



ONLINE WORKSHOP

'Transmission Electron Microscopy in
Life Sciences: Procedure and Applications'

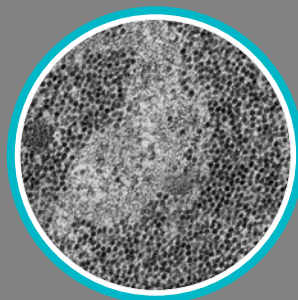
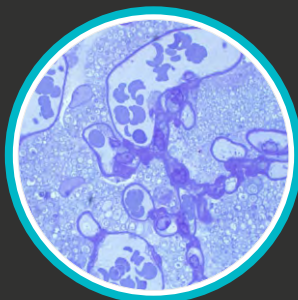
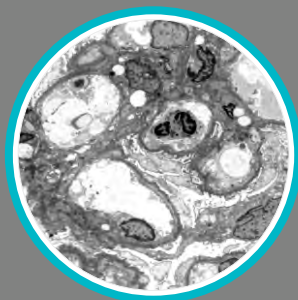
21st-26th June 2021

Organised by:

Department of Pathology, SGPGIMS, Lucknow

ABOUT

Transmission electron microscope (TEM) uses electrons to analyze tissues and cells at higher magnification than is possible using photons in a light microscope, enabling visualization of ultrastructural details. The appropriate use of ultrastructural study adds a new dimension to diagnostic pathology. Training in this area is limited due to the lack of access to such facility. SGPGIMS, a tertiary care referral hospital in North India, is organizing an online workshop to provide an opportunity to participants to understand the electron microscopy techniques, diagnostic utility and scope in research in life sciences. The workshop will be useful for students in medicine, postgraduates, pathologists and researchers.



HIGHLIGHTS

- Online sessions from 2-5 pm (IST) on 21st-25th June 2021 and 12-2.00 pm (IST) on Saturday, 26th June 2021.
- Expert National and International faculty
- Technical lectures on instrumentation and sample processing for TEM
- Video-demonstrations of techniques
- Lectures and slide seminars on diagnostic electron microscopy
- Advances in instrumentation and investigative EM methods
- Panel discussions and quiz

ORGANIZING COMMITTEE

Patrons

Dr R K Dhiman, Director
Dr S K Mishra, Dean

Chairperson

Dr Manjula Murari, Head, Dept. of Pathology

Organizing Secretary

Dr Vinita Agrawal

Scientific Conveners

Dr Manoj Jain

Dr RituVerma

Members

Dr Narendra Krishnani
Dr Lily Pal
Dr Ram Nawal Rao
Dr Pallavi Prasad

Dr Seema Sharma
Dr Sushila Jaiswal
Dr Neha Nigam
Dr Raghavendra L

Technical

Dr Vikrant Verma
Dr Anshima Singh
Dr Neha Kumari

Ms Madhulika Tewari
Ms Niharika Bharti
Ms Shubhi Kamthan

Ms Farhat Jamal
Ms Snigdha

REGISTRATION GUIDELINES

- Registration is free. Please fill the registration form. Link: <https://forms.gle/sVdpVQpq89xkyDrB9>
- Link to the online workshop will be sent to registered delegates.
- E-certificate will be sent only to participants who attend the workshop

SECRETARIAT

Prof Vinita Agrawal

Organizing Secretary

Department of Pathology, SGPGIMS, Lucknow-226014

Email: sgpgi.tem2021@gmail.com

Day 1: 21 st June 2021, Monday	
2.00-2.30 pm	Inauguration and Welcome -Dr RK Dhiman, Director SGPGIMS -Dr SK Mishra, Dean, SGPGIMS -Dr Manjula Murari, Head, Pathology, SGPGIMS
2.30-2.40 pm	Introduction to the Workshop Dr Vinita Agrawal, Pathology, SGPGIMS
<i>Session I: Overview of Instrumentation and Applications of TEM in Life Sciences</i>	
Chairpersons -Dr Kusum Joshi (Ex Prof), Histopathology, PGIMER, Chandigarh -Dr Rakesh Pandey (Ex Prof), Pathology, SGPGIMS	
2.40-3.20 pm	Electron Microscopy: Instrumentation and Functioning Dr Kalyan Mitra, Principal Scientist and In-charge EM Unit, CSIR-CDRI, Lucknow
3.20-4.00 pm	Transmission Electron Microscopy and its Applications in Medical Sciences Dr B K Chandrasekhar Sagar, Neuropathology, NIMHANS, Bengaluru
4.00-4.10 pm	Q and A, Discussion
<i>Session II: Demonstration-TEM, SGPGIMS</i>	
4.15-5.00 pm	Video-demonstration of Equipment, TEM Lab, SGPGIMS

