



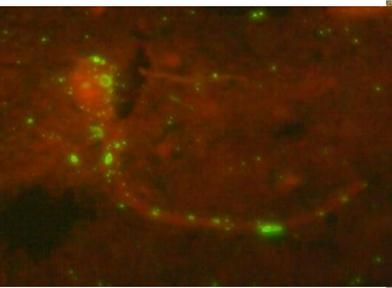
Tripartite Webinar on Rabies:

All for 1, One Health for All in the Asia Pacific Region

Enhancing animal rabies surveillance on the ground using One Health Approach

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(District Nodal Officer, Rabies Surveillance, Shimla H.P.)



99%

Around 99% of human rabies cases are due to bites from infected dogs

More than 95% of the world's fatal rabies occur in Africa and Asia (WOAH rabies guide)

> 95%

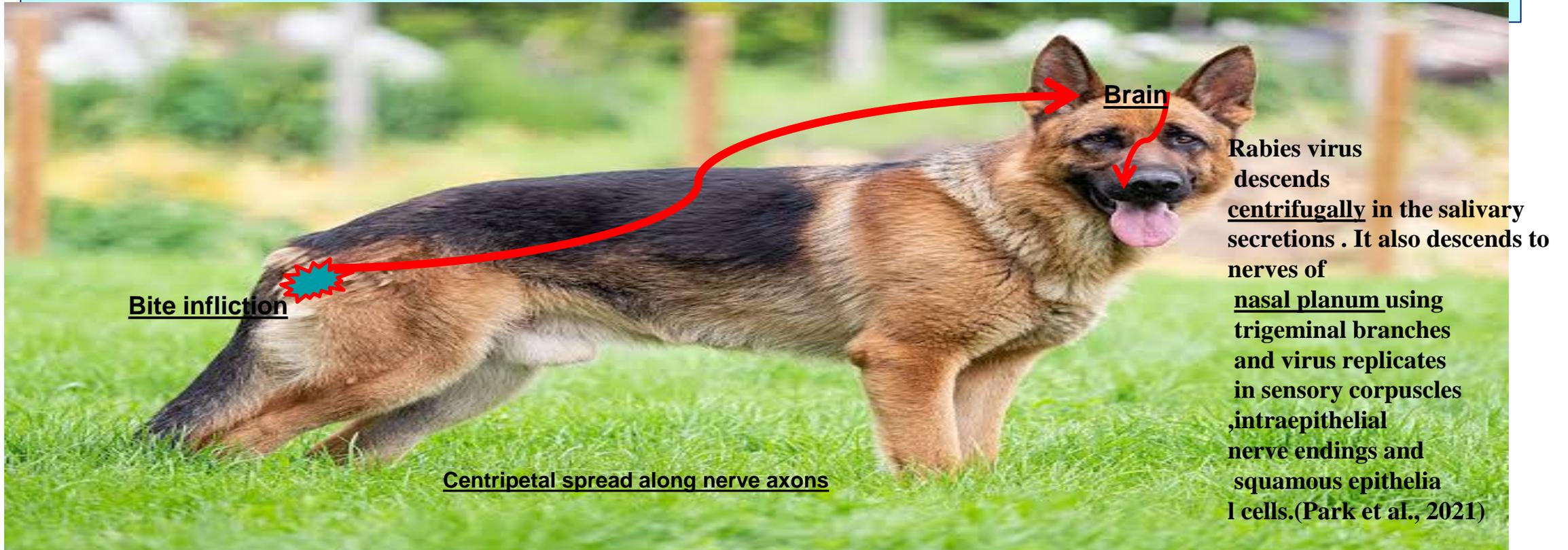
> 80%

More than 80% of rabies cases occur in rural areas with limited or inexistent access to health education campaigns and post-bite treatment

70% vaccination of dogs (pet and stray) can prevent rabies among humans and also in wildlife (WHO)

70%

•In India, rabies is under reported and its diagnosis is further hampered by religious sentiment and affection towards cattle and dogs respectively that discourages *post mortem* examination and particularly opening of the cranium. Foramen magnum (Occipital foramen) approach of obtaining the brain sample proves to be best approach to take brain samples. Specimens of peripheral tissue innervated by cranial nerves may be alternative diagnostic specimens when brain tissue is unobtainable.





