

## **Ruska Labs, Rajendranagar, Hyderabad.**



### **RUSKA LABORATORIES (ELECTRON MICROSCOPY A CENTRAL PAID FACILITY)**

Visualizing the need of Electron Microscope in veterinary and allied sector for carrying out high end research the centralized electron microscope facility was developed under AHRD project in the year 2002. This center was named as “RUSKA LABORATORIES” in recognition of the contribution made by Dr. Earnest Ruska who received Nobel Prize in Physics in 1931 for invention of Electron Microscope.

#### **Objective of the lab**

- To create a center of Excellence in application of electron microscopic techniques and other research tools for diagnosis of animal and plant diseases
- To extend the support to basic and applied research activities in State, National Academic Institutions and Research Stations.
- To serve as a center for academic excellence in the areas of postgraduate education (P.G., M. Phil and Ph.D.,) and advanced research activities.
- Imparting hands on experience training programme in Electron Microscopy to different fields of Scientists (India & Abroad).

#### **Activities of the EM Facility**

Extending the Research support to the Ph.D., M.Phil and P.G., Scholars of different Universities / Institutes, to strengthen, and to promote inter-institutional and interdisciplinary co-operative research.

Orientation programme (theory and practical) for Ph.D., and P.G., Scholars of different Faculties from different Universities. Offering a Ph.D course VPP-704 (Ultra structural Pathology) in Veterinary Faculty.

## **Facilities available**

- Transmission Electron Microscope (TEM) - (Hitachi H-7500) -magnification range from 700 x to 3, 00,000 x with 2 nm resolution.
- Ultra Microtome - (Leica Ultra cut – GA – D/E – 1/00)
- Scanning Electron Microscope (SEM) - (JEOL JSM - 5600) magnification range 30 x to 1,00,000 x with 3.5 nm resolution.
- Advance Research Microscope - (Olympus Ax – 70-proposed for digitalization under RKVY)  
*with facilities for Fluorescence, Differential interference contrast, Dark field and Phase contrast*
- Student Research Microscope - (Carl zeiss Axisokop 2 plus - proposed for digitalization )
- Stereo Zoom Microscope - (Nikon SMZ 800)
- Dark Room Facility

## **Services extended to other states**

Assam, Chhattisgarh, Rajasthan, Gujarat, Haryana, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, and West Bengal.

## **List of Universities in Telangana and Andhra Pradesh utilizing this facility**

Osmania University, Hyderabad  
University of Hyderabad (UoH),  
ANGRAU, APHU, SVVU, Hyderabad, Tirupati and Tadepallygudem  
JNTU, Hyderabad, Ananthapur and Kakinada.  
SVU, SPMVV, Tirupati,  
Acharya Nagarjuna University, Guntur  
Andhra University, Vishakhapatnam  
Sri Krishna Devaraya University, Anantapur, Sri Satya Sai Deemed  
University,Puttaparti.  
Kakatiya University, NIIT- Warangal  
Osmania Medical College,  
LV Prasad Eye Institute,  
Apollo Hospitals,Global Hospitals ENT Hospital – Hyderabad  
Mamatha Dental College, Khammam.  
Vishnu Dental College, Rajahmundry.  
Panineya Dental College, Dilshuknagar.  
Deccan Medical College, Hyderabad.  
Sri Sai Dental College, Vikarabad.  
GRIT, Hyderabad.  
Pulla Reddy College of Pharmacy, Hyderabad.  
Qis College of Pharmacy, Ongole.  
Other Private Engineering Colleges in Hyderabad and other Districts.

## **International and National Organizations utilizing this facility**

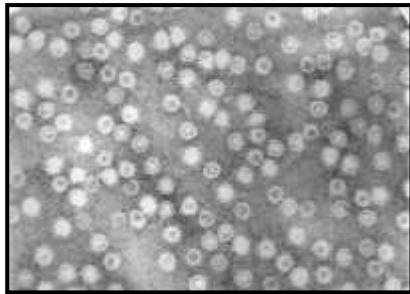
ICRISAT, BARC/ CCCM (Mumbai and Hyderabad unit),  
IICT, NIN, DOR, DRR, PDP, CDFD, NRCS, NRCM, NAARM, Hyderabad,  
Indian Immunological Limited - Hyderabad, Bharat Bio Tech - Hyderabad,  
Roshni Biotech- Hyderabad, Fore Vision India Ltd - Hyderabad,  
Sanzyme Ltd., Hyderabad, Al Tech Pharma Pvt. Ltd., Gelmark Pharma-Mumbai  
Dr Reddy's Labs – Hyderabad, ADMAS- Bangalore, and Avitech- Haryana Many  
other Indian Institute of Interated Medicine Jammu & Kashmir and other Private  
Organization from different parts of India.



OBSERVATION OF STAINED GRIDS UNDER  
TRANSMISSION ELECTRON MICROSCOPE (TEM)-  
HITACHI-H-7500

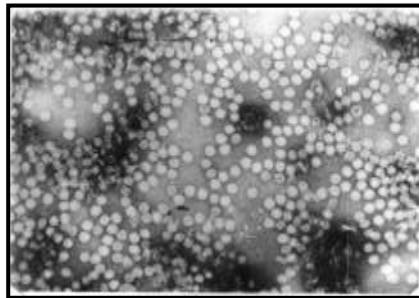


OBSERVATION UNDER (SEM) - SCANNING ELECTRON  
MICROSCOPE JEOL - JSM - 5600



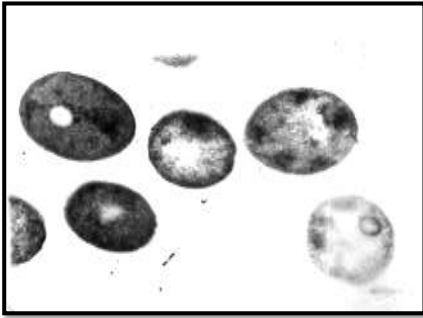
Unknown virus - 89500x

## TEM-IMAGES

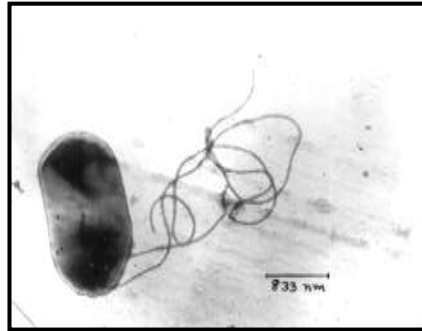


CPV-recombinant virus  
17900x

## TEM-IMAGES



**Bacteria Endospores- 44750x**



**Bacteria Flagella -2148x**

### Faculty:

Dr. M. Lakshman, Associate Professor and Officer – in - Charge