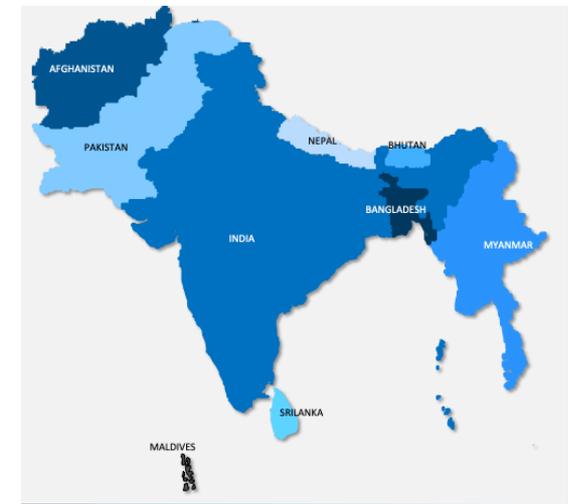




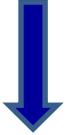
World Organisation
for Animal Health
Founded as OIE

Rabies Diagnostic capacity & recent initiatives in South Asia

Dr. Sharada, R.,
Associate Professor & Quality Manager,
KVAFSU-CVA Rabies Diagnosis Laboratory ,
WOAH Reference Laboratory for Rabies ,
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Outline



- Need for Diagnosis
- Diagnostic tests available
- KVAFSU-CVA Rabies Diagnostic Laboratory (RDL)'s Diagnostic capabilities
- Country wise Diagnostic facilities
- Next steps.....



Diagnosis of Rabies

Why do we need early diagnosis / surveillance

- Major threat to both animals and humans – One health
- Timely and appropriate treatment
- Initiation of effective preventive and control measures
- Achieve national & International health goals
- Achieve success of Rabies control programmes

Early detection

- Sensitive diagnostics
- Equipped Laboratories
- Trained personnel



- **Hence, need of effective surveillance mechanism**
 - **Diagnostic /Sero surveillance**

- **For effective surveillance – need to strengthen the laboratory infrastructure**

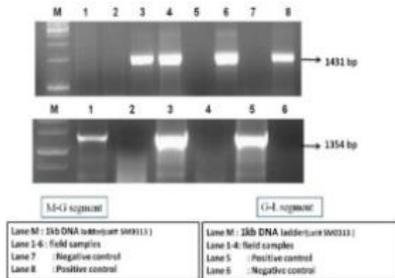


Diagnostic surveillance

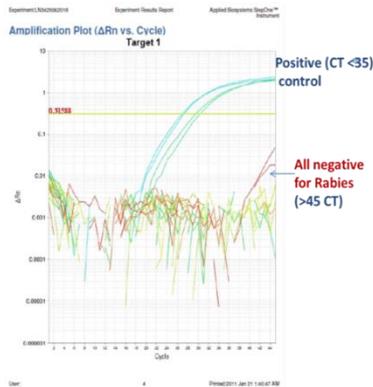
Direct Fluorescent Antibody Assay (DFA)



PCR Conventional



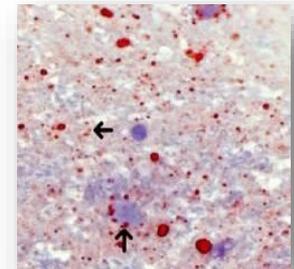
Real time PCR



Lateral Flow Assay (LFA)



Direct Rapid Immuno histochemistry Test (dRIT)



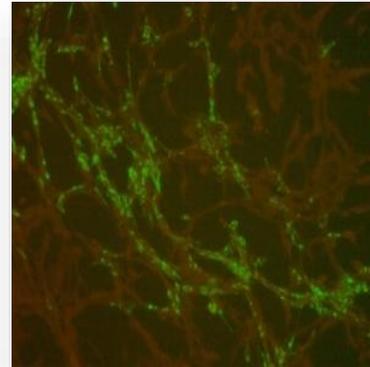
Mouse Inoculation Test (MIT)



Sero surveillance

Mass dog vaccination

- Sero monitoring of vaccinal antibodies.
- RFFIT / FAVN /ELISA (limited facilities to conduct RFFIT)
- Need to adopt in Asian countries



Activities of KVAFSU-CVA RDL

Diagnosis



- LFA
- DFA
- dRIT
- PCR
 - Conventional
 - Real time

Seromonitoring



- RFFIT
 - ✓ Pet travel
 - ✓ Vaccination Programme
- ** Development of ELISA

Research



- Phylogenetic analysis
 - ✓ G gene
 - ✓ N gene
 - ✓ G-L intergenic region
- LAMP
- Rec G protein ELISA
- Indigenous diagnostics

Human Resource Development



- Trainings / workshops
 - ✓ at KVAFSU-CVA RDL
 - ✓ On-site
 - ✓ Virtual



Status of rabies diagnostic capacity in the SA region

Country	Tests employed in Animals								Tests employed in Humans				
	LFA	DFA	dRIT	PCR		MIT	ELISA	RFFIT	DFA	dRIT	PCR		RFFIT
				Conven- tional	Real time						Conven- tional	Real time	
Afghanistan	√	√			√								
Bangladesh		√*							√*				
Bhutan	√	√							arrangements have been made to test human samples for rabies diagnosis at National centre if required				
Nepal	√	√				√							
India	√	√	√	√	√	√	√	√	√**	√	√	√	√
Pakistan						√**					√*		
Sri Lanka		√				√			√*				

Maldives: currently no laboratory diagnostic tests for rabies but intend to soon develop their diagnostic capacity in view of the threat of incursion

*At National level only

** At sub national level only



Improving surveillance of rabies in animals in SA region

- **Effective Surveillance is based on reliable diagnostics
- basis for control strategies**
- **Harmonization of laboratory techniques in the region**

**Lets join hands to Strengthen Animal Rabies Surveillance
to make Zero Rabies by 2030 A Reality**

