



ANNUAL REPORT 2022



**Sanjay Gandhi Postgraduate Institute of Medical Sciences,
Lucknow-226014, U.P., India**

Varun Bajpai
Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow



ANNUAL REPORT 2022

Sanjay Gandhi Postgraduate Institute of Medical Sciences
Lucknow-226014, U.P., India

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Executive Registrar
SGPGIMS, Lucknow

Annual Report 2022

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Director's Message



I am pleased to present the Annual Report of the Institute for the year 2022. The institute has progressed on the path of super-specialty patient care delivery, teaching & training, and research. Additionally, the year 2022 has witnessed several significant developments in the Institute. The construction of Advanced Diabetic center has begun. This Center will cater to the advanced care and treatment of Diabetes in the near future. It is estimated that Diabetes may be the next pandemic considering modern day diet and lifestyles. The Center will also provide advanced level of Diabetic foot care. A separate new building for the Department of Ophthalmology was planned and it's construction has started in 2022. I am extremely happy to announce that significant developments have been made in the *Emergency and Renal Transplant Center*. A dream project of "Advanced Pediatric center" is in the pipeline for the year 2022-2023.

The annual report for the year 2022 provides a brief statement of each Department's accomplishments in the field of teaching, research and world class patient care.

I am positive that you will enjoy reading the Institute's annual report for the year 2022.

(Prof. R K Dhiman)

Director, SGPGI

A handwritten signature in blue ink, appearing to read 'Varun Bajpai'.

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INSTITUTE BODY MEMBERS, 2022

1. Shri Durga Shanker Mishra, Chief Secretary, IAS, Govt of U.P. and President, SGPGIMS, Lucknow
2. Mr. Alok Kumar, IAS, Principal Secretary, Medical Education
3. Shri Deepak Kumar, IAS Additional Chief Secretary, Dept of Finance, Govt of U.P. Lucknow
4. Prof. R. K. Dhiman, Director, SGPGIMS, Lucknow
5. Ms. Shruti Singh, Director General, Medical Education
6. Dr. L. S. Ojha, Ojha Hospital, Prayagraj
7. Dr. Parmendra Maheshwari, Orthopedic Surgeon, Sri Gangacharan Hospital, Bareilly
8. Dr. H. N. Singh, Eye Surgeon, Pratima Maternity and Research Centre, Mau
9. Dr. Jitendra Chikara, Anesthetic, Sarve Hit Hospital, Meerut
10. Dr. Prof. V. Nagraj, Professor, Indian Institute of Science, New Delhi
11. Dr. Sanjeev Mishra, V.C., ABVMU
12. Dr. R. N. Das, Professor Department of Gastroenterology and Liver Transplant, AIIMS, New Delhi
13. Prof. S. N. Sankwar, Department of Urology, KGMU, Lucknow
14. Prof. Rajeswar Dayal, Head Department of Pediatric, SN Medical College, Agra
15. Prof. Abbas Ali Mehdi, Head, Department of Biochemistry, KGMU, Lucknow
16. Director General, Health Services, Government of India, Nirmaan Bhawan
17. Chairman, University Grant Commission, Bahadur Shah Zafar Marg, New Delhi
18. Shri Ajay Mishra, "TANI", Member of Parliament (MP, Lakhimpur Khiri, U.P)
19. Shri Raghvendra Pratap Singh, Member of Legislative Assembly (MLA), 101, Tilak Marg, Dalibagh Bahumanzila Mantri Awas, Lucknow
20. Shri Bhoopesh Chaubey, Member of Legislative Assembly (MLA), 1070B, Vidhayak Niwas, Lucknow
21. Prof. Shiv K.Sarin, Sr. Professor and Director, Institute of Liver and Biliary Sciences, Vasant Kunj, New Delhi
22. Prof. Raja Babu Panwar, V.C., Rajasthan University of Health Sciences, Jaipur
23. Prof. Eesh Bhatia, Head of Endocrinology Department, SGPGIMS, Lucknow
24. Prof. R. V. Phadke, Department of Radiology SGPGIMS, Lucknow
25. Lt. Col. Varun Bajpai, VSM, Executive Registrar, SGPGIMS, Lucknow



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GOVERNING BODY MEMBERS, 2022

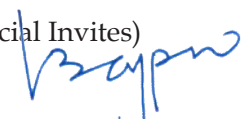
1. Shri Durga Shankar Mishra, IAS, Chief Secretary, Govt. of UP & President, SGPGIMS, Lucknow
2. Prof. R. K. Dhiman, Director, SGPGIMS, Lucknow
3. Shri Prashant Trivedi, IAS, Additional Chief Secretary, Govt. of U.P., Finance Department, Lucknow
4. Shri Alok Kumar, IAS, Principal Secretary, Govt. of U.P., Medical Education Department, Lucknow
5. Smt. Shruti Singh, IAS, Secretary Medical Education & Director General Medical Education, U.P. Lucknow
6. Prof. M. K. Mitra, 432/11, Kala Kankar Colony Yojna, Old Hyderabad, Lucknow
7. Prof. S. P. Singh, Principal, M.I.N. Medical College, Allahabad
8. Prof. Ganesh Kumar, Principal, B.R.D. Medical College, Gorakhpur
9. Dr. Nitin Somalal Shah, M.S. Surgeon, Ahmadabad
10. Prof. Soniya Nityanand, Director, RMLIMS, Lucknow
11. Lt. Col. Varun Bajpai, VSM, Executive Registrar & Member Secretary, SGPGIMS, Lucknow
12. Prof. Sunil Kumar, Department of Radiology, SGPGIMS, Lucknow
13. Prof. Mohan Gurjar, Department of CCM, SGPGIMS, Lucknow
14. Dr. Rajesh Harswardhan, Additional Professor, Department of Hospital Administration, SGPGIMS, Lucknow



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ACADEMIC BOARD MEMBERS, 2022

1. Prof. R. K. Dhiman, Director/Chairman, Academic Board
2. Dr. N. C. Prajapati, Director General, Medical Education and Training U.P.
3. Prof. S. K. Sarin, Director, Institute of Liver and Biliary Sciences, ILBS, New Delhi
4. Prof. D. S. Rana, Sir, Ganga Ram Hospital, New Delhi
5. Dr. S. K. Puri (Former Director, CDRI), A-703, Lorepur Apartment, New Hyderabad, Lucknow
6. Prof. Aneesh Srivastava, Dean, SGPGI, Lucknow
7. Prof. Rajan Saxena, Head, Department of Surgical Gastroenterology, SGPGI, Lucknow
8. Prof. Eesh Bhatia, Head, Department of Endocrinology, SGPGI, Lucknow
9. Prof. Sunil Kumar, Head Department of Radiodiagnosis, SGPGI, Lucknow
10. Prof. Sunil Pradhan, Head, Department of Neurology, SGPGI, Lucknow
11. Prof. S. P. Ambesh, Head, Department of Anesthesiology, SGPGI, Lucknow
12. Prof. Aneesh Srivastava, Head Department of Urology, SGPGI, Lucknow
13. Prof. Shubha R. Phadke, Head, Department of Medical Genetics, SGPGI, Lucknow
14. Prof. R. K. Choudhary, Head, Department of Transfusion Medicine, SGPGI, Lucknow
15. Prof. Nirmal Gupta, Head, Department of CVTS, SGPGI, Lucknow
16. Prof. Raj Kumar, Head, Department of Neurosurgery, SGPGI, Lucknow
17. Prof. Vikash Kanaujia, Head, Department of Ophthalmology, SGPGI, Lucknow
18. Prof. Amita Agarwal, Head, Department of Clinical Immunology and Rheumatology, SGPGI, Lucknow
19. Prof. Narayan Prasad, Head, Department of Nephrology, SGPGI, Lucknow
20. Prof. Rajesh Kashyap, Head, Department of Hematology, SGPGI, Lucknow
21. Prof. Gaurav Agarwal, Head, Department of Endocrine Surgery (& Breast Surgery)
22. Prof. U. C. Ghoshal, Head, Department of Gastroenterology, SGPGI, Lucknow
23. Prof. Aditya Kapoor, Head, Department of Cardiology, SGPGI, Lucknow
24. Prof. Banani Poddar, Head, Department of Critical Care Medicine, SGPGI, Lucknow
25. Prof. S. Gambhir, Head, Department of Nuclear Medicine and Nodal Officer CMT, SGPGI, Lucknow
26. Prof. Seema Sharma, Head, Department of Pathology, SGPGI, Lucknow
27. Prof. Shaleen Kumar, Head, Department of Radiotherapy, SGPGI, Lucknow
28. Prof. Punita Lal, Head, Department of Medical Oncology, SGPGI, Lucknow
29. Prof. Rajiv Agarwal, Head, Department of Plastic Surgery and Burn, SGPGI, Lucknow
30. Prof. Mandakini Pradhan, Head, Department of Maternal and Reproductive Health SGPGI, Lucknow
31. Prof. Uttam Singh, Head, Department of Bio-Statistics and Health Informatics, SGPGI, Lucknow
32. Prof. Ujjal Poddar, Head, Department of Pediatric Gastroenterology, SGPGI, Lucknow
33. Prof. Kirti M. Naranje, Head, Department of Neonatology, SGPGI, Lucknow
34. Prof. R. K. Singh, Head, Department of Emergency Medicine, SGPGI, Lucknow
35. Prof. Ujjala Ghoshal, Head, Department of Microbiology, SGPGI, Lucknow
36. Prof. Swasti Tiwari, Head, Department of Molecular Medicine and Biotechnology, SGPGI, Lucknow
37. Prof. Alok Nath, Head, Department of Pulmonary Medicine, SGPGI, Lucknow
38. Prof. Basant Kumar, Head, Department of Pediatric Surgical Super-specialties, SGPGI, Lucknow
39. Dr. Rajesh Harsvardhan, Head, Department of Hospital Administration, SGPGI, Lucknow
40. Prof. U. C. Ghoshal, Faculty Incharge Research, SGPGI, Lucknow
41. Prof. Sanjay Dhiraj, Nodal Officer, College of Nursing, SGPGI, Lucknow
42. Prof. P. K. Pradhan, Nodal Officer, School of Telemedicine and Biomedical (Special Invites)
43. Lt. Col. Varun Bajpai, VSM, Executive Registrar, SGPGI, Lucknow



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Picture Gallery



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Workshop on Communication Skills for Hospital Staff (14th February, 2022)



Director Prof. Dhiman emphasizing the importance of good communication skills



Understanding the act of communication: Participants of the workshop with speakers

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Signing of MoU Between SGPGI and IIM, Lucknow (10th March, 2022)



Director SGPGI Prof. R. K. Dhiman and Director IIM, Lucknow, Prof. Archana Shukla...looking forward to improving healthcare management with the expertise of management Guru's



Core teams of both the Institutes

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Workshop on Inspiring Leadership (12th March, 2022)



Director Prof. Dhiman, stressing the need to lead from the front



Prof. Sushil Kumar, Senior Faculty Member, IIM, Lko. mesmerising audience with his thoughtful presentation



Dr. Purna Kapoor, Senior Physician, the Master of Ceremony



Together, we can make a difference

Signing of MOU with Post Graduate Institute of Child Health (PSICH), Noida (3rd June, 2022)



Collaborating in the area of teaching, training, research and skill building



Director, SGPGI, Prof. R. K. Dhiman and Director PSICH, Noida, Prof. Ajay Singh exchanging documents


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First Inaugural Ceremony of Academic Session (18th July, 2022)



Customary lamp lighting by the Chief Guest Prof. Balram Bhargava, DG, ICMR and Secretary DHR



Key note address delivered by the Chief Guest on "Ethics in Medical Practice"



Memento Presentation to the Chief Guest as a token of respect



Institute's 27th Convocation (13th October, 2022)



Director Prof. R. K. Dhiman introducing the Chief Guest of the Function, Prof. S. P. Thyagarajan, Former VC, Madras University



Dignitaries rising for National Anthem

Varun Bajpai

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3rd Research Day (13 December, 2022)



Lamp lighting by the dignitaries



Poster presentations: Showcasing the excellent research work



Prof. Soniya Nityanand, Director, RMLIMS enlightening the students on stem cell research


39th Foundation Day (14th December, 2022)



Hon'ble Governor, UP, presenting a Plaque to the Foundation Day Orator, Dr. M. K. Mitra



Awardees with the distinguished Guests


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DEPARTMENT OF ANESTHESIOLOGY

STAFF

Name of Faculty Members:

1. S P Ambesh,MD Professor and Head
2. Prabhat Tewari, MD Professor
3. Mukesh Tripathi, MD Professor (on Deputation since 21st Jan 2019)
4. Shashi Srivastava, MD Professor (Retired on 30th November 2022)
5. Sanjay Dhiraaj, MD Professor
6. Devendra Gupta, MD, PDCC Professor
7. Puneet Goyal, MD, DM Professor
8. Aruna Bharti, MD Professor
9. Sandeep Sahu, MD,DNB,PDCC Professor
10. Aarti Agarwal, MD Additional Professor
11. Sujeet Kumar Singh Gautam, MD, PDCC Additional Professor
12. Sanjay Kumar, MD, PDCC Additional Professor
13. Ashish Kumar Kannaujia, MD Additional Professor
14. Amit Rastogi, MD, PDCC Additional Professor
15. Sandeep Khuba, MD, PDCC Additional Professor
16. RudrashishHaldar, MD, DNB,PDCC Additional Professor
17. RuchiVerma, MD, PDCC Associate Professor
18. Chetna Shamsbery, MD, DNB,PDCC Associate Professor
19. Divya Srivastava, MD, PDCC Associate Professor
20. Tapas Singh, MD,PDCC Associate Professor
21. RafatShamim,MD, PDCC Associate Professor
22. Ganpat Prasad, MD Associate Professor
23. Vansh Priya, MD Associate Professor
24. Prateek Singh Bais, MD Associate Professor
25. SuruchiAmbasta, MD Associate Professor
26. Nidhi Singh, MD Assistant Professor
(Contractual since 7th July 2021)
27. Abhishek Kumar, MD,PDCC Assistant Professor
(Contractual, Resigned Apr2022)
28. SumitSachan, MD, PDCC Assistant Professor
29. Prateek Singh, MD Assistant Professor



Resident /Student

Senior Resident	19
PDAF	9
Junior Resident	46

Services: Departmental Activities

Procedures Done	Year 2022	Year 2021	Year 2020
General Anaesthesia	8398	5975	3073
Spinal Anaesthesia	883	708	472
Nerve Blocks	464	262	119
Central Venous lines	689	735	350
Percutaneous Tracheostomy	98	38	30
Pulmonary function tests	446	516	30
Acute Pain Service	1248	1247	670
Anesth performed outside the operation theatres e.g card cath, interventional radiology, DSA, MRI, endoscopy, bronchoscopy, etc	1789	1900	650

Teaching and Training:

Seminar	Four times a week
Journal Club	Twice a week
Audit	Every Saturday

Honors and Awards:**Dr. Sandeep Sahu**

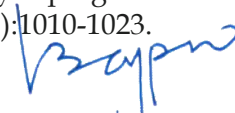
Anaesthesiology. 5th Venus International Healthcare Awards – VIHA 2022.

Dr. Ashish Kannaujia

ISACON Innovation Award Excellence

Publications:

1. Mishra P, Singh RK, Nath A, Pande S, Agarwal A, Sanjeev OP, Gupta D. A novel epidemiological scoring system for the prediction of mortality in COVID-19 patients. Trans R Soc Trop Med Hyg. 2022 May 2;116(5):409-416.
2. Awale RB, Singh A, Mishra P, Bais PS, Vansh K, Shamim R, Ghatak T, Hashim Z, Gupta D. Routine hematology parameters in COVID-19: A predictor of disease severity and mortality. J Family Med Prim Care. 2022 Jul;11(7):3423-3429.
3. Hashim Z, Nath A, Khan A, Neyaz Z, Marak RSK, Areekkara P, Tiwari A, Srivastava S, Agarwal V, Saxena S, Tripathy N, Azim A, Gupta M, Mishra DP, Mishra P, Singh RK, Gupta D. New insights into development and mortality of COVID-19-associated pulmonary aspergillosis in a homogenous cohort of 1161 intensive care patients. Mycoses. 2022 Nov;65(11):1010-1023.



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4. Kurian NM, B Yadav SC, Gurjar M, Mishra P, Sanjeev OP, Azim A, Gupta D. Association of hyperglycaemia at-admission & diabetes mellitus with 28 day mortality in patients admitted with moderate-severe SARS-CoV-2 infection: A retrospective study. *Indian J Med Res.* 2022 May-Jun;155(5&6):554-564.
5. Gunjiganvi M, Rai S, Awale RB, Mishra P, Gurjar M, Gupta D. Depression and Anxiety among COVID-19 Indian Intensive Care Unit Survivors: A Prospective Observational Study. *Indian J Crit Care Med.* 2022 Dec;26(12):1267-1274.
6. Gautam S, Gupta N, Kumar S. Evaluation of the Efficacy of Superior Cluneal Nerve Block in Low Back Pain: A Prospective Observational Study. *J Body Mov Ther* 2022; 30: 221-225
7. Kumar S, Khuba S, Chand G. Study for the Incidence of Postsurgical Neuropathic Pain Following Bilateral Axillo-breast Approach of Endoscopic Thyroidectomy: A Pilot Observational, Prospective Study. *World J EndoSurg* 2022; 14 (1):1-6.
8. Haldar R, Shamim R, Kannaujia AK. A survey on knowledge, attitude, and practices of workplace radiation safety amongst Anaesthesiology personnel in northern Indian tertiary care institutes. *Indian J Med Res.* 2022;155(5&6):554-564.
9. Ambasta S, Kannaujia A, Shamshery C. Smartphone Use among Anesthesiologists during Work Hours: A Survey-Based Study. *Anesthesia Essays and Researches* 2022;16(1):22
10. Kumar S, Khuba S, Chand G. Study for the Incidence of Postsurgical Neuropathic Pain Following Bilateral Axillo-breast Approach of Endoscopic Thyroidectomy: A Pilot Observational, Prospective Study. *World J EndoSurg* 2022; 14 (1):1-6.
11. Mandelia A, Haldar R, Siddiqui Y et al. Optimising working space for laparoscopic pyeloplasty in infants: Preliminary observations with the SGPGI Protocol. *J Minim Access Surg.* 2022 Jan-Mar;18(1):105-110.
12. Verma AK, Haldar R, Srivastava S, Das KK, Mishra P. Comparison of Recovery Profiles of Patients Undergoing Endoscopic Lumbar Discectomy under Desflurane, Propofol, or Sevoflurane Anesthesia: A Randomized, Prospective, Clinical, Comparative Study. *J Neurosci Rural Pract.* 2022 Feb 22;13(2):226-235.
13. Shukla R, Kalita J, Haldar R, et al. Blood-CSF-barrier permeability in tuberculous meningitis and its association with clinical, MRI and inflammatory cytokines. *J Neuroimmunol.* 2022 Nov 15;372:577954
14. Haldar R, Mishra P, Gurjar M, et al. Knowledge and Compliance of Hydroxychloroquine Prophylaxis for Severe Acute Respiratory Syndrome Coronavirus 2 Infection among Indian Health-Care Workers. *J Res Pharm Pract.* 2022 Aug 18;11(1):33-39
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16. Agarwal A, Aggarwal A, Shamshery C. Robotic computed tomography-guided celiac plexus neurolysis: our experience of technique and outcomes. *Pain Manag.* 2022 Sep;12(6):675-680
17. Marutirao R, Singh S, Shamshery C. Impact of Postoperative ABG Analysis and ICU Weaning Protocol in Surgical Outcome of Atlanto-Axial Dislocation: It's not the Towering Sail, but the Unseen Wind that Moves the Ship. *Neurol India.* 2022 Jul-Aug;70(4):1540-1547
18. Priya V, Shamim R, Prasad G. Proteus syndrome, anticipated difficult airway, and 2 trusted lieutenants! *Turk J Anaesthesiol Reanim.* 2022;50(6):465-466
19. Awale R B, Singh A, Mishra Prabhakar, Bais PS. Routine hematology parameters in COVID-19: A predictor of disease severity and mortality. *Journal of Family Medicine and Primary Care* (July 2022 - Volume 11 - Issue 7 - p 3423-3429)

20. Singh AK, Bais PS, Chand K, Dey S. Mesenteric injury in blunt abdominal trauma in children: Is early surgical intervention need of the hour? J Indian Assoc Pediatr Surg 2022;27:381-6.
21. Kulhari S, Shamsheery C, Ambasta S. Postoperative analgesic efficacy of quadratus lumborum block in patients undergoing laparoscopic cholecystectomy: A retrospective study. Indian J Pain 2022; 36:33-6
22. Tripathi SS, Ambasta S, Mahapatra S. Evaluation of Efficacy of Femoral Nerve Block on Pain and Anxiety in Acute Fractures of the Femur in the Emergency Department. JCDR 15(3), RC06-RC10
23. Mahapatra S, Tripathi S, Kumar, Ambasta S. Evaluation of Patterns of Trauma Reporting to the Emergency Department During the First COVID-19 Lockdown in India. Cureus 13(4): e14609
24. Tripathi, S, Mahapatra, S., Ambasta S. Epidemiological Evaluation and Causes of delayed presentation of Orthopaedic polytrauma patients to Emergency Department - A Tertiary Care Centre Experience. International Journal of Health and Clinical Research, 4(6), 309-312
25. Kannaujia A, Ambasta S, Shamsheery C. Anaesthetic Management in a Case of Penetrating Orbitocranial Trauma: A Case Report. Journal of Anaesthesia and Critical Care Case Reports | May-August 2022; 8(2): 22-24.
26. Kannaujia AK, Kumar A, Ambasta S. Retrieval of the lost guidewire immediately after central line insertion by the "clamp technique" - The preponderancy of a procedural checklist and prevention of catastrophe. Indian J Anaesth 2022;66: S175-6.

Book Chapters:

1. Gupta D, Haldar R. Massive blood loss in neurosurgery. Transfusion Practice in Clinical Neurosciences. ISBN 978-981-19-0953-5
2. Dikshit P, Gupta P, Haldar R, Maurya VP, Srivastava AK, Rajkumar. Spinal dysraphism and congenital non dysraphic malformations. Neurosurgery Research. An Update
3. Sandeep Sahu, Tapas Kumar Singh. Musculoskeletal Trauma. Textbook of ISCCM Manual of Trauma Care. ISBN 9789389776874
4. Gupta D, Srivastava S. Perioperative Critical Care Management of Spinal Surgery". Perioperative Critical Care. ISBN 9789390020508
5. Srivastava S, Gupta D. Perioperative Critical Care Management of Intracranial Aneurysm. Perioperative Critical Care. ISBN 9789390020508
6. Haldar R, Srivastava AK, Dikshit P, Jangra K. Anesthesia for Craniovertebral Junction Anomalies in Pediatric Patients

Patent Wall:

1. Dr Ashish Kannaujia. Smartphone compatible videolaryngoscope. Patent published and under examination. (Application number: 3411/DEL/2014)
2. Dr Ashish Kannaujia. Electronic intubating bougie. Patent published and under examination. (Application number: 759/DEL/2015)

Workshops/CME/Seminars:

1. Cooled Radiofrequency Ablation for Chronic Pain Management
2. 10th SGPGI Post Graduate Teaching Programme and Update for MD/DNB/DA students
3. Fundamental Critical Care Support Course provider and instructor course 7th edition

Conferences Attended:

1. Dr. Puneet Goyal: Attended conference- 44th Annual Conference of UP ISACON held at Noida; 34th ISACON-Bihar Jharkhand held at Ranchi; 14th International Congress of Asian Society of Cardiothoracic Anesthesia, held at Chaing Mai, Thailand
2. Dr. Amit Rastogi: Attended conferences- NAMSCON 2022, ISACON UP 2022 and EM India 2022
3. Dr. Ashish Kumar Kannaujia: Attended conference- AIIMS Bhopal advanced airway CME cum workshop: IASGO2022; SAARC-AA 2022; ISACON2022
4. Dr. Prateek Singh Bais: Attended conferences- All India Academic conclave of Emergency Medicine EMINDIA-22, SAARC AA 2022
5. Dr. Ruchi Verma : Attended conferences- International Anesthesia Research Society (IARS), 17th - 20th March 2022, at Hawaii; 44th Annual State Conference of Indian Society Of Anaesthesiologists- Uttar Pradesh (UPISACON 2022); Hands on workshop on Full endoscopic spine surgery” held at Bangalore; ISSPCON 2022, Bhubaneshwar
6. Dr. Divya Srivastava: Attended conference- ISACON National 2022
7. Dr. Rudrashish Haldar: Attended conferences- AIIMS Bhopal Advanced Airway CME and Workshop; AOSRA-PM and AORA 2022
8. Dr. Suruchi: Attended conference- SAARC AA 2022; UPISACON 2022
9. Dr. Sanjay Kumar: Attended conference- ENDOSPINE 22, oct, Dehradun; ICACON 2022, Chandigarh

DEPARTMENT OF BIOSTATISTICS & HEALTH INFORMATICS

STAFF

Name of Faculty Members:

- | | |
|---------------------------------|----------------------|
| 1. Uttam Singh, M.Sc., PhD | Professor & Head. |
| 2. Prabhaker Mishra, M.Sc., PhD | Additional Professor |
| 3. Anup Kumar, M.Sc., PhD | Associate Professor |
| 4. Jai Kishun, M.Sc., PhD | Associate Professor |

Activities

Awards and recognitions:

Dr Prabhaker Mishra, Additional Professor, of the Department name was included in 2% Scientist list released by Stanford university, USA on 13th December 2022.