Tripartite Webinar on Rabies: All for 1, One Health for All in the Asia Pacific Region

Rabies Surveillance in Shimla, Himachal Pradesh India



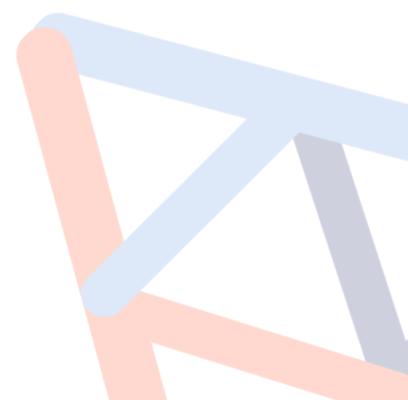
Total area : 557673 Km²

Total area Shimla District : 5131 Km²



MAIN SURVEILLANCE APPROACHES

1. Improving Diagnostics in collaboration with National reference laboratories
2. Awareness campaigns in schools and general public regarding rabies
3. Using app based technology for recording suspected rabid dogs
4. Main focus on field side tests like LFA and dRIT for rabies diagnosis.





We started rabies surveillance w.e.f. year 2021 in Rampur Bushahr area initially , after I met Padam Shri Dr. Omesh Kumar Bharti, State Epidemiologist , Department of Health and Family Welfare Shimla , H.P. Later expanded to District Shimla of H.P.

Since then we were sending Brain Samples to CRI-Kasauli , Himachal Pradesh rabies diagnostic laboratory , which is National lab for rabies diagnosis.

Gradually we started collaborating with other National Laboratories like , KVAFSU-CVA Rabies Diagnostic laboratory, WOAHI Reference lab for rabies in Veterinary College , Hebbal Bangalore and National Centre for Veterinary Veterinary Type Culture (NCVTC) virology laboratory at NRC-Equine Hisar and recently we have also collaborated with NIMHANS- Bangalore (WHO reference lab for rabies diagnosis) for testing few samples .



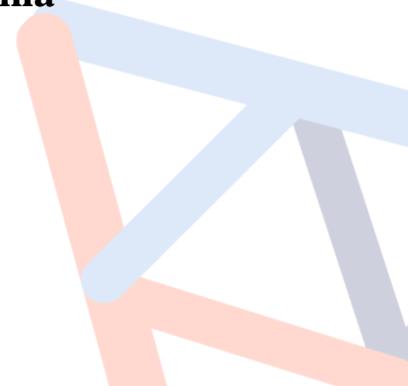
Few Photos from CRI, WOAAH reference lab , NCVTC lab, NIMHANS and Our lab at VPC-Rampur



Training Under the guidance of Dr. Shrikrishna Isloor, Professor and Lab Director KVAFSU-CVA, Rabies Diagnosis Lab , WOAAH refence laboratory for rabies, Veterinary College , Hebbal-Bangalore



Doing Lateral flow assay in laboratory at Veterinary Polyclinic , Rampur Bushahr, Distt. Shimla H.P.





