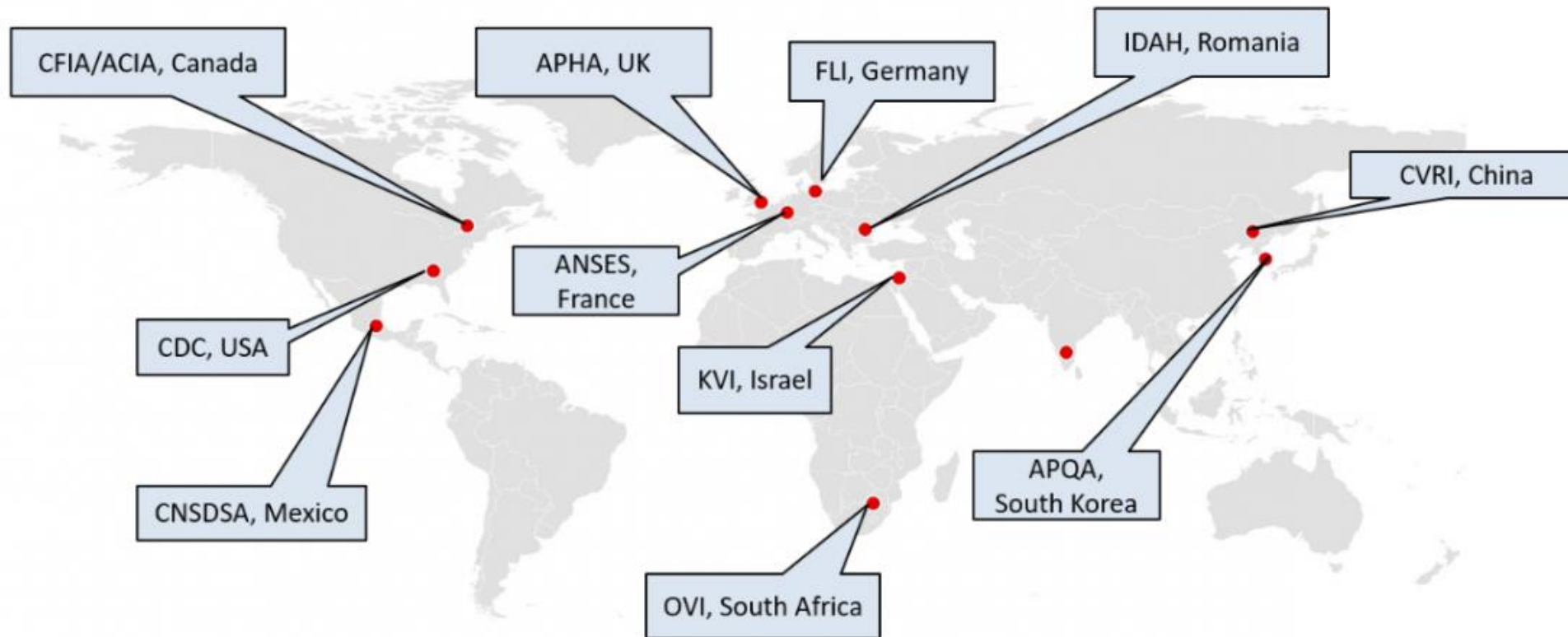
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WOAH Reference Laboratories for Rabies

- Designated by the Director General of the World Organisation for Animal Health (WOAH/OIE):
 - To pursue all scientific and technical problems relating to rabies,
 - The laboratories are run by **leading** and **active researchers** helping the OIE to provide scientific and technical assistance,
 - To provide expert advice on rabies diagnosis and control.
- Currently, there are designated 12 OIE Reference Laboratory for Rabies around the world,
 - Some of which also fulfil a double function as a WHO Collaborating Centres for Rabies.

OIE Reference Laboratories for Rabies



Africa has the least number of reference laboratories compared to other continents

OIE RabLab network

- Role of diagnostic laboratories has expanded beyond testing
- Increasing number of other key responsibilities:
 - training and outreach,
 - communications
 - laboratory-based surveillance
 - laboratory data management
- Filling diagnostic gaps and improving capacity of national labs in support of global rabies elimination efforts is pivotal

OIE RABLAB network started its work

Friday, May 7, 2021

With inaugural meeting held on 06th May 2021 the OIE reference laboratory network for rabies (RABLAB) officially started its work. Membership extends to all 12 OIE-Reference Laboratories for Rabies from across the world that form the core group with a vision to continuously broadening the network in the future. The network will meet on a regular basis and discuss appropriate solutions regarding effective capacity building, proficiency testing, vaccination strategy implementation in particular African and Asian countries. A website will be available soon where the vision, goals and objectives of the network are described in more detail.