Invited sessions and chairpersons/lectures for Conferences: 2022

Name of the Faculty and Session :

Dr. Prabhakar Mishra

- Chaired a scientific session during the 40thAnnual National Conference of the Indian Society for Medical Statistics held on Nov 2022 at Dept. of Community Medicine Krishna Institute of Medical Sciences Karad, Dist: Satara, Maharashtra.
- Presented a paper titled "Classification and regression tree and its comparison with Binary logistic regression analysis" 40thAnnual National Conference of the Indian Society for Medical Statistics (ISMSCON 2022), Dept. of Community Medicine Krishna Institute of Medical Sciences, Karad, Satara, Maharashtra, November 24-26, 2022.
- Presented a paper titled "Propensity score is an alternative of multivariate analysis" 3rd Annual National Conference of "Epidemiology Foundation of India" [EFICON-2022], Department of Community and Family Medicine, All India Institute of Medical Sciences (AIIMS), Patna (Bihar), November 4-5, 2022.
- Delivered 03 lecture at Basic course in biomedical research at SGPGI, Organized by the office of the Dean, SGPGI Lucknow during October 5-7, 2022.
- Delivered 01 lecture through online mode, on the topic of "Application of Biostatistics in Biomedical research" Organized by the IHER, New Delhi on June 04, 2022.
- Participated the Training of Trainers workshop on Data Quality Guidelines held on April 28-29, 2022, at Hotel Ambassador, Sujan Singh Park, Subramaniam Bharti Marg, New Delhi-110003.

Dr Anup Kumar


- Chaired a scientific session during the 40thAnnual National Conference of the Indian Society for Medical Statistics held on Nov 2022 at Dept. of Community Medicine Krishna Institute of Medical Sciences Karad, Dist: Satara, Maharashtra.
- Presented a paper titled "A parametric approach for estimation of distribution of first birth interval" 40thAnnual National Conference of the Indian Society for Medical Statistics

(ISMSCON 2022), Dept. of Community Medicine Krishna Institute of Medical Sciences, Karad, Satara, Maharashtra, November 24-26, 2022.

- Presented the paper entitled “Estimation of Distribution of Duration Variable from Cross Sectional Data: Data Quality and Estimation Bias” in the Northern Regional Conference of the IASP jointly organised with PRC, University of Kashmir, Kashmir, 29-30 September 2022.
- Presented a Paper Entitled “Estimation of Parity Progression Ratios from Survey Data: An Illustration from NFHS Data” at 43 Annual Conference of IASP organised at PRC, Mohanlal Sukhadia University, Udaipur, 01-03 December 2022.
- Resource Person in an Online Training Program on Statistical Data Analysis using SPSS during 21-27 January 2022, organized by Science Tech Institute, Lucknow.
- Resource Person for in an Online Training Program on Data Analysis using Excel & SPSS Software during 27-31 January 2022, organized by Department of Statistics, Banaras Hindu University, Varanasi.
- Resource Person for Refresher Course in Statistical Computing in Social Science (Multidisciplinary & Online) during 24 Jan-05 February 2022, organized by Department of Statistics, University of Rajasthan.
- Resource Person for Pre-Conference at IAPSM UP UKCON Workshop on 18 Feb 2022 through online mode, organized by Department of Community Medicine, Govt. Doon Medical College, Dehradun.
- Resource Person for in an Online Basic Course on Biomedical Research during 21-27 February 2022, organized by Science Tech Institute, Lucknow.
- Resource Person for Workshop on Faculty Development Program on Introductory Course on Research Methodology & Biostatistics, 05-06 May 2022, organized by Joint State Training Centre (CMC, Ludhiana), at Pt. BD Sharma PGIMS, Rohtak, Haryana.
- Delivered an online Lecture on Reproducible Research with R in Refresher Course in Statistical Methods in Data Science during 14-26 November 2022 organised by UGC-HRDC, University of Rajasthan, Jaipur.
- Delivered 02 Lectures in Multidisciplinary National Workshop on Statistical Tools in Research: Dimensions, Trends and Challenges during 14-18 November 2022 organised by School of Sciences, UP Rajarshi Tandon Open University, Prayag raj.
- Delivered 02 lecture at Basic course in biomedical research at SGPGI, Organized by the office of the Dean, SGPGI Lucknow during September 5-7, 2022.

Dr Jai Kishun

- Chaired a scientific session during the 40th Annual National Conference of the Indian Society for Medical Statistics held on Nov 2022 at Dept. of Community Medicine Krishna Institute of Medical Sciences Karad, Dist: Satara, Maharashtra.
- Presented a paper titled “Length of stay after child birth in india : A comparative study between public and private health institution in India” 40th Annual National Conference of the Indian Society for Medical Statistics (ISMSCON 2022), Dept. of Community Medicine Krishna Institute of Medical Sciences, Karad, Satara, Maharashtra, November 24-26, 2022.
- Participated the Training of Trainers workshop on Data Quality Guidelines held on April 28-29, 2022, at Hotel Ambassador, Sujan Singh Park, Subramaniam Bharti Marg, New Delhi-110003.
- Presented paper entitled “Nutritional status and associated risk factors of malnutrition among children under five years of age in Uttar Pradesh, India: evidence from NFHS-5” in the Northern



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Regional Conference of the IASP on Population Development and Health in Northern India: Status and Challenges Ahead held in Kashmir University, India.

Membership of Societies

Membership of professional bodies funded by Institute.

Dr Uttam Singh

1. Indian Society for Medical Statistics
2. Indian Association for the Study of Population
3. Epidemiology Foundation of India

Dr Prabhaker Mishra

1. Indian Society for Medical Statistics
2. Indian Association for the Study of Population
3. Indian Association of Preventive and Social Medicine
4. Indian Public Health Association.
5. Epidemiology Foundation of India
6. International Epidemiological Association
7. Indian Society for Probability and Statistics
8. American Public Health Association
9. Eastern Geographical Society

Dr Anup Kumar

1. Indian Society for Medical Statistics
2. Indian Association for the Study of Population
3. Epidemiology Foundation of India
4. International Epidemiological Association

Dr Jai Kishun

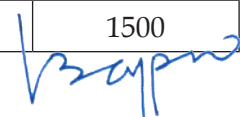
1. Indian Society for Medical Statistics
2. Indian Association for the Study of Population
3. Epidemiology Foundation of India
4. International Epidemiological Association
5. Indian Society for Probability and Statistics

Teaching Workshops/ CME's organized 2022

The department has organized its foundation day and CME on 21 December 2022 with two scientific sessions on "Systematic Reviews and Meta-Analyses" and "Artificial Intelligence".

Services: Data analysis support, Statistical consultancy, to the students and faculty of this institute as well as nearby institute like KGMU and RML.

Services	Year 2020	Year 2021	2022
Statistical Consultancy	1000	1250	1500



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Data analysis support	1200	1200	1500
Thesis support for MD	35	40	60
DM/MCh Projects	40	50	50
Teaching to the Students (Basic course)	110	140	120
Short Summer Training course (No of students)	02	0	02
*Approximate Number to SGPGI/KGMU/RML, based on online and offline support mode.			

Training

At present, there are 03 students enrolled in PhD program. Another 02 Students are in Statistical Fellows Programs.

New Extramural Research Grants:

1. Incidence, Determinants and Prediction of Risk score for Long-term complications in recovered COVID-19 patients.: A Cohort study **Funding:** 27.5 Lakhs by DBT, New Delhi (PI: Dr Prabhaker Mishra), **Status:**Approved

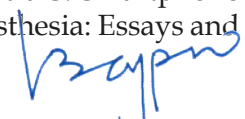
Summary Report:

Short term complication in recovered COVID-19 patients is well-known dilemma but long-term complication including development of new disease in these patients is still unclear. These short- and long-term complications may depend on patient demographic, comorbidity, vaccination status and severity of the disease including asymptomatic /symptomatic, and type of respiratory support required etc. In the proposed study, the aim is to estimate the incidence of short- and long-term complications, identify determinants and develop a risk scoring system for long term complications in recovered COVID-19 patients. Data of post COVID-19 patients to be collected using questionnaires survey at various time points since their date of COVID-19 positive to at least two years follow-up. Based on independent predictors evaluated for long term complications, a risk scoring model to be developed for early prediction of long-term complications in recovered COVID-19 patients.

Publications: (a) Original Articles; (b) Case Report; (c) Letter to the Editor; (d) Book Chapter; (e) Review Article [2022]: 34 (Thirty-Four)

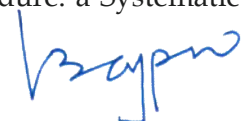
Indexed Journal:

1. Halemani K, Issac A, Dhiraaj S, Mishra P. Efficacy of body position on gastric residual in preterm infant: a systematic review and meta-analysis. Clin Exp Pediatr. 2022.
2. Gautam M, Saxena S, Saran S, Ahmed A, Pandey A, Mishra P, Azim A. Etiology of Pregnancy-related Acute Kidney Injury among Obstetric Patients in India: A Systematic Review. Indian J Crit Care Med. 2022; 26(10):1141-1151.
3. Singh Y, Maurya VP, Srivastava AK, Das KK, Bhaisora KS, Sardhara J, Verma PK, Mehrotra A, Jaiswal AK, Behari S, Mishra P, Agrawal S. Clinical experience and management outcome of WHO grade II pediatric intramedullary ependymomas: A descriptive study. J PediatrNeurosci 2022.
4. Ambasta S, Kannaujia AK, Shamsheery C, Shrivastava D, Mishra P, Mahapatra S. Smartphone use among anesthesiologists during work hours: A survey-based study. Anesthesia: Essays and Research. 2022 Jan 1; 16(1):22.

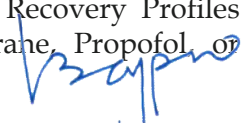


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5. Balchandra AR, Ghatak T, Samanta S, Singh RK, Verma A, Mishra P, Chaudhary R, Nath A. Pattern of conventional coagulation and thromboelastographic parameters in patients with COVID-19 diseases and association of COVID-associated coagulopathy with mortality in intensive care unit. *Anaesthesia: Essays and Research*. 2022;16(1):65
6. Pande G, Hatti M, Rai MK, Rai P, Kumar K, Vp K, Nehra A, Kumar S, Ranjan Rout S, Mishra SK, Kumar D, Kumar U, Mishra P, Majeed A, Saraswat VA, Singh K, Singh H, Misra DP, Agarwal V. Response Guided Slow Infusion of Albumin, Vasoconstrictors and Furosemide Improves Ascites Mobilization and Survival in Acute on Chronic Liver Failure: A Proof-of-Concept Study. *J Inflamm Res*. 2022 Sep 1;15:5027-5039.
7. Haldar R, Mishra P, Gurjar M, Sanjeev OP, Upadhyaya VD, Bhatnagar A, Bhadauria D, Agarwal V. Knowledge and compliance of hydroxychloroquine prophylaxis for severe acute respiratory syndrome coronavirus 2 infection among Indian health-care workers. *Journal of Research in Pharmacy Practice*. 2022 .1;11(1):33.
8. Bhaskar B, Gurjar M, Mishra P, Azim A, Poddar B, Baronia AK. Arterial site selection for measurement of mean arterial pressure in septic shock patients on high-dose norepinephrine. *Frontiers in Medicine*. 2022;9.
9. Gunjiganvi M, Rai S, Awale RB, Mishra P, Gurjar M, Gupta D, Singh R. Depression and Anxiety among COVID-19 Indian Intensive Care Unit Survivors: A Prospective Observational Study. *Indian J Crit Care Med*. 2022 Dec;26(12):1267-1274.
10. Haldar R, Shamim R, Mondal H, Kannaujia AK, Mishra P, Agarwal A. A survey on knowledge, attitude, and practices of workplace radiation safety amongst anaesthesiology personnel in northern Indian tertiary care institutes. *Indian Journal of Anaesthesia*. 2022 May 1;66(Suppl 3):S137-47.
11. Kurian NM, Yadav SC, Gurjar M, Mishra P, Sanjeev OP, Azim A, Gupta D, Hashim Z, Verma A, Bhatia E, Ghatak T. Association of hyperglycaemia at-admission & diabetes mellitus with 28-day mortality in patients admitted with moderate-severe SARS-CoV-2 infection: A retrospective study. *Indian Journal of Medical Research*. 2022 May 1;155(5&6):554-64.
12. Ora M, Soni N, Nazar AH, Mehrotra A, Mishra P, Gambhir S. Effect of Whole-body [18F] Fluoro-2-deoxy-2-d-glucose Positron Emission Tomography in Patients with Suspected Brain Metastasis. *Indian Journal of Neurosurgery*. 2022 May 16.
13. Singh V, Prasad SN, Neyaz Z, Bhargava N, Yadav U, Srivastav AK, Mishra P, Phadke RV. Computed tomographic Morphometry of lumbar spine in Indian population. *Indian Journal of Neurotrauma*. 2022 Jun;19(01):012-8.
14. Rai B, Srivastava M, Mishra P, Tiwari S. An In-Silico Approach to Identify Therapeutic Target and Markers Associated with Diabetic Nephropathy. *Current Diabetes Reviews*. 2022 Jun 10.
15. Marutirao R, Singh S, Shamsheery C, Sardhara J, Mishra P, Mehrotra A, Srivastava AK, Jasiwal AK, Srivastava S, Behari S. Impact of Postoperative ABG Analysis and ICU Weaning Protocol in Surgical Outcome of Atlanto-Axial Dislocation: It's not the Towering Sail, but the Unseen Wind that Moves the Ship. *Neurology India*. 2022 Jul 1;70(4):1540.
16. Awale RB, Singh A, Mishra P, Bais PS, Vansh K, Shamim R, Ghatak T, Hashim Z, Gupta D, Nath A, Singh RK. Routine hematology parameters in COVID-19: A predictor of disease severity and mortality. *Journal of Family Medicine and Primary Care*. 2022 Jul 1;11(7):3423-9.
17. Halemani K, Issac A, Mishra P, Dhiraaj S, Mandelia A, Mathias E. Effectiveness of Preoperative Therapeutic Play on Anxiety Among Children Undergoing Invasive Procedure: a Systematic Review and Meta-analysis. *Indian J Surg Oncol*. 2022 Dec;13(4):858-867.



18. Kumar A, Sardhara J, Mishra P, Kapoor V, Mehrotra A, Raiyani V, Singh M, Goyal N, Kulkarni AG, Srikantha U, Bhaisora KS. The current status and surgical outcome of the minimally invasive techniques for lumbar interbody fusion in India: A systematic review and meta-analysis. *Journal of Craniovertebral Junction and Spine*. 2022 Jul 1;13(3):245.
19. Marak RSK, Chaudhary R, Keshri AK, Baghel SK, ManogaranRS, Dixit AK, Mishra P. COVID-19-associated Mucormycosis: an experience of invasive fungal sinusitis from a tertiary care referral center in Northern India, *Medical Mycology*. 2022; 60 (1): 233-7.
20. Halemani K, Latha T, Mishra P, Issac A. The prevalence of COVID vaccine acceptance among pregnant women: A systematic review and meta-analysis. *Clinical Epidemiology and Global Health*. 2022:101144.
21. Haldar R, Kannaujia AK, Shamim R, Mishra P. A comparison of endotracheal intubation characteristics between Macintosh, CMAC, and Smart Trach Video laryngoscope: a randomized prospective clinical trial. *Expert Rev Med Devices*. 2022;19(10):797-803.
22. Hashim Z, Nath A, Khan A, Neyaz Z, Marak RSK, Areekkara P, Tiwari A, Srivastava S, Agarwal V, Saxena S, Tripathy N, Azim A, Gupta M, Mishra DP, Mishra P, Singh RK, Gupta D, Gupta A, Sanjeev OP, Ghatak T, Ghoshal U, Dhiman RK, Tripathy NK. New insights into development and mortality of COVID-19-associated pulmonary aspergillosis in a homogenous cohort of 1161 intensive care patients. *Mycoses*. 2022;65(11):1010-23.
23. Misra DP, Rathore U, Mishra P, Singh K, Thakare DR, Behera MR, Jain N, Ora M, Bhadauria DS, Gambhir S, Kumar S, Agarwal V. Comparison of Presentation and Prognosis of Takayasu Arteritis with or without Stroke or Transient Ischemic Attack-A Retrospective Cohort Study. *Life (Basel)*. 2022 Nov 16;12(11):1904.
24. Srivastava, A, Srivastava, P, Mathur, S, Mishra S, Sabiya A, Gupta A, Mishra P, Tiwari M, Sharma LK. Analysis of cellular and cell free mitochondrial DNA content and reactive oxygen species levels in maternal blood during normal pregnancy: a pilot study. *BMC Pregnancy Childbirth* 22, 845 (2022). <https://doi.org/10.1186/s12884-022-05156-2>.
25. Kumar A, Behari S, Sardhara J, Mishra P, Singh V, Raiyani V, Bhaisora KS, Srivastava AK. Quantitative assessment of brainstem distortion in vestibular schwannoma and its implication in occurrence of hydrocephalus. *British Journal of Neurosurgery*. 2022;6:1-7.
26. Rana C, Kamal N, Mishra P, Singh A, Ramakant P, Mishra A, Singh K. Cellular fibroadenoma versus phyllodes tumors: A pre-operative diagnostic approach based on radiological and cytological features. *DiagnCytopathol*. 2022;50(8):375-385.
27. Kishun J, Kumar A, Singh U. Correlates of Cigarette Smoking Among Adolescents in India. *Indian J Community Med*. 2021 Jul-Sep;46(3):389-395.
28. Kishun J, Anup Kumar, Uttam Singh, Sachin Kumar, Comparison of common predictors of current cigarette smoking among adolescents: Across Southeast Asian countries. *Clinical Epidemiology and Global Health* 2022, Volume 17: 3-8
29. Singh U, Kishun J, Kumar A, Singh U, Kumar S, Kapoor, V, Mishra P. Determinants of Duration of the First Birth Interval Using the Semi-parametric Survival Model in Uttar Pradesh, India: Evidence from NFHS *Journal of Epidemiology and Public Health* 2022.
30. Kumar V, Mishra S, Sharma R, Agarwal J, Ghoshal U, Khanna T, Sharma LK, Verma SK, Mishra P, Tiwari S. Development of RNA-Based Assay for Rapid Detection of SARS-CoV-2 in Clinical Samples. *Intervirology*. 2022;65(4):181-187.
31. Verma AK, Haldar R, Srivastava S, Das KK, Mishra P. Comparison of Recovery Profiles of Patients Undergoing Endoscopic Lumbar Discectomy under Desflurane, Propofol or



Sevoflurane Anesthesia: A Randomized, Prospective, Clinical, Comparative Study. J Neurosci Rural Pract. 2022;22;13(2):226-235.

32. Kishun J, Srivastava A., Chandra V, Srivastava V, Singh R, Verma NK. In-vitro evaluation of an anti-fungal nail lacquer containing miconazole nitrate. Neuroquantology. 2022;20 (11): 2699.

Non Indexed:

33. Singh G, Maurya VP, TP WA, Mishra P, Singh M, Srivastava AK, Bhaisora KS, Verma PK, Dikshit P, Kumar A, Sardhara J. Intracranial Arachnoid Cyst: Management Experience of Nearly Two Decades from a Tertiary Healthcare Centre.2022
34. Chandra A, Rao N, Srivastava D, Mishra P. Difference in Antihypertensive Medication Pattern in the First Year Compared to More than a Year of Maintenance Hemodialysis: A Northern India Tertiary Care Experience. Ann Natl Acad Med Sci 2022; 58(03): 157-163.

Chapter(s) in Book(s) 2022: Nil

Visiting Professors: Yogendra Prasad Chaubey, Department of Mathematics and Statistics, Concordia University, 1455 de Maisonneuve Blvd. West Montreal, Quebec CANADA H3G 1M8 visited the Department during the 4th Week of the December 2022.

Department Highlights:

- To manages and maintain the Hospital Information System (HIS) and patient care data on various servers in the institute.
- Implementation and manage fully functional HIS to cater the patient care activities under this system.
- Manage campus wide internet, email facilities and HIS system in in Residential areas, hostels, MRA, guest house through Wi-Fi.
- The department manages e-Office for the institute, which is a digital platform (paperless communication) for digital file movement and approval from one office including within the departments / sections of the institute and other government offices. It has the advantage that the file location can be tracked at any point in time which is a timesaving, transparent and efficient medium of e-governance.

New Initiatives:

1. **Online transaction facility at patient portal:** Online transaction facility at patient portal of the SGPGI is being implemented. By using this facility, patients will be able to deposit amounts electronically. Regarding this after sign a memorandum, patient portal, security audit from the SBI and other agencies are under way.
2. **Online leave management:** Leave management has been implemented and fully utilizing in HIS for the non-teaching staff. By using this employee can apply and receive sanction orders electronically.
3. **Implementation of E Office:** After testing the project at the department of biostatistics and health informatics, now it is being applying in the other offices of this institute. Using this application, documents are moved electronically from one office to another within SGPGI for the institute's employees. Through this software, we can monitor as well as track the location of the document. All staff and faculty members have been trained to use this service. After complete implementation of these services, institute offices related work will be paperless which is particularly important for transparency, quick processes as well as helpful to reduce spread of infections through documents during pandemic.

4. **Implementation of PACS for patient care management:** Lab/imaging equipment's of various departments have been integrated with HIS and presently utilizing in the patient care management. With this facility test results/images are coming automatically in the HIS from the lab equipment's and same is maintained in HIS and can be seen anywhere at any point of time on the hospital's network. Now PACS (Picture Archive and Communication System) facility is very much useful in patients care and management in the institute.
5. Hospital Information System (HIS) has been started in Emergency & Renal Transplant (EMRTC) building.



DEPARTMENT OF CARDIOLOGY

STAFF

Name of Faculty Members:

1. Aditya Kapoor, MD, DM, FACC, FESC, FCSI	Professor & Head (took over as Head, w.ef. 1 st Sept 2021)
2. Satyendra Tewari, MD, DM, FACC, FESC, FCSI	Professor
3. Naveen Garg, MD, DM, FACC, FESC, FCSI	Professor
4. Sudeep Kumar, MD, DM, FACC, FESC, FCSI	Professor
5. Roopali Khanna, MD, DM, FACC, FESC, FSCAI	Addl. Professor
6. Ankit Sahu, MD, DM, FACC, FSCAI	Assoc. Professor
7. Kamlesh Raut, MD, DM	Asst. Professor, (Contractual) joined March 2022
8. Arpita Katheria MD, DM	Asst. Professor, (Contractual) joined Nov 2022
9. Harshit Khare MD, DM	Asst. Professor, (Contractual) joined Nov 2022

Activities

Awards and Recognitions

Dr. Ankit Sahu:

- Fellowship of Society for cardiovascular angiography and interventions (FSCAI) Society for Cardiovascular Angiography and Interventions
- Appointed as Editorial associate member in the editorial board of Indian heart journal (IHJ). Cardiological society of India
- Award for the best paper for 'Associate professor' category in medical field presented during 3rd Research Day, SGPGIMS, Research cell, SGPGIMS
- Second prize for best case presented in Cath lab Café session during annual conference of PCSI, Pediatric Cardiac Society of India (PCSI)

Dr. Roopali Khanna

- Convener CSI heart failure council, Cardiological Society of India
- Nominated as Member National Academy of Medical Sciences, National Academy of Medical Sciences
- Best case IJ CTO, IJCTO Secretariat

Dr. Satyendra Tewari

- Elected as Vice-president of National CSI, Cardiological Society of India

Dr Aditya Kapoor

- President Elect UP Chapter Cardiological Society of India



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- Nominated Member of National Board of Electrophysiology National Board of Examinations in Medical Sciences
- Invited sessions and chairpersons/lectures for Conferences: 2022

Name of faculty and Session

Dr. Ankit Sahu

- National symposium of Imaging & Physiological council of India (IPCI), Kochi
- CARDICON, Lucknow
- ACC-Middle East, Cairo.
- European society of hypertension (ESH) and National hypertension working group (NHWG)
- Society for Cardiovascular Angiography and Interventions (SCAI) on a forum for shared learning
- Plasma cell disorders: recent updates

Dr. Roopali Khanna

- IPCI, Kochi
- IJCTO, Delhi
- CARDICON, Lucknow
- National CSI, Chennai
- National Interventional Council (NIC), Ahmedabad
- TCT, Boston, USA

Dr Sudeep Kumar

- CARDICON, Lucknow
- Joint Intreventional Meeting, Milan, Italy
- Annual conference of CSI, Chennai

Dr Naveen Garg

- CARDICON, Lucknow
- NIC, Ahmadabad
- Annual Conference, Indian Society of Hypertension, Delhi
- Annual conference of Cardiological Society, Bihar Chapter

Dr. Satyendra Tewari

- European Cardiology conference (ESC)Barcelona(Spain)
- World congress of Cardiology Rio-de-Janeiro (Brazil)
- Annual conference of CSI, Chennai

Dr Aditya Kapoor

- National Steering Comm meeting Metabolic First Aid
- Heart Failure Association of India
- ICC PG Academic Online Program
- Asia Tech Exchange Medtr masterclass bifurcation



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- CARDICON, Lucknow
- Lipid Association of India, Mumbai
- Indian Society of Electrocardiology, Mumbai
- IHRS Annual Conference 2022, Kochi
- UPISBMR in collaboration with hormone india
- Annual conference of CSI, Chennai

Membership of Societies

Membership of professional bodies funded by Institute

Aditya Kapoor

- European Society of Cardiology
- American College of Cardiology

Dr. Satyendra Tewari

- European Society of Cardiology
- American College of Cardiology

Dr. Naveen Garg

- American college of Cardiology
- Society for cardiovascular Angiography and Intervention.