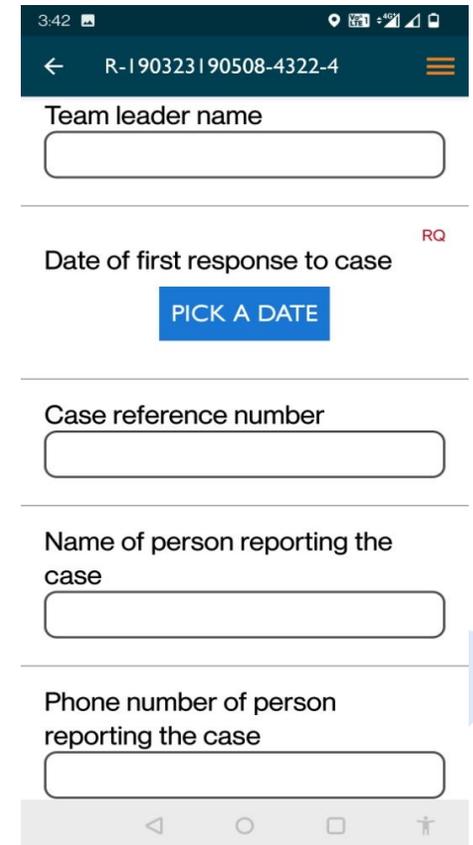
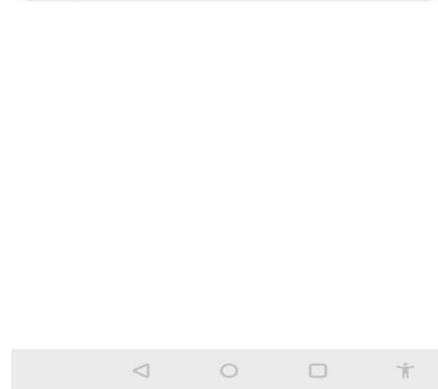
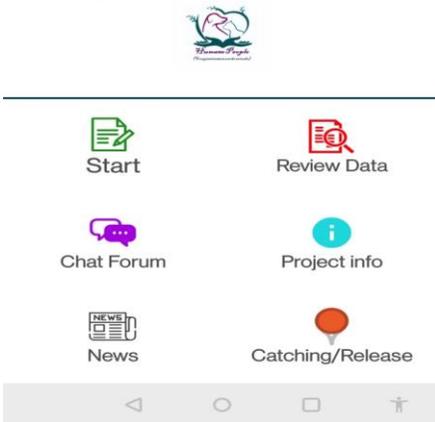
Awareness Campaigns regarding Rabies





Using App based technology for recording suspected rabid dogs

WVS-Data Collection app Developed by Mission rabies and customized for Shimla District



Brain sample collection under field conditions using foramen magnum method – User friendly and simple approach (Credits to Dr. Shrikrishna Isloor for providing training and NCDC for sponsoring it)

**Fresh carcass:
use scissor / scalpel**



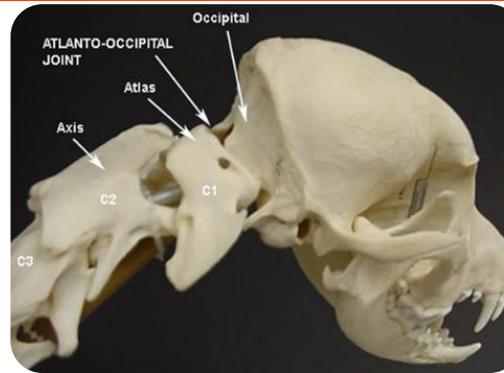
Conventional



**Old / preserved carcass:
use syringe / AI sheath**



- **DFA - principal diagnostic test used for diagnosis of rabies.**





Sample collection by other Vets guided by Video call / sharing videos for brain sample collection through occipital foramen



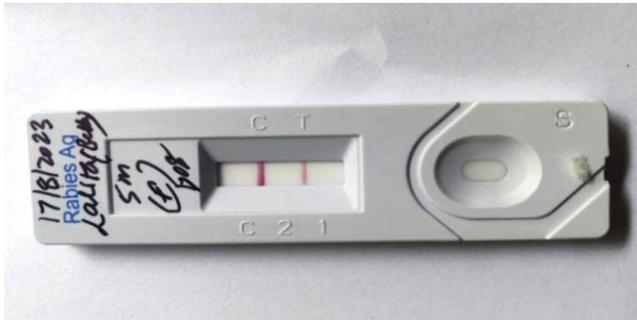
Brain sample collection in a Cow using foramen magnum approach



