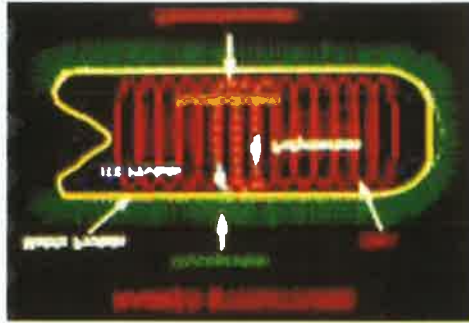


## RABIES

Rabies is one of the most ancient and most feared diseases of man and animals. It is a major zoonosis caused by a neurotropic virus of the genus *Lyssa virus* of the family *Rhabdoviridae* and is transmissible to all mammals.



## MANDATES OF THE RABIES DIAGNOSTIC LABORATORY



- To serve as a state referral laboratory for rabies by providing diagnostic services.
- Help the clinician/medical practitioner to decide about the post exposure treatment of anyone exposed.
- Epidemiological studies on rabies in the state.
- To offer training programs.
- Research

## SAMPLES TO BE COLLECTED

Brain is the most ideal specimen for diagnosis as it contains the virus in high concentration.



- **Whole carcass in case of small animals.**
- **Head in case of large animals.**
- **Full brain.**
- **Corneal impression smears and CSF in case of ailing animals.** (*Only positive findings are significant. Negative result on a corneal smear is not a negative diagnosis.*)

Brain of a rabid animal is highly infective. Removing brain after opening the skull may be hazardous under field conditions and when the personnel is not fully trained and not immunized.

## SHIPMENT OF SAMPLES

- Specimen for Rabies diagnosis must be send to the laboratory rapidly under cold conditions, because rabies virus is rapidly inactivated. Shipment conditions must be considered to be part of the "rabies diagnosis chain".
- During the shipment of suspect materials (Animal head/ Carcass/Brain), no risk of human exposure should arise.
- Leak proof rigid container should be used for keeping the specimen which should be tightly closed /sealed and put into a plastic bag and placed in insulated boxes containing refrigerant.
- Corneal smears must be air dried, fixed in high quality chilled acetone and transported on ice.
- Transport regulation for dangerous material must be observed.
- Specimen should be delivered through a messenger.
- Putrefied sample is unfit for any reliable laboratory test.

## MANAGEMENT OF DEVELOPED RABIES IN ANIMALS

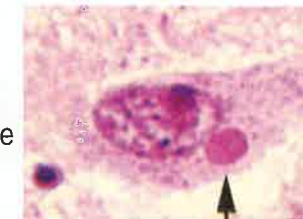


Once the symptoms of rabies have developed, no treatment is of any avail. An animal that is suspected to be rabid and which may possibly had been a source of danger to human contacts should not be destroyed (unless it can not be captured or placed under restraint).

*Premature killing affects the reliability of any laboratory test.*

## LABORATORY DIAGNOSTIC FACILITIES NEGRI BODY DETECTION

- Result within 1 hour.
- Method is sensitive to sample decomposition.
- 15 – 40 % false negative result.
- Only positive findings are diagnostic.



## LATERAL FLOW TECHNIQUE (Antigen Detection)<sup>o</sup>

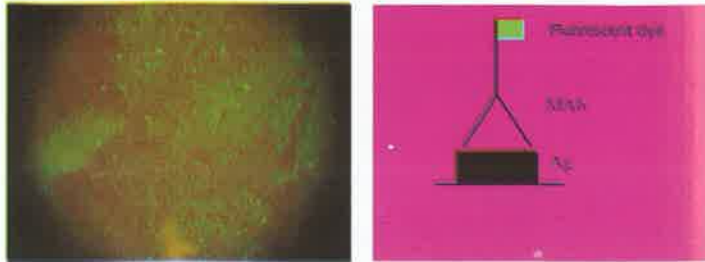
- Rapid results (within 30min).
- Simple methodology.
- Minimum skill or infrastructure required.
- A low incidence of false negative result possible.



<sup>o</sup> M/s. Anigen Animal Genetics, Inc.

### DIRECT FLUORESCENT ANTIBODY TEST (DFAT)

- Method recommended by WHO & OIE.
- Results within 6 – 18 hrs.
- 95 – 98 % reliable on fresh specimens.



### ELISA for rabies antigen detection (N-protein detection)

- Useful for large scale epidemiological surveys.
- 96 – 99% correlation with FAT results.



### BIOLOGICAL TEST (ANIMAL INOCULATION TEST)



- A valuable confirmatory test in cases where other tests have yielded an inconclusive result.
- Results within 3-4 weeks.

*(All samples found negative or inconclusive on other tests are confirmed by biological testing)*

### RESEARCH PROJECTS

- Immunogenicity study in rabies prophylaxis (On going).

### SUBMISSION OF SAMPLE

Sample for testing should accompany

- A letter from a registered veterinary practitioner.
- Full clinical history/ epidemiological data.
- Testing fee of Rs.200/specimen

*Any one exposed should consult a medical practitioner and start treatment without waiting for the lab result.*



Printed at : Kerala State Audio-Visual and Reprographic Centre, Tvpm



Government of Kerala  
DEPARTMENT OF ANIMAL HUSBANDRY



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