Day 2: 22nd June 2021, Tuesday	
<i>Session III: Sample Processing for TEM</i>	
Chairpersons	
-Dr R K Gupta (Ex Prof), Pathology, SGPGIMS	
-Dr Narendra Krishnani, Pathology, SGPGIMS	
-Dr Alok Sharma, Pathologist, Dr. Lal PathLabs, New Delhi	
2.00-2.40 pm	Collection, Transportation and Fixation of Biological Samples for TEM Dr Vineeta V Batra, Pathology, GB Pant Hospital, New Delhi
2.40-3.20 pm	Sample processing, Staining Techniques and Consumables for TEM Dr Ashwani Verma, PGIMER, Chandigarh
3.20-3.40 pm	Ultramicrotomy for TEM Dr Indu Barwal, Leica Microsystems
3.40-4.00 pm	Operation and Optimization of TEM for Grid Viewing
4.00-4.10 pm	Q and A, Discussion
<i>Session IV: Demonstration-Sample Processing for TEM</i>	
4.15-4.45 pm	Video-demonstration of Sample Fixation, Processing and Embedding
4.45-5.00 pm	Quiz I Dr Raghavendra L, Pathology, SGPGIMS, Lucknow

Day 3: 23 rd June 2021, Wednesday	
<i>Session V: Imaging in TEM</i>	
Chairpersons	
-Dr Kalyan Mitra, Principal Scientist and In-charge EM Unit, CSIR-CDRI, Lucknow	
-Dr Mahesha V, Consultant Nephrologist, Manipal Hospitals, Bengaluru	
-Dr Sushila Jaiswal, Pathology, SGPGIMS	
2.00-2.30 pm	Imaging in TEM: The Basics Mr Venkatram Dattu, Gatan
2.30-2.50 pm	Digital Imaging, Morphometry and Image Archiving Dr Manoj Jain, Pathology, SGPGIMS
2.50-3.00 pm	Q and A, Discussion
<i>Session VI: Quality Control and Safety in EM Lab-Dos and Dents</i>	
Chairpersons	
-Dr Ritambhra Nada, Histopathology, PGIMER, Chandigarh	
-Dr Vinita Agrawal, Pathology, SGPGIMS, Lucknow	
-Dr Rashmi Santosh Kumar, EM-Common Research Facility, NIMHANS, Bengaluru	
3.00-3.30 pm	Establishing an EM Lab, Maintenance and Quality control Dr Tapas C Nag, Anatomy, AIIMS, New Delhi
3.30-4.00 pm	Troubleshooting and Safety in EM Laboratory Ms Lilian Antonio, EM Lab Manager, New York-Presbyterian Hospital, USA
4.00-4.20 pm	Q and A, Discussion
<i>Session VII: Demonstration-Sectioning and Imaging for TEM</i>	
4.25-4.50 pm	Video-demonstration of Image Acquisition, and Workflow for TEM Mr Prasad Valluri, Gatan
4.50-5.15 pm	Video-demonstration: Knife Preparation, Ultramicrotomy, Staining and Viewing of Grids

Day 4: 24 th June 2021, Thursday		
Session VIII: Applications of TEM in Life Sciences		
Chairpersons -Dr Swarnalata Gowrishankar, Pathologist, Apollo Hospitals, Hyderabad -Dr Seethalekshmy V, Pathologist, AIMS, Kochi -Dr Narayan Prasad, Nephrology, SGPGIMS		
2.00-2.20 pm	TEM in Renal Diseases: Nephrologist's Perspective Dr Dharmendra Bhadauria, Nephrology, SGPGIMS	
2.20-2.50 pm	Value of Electron Microscopy in Kidney Biopsy Diagnosis Dr Shaila Khubchandani, Pathologist, Jaslok Hospital, Mumbai	
2.50-3.20 pm	Electron Microscopy in Renal Allograft Biopsies Dr Manoj Jain, Pathology, SGPGIMS	
3.20-3.30 pm	Q and A, Discussion	
Chairpersons -Dr Aruna Vanikar, President, Undergraduate Medical Education Board, National Medical Commission -Dr Rajesh NG, Pathology, JIPMER, Puducherry		
3.30-4.00 pm	Hereditary and Metabolic Diseases: Role of Ultrastructure analysis Dr Ritambhra Nada, Histopathology, PGIMER, Chandigarh	
4.00-4.20 pm	Organized Deposition Diseases: A Case-based Approach Dr Alok Sharma, Pathologist, Dr. Lal PathLabs, New Delhi	
4.20-4.30 pm	Q and A, Discussion	
Session IX: Slide Seminar I		
Chairpersons -Dr Surya Seshan, Nephropathologist, NY -Presbyterian Hospital & Weill Cornell Medicine, USA -Dr Vinita Agrawal, Pathology, SGPGIMS -Dr Anupama Kaul, Nephrology, SGPGIMS		
4.30-5.30 pm	Case presentations	Dr Geetika Singh, AIIMS, New Delhi Dr Anila Abraham, Renopath, Chennai Dr Pallavi Prasad, SGPGIMS Dr Pallav Gupta, SGRH, New Delhi
	Q and A, Discussion	