Dr. Sudeep Kumar

- European Society of Cardiology
- American College of Cardiology
- Society for cardiovascular angiography & Intervention.

Dr. Roopali Khanna

- American college of Cardiology.
- Society for cardiovascular angiography & Intervention.

Dr. Ankit Sahu

- Indian Academy of Echocardiography (IAE)-2020
- Indian college of Cardiology (ICC)-2020
- Pediatric cardiac society of India (PCSI)-2020

Teaching Workshops/ CME's organized 2022

1. Pacemaker training 8th May 2022
2. Live transmission complex Left Main coronary intervention 31st July 2022 during ACVS India South Asia in collaboration with CRF (cardiovascular research foundation) & TCT USA
3. Hands-on course for bifurcation PCI (4 hours) in 2022
4. Pacemaker training 30th July 2022
5. Live case & simulation based QFR demonstration 5-6th May 2022
6. Simulation workshops to improve clinical workflow



7. Coronary Simulation training 8th 9th July 2022 with VIST®lab
8. Echocardiography simulation workshop 24th Sept 2022
9. IVUS training workshop 19th Feb and 2nd July 2022
10. Rotablation (RotaPro®) workshop with live case, 29th June 2022
11. 3D Electrophysiology workshop held in October 2022
12. Lead extraction workshop November 2022
13. Bifurcation simulation workshop held in December 2022
14. Women health symposium March 2022

Service

Year-wise available clinical data (last three years 2020,2021,2022) for department of Cardiology

S.No	Parameters	2020	2021	2022
1	Number of New patients in OPD	2558	5437	9302
2	Number of Old/ Follow-up patients in OPD	12417	26085	11969
3	Total patients in OPD	14975	31522	21271
4	Total number of patients admitted (IPD)	1981	3295	4241
5	Total number of cath lab. Procedures done	2006	3574	3934
	a) Coronary Angiograms	812	1623	1947
	b) PTCA	762	1257	1590
	c) Peripheral Angiograms & other procedures	35	52	25
	d) Other procedures (Valvuloplasty, Umbrella closures, IVC filter, EP, etc.	119	185	253
	e) Intra aortic Balloon pump insertions	2	1	2
	f) PPM implanted.	204	311	349
	g) Others	62	146	119
6.	Total number of :			
	TMT	365	420	509
	Echo	8448	16370	23407
	Stress echo	1	4	5
	Holter Recordings	149	302	380
	ECG	4290	18396	19656

Training

At present, there are 22 senior residents enrolled in DM cardiology program including 8 (3rd year DM fellows), 7 (2nd year DM fellows) and 8 (1st year DM fellows).

Number of students appeared in the final year examination (PG) : 7

Number of students who passed in final year examination (PG): 7

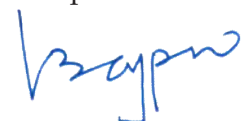


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Research projects

Completed:

1. To study the role of Ivabradine in controlling Heart Rate in Chronic Atrial Fibrillation associated with Rheumatic Heart Disease, 2022, **Funding** :Departmental (PI: Dr Aditya Kapoor), **Status**: Accepted for publication in Indian Heart Journal, **Summary report**:Ivabradine was used in 80 patients, rheumatic AF, HR > 100 bpm (age 47 ±11 yrs, AF duration 6.8 ±2.9 years, rate 131± 16 bpm) on maximally tolerated $\beta\beta$ or CCB's. It resulted in significantly lower HR (81 ±10 vs 99 + 9) at 3 months and 6 months (79 ± 8 vs 94 ±8, p < 0.001) with better day-time and night-time Holter rate control, lower NT Pro BNP and higher 6 minute walk distance with better LA Strain values (22.8±2.8% vs 20.6 ± 2.5%). Our data suggest that Ivabradine can be an option for rate control in rheumatic AF.
2. Does High dose Statin Pretreatment Affect Global and Regional Strain in Patients undergoing CABG and Valve Replacement, 2022. **Funding** : Departmental (PI: Dr Aditya Kapoor), **Status**: Communicated for publication **Summary report**:Pre-operative high dose rosuvastatin was "cardioprotective" with favorable effect on LV global strain and release kinetics of biomarkers. These cut-offs (described for the first time for rheumatic VR) can be used as prognostic predictors.
3. Oral Flecainide for Acute Conversion and maintenance of sinus rhythm in post mitral valve replacement patients with Rheumatic Atrial Fibrillation, 2022., **Funding**Departmental (PI: Dr Aditya Kapoor), **Status**: Communicated for publication, **Summary report**:Oral flecainide was effective in achieving and maintaining SR in post MVR patients with rheumatic AF. Maintenance of SR was achieved in 79 % of initial converters and 64% of overall population, with better LA strain values. Flecainide was well tolerated. As patients of rheumatic AF are often young and unlikely to have underlying coronary artery disease or severe LV dysfunction, flecainide is a potentially attractive modality for achieving and maintaining SR in these patients.
4. Comparison of Radial Artery outcomes with chitosan based haemostatic dressing AXIOSTAT® vs Mechanical Compression (TR BAND) for patients undergoing transradial coronary intervention - an open label randomised controlled trial, 202, **Funding** :Departmental (PI: Dr Naveen Garg), **Summary of results**: This study randomized 258 patients undergoing transradial coronary into 2 groups; radial hemostasis using radial TR band mechanical compression device and radial hemostasis using Axiostat a chitosan-based pad. The chitosan-based pad showed significantly greater efficiency in achieving hemostasis and fewer vascular complications compared to mechanical compression device.
5. Delineating the role of the human leukocyte antigen locus in susceptibility to rheumatic heart disease in South Asia and Oceania, 2022, **Funding** :BMA Foundation, UK (PI: Dr Balraj Mittal, Co-PI:Naveen Garg), **Summary report**:It was a genome-wide association study (GWAS) of Rheumatic Heart Disease susceptibility in 1,163 South Asians (672 cases; 491 controls) recruited in India and Fiji. We identify a novel susceptibility signal in the class III region of the human leukocyte antigen (HLA) complex in the South Asians. These findings suggest the class III region is a key determinant of RHD susceptibility offering important new insight into pathogenesis.
6. Assessment of LA functions using ratio of mitral Doppler inflow velocity and tissue Doppler mitral annular velocity along with LA stain as a predictor of severity of coronary artery disease in stable angina patients, 2022., **Funding** :Departmental (PI: Dr Satyendra Tewari), **Status**: Completed, **Summary report**: Our study shows a significant association between LA function parameters (PALS, LAsSR, LAeSR, E/e⁻), with the presence of significant CAD in patients with stable angina symptoms.

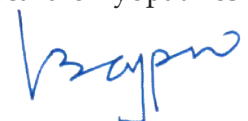


7. Assessment of Lipoprotein (a), Apolipoprotein B, Apolipoprotein A-1, ApoB/Apo A1 ratio and other attributable risk factors in predicting the severity of premature coronary artery disease (CAD), 2022. **Funding** :Departmental (PI: Dr Satyendra Tewari), **Status**: Completed , **Summary report**: We observed a gradual increase in Lp (a) and Apo-B/A1 levels with the increasing number of stenotic vessels and an independent association between Lp (a) and the severity of CAD after adjusting for other possible confounding factors. There is a need to selectively reduce plasma Lp (a) and Apo B levels to reduce CAD severity in both primary and secondary prevention settings in order to define more accurately who to treat and to what targets.
8. Clinico-echocardiographic study of Cardiac Sarcoidosis with special reference to Speckle tracking Imaging, 2022. **Funding** :Departmental (PI: Dr Sudeep Kumar), **Status**: Completed **Summary report**:.On speckle tracking echocardiography abnormal strain pattern seen in 48.39 % in LV- GLS , 83.8 % in LV-GCS, 58 % in LV- GRS and 67.7 % in RV- GLS. Strain patterns were found to be abnormal even in patients with normal EF with mean LV- GCS -12.9± 8, RV-GLS -18± 5.3. In patients without cardiac involvement evidenced by FDG-PET/CMR strain patterns were found to be abnormal with a mean LV-GLS -13± 4, LV-GCS -9.3 ± 6.5, RV-GLS - 15± 7.8.

Research in progress

Funding agency, Name of project, Investigators

1. Hamilton Health Sciences, CANADA, PHRI INVICTUS- Investigation of Rheumatic AF Treatment Using Vitamin K Antagonists, Rivaroxaban or Aspirin Studies Dr Sudeep Kumar, Dr Aditya Kapoor
2. Hamilton Health Sciences, CANADA, PHRI Investigation of Rheumatic AF Treatment Using Vitamin K Antagonists, Rivaroxaban or Aspirin - Registry Dr Sudeep Kumar, Dr Aditya Kapoor
3. Investigator initiated COVID19 Infected ST-Elevation Myocardial Infarction in INDIA (COSTAINDIA) Dr Sudeep Kumar, Dr Aditya Kapoor
4. ICMR: Understanding pathogenesis of Takayasu arteritis – transcriptomics applied to peripheral blood mononuclear cells (PBMC) and involved vessels, and the role of various T-cell subsets Dr Sudeep Kumar
5. IRA: Evaluation of clinical and serologic parameters predisposing to subclinical atherosclerosis in scleroderma Dr Sudeep Kumar
6. **The George Institute for Global Health, AUSTRALIA** Preventing Adverse Cardiac Events (PACE) in Chronic Obstructive pulmonary disease Dr Sudeep Kumar
7. ICMR: Analogue of prothrombin time: identification and assay development of novel non-invasive and surrogate indicator of blood coagulopathy. (with CBMR) Dr Sudeep Kumar Dr Aditya Kapoor
8. ICMR: Appraisal of cardiac energetic metabolism using blood sample of cardiac hypertrophy subjects (with CBMR) Dr Sudeep Kumar
9. ICMR: Breast artery calcification – A predictor of coronary artery disease in Women? A hospital-based study in Indian women (BAC-CAD STUDY) Dr Roopali Khanna Dr Namita Mohindra
10. ICMR: Identification of genetic variants and their functional evaluation in the pathogenesis of Inherited Cardiomyopathies PI: Dr Anshika Srivastava, Co-PI: Dr Naveen Garg
11. DBT: Harnessing genome sequencing and engineering (CRISPR/Cas9) technologies for identification of shared genetic and molecular aetiology in paediatric and adult cardiomyopathies PI: Dr Anshika Srivastava, Co-PI: Dr Naveen Garg



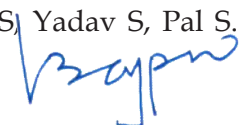
12. Department of Health Research, Govt. of India. Understanding the role of gut microbiome and associated immuno-modulation in patho-physiology of atherosclerosis, Dr Naveen Garg

Other ongoing research

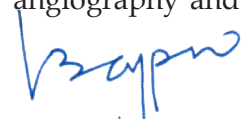
1. RADPAD protection in Cath lab: Utility for primary and secondary operator
2. Use of strain imaging to detect subtle myocardial involvement in post COVID-19 patients: An Indian perspective
 - c. Funding : Departmental (PI: Dr Aditya Kapoor)
3. A COMPARATIVE STUDY OF GLS, E/e' , and LEFT ATRIAL APPENDAGE WALL VELOCITY IN CORRELATION TO EJECTION FRACTION AND NT-probnp IN ISCHEMIC AND NON ISCHEMIC HEART FAILURE
 - b. Funding : Departmental (PI: Dr Satyendra Tewari)
4. Comparison of Radial Artery outcomes with chitosan based haemostatic dressing AXIOSTAT® vs Mechanical Compression (TR BAND) for patients undergoing transradial coronary intervention - an open label randomised controlled trial
5. Comparison of ECG recording by standard 12 lead ECG and Kardia Mobile Device.
 - a. Funding : Departmental (PI: Dr Naveen Garg)
6. Strain imaging to assess immediate and short term effects of successful percutaneous balloon mitral valvotomy on left atrial and Right Ventricular Mechanics
 - a. Funding : Departmental (PI: Dr Sudeep Kumar)
7. Breast Artery Calcification – A Predictor Of Coronary Artery Disease In Women? A Hospital-Based Study In Indian Women BAC-CAD Study
 - a. Funding : Departmental (PI: Dr Roopali Khanna)
8. Role of right atrial speckle tracking and strain imaging in pre-operative TOF patients., Funding : Departmental (PI: Dr Ankit Sahu)

Publications

1. Saklecha A, Kapoor A, Sahu A, Khanna R, Kumar S, Garg N, Tewari S, Goel P. Is Indexed Left Atrial Volume (LAVi) in Indian Patients with Acute Coronary Syndrome (ACS) undergoing revascularization a predictor of cardiovascular outcomes? *Ann Card Anaesth.* 2022; 25 (1): 19-25.
2. Sahu A, Goel PK, Khanna R, Kumar S, Kapoor A, Tewari S, Garg N. Neutrophil Gelatinase-Associated Lipocalin as a Marker for Contrast-Induced Nephropathy in Patients Undergoing Percutaneous Coronary Intervention: A Prospective Observational Analysis. *Indian J Nephrol.* 2022 May-Jun;32(3):247-255. doi: 10.4103/ijn.IJN_418_20. Epub 2022 Mar 23. PMID: 35814328; PMCID: PMC9267084.
3. Singh KK, Kapoor A, Khanna R, Sahu A, Kapoor V, Kumar S, Garg N, Tewari S, Goel P. Serum Gamma Glutamyltransferase (GGT) in coronary artery disease: Exploring the Asian Indian Connection. *Ann Card Anaesth.* 2022 Oct-Dec;25(4):408-413. doi: 10.4103/aca.aca_62_21. PMID: 36254903; PMCID: PMC9732951
4. Ghosh A, Chatterjee K, Khanna R, Kapoor A. Hypotension, Tachypnea, and Stridor Following Radial PCI: Solving the Conundrum Heart Views. 2021 Jan-Mar; 22(1): 63–67. Apr 22. doi: 10.4103/HEARTVIEWS.HEARTVIEWS_149_20
5. Cheema AM, Sahu AK, Kumari P, Mallik, Singh S, Priya S, Bhadauria S, Yadav S, Pal S.



- Knowledge and practices towards life style modification among hospitalized cardiac patients - a cross-sectional, questionnaire-based study **Global Journal of Medicine and Medical Sciences** 2021
6. Khanna R, Bansal A, Kumar S, Garg N, Tewari S, Kapoor A, Goel PK, Association between Endogenous Sex Hormones and Coronary Artery Disease in Postmenopausal Women. *Ind J Car Dis Wom*2021;6:168-173 WINCARS Vol 6
 7. Garg N, Sagar P, Kapoor A, Tewari S, Kumar S, Khanna R, Sahu A, Goel PK. Arterial Anomalies of the Upper Limb and Their Influence on Transradial Coronary Procedures. *J Invasive Cardiol.* 2021; 33 (3): E165-E171.
 8. Goel PK, Sahu AK, 3D Wiring in CTO Intervention: Cracking the Code *Journal of American College of Cardiology Interventions* 2021
 9. Kapoor A, Sahu AK Phantasmagoria of an ECG aberration in a young male with palpitations: the answer lies within, *Journal of Cardiovascular Disease Research* 2021, 12 (1):7-9
 10. Kapoor A, Bhadauria D, Sahu A, Khanna R, Kumar S, Garg N, Tewari S, Goel P. Detecting patterns of hypertension among live related kidney donors using office and ambulatory BP monitoring: data from a tertiary care center in India *Journal of Hypertension* 2021
 11. Goel P, Sahu AK, Layek M, Khanna R, Mishra P Impact of completeness of revascularization on long-term outcomes in patients with multivessel disease undergoing PCI. *Asia Intervention* 2021; 7:35-44.
 12. Khanna R, Ghosh A, Sahu AK, Goel PK Post-stenting angiographically silent coronary dissection: OCT comes to the rescue. *Br J Cardiol* 2021; 28(4):166-168.
 13. Sahu AK, Prajapati S, Kazmi DH. Simultaneous radio-ulnar cannulation: shifting gears from 'feasibility' to 'applicability'. *Egypt Heart J.* 2021;73(1):101
 14. Changing pattern of admissions for acute myocardial infarction in India during the COVID-19 pandemic *Indian Taskforce Indian Heart J.*2021
 15. Chatterjee K, Sahu A, Khanna R, Kumar S, Tewari S, Kapoor A, Goel PK, Garg N Distal radial access in the right anatomical snuffbox for coronary angiography and interventions: a prospective observational study. *European Heart Journal* 2021
 16. Harsha MM, Tewari S, Gupta SK, Khanna R, Kumar S, Garg N, Kapoor A, Goel PK. Acromegaly: Cardiovascular risk factors, cardiovascular manifestations and early vascular alterations in relation to disease activity. *Indian Heart J.* 2021; 73 (4): 499-502.
 17. Goel PK, Khanna R, Sahu A, Jain N. Transcatheter heart valve implant in bicuspid aortic valves with large annuli. *IHJ Cardiovascular Case Reports (CVCR)* 2021; 5:44-47.
 18. Ahmed A, Sahu AK*, Kapoor A Calcific severe rheumatic mitral valve stenosis disguising as a "pseudoprosthesis": An imaging vignette *J Pract Cardiovasc Sci* 2021; 7(1):76-7.
 19. Goel PK, Sahu AK Intravascular lithotripsy in heavily calcified unprotected left main with involvement of LAD ostium taking-off at extreme angulation - Taking upon an 'Armageddon' *IHJ Cardiovascular Case Reports (CVCR)* 2021; 5(3):153-155
 20. Sahu AK, Katheria A Is this the beginning of end for warfarin in bioprosthetic mitral valve recipients with atrial fibrillation? - New insights from RIVER trial *Indian Heart J* 2021; 73(4): 516-517.
 21. Raut K, Ghosh A, Kapoor A. The unusual case of a Topsy-Turvy ECG with a pseudo-infarct pattern. *J Electrocardiol* Nov-Dec 2021;69:93
 22. Dadarwal A, Garg N, Kapoor A, Tewari S, Kumar S, Khanna R, Sahu A, Goel PK, Randomized comparison of proximal and distal radial access for coronary angiography and interventions, *European Heart Journal* 2022



23. Goel PK, Rajput P, Sahu AK, Khanna R, Garg N, Tewari S, Kumar S, Kapoor A. Incidence, management patterns, and outcomes of cardiovascular implantable electronic device-related infection – A retrospective registry-based analysis. *Journal of Indian College of Cardiology* 2022 12(4):p 156-161
24. Dadarwal A, Garg N, Kapoor A, Tewari S, Kumar S, Khanna R, Sahu A, Goel PK, Clinical significance of epicardial fat in suspected angina pectoris: an observational study. *European Heart Journal* 2022 Volume 43, Issue Supplement_1, February 2022, ehab849.150, <https://doi.org/10.1093/eurheartj/ehab849.150>
25. Goel PK, Sahu AK, Kasturi S, Roy S, Shah N, Parikh P, Chadha DS. Guiding Principles for the Clinical Use and Selection of Microcatheters in Complex Coronary Interventions. *Front. Cardiovasc. Med.* 9:724608. doi: 10.3389/fcvm.2022.724608
26. Sahu AK, Harsha MM, Cardiovascular Diseases in Pregnancy - A Brief Overview. *RathoorCurrCardiol Rev* 2022; 18(1):77-88.
27. Gaur PS, R N, Anuja AK, Singh M, Rai M, Muhammed R, Sahu A, Agarwal V, Gupta L. Anti-mitochondrial antibodies in Indian patients with idiopathic inflammatory myopathies. *Int J Rheum Dis.* 2022; 26(6):659-668
28. Kumar A, Sahu A, Goel PK, Jain N, Garg N, Khanna R, Kumar S, Khanna R, Tewari S, Kapoor A. Comparison of non-invasive assessment for pulmonary vascular indices by two-dimensional echocardiography and cardiac computed tomography angiography with conventional catheter angiography in unrepaired Tetralogy of Fallot physiology patients weighing more than 10 kg: a retrospective analysis [published online ahead of print Kumar A, Sahu AK, Goel PK *Eur Heart J Cardiovasc Imaging.* 2022; jeac078. doi:10.1093/ehjci/jeac078
29. Kapoor A, Ray S, Muralidharan TR, Kumar V, Desai B, Kumar N, Muchhala S, Jhaveri K. OPINE-IT: Oral Antiplatelets Usage Pattern in Acute Coronary Syndrome: Exploring the Indian Ticagrelor Experience. *Asian Journal of Cardiology Research* 2022, 6(2): 27-35.
30. Puri R, Mehta V, Duell PB, Iyengar SS, Yusuf J, Dalal J, Narasingan SN, Kalra D, Kapoor A, Pradhan A, Mukhopadhyay Set al. Evidence for intensive LDL-C lowering for acute coronary syndrome: Recommendations from the Lipid Association of India. *Journal of Clinical Lipidology* March 2022. <https://doi.org/10.1016/j.jacl.2022.03.008>
31. Dadarwal A, Kapoor A, Sahu A Peculiar association of a small coronary arteriovenous fistula with inferior wall myocardial infarction: A bystander or culprit? *Heart India* 2022; 10:160-4.
32. Kapoor A, Sahu AK. Acute coronary syndrome presenting as sudden cardiac death. *Indian J Clin Cardiol.* 2022;0(0). doi:10.1177/26324636221135997

Chapter(s) in Book(s) 2022

1. CTO-PCI toolkit: Pravin K. Goel, Ankit Kumar Sahu, Gautam Das 7th ed Cardiological society of India (CSI) cardiology update – 2022, Jaypee Brothers Medical Publishers
2. Chapter on PCSK9 inhibitors and acute coronary syndrome Aditya Kapoor: *Clinical Lipidology Update Elsevier* 2022
3. What is Right sided Heart failure: Kamlesh Raut, Aditya Kapoor, *Heart Failure Association of India handbook: Heart Failure: All you want to know* 2022

Visiting Professors

1. Dr Shanmugasundram, Department of Cardiology, Velammal Medical College Hospital and Research Institute, Madurai, Tamilnadu: April 2022 for Conduction system Pacing workshop
2. Prof Hari D Sharma, Founder President, Indian Academy of Biomedical Sciences, Dept of Pathology Erasmus MC, Rotterdam for deliberations on 'Molecular phenotypes of Failing Heart in Tetralogy of Fallot, Sept 2022

3. Dr Brigette Oswald, Dept of Cardiovascular surgery, University of Dusseldorf, Moorenstr, Germany: Lead extraction workshop Nov 2022
4. Dr Manji Biswas, guest lecture on usage of SGLT2 inhibitors in heart failure, Nov 2022.

Departmental Highlights

1. Public awareness programs including walkathon, cycling drive conducted on World heart day under the aegis of Cardiological society of India – UP chapter on 29th September 2022
2. A women health symposium addressing the brittle health issues in women on the eve of international women’s day organized by Department of Cardiology, SGPGIMS, Lucknow on 8th March 2022.
3. Advanced life support (ALS) and CPR awareness drive conducted by Dr. Aditya Kapoor under the aegis of Revive Heart Care and Indian heart rhythm society.
4. Round the clock services of Primary Angioplasty for acute MI patients.
 - Acute myocardial infarction is one of the important and serious components of the spectrum of coronary artery disease and requires specialized care and management. Despite the advances in the medical treatment of hospitalized MI patients, short-term and long-term mortality remains significantly high. Acute MI presentation within the window period/ golden hour needs reperfusion either by immediate fibrinolysis or primary angioplasty. In the setting of a tertiary care hospital equipped with an active cardiac cath lab, one should strive to achieve a primary angioplasty (immediate angioplasty for acute MI without reperfusion) rate in excess of 90% within 120 minutes of the onset of chest pain. However, many centers, despite having a cath lab fail to provide 24x7 services of primary angioplasty to the population. Our department on the contrary, has strived to maintain and upgrade the best practice of primary angioplasty services round the clock for our patients since more than last 20 years
 - Through this unique practice of providing round the clock primary angioplasty services, the fellows in training receive the exposure to assess, evaluate and manage sick MI patient. Also, they receive hand-on experience in the interventional management of complications during primary angioplasty like temporary pacemaker insertion, CPR, intubation, pericardiocentesis, defibrillation, etc. This also instills a sense of greater responsibility and dedication towards the patients.

New Initiatives

- Offer certificate courses as Refresher Programs for Cardiac Nurses focusing on the entire spectrum of Cardiology Care. First Course completed
- Skill development workshops on implantable cardiac devices, physiological cardiac imaging and online simulators.
- Development of a new ALS/ BLS certificate course for residents across all the departments that is in line with NMC requirements in collaboration with other allied departments of anesthesiology, CCM, neonatology and pulmonary medicine.