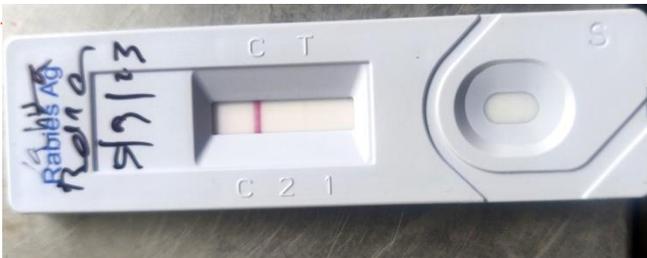
Brain sample collection in a dog – Foramen magnum approach



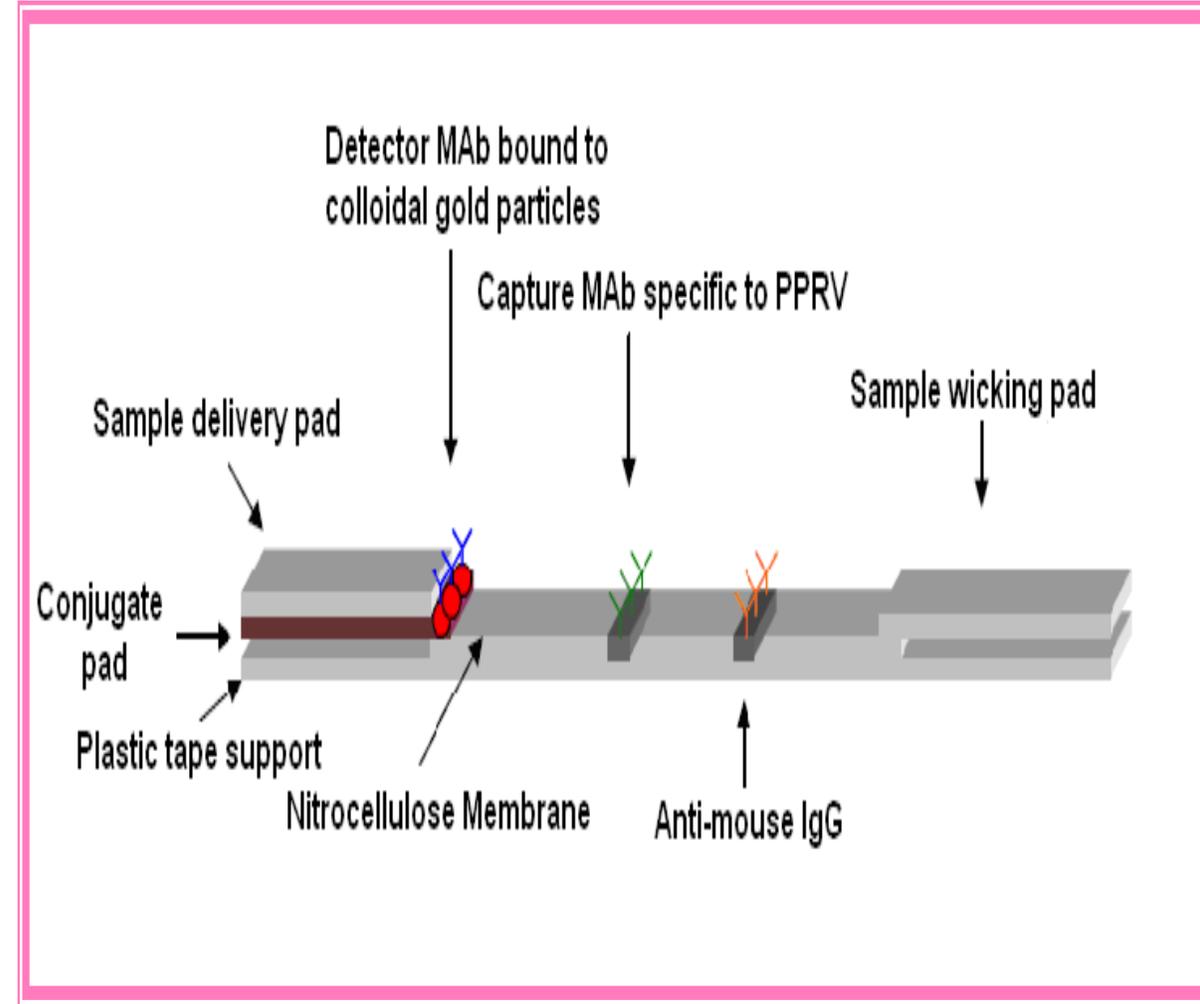
Field side tests with no special laboratory requirements like LFA