Day 5: 25 th June 2021, Friday		
<i>Session X: Applications of TEM in Life Sciences</i>		
Chairpersons		
-Dr Nuzhat Husain, Pathology, RMLIMS, Lucknow		
-Dr M C Sharma, Pathology, AIIMS, New Delhi		
-Dr Lily Pal, Pathology, SGPGIMS		
2.00-2.20 pm	Processing of Skin, Nerve and Muscle biopsy for Electron Microscopy	
	Dr Rashmi Santosh Kumar, EM-Common Research Facility, NIMHANS, Bengaluru	
2.20-3.00 pm	Diagnostic Utility of Ultrastructural Analysis in Muscle Disorders	
	Dr Rashmi Santosh Kumar, EM-Common Research Facility, NIMHANS, Bengaluru	
3.00-3.40 pm	Role of TEM in Diagnosis of Neurological Disorders	
	Dr Nandeesh BN, Neuropathology, NIMHANS, Bengaluru	
3.40-3.50 pm	Q and A, Discussion	
<i>Session XI: Slide seminar 2 (Potpourri of cases)</i>		
Chairpersons		
-Dr B D Radotra, Histopathology, PGIMER, Chandigarh		
-Dr Poonam Elhence, Pathology, AIIMS, Jodhpur		
-Dr Ritu Verma, Pathology, SGPGIMS		
4.00-5.00 pm	Case presentations	Dr M C Sharma, AIIMS, New Delhi Dr Amanjit Bal, PGIMER, Chandigarh Dr Megha Uppin, NIMS, Hyderabad Dr Neha Nigam, SGPGIMS
5.00 pm	Q and A, Discussion and Quiz II	

Day 6: 26 th June 2021, Saturday	
<i>Session XII: Applications of TEM in Life Sciences</i>	
Chairpersons	
-Dr Anita Mahadevan, Neuropathology, NIMHANS, Bengaluru	
-Dr Ujjala Ghoshal, Microbiology, SGPGIMS	
-Dr Ram Nawal Rao, Pathology, SGPGIMS	
12.00-12.30 pm	Utility of Electron Microscopy in Infections Dr Gayathri N (Ex Prof), Neuropathology, NIMHANS, Bengaluru
12.30-12.50 pm	Application of TEM in Oncology Dr Atin Singhai, Pathology, KGMU, Lucknow
12.50-1.00 pm	Q and A, Discussion
<i>Session XII: Advances in Electron Microscopy</i>	
Chairpersons	
-Dr Amit Dinda (Ex Prof), Pathology, ICMR Emeritus Scientist, AIIMS, New Delhi	
-Dr A N Srivastava, Pathology, Era LMCH, Lucknow	
-Dr Manoj Jain, Pathology, SGPGIMS	
1.00-1.30 pm	Applications of TEM in Biological Research Dr Nandeesh BN, Neuropathology, NIMHANS, Bengaluru
1.30-2.00 pm	Advancements in TEM Instrumentation Dr Alok Pandey, Principal Scientist, Nanomaterial Toxicology, CSIR-IITR, Lucknow
2.00-2.10 pm	Q and A, Discussion
2.10 pm	<i>Quiz prizes, Feedback, and Vote of Thanks</i>



Secretariat

Prof Vinita Agrawal

Organizing Secretary

Department of Pathology

SGPGIMS, Lucknow-226014

Contact details:

Phone: 94154 03550 **Email:** sgpgi.tem2021@gmail.com