DEPARTMENT OF CLINICAL IMMUNOLOGY AND RHEUMATOLOGY

STAFF

Name of Faculty Members:

- | | |
|---------------------------------|--|
| 1. Amita Aggarwal, DM | Professor & Head |
| 2. Able Lawrence, | Professor |
| 3. Vikas Agarwal, DM | Professor |
| 4. Durga P Misra, DM | Associate Professor |
| 5. Dr. Koshy Nithin Thomas, DM | Assistant Professor (Contractual) |
| 6. Dr. Naveen R, DM | Assistant Professor (Contractual) |
| 7. Dr. Rudrarpan Chatterjee, DM | Assistant Professor (Contractual) joined on 21.11.2022 |
| 8. Dr. Anu Balakrishnan, DM | Assistant Professor (Contractual) joined on 21.11.2022 |
| 9. Dr. Upendra Rathore, DM | Assistant Professor (Contractual) joined on 21.11.2022 |
| 10. Dr. Rajat Kharbanda, DM | Assistant Professor (Contractual) joined on 21.11.2022 |
| 11. Dr. Kunal Chandwar, DM | Assistant Professor (Contractual) joined on 21.11.2022 |
| 12. Dr. Juhi Dixit, DM | Assistant Professor (Contractual) joined on 30.11.2022 |

Activities

Invited Talks

1. Amita Aggarwal: Invited to lead a panel discussion on 'SLE' at Clinical Rheumatology conference, KIMS, Hyderabad in April 2022.
2. Amita Aggarwal: Invited to deliver a lecture on 'Rheumatological overlap between Autoimmunity & Autoinflammatory disorders of IEL' at Wadia Childrens hospital, Mumbai in August 2022.
3. Amita Aggarwal: Invited to deliver a lecture on 'Child with a limp pain' at the Annual conference of Indian Rheumatology Association, Ranchi Chapter in September 2022.
4. Amita Aggarwal: Invited to deliver a lecture on 'JAK inhibitors in Pediatric Rheumatology' at the Annual conference of Pediatric Rheumatology Society of India in December 2022
5. Amita Aggarwal: Invited to deliver a lecture on 'Juvenile Spondyloarthritis' at the 37th Annual conference of Indian Rheumatology Association on 24th November 2022
6. Amita Aggarwal: Invited to deliver a lecture on 'Recent advances in Basic and Translational science in 2022' at the 37th Annual conference of Indian Rheumatology Association on 25th November 2022
7. Vikas Agarwal: Invited Lecture 'Current & Future biological targets of therapy in Scleroderma' at Indian Rheumatology Association meeting in Indore, India in November 2022
8. Vikas Agarwal: Prof. Sukumar Mukherjee Honour lecture at Rajgir, Bihar at IACMCON in November 2022
9. Vikas Agarwal: Invited IJR Scientific writing workshop and Rheumatology Pearls 2022 in October 2022 at Udaipur



10. Vikas Agarwal: *Invited lecture 'Pancreatic stellate cells and fibrogenesis in Chronic Pancreatitis' at Annual Indian Pancreas Club meeting in October 2022*
11. Vikas Agarwal: *Invited Lecture 'Inflammation therapeutic targets-success stories (monoclonal antibodies)' at THSTI, Faridabad in July 2022*
12. Vikas Agarwal: *Invited lecture 'Gut microbiota in health and disease' at CME on "Nutrition, Gut Health and CKD", in August 2022.*
13. Durga P Misra: *Delivered lecture on "Avoiding common publication misconducts British Society For Rheumatology 2022 Conference (hybrid mode) on 27th April 2022., UK*
14. Durga P Misra: *Principles & Applications of IF Microscopy in Rheumatology (Immunofluorescence Microscopy in Autoantibody diagnostics workshop,, IRACON, 2022. Indore, MP.*
15. Durga P Misra: *Delivered lecture on "Rapporteur - Vasculitis session, Clinical Rheumatology Conference - 2022, at KIMS, Hyderabad.*
16. Durga P Misra: *Delivered a lecture on "Anti TNF and IL-17 in Management of Various Systemic Inflammatory Rheumatic Diseases (SIRD)" for the Society of Inflammation Research on 23rd July 2022.*
17. Durga P Misra: *Delivered a lecture on "HYDROXYCHLOROQUINE Clinical use in Rheumatology, Safety Concern, Precautions and Management of Adverse Events" for the Society of Inflammation Research on 06th August, 2022.*
18. Durga P Misra: *Delivered a lecture on "Genes and environment in sarcoidosis" for Sarcoidosis Summit 2022 being conducted by Asian Institute of Gastroenterology on 14th October 2022.*

Papers at Conferences:

International conferences:

1. Amita Aggarwal: *Serious Infections in SLE- Incidence, Associated Factors, Impact and Trends over Two Decades (abstract number 1592) at American college of Rheumatology, Philadelphia, Nov 14, 2022*
2. Amita Aggarwal: *Juvenile Onset SLE in India-Data from a Multi-institutional Inception (INSPIRE) Cohort of Systemic Lupus Erythematosus (abstract number 1371) at American college of Rheumatology, Philadelphia, Nov 14, 2022*
3. Amita Aggarwal: *Clinical Profiling and Antiphospholipid Antibody (aPL) Associations in Indian Systemic Lupus Erythematosus (SLE) Cohort (abstract number 1465) at American college of Rheumatology, Philadelphia, Nov 14, 2022*
4. Amita Aggarwal: *Gastrointestinal Manifestations in Systemic Lupus Erythematosus Are Associated with High Disease Activity and Mortality: A Nationwide Cohort Study from India (abstract number 1445) at American college of Rheumatology, Philadelphia, Nov 14, 2022*
5. Amita Aggarwal: *Prevalence and Associations of Myositis in an Indian Inception Cohort of Lupus (abstract number 1453) at American college of Rheumatology, Philadelphia, Nov 14, 2022*
6. Able Lawrence: *Etiology of Elevated Serum Creatinine in Patients with Systemic Lupus Erythematosus at Presentation and Association of Crescents in Renal Biopsy with Rapidly Progressive Renal Failure in a Lupus Cohort (abstract number 1483) at American college of Rheumatology, Philadelphia, Nov 14, 2022*
7. Amita Aggarwal *Predictors of Methotrexate Monotherapy Response in Patients with Active Rheumatoid Arthritis: Results from a Multi-centre, Randomized Controlled Trial (abstract number 0919) at American college of Rheumatology, Philadelphia, Nov 14, 2022*
8. Amita Aggarwal . *Development, Refinement And Weighting Of Candidate Criteria For Axial*

- Disease In Juvenile Spondyloarthritis: An International Collaboration (*abstract number 0852*) at American college of Rheumatology, Philadelphia, Nov 14, 2022
9. Amita Aggarwal: Impact of Characteristic Inflammatory and Structural Imaging Lesions on Expert Classification of Axial Juvenile Spondyloarthritis(*abstract number 0880*) at American college of Rheumatology, Philadelphia, Nov 14, 2022
 10. Durga P Misra: Transcriptomics applied to peripheral blood mononuclear cells (PBMC) and involved vessels” at the European Vasculitis Society Takayasu Arteritis Investigators meet on 15th October 2022.
 11. Koshy N Thomas: AB1205: Medical and psychological comorbidities in fibromyalgia: a cross sectional study, EULAR congress, Denmark, (Virtual): Jun 1-4, 2022.
 12. Koshy N Thomas: CAS311: Recurrent Macrophage activation syndrome and concurrent AIHA as the presenting feature of Systemic Lupus at Diagnostic School 2022, Clinical Immunology Society, USA (virtual): Aug 3-5, 2022.
 13. Naveen R: COVID-19 Vaccination in Autoimmune Diseases Study: Vaccine Safety in Rheumatoid Arthritis: ACR 2022 Poster.
 14. Naveen R COVID-19 Vaccination In Autoimmune Diseases Study: Vaccine Safety in Systemic Lupus Erythematosus-ACR 2022 Poster
 15. Naveen R: Vaccine Hesitancy Among Patients With Idiopathic Inflammatory Myopathies And Rheumatic Diseases in 2021-2022: A Comparative Analysis Of COVID-19 Vaccination In Autoimmune Diseases Surveys- ACR 2022 Poster.

National conferences:

1. Dr. Koshy N Thomas: Gradual waning of response to Tofacitinib in a 20 year old lady with SAVI, 6th National conference on Inborn errors of immunity, ISPID at Chandigarh, Nov 26-27, 2022.
2. Dr. Naveen R: Characteristics of Post-COVID-19 In Autoimmune Rheumatic Diseases: Data From COVID-19 Vaccination In Autoimmune Diseases Study- IRACON 2022 Poster.
3. Dr. Vikas Agarwal: Comparison of presentation of pediatric-onset and adult-onset Takayasu arteritis: A retrospective cohort study (oral). Annual Indian Rheumatology Association at Indore, November 2022.
4. Dr. Naveen R: Flares following COVID-19 Vaccination in patients with Idiopathic Inflammatory myopathies: Combined analysis from the COVAD studies- IRACON 2022 Poster.
5. Dr. Durga P Misra: Presented my work on “Understanding pathogenesis of Takayasu arteritis

Members of international societies.

1. Amita Aggarwal: International fellow of American college of Rheumatology

Conference organized:

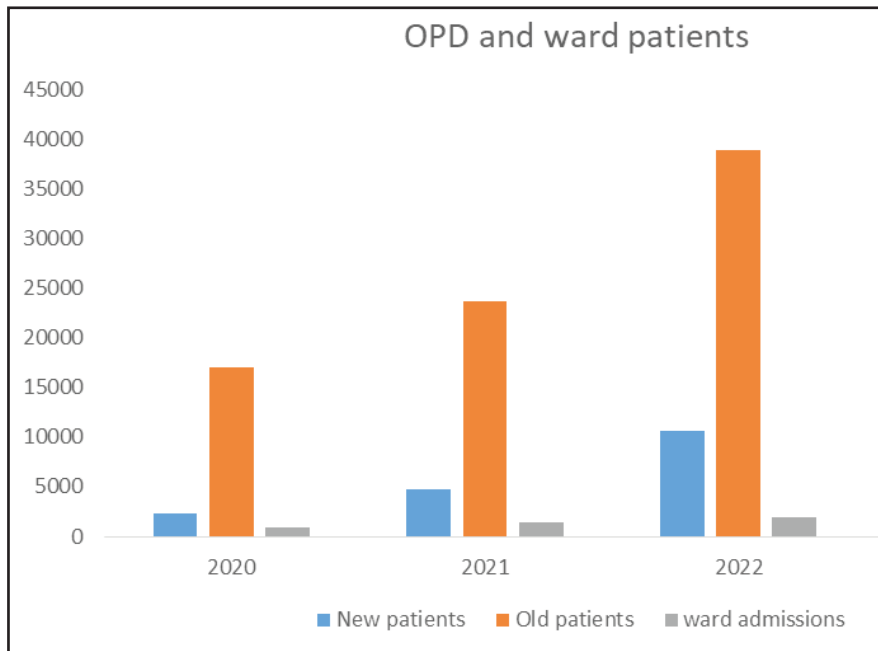
14th National Autoantibody Workshop held on Sep 1-4, 2022.

Service

Patients seen

Year	New Patient	Old Patient	Ward Admission
2020	2349	17079	902
2021	4719	23732	1409
2022	10673	38837	1913

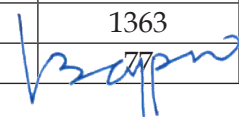
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Investigations done

This year immunodeficiency tests have been started on charge basis and are available on consultation. This year ESR has been discontinued as Department of pathology is now doing it by Westergren method.

SN.	Name of Test	2020	2021	2022
1	RF	157	320	930
2	Anti Nuclear Antibody	3059	7402	11818
3	Anti Mitochondrial Antibodies	326	1147	2203
4	Anti Smooth Muscle Antibody	646	1860	2851
5	Anti-LKM Antibodies	448	1505	2666
6	Anti ds-DNA	1097	2533	3219
7	ANCA Screen	1152	2357	2760
8	IgG Anti Cardiolipin Ab	158	311	401
9	ENA Screen	659	1627	2555
10	Anti Parietal Cell Antibody	124	308	335
11	Anti- GBM Elisa	243	617	654
12	Anti-MPO (ANCA) - Elisa	85	164	277
13	Anti-PR3 (ANCA) - Elisa	85	165	226
14	IgM Anti Cardiolipin Ab	161	314	408
15	Anti-CCP Antibodies	169	456	822
16	RA Screening	544	1749	3033
17	Anti TissueTrangultaminsase Antibody	649	2352	4182
18	Anti Phospholipid Antibody Profile	500	1132	1363
19	Myositis Specific Auto Antibodies	63	115	777



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20	Anti Aquaporin-4-IIFT	13	20	4
21	ENA Systemic Sclerosis	15	45	62
22	PLA2R Elisa Test	0	68	543
23	Myositis SA (TIF-1y and MDA-5)	0	17	164
24	Neuromyelitis Optica Screening Test	0	6	13
25	C Reactive Protein	2864	6086	5920
26	C4	1460	3213	4828
27	Alpha-1 Antitrypsin	10	127	123
28	IgG	722	2094	3660
29	IgA	340	854	1543
30	IgM	367	789	1516
31	C3	1488	3272	4875
32	Cryoglobulin	11	39	28
33	Serum Ferritin (Nephelometric)	674	1410	3068
34	Serum Ceruloplasmin	174	644	1446
35	Serum IgE	189	779	1109
36	Serum IgG4	0	41	303
37	Lymphocyte subtyping (CD4/CD8 ratio)	0	1	8
38	Absolute CD4 Count	0	3	28
39	Lymphocyte subset analysis	0	2	26
40	B Cells Counts	0	4	51
41	T Cell Subset	0	0	5
42	CD18/CD11	0	0	1
43	Musculoskeletal Ultrasound	0	0	292
45	ESR	1488	1134	0

Training

12 students are pursuing DM in clinical Immunology & Rheumatology and 4 students appeared for examination in August 2022 and cleared their exam and have joined as contractual faculty. 3 new PhD students joined the department.

A new course **PDCC in Pediatric Clinical Immunology & Rheumatology** was started and the first resident has joined.

2 students from CMC Vellore, one student from PGIMER Chandigarh, 1 fellow from Apollo Hospital Delhi and **2 fellows from Nepal** came for 1-2 months short term training in our department.

Research completed during the year

1. Name of the Sponsoring agency: **ICMR [Amita Aggarwal]**

Title of the Project: **Disease outcome in adulthood of children with enthesitis related arthritis (ERA) category of Juvenile Idiopathic arthritis and its predictors: a cohort study.**

Results: Poor functional outcome was seen in 120 of 181 patients. Those with poor functional outcomes had longer delay in diagnosis (4 vs 1 years, $p < 0.001$), and lower prevalence of uveitis at baseline [OR 0.1(0.04-0.6)] in univariate analysis. Those with poor outcome had higher BASDAI, BASMI, ASDAS-ESR, ASDAS-CRP. Patients with poor functional outcome had higher frequency

of ERAP-1 (rs 27044) allele C [OR 7.3 (1.8-28.4), p 0.001] but similar frequency of HLA-B27, ERAP rs23037 and IL23R genotype as compared to patients with good outcome. In multivariable analysis, delay in diagnosis [OR 1.1 (1.02-1.3)] and ERAP1 (rs 27044) allele C [OR 7.2 (1.3-37.8)] were predictors of poor functional outcome.

2. Name of the Sponsoring agency: **ICMR[Amita Aggarwal]**

Title of the Project: **Evaluation of peripheral blood T and B cell responses to M tuberculosis membrane and the associated antigen alpha crystallin as progression biomarkers for tuberculosis.**

Result: Most sensitive indicators of the progression of LTBI could be: (i) levels of Interleukin-6 induced by Mtb membrane antigens and (ii) blood counts of IgG+ memory B cells.

3. Name of the Sponsoring agency: **ICMR[DP Misra]**

Title of the Project: **Understanding pathogenesis of Takayasu arteritis-transcriptomics applied to peripheral blood mononuclear cells (PBMC) and involved vessels and the role of various T-cell subsets**

Result: Increased population of Th17 lymphocyte subsets of Th17.1 and PD1+Th17 was seen in TAK. We also demonstrated an up-regulation of pro-fibrotic pathways following immunosuppressive therapy in TAK and in the arterial tissue of TAK compared to control tissue.

4. Name of the Sponsoring agency: **SGPGI [Vikas Agarwal]**

Title of the Project: **Evaluation of TGF-B Induced Canonical and Non-Canonical Fibrotic Pathways in Fibroblasts Derived from Stricture Esophagus**

5. Name of sponsoring agency: **JSS Medcial Res India Pv. Ltd:**

Title of the Project: **A multi-center, randomized controlled phase III study to evaluate the clinical outcomes and safety of tocilizumab along with standard of care in patients with cytokine release syndrome associated with COVID-19 infection**

Result: Routine use of tocilizumab in patients admitted to hospital with moderate to severe COVID-19 is not supported. However, post-hoc evidence from this study suggests tocilizumab might still be effective in patients with severe COVID-19 and so should be investigated further in future studies.

Research in Progress

1. **WHO, NIV:** Study on Polio and Non-Polio enterovirus infections in children with immunodeficiency at multiple medical institutes across India (Amita Aggarwal)
2. **DBT:** Multi-institutional network program on systemic lupus erythematosus understanding the diversity of SLE (Amita Aggarwal)
3. **FPID:** FPID_SGPGI primary immunodeficiency centre (Amita Aggarwal)
4. **ICMR:** Dural drug (phosphodiesterase 5 inhibitor and tankyrase inhibitor) loaded ultra flexible nanoliposome selective targeting myofibroblast to ameliorate fibrosis in systemic sclerosis mouse model (AK Srivastava)
5. **ICMR:** Evaluation of microparticle proteins in post Covid-19 lung fibrosis (D Dubey)
6. **ICMR:** Evaluation of D2R pathway for potential anti-viral therapy in Japanese Encephalitis Virus (Sukanay Tripathy)
7. **ICMR:** Evaluation of cGMP/PKG pathway in pathways in Idiopathic Pulmonary Fibrosis: an in vitro and in vivo study (Mohit K Rai)
8. **SGPGI:** Longitudinal Profile of Inflammatory Cytokines In Enthesitis Related Arthritis Category Of Juvenile Idiopathic Arthritis Patients Treated With Oral JAK Inhibitor Tofacitinib (Amita Aggarwal)

Aggarwal)

9. **SGPGI:** Pneumococcal vaccination in SLE: comparison of single dose versus sequential vaccine Immunogenicity and impact on disease (Amita Aggarwal)
10. **SGPGI:** Characterization of circulating microparticles in ANCA vasculitis and their role in inducing endothelial injury and glomerulonephritis (DP Misra)
11. **SGPGI:** Determination of Myositis specific and Myositis Associated antibody profiles of Indian Myositis patients using the Immunoprecipitation assay.(Vikas Agarwal)

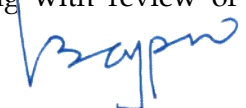
Publications

Indexed Publications

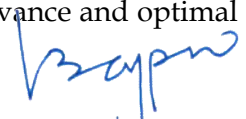
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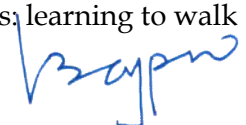
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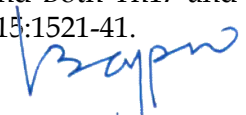
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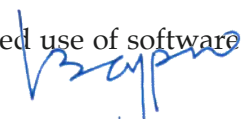
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84. Tripathi D, Awasthi R, Agarwal V, Agrawal V, Rathore RKS, Sharma K, Pandey CM, Gupta RK. Diffusion Tensor and Dynamic Contrast-Enhanced Magnetic Resonance Imaging Correlate with Molecular Markers of Inflammation in the Synovium. *Diagnostics (Basel).* 2022;12:3041.
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Non indexed journals

1. Misra DP. A practical guide for plagiarism detection through the coordinated use of software and (human) hardware. *J Gastrointest Infect* 2022;12:47-50.



2. Misra DP, Agarwal V. Emerging Concepts in the Evaluation and Management of Takayasu arteritis: New Wine in an Old Bottle. JK Science 2022; 24(2): 73-74

Chapter(s) in Book(s)

1. Aggarwal A, Naveen R. Approach to childhood vasculitis in Vasculitis In Ed Aman Sharma Editor Textbook of Vasculitis 2023.pp
2. Aggarwal A. Autoimmune diseases: pathogenesis, Laboratory tests and immune based therapies in API textbook of Medicine 129th Ed Kamath SA, 2022 pp e899-905
3. Thomas KN, Misra DP. Cheiroarthropathy and Other Musculoskeletal Manifestations of Diabetes. In: Ravindran V, Santhanam S, Goyal M, editors. Rarer Arthropathies. Cham: Springer International Publishing; 2022. p. 97-109.
4. Chatterjee, R., Grover, S., Agarwal, V. Biologics in Behcet's syndrome. In: Jain, N., Duggal, L. (eds) Handbook of Biologics for Rheumatological Disorders. Springer, Singapore. 2022
5. Thakre D, Agarwal V. Ochronosis. In: Ravindran N, Sanathanam S and Goyal M. (eds) Rarer Arthropathies. Springer International Publishing. 2022

Visiting Professors

Professor Chris Scott (December 12, 2022): Prof Chris Scott, paediatric rheumatologist, University of Capetown, South Africa, visited the department of Clinical Immunology and Rheumatology on He started off by conducting a session on challenges in juvenile arthritis care in developing nations where he stressed on getting data to reach the right doorsteps in the administrative corridors so as to ensure better funding for research and treatment. He engaged with the group working on juvenile idiopathic arthritis. He then rounded patients diagnosed with fibrodysplasia ossificans progressive (FOP) in the department of Medical Genetics. He concluded with a session on 'the tin soldiers', children diagnosed with FOP, and his role in enhancing medical care for this group of patients across South Africa and the World.

Awards and Honours

Amita Aggarwal

- Elected fellow of Indian National Science Academy
- Pediatric Rheumatology European Society: Co-Chair of Scientific committee for 2023 annual meeting
- Member of International group on treat to target (T2T) in childhood SLE
- Member of International group on axial disease in juvenile spondyloarthropathy

Member/Chairperson of Government committees

1. Chairperson Technical evaluation committee for Chronic disease Biology, Department of Biotechnology (DBT)
2. Chairperson Project review committee Immunology & Allergy, ICMR
3. Chairperson Task force on rare disease (primary Immunodeficiency disease, ICMR)
4. Co-Chairperson, Ramalinga swami fellowship committee, Department of Biotechnology (DBT)
5. Member, Selection committee, Shanti Swarup Bhatnagar awards (Medical Sciences)
6. Member SERB Committee for CRG and IRPHA project for COVID 19
7. Member SERB task force on Innovation in antibody engineering
8. Member SERB committee for POWER projects



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9. Member of DBT task force for **The Innovative Young Biotechnologist Award (IYBA)**, National Biosciences and TATA awards
10. Member of Scientific Advisory group on Analgesics and Rheumatic drugs of DCGI, 2015-2022
11. Member Scientific advisory committee, National Institute of Immunology, Delhi
12. Selection committee member of sectional committee on Medicine of The Indian Academy of Science
13. Advisory group member of Lancet Rheumatology
14. National coordinator of the teaching program of DNB trainees in Rheumatology
15. Member, Standing National Committee on Medicines of ICMR **Able Lawrence**
16. Treasurer Indian Rheumatology Association 2021-23 **Durga P Misra**
17. Dr Shurvir Singh Trust Visiting Professorship 2020 at APICON 2022, Jaipur.
18. Listed among the top 2% scientists of the world by Stanford University in the 2022 October release
19. Fellowship of the Royal College of Physicians, London
20. Member of the Executive committee, Indian Rheumatology Association (2021-2023)

Residents, Research fellows

1. Dr.Rudrarpan Chatterjee received Prof. R.K. Sharma Best DM Degree Award, 2022.

Departmental Highlights

The department is very active in all 3 areas: training, research and patient care

Training:

1. New PDCC course was started in Pediatric Clinical Immunology & Rheumatology
2. XIV National autoantibody workshop was conducted in September 2022

Research

1. Dr. Amita Aggarwal was elected as fellow of Indian National Science academy
2. Dr Durga Misra was listed in the list of top 2% of researchers
3. Dr.RudrarpanChatterjee got the best DM student award.
4. The department published nearly 100 research papers including book chapters.
5. The department had 16 research grants running in 2022 funded by WHI, ICMR, DBT, JSS foundation, FPID and intramural scheme.

Patient Care

1. The patient care has been streamlined in OPD with reduced waiting time for vulnerable population like elderly, on wheelchair/stretchers and for infusion patients
2. The 9th floor ward is getting renovated, and we hope to shift there by the beginning of next year. This will provide a clean environment for patients.

New Initiatives

- New PDCC course has started in Pediatric Clinical Immunology & Rheumatology
- Patient education room has been activated in OPD
- New lab tests were started for patient care.