LFA +ve



LFA -ve



Animal Rabies incidences in HP from Dec 2021 till date...

S. No.	Rabies Case reported in Species	Date of Reporting	Lab confirmed/Clinical rabies	Action taken	Remarks
1.		07/12/2021	Lab Confirmed	PEP in Animals bitten and Mass Vaccination in that area	No incidence of rabies till date
2.		22/04/2022	Clinically rabid	PEP of bitten	One case of rabies in dog reported within 3 months
3.		19/07/2022	Lab confirmed	PEP+ Mass vaccination	No new incidence till date
4.		1/12/2022	Clinical rabies	No action	Human death 12/12/22 even after PEP, case of another rabid dog within 2 months
5.		4/01/2023	Clinical rabies	PEP+Mass vaccination	No rabies in other animals, one human death of bitten woman (no proper PEP given/delayed PEP)
6.		23/01/2023	Lab confirmed	PEP+Mass Vaccination	No new incidence
7.		01/02/2023	Lab confirmed	PEP and Mass Vaccination	No rabies till date in area
8.		09/02/2023	Clinical rabies	Mass Vaccination and PEP	No rabies till date in area



S. No.	Rabies Case reported in Species	Date of Reporting	Lab confirmed/Clinical rabies	Action taken	Remarks
9.		09/03/2023	Clinically rabid	PEP for bitten victims	Re-occurrence of rabies in area after 2 months
10.		12/05/2023	Clinically rabid	Only PEP in bitten victims	Another incidence within 10 days in a sheep
11.		23/05/2023	Clinically rabid	PEP followed for sheep , no eRIG infiltrated in wounds	Sheep Died after 16 days
12.		06/06/2023	Lab confirmed	Mass vaccination	No new incidence till date
13.		08/06/2023	Clinical rabies	PEP to bitten	No new incidence till date
14.		08/06/2023	Clinical rabies	Mass vaccination +PEP	No rabies in other animals
15.		28/05/2023	Lab confirmed	PEP and Mass Vaccination	No rabies till date in area
16.		03/06/2023	Clinically rabid	PEP+MDV	No case reported till date
17		01/06/2023	Clinically rabid	PEP+MDV	No new case reported till date

S. No.	Rabies Case reported in Species	Date of Reporting	Lab confirmed/Clinical rabies	Action taken	Remarks
18.		09/08/2023	Lab confirmed	MDV	No reoccurrence
19.		11/09/2023	LFA +ve saliva	MDV	No reoccurrence



Fig: Rabid dog 1



Fig: Rabid dog 2



Fig: Rabid dog 3

Joint Surveillance- One Health

In serial no. 4 a rabies case in a dog was observed on dated 01/02/2023 and no immediate action was taken w.r.t. MDV in that area . As a result one human death on dated 12/02/2023 was there even after proper PEP followed in man.

One more rabies incidence in a dog was observed after 2 months .

In serial no. 5 also rabies was reported in a dog on 04/01/2023. In same place one human death was encountered (delayed PEP in human case).

Best solution : Surveillance based Mass Dog Vaccination (10-15 Km diameter) whether case reported in a dog , cow, wild animal or Human being.



Controlling Rabies at Dog's Level , is of utmost importance to Control Dog Mediated Rabies by 2030



Thank you!