Read more: https://uarforum.co.uk/wp-content/uploads/2021/01/UnitedAgainstRabies-OneHealthInAction_Dec2020-.pdf



Goals/vision

- to develop closer relations among OIE-RLs for Rabies,
- to build **strong partnerships** for cooperation to support OIE and the tripartite (FAO/WOAH/WHO) in their global fight against rabies,
- to expand access to **high-quality diagnostic services** to continuously enhance regional and national diagnostic capacities,
- to contribute to worldwide improvement of **laboratory-based rabies surveillance** and **information exchange**

Key objectives

- To share and offer technical assistance, training and veterinary expertise to OIE Member Countries
- To standardize rabies laboratory techniques (OIE Terrestrial Manual)
- To improve access to OIE to proficiency testing schemes
- To exchange biological materials

Key objectives

- To analyse and share scientific data of diagnostic relevance
- To highlight adequate laboratory-supported rabies surveillance, reporting and dissemination of data (OIE Terrestrial Code)
- To identify related research needs and promote their development.
- To promote implementation of the Global Strategic Plan to end human deaths from dog-mediated rabies by 2030 by supporting pillar “2” related activities

Laboratory capacity – back stopping missions



Laboratory capacity – SADC regional training



Laboratory capacity – twinning programmes

- Twinning is an official WOAHA programme
- Approval by the Biological Standards Commission (BSC),
- Other activities are ad hoc and part of the RABLAB members' Terms of Reference in providing support to WOAHA Members.
- To apply for a Laboratory Twinning Program,
 - the parent (Reference Lab) and the candidate centre needs to submit a proposal to the Biological Standards Commission (BSC),
 - outlining objectives, activities, timeline, budget, and any specific limitations.
 - The BSC technically evaluates the proposal, and if approved, funding options can be explored.



Twinning is a long-standing project that establishes a long-term relationship for knowledge transfer and scientific collaboration, but can involve a high administrative burden.



Ongoing twinning projects

- The Animal Plant Health Agency, APHA (United Kingdom)
 - Central Veterinary Laboratory (CVL) in Sierra Leone.
 - Participants were trained in:
 - Conventional PCR,
 - Biosafety, biosecurity and quality control systems.

Ongoing twinning projects

- ANSES, (France) went into a twinning project with the Chinese Taipei.
 - This project was funded by the Animal Health Research Institute (Chinese Taipei).
 - The Chinese Taipei laboratory is well equipped and was interested to conduct pilot studies in ORV in the future.
 - Currently, Taiwan laboratory is not keen to be part of Rabies reference laboratory network for **administrative reasons**.
 - The twinning program with Institute Pasteur (Tunisia) is now finalised.

Ongoing twinning projects

- The **FLI (Germany)** completed twinning programs with **Central Veterinary Laboratory (CVL) in Namibia**.
 - Implemented several new techniques;
 - Completed **interlaboratory comparisons**,
 - Refined/developed standard operating procedures;
 - Undertook joint research projects,
 - For the year 2023 proficiency testing is planned in collaborating with CVL Namibia.
 - Currently CVL does not have any plans to be **identified as reference laboratory due to budgetary constraints**, but the laboratory would be interested in being identified as a focal point for Rabies in the region.

Ongoing twinning projects

- FLI (Germany), in collaboration with Onderstepoort Veterinary Institute (OVI) South Africa,
 - established a Southern African Rabies Laboratory Network, with FLI focusing on countries in the west of Southern Africa, and OVI focusing on the remaining countries.

Provision of standards and diagnostic reagents

Reagent/biological	Purpose	Remarks
Challenge virus standard (CVS)	PCR and rabies tissue culture tests (RTCIT)	Asia and Pacific
FITC-labelled anti-rabies conjugate	Direct fluorescent antibody test (DFAT)	Namibia, Zambia, Eritrea, Ethiopia
Low glycerol mounting medium	DFAT	Africa and America
PBS packets	DFAT	Africa and America
Monoclonal antibodies (FITC/biotin labelled)	DFAT and dRIT	America and Asia and Pacific

Provision of expert advice

Advice	Recipient	Details
Microscope and reagent information	Haiti, Ethiopia	Teleconference
Rabies virus PCR and sequencing	Brazil, Colombia, Zambia, Thailand, Venezuela	Protocol sharing
Lateral flow devices rapid diagnostic testing	Zambia	Training
Surveillance of animal rabies to provide accurate data in countries for timely and appropriate control measures.	Asian countries	Virtual workshop

Sample number	Strain	Intended result	Cq value
23/7165	RV2299-Dog (Zambia)	Rabies Positive	28.15
23/7166	RV267-Dog (Pakistan)	Rabies Positive	26.39
23/7167	Negative	Negative	No Cq
23/7168	RV267-Dog (Pakistan)	Rabies Positive	26.39
23/7169	Negative	Negative	No Cq
23/7170	RV437-Raccoon Dog (Estonia)	Rabies Positive	27.17
23/7171	RV2299-Dog (Zambia)	Rabies Positive	28.15
23/7172	RV267-Dog (Pakistan)	Rabies Positive	26.39
23/7173	RV437-Raccoon Dog (Estonia)	Rabies Positive	27.17
23/7174	RV267-Dog (Pakistan)	Rabies Positive	26.39

Participating in PTs can be expensive

- ISO17025 accreditation
- Other ways of assessing individual technical competence:
 - WOAHA Rabies reference laboratory – regional proficiency tests,
 - Istituto Zooprofilattico Sperimentale delle Venezie (IZSve), Italy
 - Annual exchange of samples between countries (e.g. Ethiopia and Eritrea)
 - Inter-analyst comparison (test previously tested samples and compare results)



Summary: RABLAB

- Advice about rabies diagnosis
- Confirmatory diagnosis (PCR and sequencing)
- Bench training – short-term or twinning
- Panel of samples for assessing technical competence
- Biological reagents and consumables
 - CVS/conjugate
- Rabies control strategic plans

In case a member country needs assistance

Please **contact**:

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