Patents: None



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DEPARTMENT OF CRITICAL CARE MEDICINE

STAFF

Name of Faculty Members:

- | | |
|---------------------------|---------------------------|
| 1. Banani Poddar, MD | Professor & HoD, 2003 |
| 2. Afzal Azim, MD, PDCC | Professor, 2002 |
| 3. Mohan Gurjar, MD, PDCC | Professor, 2008 |
| 4. Shreyas Gutte, MD, DM | Assistant Professor, 2021 |

Activities

- Awards and honours- See below at no 8**
- Presiding over National level CME of national or international conference- Nil**
- Invited lectures**

Banani Poddar

- Invited as faculty for 23rd national conference of IAP PIC chapter (Pedicriticon 2021), April 2022, Jaipur ; delivered a lecture on 'Cytokine storm : how and when to treat'
- Invited as faculty for WS Pedicriticon 2022 to participate in the advanced CME, Sept 2022, Goa ; talk topic 'Costcontainment in the PICU:viewpointfrom a public perspective'
- Invited as faculty for 24th national conference of IAP PIC chapter (Pedicriticon 2022), December 2022, Bhubaneswar ; delivered a lecture on 'Management of Burns: Update' and was a panelist for panel discussion on 'Autonomicdisturbances in PICU'.

Afzal Azim

- 'Advances in Critical care technology' at World Critical care and Anesthesia, Asia, held at Bangkok Thailand on 9-10 September, 2022
- 'Antibiotic stewardship- need of the hour in ICU' at 19th NZ ISACON 2022 held at Shimla on 28-30 October, 2022

Mohan Gurjar

- Use of sedation during mechanical ventilation, at CME on Mechanical Ventilation, Kalam Center, KGMU, Lucknow, 3rd Dec, 2022.
- Risk-benefit assessment, at course on Ethics in Medicine, SGPGIMS, Lucknow, 2nd Nov, 2022.
- Sodium replacement during crisis/ deficit, at 28th Annual Conference of Indian Society of Critical Care Medicine (CRITICARE 2022), Mahatma Mandir Convention Center, Gandhinagar, Ahmedabad, 8th -10th, Apr, 2022
- Snake bite poisoning, at 28th Annual Conference of Indian Society of Critical Care Medicine (CRITICARE 2022), Mahatma Mandir Convention Center, Gandhinagar, Ahmedabad, 8th -10th, Apr, 2022
- Immune Boosters in Common Respiratory Viral Diseases (Preventive & Curative) at National Conference of IAPEN India Clinical Nutrition Congress 2022 (ICNC-2022), AIIMS, New Delhi 19th -20th March 2022.



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Receipt of prizes or medals by staff

1. Mrs.Indu S Nair, sister gr 1 received 'award of excellence' at the Republic Day celebrations held on 26.01.2022
2. Best incharge nurse: Sister Meera was awarded this prize on Nurses' Day on 12 May 2022
3. Mr.Rajendra Kumar, physiotherapist gr1 received 'award of excellence' at the Independence Day celebrations held on 15.08.2022
4. Mrs.Neelmani Esther, sister gr 1 received 'Best nurse award' at the Foundation Day celebrations held on 14.12.2022

Academic visit to other institution- Nil

Member of international societies

Dr. Banani Poddar

- World Federation of Pediatric Intensive Critical Care Societies
- Society of Critical Care Medicine, USA

Dr. Mohan Gurjar

- European Society of Intensive Care Medicine
- Society of Critical Care Medicine, USA

CME's organized-

One day Nursing CME organized on the occasion of the 20th Foundation Day of the CCM Department (September 17, 2022)

Service

Patient Care Services

The Department runs only IPD services

	2020	2021	2022
Admissions	229	289	327
Tests and procedures			
Central venous catheterisation	450	480	510
Intra-arterial catheterisation	220	300	310
Pulmonary artery catheterisation	04	02	01
Endotracheal intubations	150	50	60
Percutaneous tracheostomy	120	90	86
Renal replacement therapy	500	540	550
Bronchoscopy	130	180	200
Chest drain placement	50	20	25
Ascitic fluid drainage	15	22	30
Outreach services rendered in other wards			
Organ failure assessment and management	350	360	380
Follow up of critically ill patient	220	200	210
Cardiopulmonary resuscitation	40	50	50

Central venous catheterisation	180	200	225
Endotracheal intubations (other than CPR)	25	45	50

Training

Residents/Students

DM- 12

PDCC- 02

SR(HS)- 03

Passed DM candidates - 02

Passed PDCC candidates - 00

Research completed during the year-NON FUNDED, student projects

1. Clinical profile of ICU acquired hypernatremia in critically ill adult patients - a prospective observational study (PI-Dr. Banani Poddar)
2. Clinical profile of patients with Colistin resistant bacterial isolates: experience of tertiary care centre (PI-Dr. Afzal Azim)
3. Research in progress: NON FUNDED, student projects
3. Bronchoscopic assessment of swallowing dysfunction in critically ill: A prospective observational study (PI-Dr. Banani Poddar)
4. Correlation of Mechanical Power and Outcome in critically ill ICU Patients: An Observational Study (PI-Dr. Afzal Azim)
5. Diagnostic accuracy of FVD/FAD ratio to IVC in assessing volume status in critically ill patients: An observational study (PI-Dr. Afzal Azim)
6. Cytomegalovirus reactivation in acute necrotizing pancreatitis: An observational study (PI-Dr. Mohan Gurjar)
7. Liver stiffness in critically ill patients with septic shock: An observational study (PI-Dr. Mohan Gurjar)

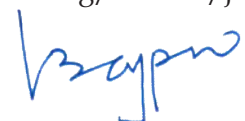
Research Projects including both 1.) Intramural; 2.) Extramural Research Grants

1. Intramural- Nil
2. Extramural- Nil

Publications

Indexed Journal Publications

5. Nallasamy K, Banani Poddar. Ultrasound in refractory septic shock: Have we pitched and pictured it correctly? [Invited editorial] *Indian J Crit Care Med* 2022; 26(7):773-4
6. Kayarat, B., Gutte, S., Pal, S., Poddar, B., Azim, A., & Gurjar, M. (2023). Acute pancreatitis due to massive hemolysis in a child with glucose-6-phosphate dehydrogenase deficiency: A Case Report. *Journal of Pediatric Critical Care*, 10, 36 - 38.
7. V. Sundarsingh, Banani Poddar, S. Saran et al., Glucometrics in the first week of critical illness and its association with mortality. *Medicina Intensiva* 2022, <https://doi.org/10.1016/j.medin.2022.06.002>



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8. Bhaskar B, Gurjar M, Mishra P, Azim A, Poddar B, Baronia AK. Arterial site selection for measurement of mean arterial pressure in septic shock patients on high-dose norepinephrine. *Front Med (Lausanne)*. 2022 Dec 23;9:1019752.
9. Dixit AK, Marak RSK, Bhartiya C, Azim A, Sahu C, Tripathi S. P184 Candida auris candidemia in COVID-19 and post-COVID-19 patients in a tertiary care hospital in North India. *Med Mycol*. 2022 Sep 20;60(Suppl 1):myac072P184.
10. Pandey S, Siddiqui MA, Azim A, Sinha N. Metabolic fingerprint of patients showing responsiveness to treatment of septic shock in intensive care unit [published online ahead of print, 2022 Nov 30]. *MAGMA*. 2022
11. Gautam M, Saxena S, Saran S, Ahmed A, Pandey A, Mishra P, Azim A. Etiology of Pregnancy related Acute Kidney Injury among Obstetric Patients in India: A Systematic Review. *Indian J Crit Care Med*. 2022;26(10):1141-1151
12. Zia H, Nath A, Khan A, Neyaz Z, Marak RSK, Areekkara P, Tiwari A, Srivastava S, Agarwal V, Saxena S, Tripathy N, and Azim A, et al. COVID-19-Associated Pulmonary Aspergillosis in India and New Insights Into Its Development and Mortality. *Mycoses*. 2022;65(11):1010-1023.
13. Kurian NM, B Yadav SC, Gurjar M, Mishra P, Sanjeev OP, Azim A, Gupta D, Hashim Z, Verma A, Bhatia E, Ghatak T, Singh RK, Nath A, Sahoo SK, Dabadghao P, Gupta S. Association of hyperglycaemia at-admission & diabetes mellitus with 28 day mortality in patients admitted with moderate-severe SARS-CoV-2 infection: A retrospective study. *Indian J Med Res*. 2022 MayJun;155(5&6):554-56
14. Muzaffar SN, Siddiqui SS, Chakraborty N, Azim A. The evolution of clot strength in critically ill COVID-19 patients: a prospective observational thromboelastography study. *Thromb J*. 2022;20(1):8. Published 2022 Feb 14.
15. Muzaffar SN, Azim A, Siddiqui SS. Thromboelastography for Predicting Disseminated Intravascular Coagulation (DIC) in Sepsis. *Shock*. 2022;57(5):759
16. Muzaffar SN, Azim A, Siddiqui SS. Re: Thromboelastograph: A prognostic marker in sepsis with organ dysfunction without overt bleeding. *J Crit Care*. 2022;68:172
17. Ahmed A, Saxena S, Pandey A, Mishra P, Azim A. Analysis of Causes of Hepatic Dysfunction in Obstetric Patients in India: A Systematic Review. *Indian J Crit Care Med*. 2022;26(1):114-122
18. Muzaffar SN, Siddiqui SS, Azim A. Global haemostatic tests demonstrate the absence of parameters of hypercoagulability in non-hypoxic mild COVID-19 patients: a prospective matched study. *J Thromb Thrombolysis*. 2022;53(3):731-733.
19. Muzaffar SN, Patnaik R, Siddiqui SS, Azim A. Letter to the Editor: "Impact of hypoalbuminemia on mortality in critically ill patients requiring continuous renal replacement therapy". *J Crit Care*. 2022
20. Pandey S, Siddiqui MA, Trigun SK, Azim A, Sinha N. Gender-specific association of oxidative stress and immune response in septic shock mortality using NMR-based metabolomics. *Mol Omics*. 2022;18(2):143-153. Published 2022 Feb 21.
21. Saran S, Misra S, Siddiqui SS, Agrawal A, Gurjar M, Patwa AK, Muzaffar SN. Fulminant acute fatty liver of pregnancy presenting with multi-organ failure: A case series. *Int J Crit Illn Inj Sci*. 2022 Oct-Dec;12(4):239-243.
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35. Siddiqui SS, Chatterjee S, Yadav A, Rai N, Agrawal A, Gurjar M, Yadav G, Prakash S, Kumar A, Muzaffar SN. Cytomegalovirus Coinfection in Critically Ill Patients with Novel Coronavirus-2019 Disease: Pathogens or Spectators? *Indian J Crit Care Med.* 2022 Mar;26(3):376-380.
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40. Gurjar M, Muzaffar SN, Siddiqui SS, Chakraborty N. Effect of proning and recruitment on physio-anatomical variables in COVID-19 pneumonia. *Intensive Care Med.* 2022 Jan 21:1-2. doi: 10.1007/s00134-022-06627-y. Online ahead of print. PMID: 35061054
41. Maddali MV, Churpek M, Pham T, Rezoagli E, Zhuo H, Zhao W, He J, Delucchi KL, Wang C, Wickersham N, McNeil JB, Jauregui A, Ke S, Vessel K, Gomez A, Hendrickson CM, Kangelaris KN, Sarma A, Leligdowicz A, Liu KD, Matthay MA, Ware LB, Laffey JG, Bellani G, Calfee CS, Sinha P; LUNG SAFE Investigators (Gurjar M) and the ESICM Trials Group. Validation and utility of ARDS subphenotypes identified by machine-learning models using clinical data: an observational, multicohort, retrospective analysis. *Lancet Respir Med.* 2022 Jan 10:S2213-2600(21)00461-6.
42. Pisani L, Algera AG, Neto AS, Azevedo L, Pham T, Paulus F, de Abreu MG, Pelosi P, Dondorp AM, Bellani G, Laffey JG, Schultz MJ; ERICC study investigators; LUNG SAFE study investigators (Gurjar M); PRoVENT study investigators; PRoVENT-iMiC study investigators. Geoeconomic variations in epidemiology, ventilation management, and outcomes in invasively ventilated intensive care unit patients without acute respiratory distress syndrome: a pooled analysis of four observational studies. *Lancet Glob Health.* 2022 Feb;10(2):e227-e235.
43. Gutte, S., Pal, S., Bhaskar, B.K., Kurian, N., Sanket, Gurjar, M. (2022). Sheehan's Syndrome unmasked by Dengue Fever: A case report and review of literature. *J Vector Borne Dis.* 2023 Apr-Jun;60(2):220-223

- **Non- Indexed Journal Publications- Nil**

Book chapters

1. Chapter on 'Weil's Disease: Intensivist's Nightmare' for Critical care communication



2. Chapter on 'ARDS in children – How is it different?' in Critical Care Update Book 2023.
3. Banani Poddar, Naranje KM. Fluid therapy. In: PG Textbook of Pediatrics 3/e, Gupta P, Menon PSN, Ramji S, Lodha R (eds), Jaypee publishers, New Delhi 2022; pp: 252-258
4. Ismail.J, BananiPoddar. Pediatric advanced life support. In: PG Textbook of Pediatrics 3/e, Gupta P, Menon PSN, Ramji S, Lodha R (eds), Jaypee publishers, New Delhi 2022; pp: 312-323
5. Poddar B. Prevention of Hospital-acquired Infections [Video]. In: Gupta P (Ed). Pediatrics MD. New Delhi: Jaypee Brothers Medical Publishers; 2022. Available from <https://www.diginerve.com/course/pediatricsmd/> [Last Accessed April 2022].
6. Jamal A, Banani Poddar. ARDS in children – How is it different? In ISCCM Critical Care Update, released during Annual conference of ISCCM (Criticare 2023), Indore, February 2023
7. Kasimahanti R, Banani Poddar. Antimicrobial Stewardship. In: ISCCM Textbook of Critical Care, Chaudhry D, Dixit S, Govil D, Samavedam S (eds), Jaypee publishers, New Delhi 2023
8. Gutte, S., Azim, A., Patnaik, R. (2022). Biomarkers in Hypoxic Brain Injury: Methods, Discoveries, and Applications. In: Rajendram, R., Preedy, V.R., Patel, V.B. (eds) Biomarkers in Trauma, Injury and Critical Care. Biomarkers in Disease: Methods, Discoveries and Applications. Springer, Cham.
9. Saran SPV, Khan MS and Gurjar M. Clinical Research in Onco-Critical Care. In: Onco-critical care - An evidence based approach. Kumar V, Gupta N and Mishra S (Eds.), Springer Verlag, Singapore 2022. pp 533-545. (ISBN Number: 978-9811699283)
10. Patnaik R, Gutte SH, Gurjar M. Acute respiratory distress syndrome. In Postgraduate Medicine Wander GS (Ed). New Delhi, Jaypee Brothers Medical Publisher 2022, pp 539-546 (ISBN Number 9789390595464).

Visiting Professors- Nil

Awards and Honours-

Banani Poddar

- Fellowship of the American College of Critical Care Medicine (FCCM) at the convocation ceremony during the annual Congress of Society of Critical Care Medicine. (February 07, 2022)

Mohan Gurjar

- Prof. Mohan Gurjar's name was included in the list of World's top 2% of scientists (Stanford University, University of California) Stanford University

Departmental highlights

The current bed strength of the department is 20 in the main hospital and 10 in the trauma center. This will soon be enhanced to 40 beds in the next two years' time.

New initiatives

Academic initiatives for training the manpower

- 1) Periodic internal audit of critically ill population
 - i) Ventilator-associated pneumonia (VAP) audit
 - ii) Central line-associated bloodstream infection (CLABSI) audit
 - iii) Life-threatening events audit
 - iv) Demographic data audit



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- 2) Nursing continuous educational activity every **Friday**

Institution of best practices

1. Our ICU has admissions with various diagnoses; for a better understanding of common diseases, handouts in the local language (Hindi) are being given to patient's relatives, for the following conditions
 - i) Pancreatitis
 - ii) Guillain-Barré syndrome
 - iii) Delirium
2. Physiotherapy is an essential element of critical care management. Our ICU has initiated record maintenance documents for a better understanding, and management of critically ill patients' pathophysiology in terms of critical illness neuromyopathy.
3. Nutrition, is an essential part of critical care management. A separate nutrition maintenance document was started for better delivery of nutrition.

Patents- Nil

DEPARTMENT OF CARDIO VASCULAR & THORACIC SURGERY

STAFF

Name of Faculty Members:

1. Nirmal Kumar Gupta, MS, MCh	Professor & Head
2. Surendra Kumar Agarwal, MS, MCh, FRCS	Professor
3. Shantanu Pandey, MS, MCh. FRCS	Professor
4. Bipin Chandra, MS, MCh	Professor
5. Varuna Pravin Varma, MS, MCh	Additional Professor
6. Dr Ankush Singh Kotwal, Ms, MCh	Assistant Professor

Awards and Honours

Prof. Shantanu Pande

- **Invited Speaker:** February 10-13 2022. 68th Annual Conference of Indian Association of Cardio Vascular Thoracic Surgeons, **Y or not to Y in Total Arterial CABG**
- **Invited Speaker:** 6th Annual Conference and Workshop of the Society of Minimally Invasive Cardiovascular and Thoracic Surgeons of India (SMICTSI), Mamallapuram; **Cardinal concepts for reproducing multi-vessel MICABG**
- **Invited Speaker:** Techno College IACTSCON 2022, 20-21 August 2022, New Delhi; **Practice Guidelines for Tricuspid Valve Regurgitation.**
- **Invited Speaker:** Annual Conference of Cardiac Surgeons Society of Bangladesh, 21-22 October 2022, Dhaka: **Cardinal Concepts of Reproducing Multivessel MICABG.**

Service

Particulars	Year 2022	Year 2021	Year 2020
New registrations	480	573	573
Follow-up cases	24432	23016	6767
Total admissions in Ward	789	492	492
Total Admissions & Transfers in ICU	760	573	382
Total Surgeries done	684	506	258

Training

Two MCh students joined the department through NEET SS. One of them left the department due to his personal commitments and also the fact that he did not want to commit himself to the bond for 2 years.

Research completed during the year:NA

Research in Progress

1. **DBT:** Determination and establishment of key molecular therapeutic approach for remodeling pericardial heart valve of Tetralogy of Fallot **Proposal ID:** BT/PR42952/MED/97/569/2021 PI: Dr Shantanu Pande, Dr S K Agarwal

Publications

Indexed Publications

1. Kapoor R, Mandelia A, Farzana M, Nigam N, Dhabadgaon P, Sharma SP, Kanneganti P, Pande S. Bronchial Carcinoid Tumor in an Adolescent Female: Diagnosis and Management by a Multi-Disciplinary Team. J Indian Association Pediatric Surgeon. 2022;27:500-502.

Non-Indexed Publications (Give separately, instructions same as above)

- 1 Shantanu P, Amitabh A, Agarwal SK, Tewari P, Kapoor A, Soni N, Kumar S. Long-term performance of untreated fresh autologous pericardium as a valve substitute in pulmonary position. Ann Card Anaesth. 2022: 25:164-170.

Chapter(s) in Book(s)

1. Agarwal SK. Myasthenia Gravis in IAES Text Book of Endocrine Surgery. Ed Amit Agarwal, 2022, Jaypee Brothers Medical Publishers Pvt Ltd. New Delhi, India

Books: NA

Visiting Professors: NA

Departmental Highlights

Department of Cardiovascular and Thoracic Surgery (CVTS) started in the year 1988 and thereafter consistently increased its productivity both in the care of patient care, fundamental and clinical research, and teaching and training of postdoctoral students, cardiac care nurses and paramedical technicians including BSC Perfusion Technology. The department major workload is the open-heart surgeries for the acquired and congenital heart diseases both in children and adults. The department is the premier center not only in the state of UP but also in the several states of the north-eastern India and for neighboring nations like Nepal, Bhutan Bangladesh and Afghanistan. After over 2 decades of performing conventional and beating heart coronary artery bypass surgeries (CABG), department has forayed into Robotic Assisted coronary artery bypass surgeries in the year 2020.

The department is also equipped with Ventricular assist device, Extra corporate membrane oxygenation for treatment of heart failure and prospective, heart, lung transplant and heart and lung transplantation in the foreseeable future.

The department has an active research program and has published several papers in national and international peer-reviewed journals.

New Initiatives: The department has actively embarked upon development of surgical treatment facilities for heart and lung failure including assist devices and thoracic organ transplant. The team and protocol are in place and patients are being recruited.

Patents: NA

DEPARTMENT OF EMERGENCY MEDICINE

STAFF

Name of Faculty Members:

- | | |
|---|---------------------|
| 1. Dr Ratender K Singh, MD, PDCC, FICCM, MNAMS, FACEE | Professor & Head |
| 2. Dr Tanmoy Ghatak, MD, PDCC, FACEE | Associate Professor |
| 3. Dr O P Sanjeev, MD, PDCC, FACEE | Associate Professor |
| 4. Dr Alka Verma, MD, FACEE | Associate Professor |

Activities

Awards and Honours

Prof R K Singh (HoD)-Nil

Dr Tanmoy Ghatak

- “Young Intensivist of the year 2022” given by UP UK Criticon 22 held at Varanasi 6th June 2022.

Dr O P Sanjeev-Nil

Dr Alka Verma-Nil

Invited sessions and chairpersons/Lectures for conferences.

Prof R K Singh

- Lecture: 2nd World Conference on Comprehensive Critical Care (W4C), Jim Corbett, Ramnagar, Nainital, October 13 - 16, 2022. Jim Corbet, Nainital, Uttarakhand.
- Lecture: Oxygen therapy and Targets, with special reference to HFNC in COVID-19; COVICON-2022, 8th October 2022 at Government Medical College, Kannauj (U.P).
- Faculty Lecture: NIV in ARF: what's there to know?
- Faculty Lecture: Treatment of MRSA Infections in India: Insights from a Delphi Analysis 14th May, 2022, Sanofi Webinar.
- Faculty Lecture via Webinar: Posaconazole-is it sufficient for all Mucormycosis
- Invited Lecture: Refeeding Syndrome at the Advanced Nutrition Conference organized at Hyatt Hotel, Lucknow, by Department of Nephrology SGPGI, Nutrition Division.

Dr Tanmoy Ghatak

- Replacement / Infusion principle in ICU-in crisis / deficit - symptomatic in ICU. Vitamin B1, K, B12.- Criticare 2022 Ahmedabad 9th April 2022.
- Faculty in USG and ECHO workshop in ISACON 2022 Shillong Meghalaya. 24th November 2022.
- As co-ordinator in the session- Meet the Expert on Topic - “Low cardiac output syndrome and mechanical support.” Criticare Ahmedabad 9th April 2022.

Dr O P Sanjeev-Nil

Dr Alka Verma-Nil



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Membership of Societies

Prof R K Singh

- European Society of Intensive Care Medicine (ESICM)
- Society of Critical Care Medicine (SCCM) USA
- American Academy of Emergency Medicine (AAEM)
- Society of Emergency Medicine India (SEMI)
- European Society of Emergency Medicine (EuSEM)
- Indian Society of Critical Care Medicine (ISCCM)
- Emergency Medicine Association (Academic College of Emergency Experts in India)
- Association of Physicians of India (API)
- Indian Medical Association

Dr Tanmoy Ghatak

- Indian society of Anaesthesia (ISA)
- Indian society of Critical Care Medicine (ISCCM)
- Emergency Medicine Association (Academic College of Emergency Experts in India)

Dr O P Sanjeev

- Indian Society of Anaesthesia (ISA)
- Indian Society of Critical Care Medicine (ISCCM)
- Emergency Medicine Association (Academic College of Emergency Experts in India)

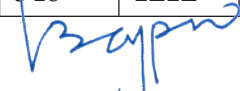
Dr Alka Verma

- Indian Society of Anaesthesia (ISA)
- Indian Society of Critical Care Medicine (ISCCM)
- Emergency Medicine Association (Academic College of Emergency Experts in India)

Services

Year-wise services available clinical data (last three years 2020, 2021, 2022) provided by Emergency Medicine

S.No	Parameters (30-ED-Beds)	2020	2021	2022
1.	Number of patients who attended ED	19260	22560	36000
2.	Number of patients refused admission in ED	15480	20280	33396
3.	Number of patients admitted in ED	3852	2280	2604
4.	Number of patients who died in ED	156	168	372
5.	Number of patients transferred from ED to wards	2160	1128	1044
6.	Number of patients discharged home from ED	1284	936	1140
7.	Number of patients who received Ventilation	180	253	1080
8.	Number of patients who received Vasopressors	384	540	1212



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9.	Number of Dialysis sessions	708	840	1201
10.	Number of patients who received Endoscopy	306	406	503
11.	Number of patients who received Transfusions	80	96	108
12.	Number of patients who had CT/MRI	60	72	84

Training

At present there are 02-Academic JRs perusing MD-Emergency Medicine.

Visited other Institute for Academic purpose

Prof R K Singh-Nil

Dr Tanmoy Ghatak

- External examiner for PDCC (Post Doctoral Certificate Course in Critical Care Medicine): Era University 28th March 2022

Dr O P Sanjeev-Nil

Dr Alka Verma-Nil

Research projects

Projects completed (Funding Agency-SGPGI)

Prof R K Singh

- ***The Impact of COVID-19 on the Clinical Practices, Working Environment and Social Life of Intensivists in Non-COVID-ICU.***

COVID-19 bared the lacunas and flaws of the healthcare system as well as the non-COVID ICUs. Having no previous similar experience in past is probably the most important reason behind this. Intensivists working in the private sector and with lesser experience were affected most to the tunes of significantly lesser family time during pandemic, significantly lesser leaves and less HCW cooperation.

- ***Pattern of conventional coagulation and thromboelastographic parameters in patients with COVID-19 diseases and association of COVID associated coagulopathy with mortality in Intensive Care Unit.***

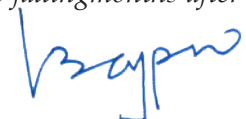
Elevated plasma D-dimer level was observed in non-survivors COVID-19 ICU patients. A large portion of COVID-19 ICU patients had a normal TEG profile. Conventional coagulation parameters and TEG profile were statistically similar between survivor and non-survivor COVID-19 ICU patients.

- ***A questionnaire-based study to assess the need-based approach of Clinical communication from Health Care Providers to family members of COVID-19 patients during Covid-19 pandemic.***

The results of study propose a senior physician should communicate to a designated responsible family member at-least once a day for stable and twice a day for critical Covid-19 patients (more if patient's health condition changes), either by voice or video calls for 5-10 min.

- ***Study of antibody response following COVID vaccination in asymptomatic population.***

ChAdOx1 nCoV-19 (Covishield®) vaccine induces detectable ASAb and NAb in all recipients after two doses. The antibody titre induced by vaccination is much higher in those who have had prior covid infection. The vaccine induced antibody persists for at least two months and starts falling months after second dose.



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Dr Tanmoy Ghatak

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COVID-19 bared the lacunas and flaws of the healthcare system as well as the non-COVID ICUs. Having no previous similar experience in past is probably the most important reason behind this. Intensivists working in the private sector and with lesser experience were affected most to the tunes of significantly lesser family time during pandemic, significantly lesser leaves and less HCW cooperation.

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Dr O P Sanjeev (Associate Professor)

- **A questionnaire-based study to assess the need-based approach of Clinical communication from Health Care Providers to family members of COVID-19 patients during Covid-19 pandemic.**

The results of study propose a senior physician should communicate to a designated responsible family member at-least once a day for stable and twice a day for critical Covid-19 patients (more if patient's health condition changes), either by voice or video calls for 5–10 min.

Dr Alka Verma (Funding Agency-SGPGI) (Associate Professor)

- **Study of antibody response following COVID vaccination in asymptomatic population.**

ChAdOx1 nCoV-19 (Covishield®) vaccine induces detectable ASAb and NAb in all recipients after two doses. The antibody titre induced by vaccination is much higher in those who have had prior covid infection. The vaccine induced antibody persists for at least two months and starts falling months after second dose.

- **Serological Immune Response Following ChAdOx1 nCoV-19 Vaccine (Covishield®) in Patients with Liver Cirrhosis.**

A two-dose schedule of the ChAdOx1 nCoV-19 vaccine induces good antibody response in patients with cirrhosis. The antibody response to the vaccine is not affected by the etiology or severity of underlying cirrhosis. The antibody response appears to be better if the doses are administered at an interval of more than six weeks.

- **A questionnaire-based study on quality and adequacy of clinical communication between physician and family members of admitted Covid-19 patients**

This web-based survey to evaluate the nuances of current communication means between family members and healthcare providers is the first of its kind. We tried to envisage the issues with present modes of conversation; adequacy and expectations of respondents.

- **Association of hyperglycemia at-admission & diabetes mellitus with 28day mortality in patients admitted with moderate-severe SARS-CoV-2 infection: A retrospective study.**

This study showed that the presence of hyperglycaemia at-admission in critically ill SARS-CoV-2 patients was an independent predictor of 28-day mortality. However, the findings may be susceptible to unmeasured confounding, and more research from prospective studies is required.



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Research in Progress(Funding Agency-SGPGI)

Prof R K Singh

- Assessment of awareness of Emergency Medicine (EM) amongst medical students, faculties, and medical practitioners in India.
- Study of antibody response following covid vaccination in asymptomatic population.
- A questionnaire-based study on quality and adequacy of clinical communication between physician and family members of admitted Covid-19 patients.
- Association of hyperglycemia at-admission & diabetes mellitus with 28 day mortality in patients admitted with moderate-severe SARS-CoV-2 infection: A retrospective study.
- Study of antibody response following COVID vaccination in asymptomatic population.
- Profile and outcome of patients admitted in emergency department during COVID pandemic-SGPGI Experience.
- A comparison between outcomes of AKI management by the nephrologists' view of decrease in Urea to creatinine ratio and an emergency physicians' view of Lung Ultrasound: A prospective observational study.

Dr O P Sanjeev (Non-Funded)

- Assessment of awareness of Emergency Medicine (EM) amongst medical students, faculties, and medical practitioners in India

Dr Alka Verma

- **Extramural project-As Co PI:** Prevalence, determinants and awareness of covert injuries and its effect on performance in players involved in non-contact sports. Funding Agency: **ICMR**
- **Other projects:** Breakthrough Covid-19 infection among vaccine recipient and the effect of vaccination on the disease severity.

Publications

1. Awale Rupali B; Singh Ashutosh; Mishra Prabhaker; Bais Prateek S; Vansh Khare; Shamim Rafat; Ghatak, Tanmoy; Hashim Zia; Gupta Devendra; Nath Alok; Singh Ratender K; Singh Chandrakanta; Pande Shantanu. Routine hematology parameters in COVID-19: A predictor of disease severity and mortality. *Journal of Family Medicine and Primary Care*:2022(11); 3423-3429.
2. Awale Rupali B, Ghatak T, Samanta S, Singh RK, Verma A, Mishra P, Chaudhury RK, Nath A. Pattern of conventional coagulation and thromboelastographic parameters in patients with COVID-19 diseases and association of COVID associated coagulopathy with mortality in Intensive Care Unit. *Anesthesia Essay and Research* 2022;16: 65-70.
3. Ghatak T, Singh RK, Kumar A, Patnaik R, Sanjeev OP, Verma A, Sharma S. The Impact of COVID-19 on the Clinical Practices, Working Environment and Social Life of Intensivists in Non-COVID-ICU. *Indian J Crit Care Med* 2022;26(7):816-824.
4. Singhal T, Rodrigues C, Soman R, Wattal C, Swaminathan S, Nambi S, Talwar D, Singh RK, Todi S. Treatment of MRSA infections in India: Clinical insights from a Delphi analysis. *Indian J Med Microbiol.* 2022 Jan-Mar;40(1):35-45. doi: 10.1016/j.ijmmb.2021.11.005. Epub 2021 Dec 3. PMID: 34785281
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 11. Ghatak T, Singh RK, Kumar A, Patnaik R, Sanjeev OP, Verma A, Sharma S. The Impact of COVID-19 on the Clinical Practices, Working Environment and Social Life of Intensivists in Non-COVID-ICU. *Indian J Crit Care Med* 2022;26(7):816-824. (Pubmed. Impact factor 0.8)
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 14. Verma A, Sanjeev OP, Jahan S, Point of care ultrasound revealed septate pericarditis in a patient presenting with acute chest pain in emergency department. *Visual Journal of Emergency Medicine,* 2022;29: <https://doi.org/10.1016/j.visj.2022.101480>.
 15. T Ghatak, RK Singh, A Kumar, R Patnaik, OP Sanjeev. The Impact of COVID-19 on the Clinical Practices, Working Environment, and Social Life of Intensivists in Non-COVID ICU. *Indian J Crit Care Med* 2022;26(7):816-824.
 16. Goel A, Verma A, Tiwari P, Katiyar H, Aggarwal A, Khetan D, Kishore RV, Kumar P, Singh TP, Sheikh S, Vaishnav M. Serological Immune Response Following ChAdOx1 nCoV-19 Vaccine (Covishield®) in Patients with Liver Cirrhosis. *Vaccines.* 2022 Oct 30;10(11):1837.
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 18. Alka Verma, Om P Sanjeev, Sakeena Jahan, Point of care ultrasound revealed septate pericarditis in a patient presenting with acute chest pain in emergency department, *Visual Journal of Emergency Medicine,* Volume 29, Oct 2022,

Chapters (s) in Book(s): Nil

Visiting Professors(s): Nil

Departmental Highlights

1. The year 2022 encountered the waning of the 2nd wave of COVID and start of the OMICRON variant of Covid.
2. Being the Nodal Officer for COVID in SGPGI, the task of preparedness for RCH and the State Medical Colleges, was again entrusted to me.
3. COVID-19 preparedness for this wave, included replenishment of drugs like-Remdesivir, Baricitinib, Isoniazid, etc via HRF.
4. Imparting education, and training via COVID-Version-2.0 Teaching Modules to 52 State Medical Colleges-HCWS.
5. Conducting regular Death Audit Committee (DAC) meetings to oversee the audit of the mortality files of COVID patients admitted in RCH and send them to the DGME-UP-Govt, along with regularly attending UP Government meetings related with the 2nd wave of COVID-19.
6. During this period as number of Covid admissions had reduced, and the Hospital and its unit had started functioning to their fullest, load in ED had also started rising.
7. All elements of ED care had to be rejuvenated to their pre-Covid status.
8. Simultaneously we also worked towards the designing, modification, layout, and procurement of equipments and furniture for the upcoming new 210-Bed-ED block in EMRTC.

New Initiatives

The following were initiated and strengthened during this year to improve the quality of ED care:

1. The Emergency Microplan of Covid had to be dismantled and old style of working restored in ED.
2. Protocolized-FAST-HUG-BIDS elements were implemented in totality.
3. Protocolized Quality Care Bundles of VAP/CRBSI/CAUTI, were again scaled up to achieve better standards of Infection Prevention and Control (IPC).
4. Audit of IPC measures in ED were restarted.
5. Strengthened the implementation of needle safe practices by auditing the Peripheral Intra Venous Catheter (PIVC) and Central Intra Venous Catheter (CIVC) activities in ED.
6. Implemented regular thromboprophylaxis (mechanical and pharmacological) for prevention of Venous-thrombo-embolism (VTE) in admitted patients in ED.

DEPARTMENT OF ENDOCRINOLOGY

STAFF

Name of Faculty Members:

1. Eesh Bhatia, MBBS, MD, DNB(Endocrinology) (superannuation Dec 31 st 2022)	Professor & Head
2. Vijayalakshmi Bhatia, MBBS, MD	Professor
3. Sushil Gupta, MBBS, MD, DM (Endocrinology)	Professor
4. Preeti Dabadghao, MBBS, MD, DM (Endocrinology)	Professor
5. Subhash Yadav, MBBS, MD, DNB(Endocrinology)	Professor
6. Saroj Sahoo, MBBS, MD, DM (Endocrinology)	Associate Professor
7. Siddhnath Sudhanshu, MBBS, MD, PDCC (Pediatric Endocrinology)	Associate Professor
8. Rohit A Sinha, B.Sc., M.Sc., PhD (Molecular Endocrinology)	Associate Professor
9. Jayakrishnan C Menon, MBBS, MD, DM (Endocrinology)	Assistant Professor (Contractual) (Date of Joining: 21/11/22)
10. Ambica Tandon, MBBS, MD, DM (Endocrinology)	Assistant Professor (Contractual) (Date of Joining: 21/11/22)
11. Vaibhav Singhal, MBBS, MD, DM (Endocrinology)	Assistant Professor (Contractual) (Date of Joining: 21/11/22)

Awards & Honours:

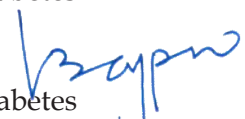
Dr Rohit A Sinha, associate professor, was awarded the Prof SR Naik award for outstanding research (Oct 2022), and the Vishwa Gaurav Samman for being among the top 2% world scientist published by the Stanford University (2022)

Invited Lectures by Faculty Members

Name of Faculty	Lecture
Preeti Dabadghao	<ul style="list-style-type: none">Indian Society of Pediatric and Adolescent Endocrinology 2022 20-Nov-2022Endocrine Society of India ESICON 2022 Jaipur 24-12-2022

Members of International Societies

Name of Faculty	Society
Eesh Bhatia	Endocrine Society (USA) European Society for Endocrinology
Vijayalakshmi Bhatia	Endocrine Society (USA) Asia Pacific Pediatric Endocrine Society International Society for Pediatric and adolescent Diabetes
Preeti Dabadghao	Endocrine Society (USA) Asia Pacific Pediatric Endocrine Society International Society for Pediatric and adolescent Diabetes



Subhash Yadav	Endocrine Society (USA) American Diabetes Association (ADA) American Association of Clinical Endocrinology (AACE)
Rohit A. Sinha	Endocrine Society (USA) European Society for Endocrinology (ESE) Endocrine and Metabolic Society of Singapore (EMSS)
Jayakrishnan C Menon	Endocrine Society (USA)
Ambica Tandon	Endocrine Society (USA)
Vaibhav Singhal	Endocrine Society (USA)

Activities Organised:

In November 2022 diabetes families support group program was organised on occasion of World Diabetes Day, in telemedicine auditorium.

Service

Total number of patients attended in the OPD and IPD and samples in Endocrinology and DEXA labs were as follows:

	2020 (Covid year)	2021 (Covid year)	2022
OPD- New patients seen	959	2139	3695
OPD- Old patients seen	13144	31752	35480
IPD admissions	660	803	1301
Endocrinology Lab samples processed	60878	106251	163891
DEXA lab tests	421	1022	2184

Training

- 12 students currently enrolled for DM Endocrinology, 2 students for PDCC Pediatric Endocrinology and 3 students for PhD
- In 2022, 4 students were awarded DM and 2 were awarded PDCC

Research completed during 2022

- 1) **Indian Council of Medical Research (ICMR) - Islet antibody negative type 1 diabetes (type 1B) in north Indians: clinical implications and pathogenesis.**

PI - Dr Eesh Bhatia

Results - 35 (21%) of the total cohort (n = 169) were negative for all islet antibodies. 12 islet-antibody negative subjects (7% of entire cohort, 35% of islet-antibody negative patients) were detected to have monogenic diabetes; most frequently *WFS1* (9 patients), implicated in Wolfram syndrome (WS). Other genetic loci affected included *HNF4A*, *ABCC8* and *PTF1A* (one patient each). Patients with WS were clinically indistinguishable from other T1DM, except for an earlier onset and shorter stature.

- 2) **Indian Council of Medical Research (ICMR) - Potential Role of aldo-keto Reductase Family 1, member B10 (AKR1B10) as a diagnostic and therapeutic target in Nonalcoholic steatohepatitis (NASH).**



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PI - Dr Rohit A Sinha

Results - Non-alcoholic steatohepatitis (NASH) is a clinically important spectrum of non-alcoholic fatty liver disease (NAFLD) in humans. To discover novel drug targets for NASH, we analyzed a human transcriptomic NASH dataset and found Aldo-keto reductase family 1 member B10 (AKR1B10) as a significantly upregulated gene in livers of human NASH patients. Pharmacological inhibitors of AKR1B10 significantly reduced the pathological features of NASH such as steatosis, inflammation and fibrosis in mice. These results thus underscore the involvement of murine AKR1B10 and AKR1B8 in the pathogenesis of murine NASH and raise an intriguing possibility of a similar role of AKR1B10 in human NASH (Rajak et al., BBA-mol basis of disease, 2022).

3) Endocrine Society of India (ESI) - Prediction of relapse after antithyroid therapy in Graves' disease.**PI - Dr Subhash Yadav**

Results - The remission rate in newly diagnosed patients with Graves on at least 12 months of medical therapy was 33%

The pretreatment factors predicting response was younger age at diagnosis. Baseline thyroid hormone levels, thyroid receptor antibody and USG volume did not differ between the groups.

Patients with Graves disease had higher proportion of CTLA4 CT60 SNP containing A/G genotype (OR 3.79) compared to A/G phenotype which was more common in age and sex matched control groups.

4) Science and Engineering Research Board (SERB) - Role of Cystic fibrosis transmembrane conductance regulator (CFTR) in the pathogenesis of Non-alcoholic steatohepatitis (NASH).**PI - Dr Dr Rohit A Sinha**

Results - The aetiology of NASH is multifactorial and identifying reliable molecular players has proven difficult. Here, using public human transcriptomic NAFLD dataset, we uncover Cystic fibrosis transmembrane conductance receptor (CFTR) as a differentially expressed gene in the livers of human NASH patients and mouse models of NASH. Pharmacological inhibition of CFTR significantly reduced NASH progression in mice and its overexpression aggravated lipotoxicity in human hepatic cells. These results, thus, implicate the involvement of murine CFTR in the pathogenesis of NASH and raise the intriguing possibility of its pharmacological inhibition in human NASH (Rajak et al., BBA-mol basis of disease, 2023).

5) Department of Science and Technology (DST) - Childhood Diabetes - District outreach as a model for decentralized care and education through use of telemedicine.**PI - Dr V Bhatia**

Results - Families with type 1 diabetes (T1D) met the multidisciplinary diabetes care team (MDT) in district hospitals of Raebareli, Sitapur, Hardoi, Unnao, Ayodhya, for outreach tele diabetes visits. All routine care including HbA1c test were done by the MDT; videoconferencing with our faculty followed. HbA1c improved from 8.5% (7.3-9.2) to 8.0% (7.2-8.7) ($p = 0.04$), and Diabetes Knowledge Score from 61.2 (13.1) to 64.9 (11.7), $p = 0.02$. Saving in school, work days, expenses, satisfaction with outreach clinic, documented. Conclusion: Care of children with T1D via telemedicine was superior to that provided by visits to SGPGI.

5. Research in Progress

A. PI: Prof Preeti Dabadghao

- 1) Intramural Grant SGPGI: **24 hours glucose profile and beta cell function in women with early gestational diabetes mellitus** PI Preeti Dabadghao
- 2) **UP Council of Science and Technology(UPCST): Pathological classification and outcome of silent (Non-functioning) pituitary adenoma**

B. PI: Prof Sushil K. Gupta

1. **DBT-SAHAJ:** To establish facility for micro-architectural and histomorphometric assessment of bone in osteoporosis and metabolic bone disease (MBD)

C. PI: Dr. Rohit A. Sinha

1. **Wellcome Trust/DBT -** Determining the role of pancreatic alpha-cell autophagy in intra-cellular glucagon turnover and its modulation as an anti-diabetic therapy (on 1 year no-cost extension)

Publications

1. Bhowmik E, Verma S, Bhatia V, Dabadghao P, Sudhanshu S, Gupta N, Ansari AM. How our families fared with home management of Type 1 diabetes during COVID 19 pandemic 2020 lockdown. Indian Journal of Pediatrics. 2022 DOI <https://doi.org/10.1007/s12098-022-04276-z>.
2. Gunna Shri H, Dabadghao P. * Sudhanshu S. Long-Term Outcomes of Paediatric-Onset Craniopharyngioma: A Retrospective Analysis from a Tertiary Care Centre in North India. Neurology India 2022 DOI: 10.4103/0028-3886.344661 Cite.
3. Raza S, Rajak S, Srivastava J, Tewari A, Gupta P, Chakravarti B, Ghosh S, Chaturvedi CP, Sinha RA*. ULK1 inhibition attenuates telomerase activity in hepatic cell BiochimBiophys Acta Mol Cell Res. 2022 DOI: 10.1016/j.bbamcr.2022.119355.
4. Hussain Y, Singh J, Raza W, Meena A, Rajak S, Sinha RA, Luqman S. Purpurin ameliorates alcohol-induced hepatotoxicity by reducing ROS generation and promoting Nrf2 expression. Life Sci. 2022 DOI: 10.1016/j.lfs.2022.120964.
5. Tripathi M, Singh BK, Zhou J, Tikno K, Widjaja A, Sandireddy R, Arul K, Abdul GhaniSAB, Bee GGB, Wong KA, Pei HJ, Shekeran SG, Sinha RA, Singh MK, Cook SA, Suzuki, A, Lim TR, Cheah CC, Wang J, Xiao RP, Zhang X, Chow PKH, Yen PM. Vitamin B12 and folate decrease inflammation and fibrosis in NASH by preventing syntaxin 17homocysteinylation. Journal of Hepatology. 2022 DOI: 10.1016/j.jhep.2022.06.033.
6. Sait H, Sharma L, Dabadghao P, Phadke SR Congenital Hyperinsulinemia of Infancy: Role of Molecular Testing in Management and Genetic Counseling. Indian J Pediatr. 2022 DOI: 10.1007/s12098-021-04014-x.
7. NM Kurian, SCB Yadav, M Gurjar, P Mishra, OP Sanjeev, A Azim, D Gupta Association of hyperglycaemia at-admission & diabetes mellitus with 28 day mortality in patients admitted with moderate-severe SARS-CoV-2 infection: A retrospective study Indian Journal of Medical Research 2022DOI: 10.4103/ijmr.ijmr_2605_21.
8. S Bhardwaj, AK Jaiswal, S Yadav, R Yadav Prevalence, course, and predictive factors of water and electrolyte disturbances (WEDs) following transsphenoidal pituitary surgery (TSS) in patients with pituitary adenoma Indian Journal of Endocrinology and Metabolism 2022 doi: 10.4103/2230-8210.342189.



9. Kapoor R, Mandelia A, Farzana N, Nigam N, Dabadghao P, Sharma SP, Kanneganti P, Pande S Bronchial Carcinoid Tumor in an Adolescent Female: Diagnosis and Management by a Multi-Disciplinary Team. J Indian Assoc Pediatr Surg. 2022 DOI: 10.4103/jiaps.jiaps_132_21.
10. Shah AS, Zeitler PS, Wong J, Pena AS, Wicklow B, Arslanian S, Chang N, Fu J, Dabadghao P, Pinhas-Hamiel O, Urakami T, Craig ME. ISPAD Clinical Practice Consensus Guidelines 2022: Type 2 diabetes in children and adolescents. Pediatr Diabetes 2022 DOI: 10.1111/pedi.13409.
11. Raza S, Rajak S, Tewari A, Gupta P, Chattopadhyay N, Sinha RA, Chakravarti B. Multifaceted role of chemokines in solid tumors: From biology to therapy. Semin Cancer Biol2022 DOI: 10.1016/j.semcancer.2021.12.011.
12. Rajak S, Raza S, Sinha RA*. ULK1 Signaling in the Liver: Autophagy Dependent and Independent Actions. Front Cell Dev Biol2022 DOI: 10.3389/fcell.2022.836021.
13. Rajak S, Gupta P, Anjum B, Raza S, Tewari A, Ghosh S, Tripathi M, Singh BK, Sinha RA*. Role of AKR1B10 and AKR1B8 in the pathogenesis of non-alcoholic steatohepatitis (NASH) in mouse. iochimBiophys Acta Mol Basis Dis 2022 DOI: 10.1016/j.bbadis.2021.166319.
14. Chakravarti B, Rajput S, Raza S, Rajak S, Tewari A, Gupta P, Upadhyay A, Chattopadhyay N, Sinha RA*. Lipoic acid blocks autophagic flux and impairs cellular bioenergetics in breast cancer and reduces stemness. BiochimBiophys Acta Mol Basis Dis 2022 DOI: 10.1016/j.bbadis.2022.166455.
15. A Mishra, Z Neyaz, S Yadav, A Gupta, E Bhatia, SK Mishra Outcome of Pre-operative vs Intraoperative Localization Techniques in Insulinoma: Experience in a Tertiary Referral Center Indian Journal of Surgery 2022 DOI:10.1007/s12262-022-03569-z.
16. A Krishna, SK Mishra, A Mishra, S Kumar, RN Rao, S Yadav Feasibility and impact of a one-stop thyroid clinic in a low-and middleincome country South African Journal of Surgery 2022.

Visiting Professor

1. Dr Margaret Zacharin, Prof Pediatric Endocrinology, Royal Childrens Hospital, Melbourne. April 2022, November 2022.
2. Dr Gabby Atlas, Assist Prof Pediatric Endocrinology, Royal Childrens Hospital, Melbourne. November 2022.
3. Katherine Hamilton, Diabetes Nurse Educator, Pediatric Endocrinology Dept, Royal Childrens Hospital, Melbourne. November 2022.

Departmental Highlights

The department has worked along with the Institute to make the vision and detailed DPR to provide comprehensive diabetes care under one roof in the form of an Advanced Diabetes Centre. We have Rs 4.2 crores in ongoing extramural grant funding this year. We created several useful patient education information in various media in Hindi and English, available on our department website in the SGPGI website. Our nursing staff were awarded for their excellence in all spheres; they are the backbone of our patient care. We attracted 8 observer DM students to observe pediatric and adult endocrinology from CMC Vellore, Andhra Medical College and Narayana Medical College Nellore. And 1 pediatric endocrinology observer assistant professor paediatrics, AIIMS, Raebareli. Such observers from top institutes have been coming to our department without break, since the last 18 years, which testifies to the excellent teaching programs we have.



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SGPGIMS, Lucknow

DEPARTMENT OF ENDOCRINE SURGERY (& BREAST SURGERY)

Name of Faculty Members:

- | | |
|-------------------------------|---|
| 1. Gaurav Agarwal, MS,DNB,PDC | Professor & Head
(Head w.e.f 13 th October, 2022) |
| 2. Amit Agarwal, MS | Professor & Head
(Vountary retirement on 13 th Oct. 2022) |
| 3. Anjali Mishra, MS,PDC | Professor |
| 4. Gyan Chand, MS | Professor |
| 5. Sabaretnem M., MS, MCh | Additional Professor |
| 6. Abhishek Krishna, MS, MCh | Assistant Professor (Bond) |
| 7. Vikram S., MS, MCh | Assistant Professor (Bond) |
| 8. KMM Vishvak, MS, MCh | Assistant Professor (Bond) |
| 9. Sushobhan Pradhan, MS, MCh | Assistant Professor (Bond)
(Joined on 21.11.2022) |
| 10. Farheen Khan, MS, MCh | Assistant Professor (Bond)
(Joined on 21.11.2022) |
| 11. Dileep K. Hoysal, MS, MCh | Assistant Professor (Bond)
(Joined on 21.11.2022) |

Activities

The department of Endocrine & Breast surgery delivered patient care to whole spectrum of patients with various endocrine and breast surgical diseases, carried out teaching & training activities, and conducted research in the areas of breast oncology, endocrine surgery and telemedicine during the year 2022. The department conducted large number of complex endocrine surgical procedures including minimally invasive, endoscopic and robotic procedures, Oncoplastic breast surgery, and life saving procedures for various cancers of breast and endocrine organs.

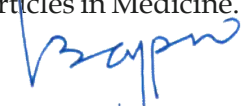
The community outreach activities were further expanded, and under the SGPGI Breast & Cervical Cancer Awareness and Early Detection Programme (SGPGI- BCCAEDP), a large number of public health workers- medical officers, staff nurses, CHOs, ASHA workers and ANMs were trained in clinical breast examination for breast cancer screening. Under this programme, a large number of women in the age group of 35-70 years age residing the Tehsil Mohanlalganj were imparted awareness regarding early diagnosis of breast and cervical cancer, and screened for these two cancers by public health workers in numerous camps held in the community during the year.

Besides, Large number of breast cancer awareness lectures and campaigns were carried out, including a breast cancer awareness walk on the occasion of world cancer day (4th Feb 2022) and in October- the breast cancer awareness month.

Conference Presentation / Invited Lectures

Prof. Gaurav Agarwal

- Molecules and nano-particles in medicine: facilitating diagnosis, therapy and precision surgery in cancer patients. At the Indo-French symposium on Molecules and nano-particles in Medicine. University of Bordeaux, France, Nov 2022.



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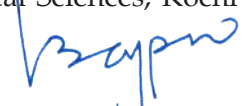
- Presidential Oration of Breast Surgery International. At International Surgical week 2022, Vienna, Aug 2022.
- Axilla of all breast cancer patients should be imaged with ultrasound and suspicious nodes biopsied. BSI debate, speaking against the motion. At the International Surgical week 2022, Vienna, Aug 2022.
- Introduction to “Umberto Veronesi Lecturer- 2022” at International Surgical week 2022, Vienna, Aug 2022.
- IASSS surgical show-down: Why is breast surgery the best surgical subspecialty as a career option. At the International Surgical week 2022, Vienna, Aug 2022.
- Oncoplastic BCS for EBC and LABC. UPASICON 2022 Lucknow, Oct 2022
- Impact of Breast cancer treatment on psychology of a patient. Meeting of Indian Psychiatric society, Aug 2022.

Dr. Anjali Mishra

- Invited lecture in Annual Winter Workshop/ Symposium 2022 “Recent Trends in Cancer Research and Precision Medicine”, December 16-18, 2022, BSBE IIT Kanpur
- Invited lecture Symposium on Digital Surgery- “Surgical Care Continuum and mentoring Surgeons adopting Telemedicine Technology” in 18th International Conference of Telemedicine Society of India, (Telemedicon 2022), November 10- 12, 2022, AIMS Kochi India
- Invited lecture “Parathyroid Incidentaloma- diagnosis and management” & Chairperson “Plenary Lecture- Trans Oral Thyroidectomy”. 23rd National Conference of the Indian Association of Endocrine Surgeons” (IAESCON 2022), CMC Vellore, Tamil Nadu, September 16 to September 17 2022
- Panelist in the Round Table Brain Storming Session during the National Workshop on Telemedicine & Artificial Intelligence in Healthcare organized by Gangwal School of Medical Sciences & Technology, IIT, Kanpur, July 2nd, 2022
- Faculty Lecture CME by Indian association of Endocrine Surgeons “What is New in The Management of Papillary Thyroid Carcinoma” May 14, 2022

Dr. Gyan Chand

- “Dr. W R Gajdhar Memmorial Oration” deliver on Aesthetic Thyroid Surgery Annual conference of Association of surgeons of India, Indore city chapter on 2nd April 2022, Indore
- Endoscopic Trans Oral Thyroid Surgery 7th Edition of Onco Surgery Master Course organized by Ahmedabad Cancer Foundation held on 16th -17th April 2022
- Video Lecture on Trans Oral Thyroid Surgery 7th Edition of Onco Surgery Master Course organized by Ahmedabad Cancer Foundation held on 16th -17th April 2022
- Cosmetic Thyroid Surgery World Immunology Day organized by department of Biotechnology, BBAU, Lucknow on 29th April 2022
- Endoscopic Thyroid Surgery IAES Weekly Revision Class for MCh Exit Exam, Virtual on 14th May 2022.
- Aesthetic Thyroid Surgery Endoscopic Thyroid surgery Workshop organized by Department of surgery, Amrita Institute of Medical Sciences, Kochi from 29th to 30th July 2022
- Live Demonstration of Four cases of Trans Oral thyroid Surgery Endoscopic Thyroid surgery Workshop organized by Department of surgery, Amrita Institute of Medical Sciences, Kochi from 29th to 30th July 2022



- Pancreatic Neuroendocrine Tumors Annual Day & CME in Surgery-2022 organized by Department of Surgical Disciplines, Surgery Block, AIIMS, New Delhi from 3rd to 5th September 2022
- Panel Discussion on Intraoperative Consultation in Thyroid and Parathyroid lesions 14th Annual CME -2022 of International Academy of Pathology Indian Division, Organized by Department of Pathology, SGPGIMS, Lucknow from 16th to 17th September 2022
- Panel Discussion on Wound Management 20th Annual Conference of Diabetic Society of India, DFSICON-2022 & 18th Annual conference of Asia Pacific Association of Diabetic Limb Problems from 14th to 16th Oct 2022 at Taj Resort & Convention Center, Goa, India
- Endoscopic Thyroid Surgery 17th International Conference of the Association of Minimal Access Surgeons of India-AMASICON-2022, from 18th to 20th Nov 2023, at Krishnashree Grand, Guwahati, Assam.
- PANNELIST Diabetic Foot 1st national Conference of Distinctive Health Organization, organized by Maharaja Suheldeo Medical College, Bahraich, UP on 11th Dec 2022
- Trans-Oral Thyroid Surgery. 82nd Annual Conference of Association of surgeons Of India, Mumbai from 21/12/2022 to 24/12/2022

Dr. Sabaretnam M.

- 49th World Congress of International Society of Surgery / International surgical week from 2022

Dr. Abhishek Krishna

- *Paper Presentation* for Laparoscopic Adrenalectomy: Experience of a single surgeon from an endocrine surgery centre Asia-Pacific congress of Endoscopic and Laparoscopic Surgeons of Asia, Dubai. 21st-23rd October 2022
- *Master Video Presentation* for Open Adrenalectomy- Indian Association of Endocrine Surgeons, Vellore (IAESCON-2022)

Awards & Honors:**Prof. Gaurav Agarwal**

- Top 2% (highest cited) scientist in the world. List published by Stanford University Researchers.
- Awarded Fellow of International Society of Surgery, FISS, ISS/SIC, during the ISW 2022 at Vienna, Austria.
- Delivered Presidential oration of the Breast Surgery International during the ISW 2022, Vienna Austria.

Prof. Anjali Mishra

- SP Srivastava Oration". 48th Annual Conference of UP Chapter of the Association of Surgeons of India "UPASICON- 2022" Lucknow December 14 to 16, 2022. "Thyroid Cancer in India: Are we looking at different disease"?

Dr. Abhishek Krishna

- Chairperson: Special Plenary lecture- Evolution of Thyroid Surgery, Prof. James Lee (Australia) IAESCON-2022, CMC Vellore
- Organizing committee member, Pink walk for Breast cancer awareness, SGPGI, Lucknow, India, October, 2022
- **Co-Organizing Secretary**, Live workshop on robotic and open thyroidectomy, SGPGI, Lucknow, July 2022

- Organizing committee member, Breast cancer awareness and early detection camp, Raj Bhavan, Lucknow, India, April, 2022

Dr. KMM Vishvak Chanthar

- Second Prize in the Paper Presentation, 6th Annual Conference of the Asian Society of Mastology, ASOMACON, Nov 2022, Jaipur, India
- Dr. Selwyn Taylor Award for Best Podium Presentation at the International Association of Endocrine Surgeons Meeting at ISW August 2022, Vienna, Austria
- IAES Travel Award at the International Association of Endocrine Surgeons Meeting at ISW August 2022, Vienna, Austria Professional Enhancement Grant by TATA Education and Development Trust for international clinical observership at Guys and St Thomas NHS Foundation Trust, London, Aug – Sept 2022

Dr. Sushobhan Pradhan

- Fifth Prize – Best Research work on Trends and Reasons of Referral of Benign Breast Disease patients in a tertiary Referral Medical Center in a Developing Country” during the 6th annual Conference of the Asian Society of Mastology, ASOMACON, held at Jaipur Rajasthan on 406 November, 2022.

Dr. Farheen Khan

- Second Prize- Prof. S. Vittal best paper award on “Outcome of Focused Parathyroidectomy with and without intra – operative PTH adjunct: Comparative Study between two academic medical centers in a low resource setting” during 82nd Annual Conference The Association of Surgeons of India 21-24th December, 2022 at Mumbai.

Dr. Sarrah Idrees

- Awarded “Best MCh resident” at 39th foundation day of SGPGI, December, 2022.
- Awarded “Annual Best performer Award for 2021 at Indian Association of Endocrine Surgeons Conference, September, 2022.
- CSIR Travel Grant, July, 2022

Membership of International Professional Bodies:**Prof. Gaurav Agarwal**

- American Association of Endocrine Surgeons
- American Society of Breast Diseases
- American Society of Clinical Oncology
- Asia Oceania Thyroid Association
- Association of UICC Fellows (Life member)
- Breast Surgery International
- International Association of Endocrine Surgeons
- International Surgical Society (ISS/ SIC) Global Cancer Control Community, UICC

Prof. Anjali Mishra

- International Surgical Society
- Asian Association of Endocrine Surgeons



- International Association of Endocrine Surgeons
- American Thyroid Association

Dr. Gyan Chand

- International Surgical Society
- Asian Association of Endocrine Surgeons
- International Association of Endocrine Surgeons
- American Thyroid Association
- American Society of Clinical Oncology
- European Society of Medical Oncology

Dr. Sabaretnam M.

- International Surgical Society
- Asian Association of Endocrine Surgeons
- International Association of Endocrine Surgeons
- American Thyroid Association
- International College of Surgeons
- American Society of Clinical Oncology
- European Association of Endocrine surgeons
- Asia Pacific Society of Thyroid surgeons
- Asian Society of Oncology

Dr. Farheen Khan (Society Membership)

- International Surgical Society

Services

OPD	2022	2021	2020
OPD Schedule	6 days per week	6 days per week	6 days per week
Indoors – beds	34	34	34
General	22 + 04 (day care)	22 + 04 (day care)	22 + 04 (day care)
Private	06	06	06
Isolation	02	02	02
Operation Theatre	02	02	02
Old Follow-up	17799	7087	5960
New Registration	7060	1215	605
Admission	2988	1938	1744
Surgery	1671	1266	632

Others Tests & procedures (specify tests with no. of tests done)

Tests	2022	2021	2020
Serum Thyroglobulin	731	506	275
Anti ATG	731	506	275
Serum CEA	671	411	204

Serum CA 125	177	100	48
Serum Calcitonin	139	81	56
Serum CA 15-3	08	21	22

Training:

No. of students undergoing MCh training (As on 31st March, 2023) – 11

No. of students undergoing PDCC (Breast Surgery) training (As on 31st March, 2023) – 01

No. of students who passed MCh: 4

No. of students who passed PDCC (Breast Surgery) : 01

Research Completed : None

Research in Progress:

Prof. Gaurav Agarwal

- Funded by SERB, DST GoI. Role: Principal Investigator. Grant Amount: INR 7.6 millions. “Breast Tumor Educated Monocytes (Br-TeMo)”: Signature pattern of TRIMs (Innate Immune Regulators) as Biomarkers for Early Prediction of Breast Cancer Progression and Metastasis” (SPR/2019/001041). Status: Ongoing, initiated Aug 2020.
- Funded by: DBT, GOI. Role: Principal Investigator. Co-PI: Dr Rajesh Singh, MSU Vadodara. Grant Amount: INR 16.9 millions “Understanding the role of mitochondrial-associated membrane proteins (MAMs) modulated type-I interferon signaling for targeted cell death in ageing breast cancer patients”. Nov 2019 onwards. Status: Ongoing.
- Funded by: ICMR. Role: Co-Investigator. PI: Dr Lokendra Sharma, Dept of Molecular Medicine. Grant Amount: INR 6.4 millions “Targeting mitophagy in breast carcinogenesis through mitochondrial-mediated mechanisms”. Apr 2019 onwards. Status: Ongoing.

SGPGI Intramural Research Grants:

- Effects of catecholamine excess on glucose and fat metabolism in Pheochromocytoma & Paraganglioma patients and their reversal following surgical cure: A Prospective Cohort Study. (PI). Dec 2020 onwards. Status: Ongoing. INR 0.463 Millions.
- Prognostic and Predictive Value of Tumor Infiltrating Lymphocytes (TILs) and PD- L1 In Breast Cancer. (PI). 2019. Status: Ongoing.
- Prospective case control study of objective cardiac & vascular changes in Pheochromocytoma-Paraganglioma and their reversal following curative surgery. (Co-PI). 2019. Status: Ongoing. INR 0.5 Millions.
- Correlation of RET genotype with clinical, pathological attributes and outcomes in patients with Medullary thyroid cancer. (PI). 2018. Status: Ongoing. INR 0.5 Millions.

Dr. Anjali Mishra

- Incidence and Prognostic Significance of Programmed Death Ligand-1 (PD-L1) Expression in Thyroid Carcinoma of Follicular Origin- Anjali Mishra (Intramural)



Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow

Dr. Gyan Chand

- A randomized comparative study of endoscopic thyroidectomy via bilateral axillo breast approach vs transoral thyroidectomy
- Clinico-pathological profile and surgical outcome of non-functioning adrenal tumors- 30 years experience
- A randomized comparative study of Trans oral endoscopic thyroidectomy via vestibular approach vs Open thyroidectomy
- Clinico-pathological profile and surgical outcome of pancreatic Neuro-Endocrine tumors- 30 years experience
- Correlation of Oncogenic viruses in Papillary Thyroid carcinoma
- Study of human oncogenic Viruses and molecular pattern correlated with differentiated thyroid cancer
- A randomized, open label, single center, Post Market Surveillance study to evaluate the efficacy and safety of a new antimicrobial wound dressing (VELVERT) compared to standard dressing (Silver Dressing) in the treatment of Diabetic foot ulcer.
- A Prospective, Open-Label, Multi-centered, Non-Randomized, Non-Comparative Active Post-Marketing Surveillance to test the safety and efficacy of Diperoxochloric Acid [DPOCL] topical solution in subject with diabetic neuropathic ulcers of skin and subcutaneous tissues.
- Non-randomized study to correlate endoscopic thyroid surgery via trans-oral endoscopic thyroid surgery via vestibular approach versus Open thyroid surgery
- Retrospective study of comparison of outcomes of thyroid cancer in three age groups.
- Impact of NACT on molecular biomarker in ca breast and its implication

Projects: as Co-PI

- To study the difficulty status of transoral thyroid surgery.
- To study the inflammatory markers in endoscopic thyroid surgery.
- To Study the Neuropathic pain in trans-oral endoscopic thyroid surgery.
- Immunochemical Expression of MUC1 on Cell Block and Yokohama System in FNA Diagnosis of Breast cancer.
- Incidence of Neuropathic Pain in Patients undergoing Robotic Thyroidectomy Incidence of postoperative shoulder and neck morbidity in patients undergoing thyroidectomy: A prospective observational study Ultrasound Shear Wave Elastography evaluation of Tibial Nerve in Non-diabetic, Diabetic patients with and without ever peripheral neuropathy/ diabetic foot Ulcer.

Publications**Original Articles:****Index Publications**

1. Vishvak Chanthar K.M.M, Khanna R, Agarwal G (joint first author),Rout SR, Kapoor A, Sabaretnam M, Chand G, Mishra A, Agarwal A, Mishra SK. Cardiac Changes and Their Reversal Following Curative Surgery in Pheochromocytoma: PheoCard Prospective Cohort Study."World J Surg". Published Online 10Oct2022.[https:// doi.org/10.1007/s00268-022-06731-6](https://doi.org/10.1007/s00268-022-06731-6).



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Executive Registrar
SGPGIMS, Lucknow

2. NIHR Global Health Unit on Global Surgery, COVIDSurgCollaborative,..Agarwal G. Elective surgery system strengthening: development, measurement, and validation of the surgical preparedness index across 1632 hospitals in 119 countries. "The Lancet". Published Online October 31, 2022 [https://doi.org/10.1016/S0140-6736\(22\)01846-3](https://doi.org/10.1016/S0140-6736(22)01846-3)
3. Krishna A, Mishra SK, Mishra A, Kumar S, Rao R, Yadav S, Mayilvaganan S, Chand G, Agarwal G, Agarwal A. Feasibility and impact of a one-stop thyroid clinic in a low- and middle-income country. "South African J Surg" 2022;60(3), 189-194.
4. Kumar S, Usmanova G, Nair TS, Srivastava VK, Singh R, Mohanty N, Nadeem Akhtar N, Kujur MS, Srivastava AK, Pallipamula SP, Agarwal G, Singh AB, Kashyap V, McCarthy M, Liebermann EJ, Ginsburg O. Implementation of a large-scale breast cancer early detection program in a resource-constrained setting: real-world experiences from two large states in India. "Cancer J". 2022;128(9):1757-1766.
5. Jha CK, Mishra A, Chand G, Agarwal G, Agarwal A, Mishra SK. Truncal Ligation of Inferior Thyroid Artery Does Not Affect the Incidence of Hypocalcaemia After Central Compartment Lymph Node Dissection. "Indian J Otolaryngol Head Neck Surg". 2022 Oct;74(Suppl 2):1864-1869. doi: 10.1007/s12070-020-01879-w. Epub 2020 May 11. PMID: 36452781; PMCID: PMC9702179.
6. BMB Sunil, YK Sanjay, A Vivek, M Anjali, MK Saroj, C Gyan, A Gaurav, A Amit. Safe and Standard Thyroid Cancer Surgery, or Lack Thereof: Patterns and Correlates of Patient Referral to Tertiary Care Centre for Revision Thyroid Surgery in a LMIC "South Asian J Cancer" 2021;00(00):00-00.
7. Dhanda M, Agarwal A, Mandal K, Gupta S, Sabaretnam M, Chand G, Mishra A, Agarwal G, Mishra SK. Clinical, Biochemical, Tumoural and Mutation Profile of VHL- and MEN2A-Associated Pheochromocytoma: A Comparative Study. "World J Surg". 2021 Dec 2. doi: 10.1007/s00268-021-06393-w. Epub ahead of print. PMID: 34859295.
8. Singh D, Arya A, Agarwal A, Agarwal G, Ravina M, Gambhir S. Role of Ga-68 DOTANOC Positron Emission Tomography/Computed Tomography Scan in Clinical Management of Patients with Neuroendocrine Tumors and its Correlation with Conventional Imaging- Experience in a Tertiary Care Center in India. "Indian J Nuclear Med" 2022;37(1):29-36.
9. Mishra A, Neyaz Z, Yadav S, Gupta A, Bhatia E, Mishra SK. Outcome of Pre- operative Vs Intraoperative Localization Techniques in Insulinoma: Experience in a Tertiary Referral Centre Indian Journal of Surgery 2022 Published online 15 October 2022 <https://doi.org/10.1007/s12262-022-03569-z>
10. Barua SMB, Yadav SK, Aggarwal V, Mishra A, Mishra SK, Chand G, Agarwal G, Agarwal A. Safe and Standard Thyroid Cancer Surgery, or Lack thereof: Patterns and Correlates of Patient Referral to Tertiary Care Centre for Revision Thyroid Surgery in a LMIC. SAJC Published online: 2022-04-25 DOI <https://doi.org/10.1055/s-0041-1739177> ISSN 2278-330X
11. Krishna A, Mishra SK, Mishra A, Kumar S, Rao RN, Yadav S, Mayilvaganan S, Chand G, Agarwal G, Agarwal A Feasibility and impact of one stop thyroid clinic - a preliminary study in a super speciality academic centre in a low- and middle-income country. South African Journal of Surgery 2022;60(2):10-15
12. Mohindra N, Jain N, Sabaretnam M, Agrawal V, Mishra P, Chaturvedi, Mishra A, Agarwal G. Mammography and Digital Breast Tomosynthesis in Granulomatous and nongranulomatous Mastitis. Journal of Surgical Research 2022; 281: 13-21 <https://doi.org/10.1016/j.jss.2022.08.009>
13. Sharanappa V, Pradhan S, Mishra A, Pradhan P. Neoadjuvant Multikinase Inhibitor Therapy in Locally Advanced Unresectable Differentiated Thyroid Carcinoma: a Case Report Indian J Surg DOI: 10.1007/s12262-022-03649-0

Book Chapters and Books:

1. IAES text book of Endocrine Surgery
2. Agarwal G, Hoysal DR. Chapter 50: Parathyroid Carcinoma. Landmark Paper: Classification of Parathyroid Cancer. In Wisemann S & Aspinall S (eds). "50 Landmark Papers Every Thyroid & Parathyroid Surgeon Should Know". CRC Press/Taylor & Francis Inc, London UK (in Press).
3. Vishvak Chanthar KMM, Agarwal G. Symptoms and Natural history of primary hyperparathyroidism. In Mishra AK, Singh KR et al. (Eds). "Endocrine Surgery: A South Asian Perspective". CRC Press, Francis & Taylor Inc, London UK. 2022, pp 230-239.
4. Khan F, Mishra A, Mishra SK. Etiopathogenesis of Breast Cancer and Prevention. In Bose SM, Sharma SC, Mazumdar A, Kaushik R. (Eds): Breast Cancer: Comprehensive Management. Springer, 1 st Ed 2022 pp. 978-981
5. Chanthar KV, Mayilvaganan S. Papillary Microcarcinoma of Thyroid. In Endocrine Surgery 2022 (pp. 117-122). CRC Press.
6. Mayilvaganan S, Singh KR, Mishra AK. Endocrine Emergencies. In Endocrine Surgery 2022 (pp. 463-467). CRC Press.

Visiting Professors: Nil

Award and Honors: As above

Departmental Highlights:

1. The department organized Live workshop on robotic and open thyroidectomy with 3-D transmission (for the first time ever in UP).
2. Department organized a breast cancer awareness walk and rally on 31st Oct 2022 to mark breast cancer awareness month.
3. The department also organized SGPGI breast cancer awareness and early detection camp at Raj Bhawan, Lucknow on the occasion of May Day-2022.
4. Prof Gaurav Agarwal delivered a TEDx talk on importance of breast cancer early diagnosis and treatment.

New Initiatives:

The department conducted various activities under the breast cancer and cervical cancer awareness and early detection program in collaboration with departments of radiology and radiotherapy and adopted Mohanlalganj Tehsil for the same.

Patents: None

DEPARTMENT OF GASTROENTEROLOGY

STAFF

Name of Faculty Members:

- | | |
|---|--|
| 1. Dr. Rakesh Aggarwal, MD, DM, FNA, FASc., FNASc.,FAMS | Professor (on deputation
Director, JIPMER,
Puducherry) |
| 2. Dr. Uday C Ghoshal, MD, DNB, DM, FACG, FAMS, FRCP, RFF | Professor and Head |
| 3. Dr. Praveer Rai, MD, DM | Professor |
| 4. Dr. Samir Mohindra, MD, DM | Professor |
| 5. Dr. Amit Goel, MD, DM | Additional Professor |
| 6. Dr. Gaurav Pande, MD, DNB | Additional Professor |
| 7. Dr. Anshuman Elhence, MD, DM | Assistant Professor
(Contractual) from 9.6.2021 |
| 8. Dr. Akash Mathur, MD, DNB, DM, MNAMS | Assistant Professor
(Contractual bond)
from 13.8.2021 |
| 9. Dr. S Rakesh Kumar, MD, DM | Assistant Professor
(Contractual bond)
from 21.11.2022 |
| 10. Dr. Pankaj Kumar, MD, DM | Assistant Professor
(Contractual bond)
from 21.11.2022 |
| 11. Dr. Piyush Mishra, MD, DM | Assistant Professor
(Contractual bond)
from 21.11.2022 |

Activities

Awards and recognitions

Dr. Anshuman Elhence

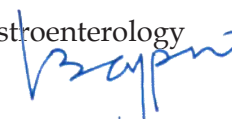
1. Best original article of the year award 2022 of the Indian Journal of Gastroenterology

Praveer Rai

1. Fellow of the Indian Society of Gastroenterology

Uday C Ghoshal

1. Top 2% Scientists of the World in Stanford University Survey
2. Best review article of the year award 2022 of the Indian Journal of Gastroenterology
3. Fellow of Royal College of Physician (FRCP), Edinburgh, United Kingdom
4. Selected as Expert Chicago classification of esophageal motility disorder
5. Lead member of Overlap consensus team of Asian Pacific Association of Gastroenterology
6. President, Indian Motility and Functional Diseases Association



7. Top cited paper award of Gastroenterology
8. Top cited paper award of JGH Open
9. Invited as speaker and/or Chairperson in several national and international conferences

Rakesh Aggarwal

1. Top 2% Scientists of the World in Stanford University Survey
2. Master of the Indian Society of Gastroenterology

Teaching Workshops/ CME's organized 2022

1. Centre for Disease Control Workshop on Research Methodology on 17-18th Dec 2022
2. Several online research methodology and clinical gastroenterology sessions

Services

Year-wise available clinical data (last three years 2020, 2021, 2022) for department of Gastroenterology

Sl. No.	Parameters	2020	2021	2022
1	Number of new patients in OPD	3430 (e-OPD 2670, new 521, consult 239)	8323	12309
2	Number of Old/ Follow-up patients in OPD	1037	30444	47670
3	Total patients in OPD	4467	38767	59979
4	Total number of patients admitted (IPD)	1420	1870	2620
Total number of endoscopy procedures done				
1	Endoscopic Sclerotherapy OR Varix Ligation Or Glue injection	5	11	50
2	Upper GI Endoscopy Diagnostic	2560	4154	6671
3	Upper GI Endoscopy Therapeutic or APC or Polypectomy	12	26	77
4	EVL or EST follow up	620	987	987
5	PEG	1	1	3
6	Single Balloon Endoscopy	10	20	38
7	Endoscopic Foreign Body Removal	2	3	2
8	Full colonoscopy Therapeutic	20	35	50
9	Short colonoscopy Therapeutic	12	30	1259
10	Full colonoscopy (diagnostic)	630	1241	1610
11	Short colonoscopy (diagnostic)	520	879	62
12	Anal Endoscopic Ultrasound	0	0	0
13	Endosonography Diagnostic (EUS)	130	590	763
14	Endosonography Therapeutic (EUS)	15	36	65
15	Therapeutic ERCP	200	822	1169

16	Diagnostic ERCP with papillotomy	8	15	8
17	Balloon dilatation for achalasia cardia	15	33	31
18	Esophageal dilatation SG or CRE or SEMS placement	35	77	258
19	Naso Juenal Tube Replacement	10	129	161
20	Side-viewing Endoscopy (diagnostic)	30	70	94
21	Side-viewing Endoscopy with biopsy	8	14	18
22	Antral CRE dilatation or SEMS	5	15	29
23	Endoscopic Submucosal Resection (ESD)	2	7	1
24	Submucosal Transluminal Endoscopic Resection (STER)	0	0	0
25	Endoscopic Mucosal Reception (EMR)	0	0	0
26	Per Oral Endoscopic Myotomy (POEM)	0	22	27
Total endoscopy procedures		4850 (<i>Grossly low as it was closed due to COVID-19</i>)	9217	13433
GI pathophysiology & manometry laboratory procedures				
1	Esophageal Manometry	80	224	338
2	Rectal Manometry	162	321	575
3	24-hour pH metry	10	51	50
4	Biofeedback	15	31	0
5	Balloon expulsion test	102	203	504
6	Capsule Enteroscopy	10	22	23
7	D-xylose	48	96	66
Total GI pathophysiology & manometry laboratory procedures		427 (<i>Grossly low as it was closed due to COVID-19</i>)	948	1490
GE laboratory tests				
1	Anti HBe	630	1004	1458
2	Anti HBs	424	853	1219
3	Anti HCV	5620	9421	15397
4	Anti HEV	420	754	1484
5	HBVDNA	1160	1616	2321
6	HBeAg	456	977	1582
7	HbsAg	6131	11997	18060
8	HCVRNA	286	567	1024
9	Anti HAV	354	791	1457
10	Anti HBc	203	407	692

11	Blood Ammonia	90	192	223
12	Stool fat (Quantitative: Van De Kamer)	15	34	22
13	Stool Fat: Sudan Stain	456	932	1391
14	Urine D-xylose / Blood D-xylose	46	92	68
15	Fibroscan	1270	2814	4676
TotalGE laboratory tests		17201 (Low due to COVID-19)	32451	51073

Training

At present, there are 18 senior residents enrolled in DM Gastroenterology program including 6 (3rd year DM fellows), 6 (2nd year DM fellows) and 6 (1st year DM fellows).

Number of students appeared in the final year examination (PG): 6

Number of students who passed in final year examination (PG): 6

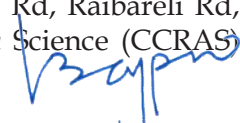
Research Projects

Completed

1. Relationship between digestive symptoms and morbidity, mortality and fecal excretion of the virus among patients with COVID-19: A possible diagnostic role of fecal sample and potential for feco-oral transmission. Funding: DBT (PI: Dr. Uday C Ghoshal) (funding amount: 44 lakhs) (duration: 2020-2022). Status: Completed.
2. Multicentric, phase IV, randomized, double blind, placebo controlled trial to assess effectiveness and safety of ILactobacillus acidophilus LA-5 and Bifidobacterium BB12 in the treatment of non constipated irritable bowel syndrome in adults aged 18 yrs to 65 yrs. Funding: Medclin (PI: Dr. Uday C Ghoshal) (funding amount: 6.15 lakhs) (duration: 2021-2023). Status: Completed. Publication: Manuscript under preparation
3. A phase IIa, randomised double-blind, placebo-controlled factorial design, proof of concept trial to assess safety, tolerability and efficacy of artesunate and curcumin in patients with Crohn's disease, who continue to have mild to moderate disease activity on an adequate dose of azathioprine. Funding: Bowel disease UK (PI: Dr. Uday C Ghoshal) (funding amount: 13 lakhs) (duration: 2021-2023). Status: Completed. Publication: Manuscript under preparation
4. Indian consensus on IBS. Funding: Bowel disease UK (PI: Dr. Uday C Ghoshal) (funding amount: 3.5 lakhs) (duration: 2021-2023). Status: Completed.

Research in progress

1. Frequency of sleep abnormalities in patients with irritable bowel syndrome and its relationship with symptom severity, quality of life and effect of Pharmacological intervention to improve sleep on these parameter. Funding: UP-CST (PI: Dr. Uday C Ghoshal) (funding amount: 6.15 lakhs) (duration: 2021-2023). Status: Ongoing.
2. A Randomized Double Blind Placebo control clinical study to evaluate the immunomodulatory effect of Swarnprashan in Moderately Malnourished Children" COLLABORATIVE PROJECT of Sanjay Gandhi Postgraduate Institute of Medical Sciences New PMSSY Rd, Raibareli Rd, Lucknow, Uttar Pradesh And Central Council for Research in Ayurvedic Science (CCRAS)



Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow

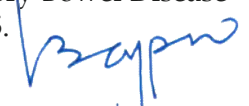
Ministry of AYUSH Government of India, (Role- Co-PI Dr. Gaurav Pandey, Additional professor, Department of Gastroenterology, SGPGIMS, Lucknow-226014, U.P.).

3. A randomized controlled trial of ramosetron versus amitriptyline in patients with diarrheapredominant irritable bowel syndrome and its relation with rectal hypersensitivity. Funding: Intramural (PI: Dr. Uday C Ghoshal) (funding amount: 5 lakhs) (duration: 2020-2022). Status: Ongoing.
4. Feasibility of a new diagnostic device to assess small intestinal dysbiosis in routine clinical setting. Funding: Atmo Biosciences (PI: Dr. Uday C Ghoshal) (funding amount: 16.87 lakhs) (duration: 2022-2023). Status: Ongoing.

Publications:

1. Sperber AD, Freud T, Aziz I, Palsson OS, Drossman DA, Dumitrascu DL, Fang X, Fukudo S, Ghoshal UC, Kellow J, Khatun R, Okeke E, Quigley EMM, Schmulson M, Simren M, Tack J, Whitehead WE, Whorwell P, Bangdiwala SI. Greater Overlap of Rome IV Disorders of Gut-Brain Interactions Leads to Increased Disease Severity and Poorer Quality of Life. *Clin Gastroenterol Hepatol.* 2022; 20: e945-e956.
2. Demonstration of Gut-Barrier Dysfunction in Early Stages of Non-alcoholic Fatty Liver Disease: A Proof-Of-Concept Study Kanav Kaushal* ,a , Samagra Agarwal* ,a , Sanchit Sharma* , Pooja Goswami* , Namrata Singh* , Vikas Sachdev* , Shekhar Poudel* , Prasenjit Das y , Rajni Yadav y , Dinesh Kumar z , Gaurav Pande, Deepak Gunjan* , Anoop Saraya* J CLIN EXP HEPATOL 2022;12:1102-1113.
3. Response Guided Slow Infusion of Albumin, Vasoconstrictors and Furosemide Improves Ascites Mobilization and Survival in Acute on Chronic Liver Failure: A Proof-of-Concept Study. Gaurav Pande¹, Manjunath Hatti¹, Mohit Kumar Rai², Praveer Rai¹, Kamlesh Kumar¹, Krishna Vp¹, Abhimanyu Nehra¹, Sudeep Kumar³, Smarak Ranjan Rout³, Sourav Kumar Mishra³, Dinesh Kumar⁴, Umesh Kumar⁴, Prabhaker Mishra⁵, Abdul Majeed¹, Vivek Anand Saraswat^{#1}, Kritika Singh², Harshit Singh², Durga Prasanna Misra², Vikas Agarwal^{#2}. *J Inflamm Res*; 2022; 15: 5027-39.
4. Singh R, Zogg H, Ghoshal UC, Ro S. Current Treatment Options and Therapeutic Insights for Gastrointestinal Dysmotility and Functional Gastrointestinal Disorders. *Front Pharmacol.* 2022; 13: 8195.
5. Yadlapati R, Kahrilas PJ, Fox MR, Bredenoord AJ, Prakash Gyawali C, Roman S, Babaei A, Mittal RK, Rommel N, Savarino E, Sifrim D, Smout A, Vaezi MF, Zerbib F, Akiyama J, Bhatia S, Bor S, Carlson DA, Chen JW, Cisternas D, Cock C, Coss-Adame E, de Bortoli N, Defilippi C, Fass R, Ghoshal UC, Gonlachanvit S, Hani A, Hebbard GS, Wook Jung K, Katz P, Katzka DA, Khan A, Kohn GP, Lazarescu A, Lenglinger J, Mittal SK, Omari T, Park MI, Penagini R, Pohl D, Richter JE, Serra J, Sweis R, Tack J, Tatum RP, Tutuian R, Vela MF, Wong RK, Wu JC, Xiao Y, Pandolfino JE. Esophageal motility disorders on high-resolution manometry: Chicago classification version. *Neurogastroenterol Motil.* 2021; 33: e14058.
6. Ghoshal UC. Postinfection Irritable Bowel Syndrome. *Gut Liver.* 2022; 16: 331-340.
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Book Chapters

1. Approach to altered Liver function tests: For a digital India point-of-care product which will be a quick reference information; An Elsevier Initiative ;Gaurav Pande' ArunBhadhorja, Rakesh S.K.

Visiting professor

None in this year

Departmental Highlights

The Department of Gastroenterology is a very busy clinical department with high public demand. Yet, the Department is very active in high-quality and high-impact research as reflected by large number of publications in national and international journals. The Department is also in demand for training as reflected by the observers coming to get trained in addition to the 18 DM students.

New initiatives

1. Establishing an Advanced GI Endoscopy Center with upgradation of facilities for
2. Further advancement in Gastrointestinal Pathophysiology and Motility

DEPARTMENT OF HEMATOLOGY

STAFF

Name of Faculty Members:

1. Soniya Nityanand, MD, PhD	Professor (On deputation since May 17, 2021)
2. Rajesh Kashyap, MD	Professor & Head
3. Ruchi Gupta, MD	Additional Professor
4. Khaliqur Rahman, MD, MAMS	Additional Professor
5. Anshul Gupta, MD, FNB	Associate Professor (Resigned on July 18, 2022)
6. Chandra Prakash Chaturvedi, PhD	Associate Professor
7. Vinod Verma, PhD	Associate Professor
8. Dinesh Chandra, MD, DM	Assistant Professor
9. Sanjeev, MD, DM	Assistant Professor
10. Manish Kumar Singh, MD	Assistant Professor
11. Naresh Kumar Tripathy, PhD	Assistant Professor
12. Kulwant Singh, PhD	Assistant Professor
13. Jalaj Gupta, PhD	Assistant Professor

Awards, Honours, and Recognitions

Rajesh Kashyap:

- Chaired “National Symposium on “Stem cell and cellular therapy in Human Diseases”. November 18, 2022.
- “Curb the Crab”. Management of Multiple Myeloma. Live webinar. March 25, 2022.
- “ PED TALK: Unfolding Pediatricleukemia” Pediatric AML. May 07, 2022.
- “Delete the bleed” Management of immune thrombocytopenia in children. July 16, 2022.

Ruchi Gupta:

- AML : Morphology, Flow cytometry, and Molecular Classification . Pursue 17E – Online PG teaching Program; January 28, 2022.
- Role of flow cytometry in the diagnosis of Chronic lymphoproliferative disorders. Multiparametric Flow Cytometry in the Hematological Disorder; March 26, 2022
- Role of flow cytometry in MDS diagnosis. Multiparametric Flow Cytometry in the Hematological Disorder. March 26, 2022
- Role of MRD in Multiple Myeloma: Beat Myeloma Centrum; October 02, 2022.
- Laboratory Diagnosis of Sickle Cell Anemia. Masterclass of Haematology; September 14, 2022.
- Member, European Hematology Association:
- Member, Molecular Pathology Association of India
- Member, The Cytometry Society of India .
- Member, Indian Society of Hematology and Blood Transfusion



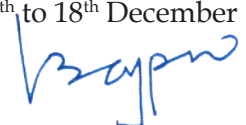
Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow

Khaliqur Rahman:

- Best research paper award under additional professor Pre/Para/Basic category at 3rd annual research Day; December 14, 2022
- Role of flow cytometry in Non Malignant Hematological disorders. 13th annual Conference of The cytometry Society of India; October 13-16; 2022
- EMA binding assay for the diagnosis of Hereditary Spherocytosis. 13th annual Conference of The cytometry Society of India. 13th to 16th October 13-16, 2022
- Antibodies, Clones & Fluorochromes. Basic Clinical Workshop, 13th annual Conference of The cytometry Society of India; October 13-16, 2022
- Approach To Lymphoproliferative Disorders-Case Based. Basic Clinical Workshop, 13th annual Conference of The cytometry Society of India; October 13-16, 2022
- Variations In Sample Processing: Basic Clinical Workshop. 13th annual Conference of The cytometry Society of India; October 13-16, 2022
- Flow cytometry- Basics and role in acute leukemia. Hematology Update; October 08, 2022
- Genetics landscape of waldenstorm macroglobulinemia. Beat Myeloma Centrum; October 02, 2022
- LSC in CML- Flow cytometric identification and characterization. TCS online monthly lecture series; September 24, 2022
- FCM in Acute Myeloid Luekemia- Case studies. 3rd International online Flow cytometry conference; September 21-24, 2022
- MRD in ALL: Technical Aspects and clinical implication. CME on Advances in Clinical Flow Cytometry (ACFC); May 12, 2022
- Basic Principle of Flow cytometry and Acute Leukemia Panel. CME on Multiparameteric Flow cytometry in hematological disorders; March 26, 2022.
- Diagnosis of PNH by FLAER. CME on Multiparameteric Flow cytometry in hematological disorders. March 26, 2022
- Flow cytometry for hematological disorders. 23rd INDO-US Flow Cytometry workshop; March 07-10, 2022
- Member, National Academy of Medical Sciences, : November 2022.
- Member, International Society for Advancement in Cytometry : Membership#68296265
- Member, European Hematology Association :Membership#012559
- Member, Association of Molecular Pathology, USA : Membership#1267690
- Member, British Society of Hematology; UK : Membership#37261
- Member, European Society of Clinical Cell Analysis : Membership#ESCCA-2341
- Member, European Society of Medical Oncology : Membership#570217

Dinesh Chandra:

- Fellowship and scholarship from “International Society on Thrombosis and Hemostasis” May 2022.
- Best Reviewer Award by Indian Journal of Hematology and Blood Transfusion. November 05, 2022.
- Conducted Hands on Workshop on Hemophilia and Bleeding Disorders; 14th to 18th December 14-18, 2022.



- Case presentation in Coagulation disorders (Online teaching Program); 10th November 10, 2022
- Laboratory Monitoring of Direct Oral anticoagulants- Hematocon; November 02-06, 2022,
- Sample collection, transportation, preparation of platelet poor and rich plasma (National Online Teaching Program); September 27, 2022.
- Pursue-Online PG teaching Program “Disseminated Intravascular Coagulation”; September 24, 2022.
- Diagnosis of Hemophilia and Rare Bleeding Disorders. UP Rare Disease Symposium; September 17-18, 2022.
- Hemophilia and Bleeding Disorders in Resource –Constrain Settings: 11th National Haemostasis Update; August 20-21, 2022.
- Diagnostic tests (HPLC) and Interesting cases(Online National Virtual Program); July 07, 2022
- Member, Internatl Soc ThrombHaemost : Membership#60995146.
- Member, Indian Society of Hematology and Blood Transfusion : Membership#L-1491

Anshul Gupta:

- Life Member of Pediatric Hematology and Oncology chapter of Indian academy of paediatrics
- Life Member of Indian Academy of Pediatrics

Chandra Prakash Chaturvedi :

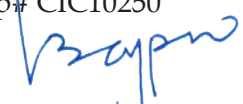
- Best Paper Research Award in Pre/Para/Basic Associate Professor Category, December 2022
- Organized “National symposium on stem cell and cellular therapy in human disease”; November 18, 2022.

Vinod Verma :

- Organized “National symposium on stem cell and cellular therapy in human disease”; November 18, 2022.
- Lecture on ‘Ray of hope: A stem cell therapy for diabetes’; 10th -24th January 10-24, 2022.

Sanjeev:

- Conducted BMT Master class, Nursing sympo& BMT survivors meet; December 18, 2022
- Conducted MPN voice; November 13, 2022.
- Conducted Plasma cell disorders Update; October 02, 2022.
- Lecture on “Acquired severe aplastic anaemia (SAA) complicated with multiple infectious episodes & bowel gangrene leading to colostomy, salvaged by matched sibling donor HSCT”; 7th International Transplant course 2022.
- EBMT observer ship- July -September 2022.
- 7th International transplant course, August 2022
- Member, ISHBT, Executive Committee : November 2022
- Member, Indian Society of Hematology and Blood Transfusion : Membership#L/1446
- Member, European Hematology Association : Membership#014359
- Member, American society of Hematology : Membership#1399461
- Member, Indian society of Blood & marrow transplantation : Membership#108
- Member, European society of blood & marrow transplantation : Membership# CIC10250
- Member, Indian Myeloma academic Group: Membership#117



- Member, British society of Hematology : Membership# 50155

Manish Kumar Singh

- Invited lecture on “*Application of Cytogenetics in Haematology*” in the pre-conference Workshop of HAEMATOCON 2022
- Naresh Kumar Tripathy:
- Best research paper award under additional professor cadre in Clinical category at 3rd annual research Day; December 14; 2022
- Organized “National symposium on stem cell and cellular therapy in human disease”; November 18, 2022.

Kulwant Singh:

- Invited Lecture on “Programming Immune Cells to treat the Cancer” in 2nd International Precision Medicine symposium on The Precision Emergency and Critical-Care: Recent Advances and Current Trends”; December 07, 2022.
- Invited Lecture on “Cellular targets for Immunotherapy in hematological malignancies” symposium; November 18, 2022.
- Invited Lecture on “Epigenetics in Development and Diseases” refresher course on Life Sciences”; October 17, 2022.
- Invited Lecture on “Understanding the molecular basis of MEF2D-rearranged oncogenic fusion proteins in leukemogenesis”, 1st Group Monitoring Workshop; July 04, 2022.

Jalaj Gupta

- Organized “National symposium on stem cell and cellular therapy in human disease”, November 18, 2022.

Services

Clinical/Lab Services	2020	2021	2022
OPD Patients (New/Follow-up)	15,621	30,765	40,087
IPD Patients (Ward Admissions)	2139	1813	3362
Bone Marrow Biopsy Procedures	1550	1697	2753
Bone Marrow Aspirate Procedures	1522	3955	3024
BMT	06	21	40
Morphology Lab Investigations			
PLT	16382	20884	25350
TLC.	18668	21150	41169
RBC	16287	1861	3352
DLC	865	8541	9047
HCT	9090	1909	3544
RETIC	908	2672	4970
Serum Erythropoietin	1961	230	389
Mean Platelet Volume	62	188	193
Red Cell distribution width	50	158	1102
MCV/MCH/MCHC	250	3009	4030

Peripheral Smear	1979	4811	9133
Specific Immunophenotype	10	38	57
Lymphoma Screening panel	6	42	97
Lymphoma Diagnostic Panel	12	104	185
Review of BM aspirate/Imprint	37	49	57
Leukemia Panel(IHC)	0	112	106
Lymph node biopsy	11	129	162
Flow Cytometry Lab Investigations			
Acute Leukemia Panel	245	227	274
B-ALL MRD	212	231	267
Clonality Panel	32	110	201
CLL panel	10	22	13
PNH panel	44	381	441
CLPD panel	200	52	159
MDS Screening Panel \	20	30	23
Stem Cell panel	37	115	155
Specific Single tube	49	91	27
T-ALL MRD	61	57	43
OFT	-	25	27
Osmotic Fragility Assay (Since 2022)	-	-	27
EMA Binding Test (Since 2022)	-	-	11
Myeloma MRD (Since 2022)	-	-	05
Myeloma Lab Investigations			
Beta-2 Microglobulin	98	151	265
Serum Immunofixation	353	673	637
Serum Kappa FLC	1023	1852	1922
Serum Lambda FLC	1024	1859	1955
SPE with absolute quant. of M Band	1282	2156	1996
UE with % quantification of M-band	74	105	89
Coagulation Lab Investigations			
PT	10609	12042	32583
APTT	4313	4836	4943
Activated Protein-C Resistance assay	27	14	21
Factor-V Leiden Mutation	146	218	290
Platelet Function Test	8	13	14
Von Willebrand Factor Assay	42	59	70
Thrombin Time	21	65	102
Anti Beta2 gp1 Antibody Screening test	175	347	289
Factor-VIII levels	50	70	134
Protein-C Function Assay	106	159	231
Antithrombin-III Function Assay	82	120	261
Lupus anticoagulant	408	775	1017

Protein-S -Function Assay	100	159	219
APTT-Mixing Study	9	34	51
Factor-IX levels	11	18	25
Ristocetin induced platelet aggregation test	4	8	1510
Plasma Fibrinogen	573	342	647
Factor V Function Assay	31	10	32
Factor VII Function Assay	1	1	7
Factor X Function Assay	1	7	8
Factor VIII Inhibitor (Bethesda Assay)	19	37	31
Factor IX Inhibitor (Bethesda Assay)	0	1	10
Inhibitor Screening	85	115	114
Factor XIII Screening Test	4	13	41
EPO (Created since 2022)	-	-	01
Molecular Hematology Lab Investigations			
B-RAF V600E_HCL	3	5	4
BCR-ABL Real Time PCR (Quantitative	746	1169	2064
CMV Real Time PCR	35	92	238
FLT3-ITD & NPM1 Multiplex PCR	40	37	20
FLT3-TKD (exon-20)	29	18	8
Jak2 Mutation (V617F)	94	159	177
PML-RARA qualitative	42	62	101
RT-PCR ALL Panel	18	0	35
RT-PCR AML1-ETO	33	26	12
RT-PCR BCR-ABL (p210-p190)	61	92	124
BCR-ABL1 Kinase Domain mutation	-	95	175
MYD88 mutation analysis	-	5	-
MPN Rteflex Panel (Created: 2022)	-	-	04
Transplant Biology Lab Investigations			
BMT-Chimerism	30	32	130
HLA Typing of Family for BMT	46	78	119
HLA Typing (Class-I & II)	0	0	9
HLA Typing class-II	0	0	0
Medico-legal Paternity Testing	0	0	1
HLA Typing of donor for BMT	14	21	6
MYD88 (created: 2022)	-	-	3
Cytogenetics Lab Investigations			
ALL Reflex FISH Panel	72	60	96
Double Hit Lymphoma FISH panel (c-MYC,BCL2 & BCL6 gene rearrangement	9	2	8
FISH for ATM (11q22)/TP53(17p13) gene deletion in CLL	12	28	38
FISH for t(11:14)/1gh-CCND1 fusion	9	2	8
FISH for del (17p13)TP53deletion	6	22	14

FISH for del (5q)	2	6	9
FISH for t(15;17)/PML-RAPa fusion	9	14	6
FISH for del (7q)	8	1	6
FISH for ABL1 gene rearrangement	13	2	-
FISH for PDGFRb gene rearrangement	4	1	8
FISH for t(12;21)ETV6-RUNX1 fusion	1	0	0
FISH for c-MYC gene rearrangement	3	1	5
FISH for t(9;22)/BCR-ABL 1 Fusion	14	89	52
FISH for KMT2A(MLL) gene rearrangement	2	238	1
BM/PB Karyotyping	62	46	268
Stress Cytogenetics Test	7	27	19
FISH got in (16)/CBFb rearrangement	3	7	
AML (Standard risk cytogenetics)FISH Panel (Created: 2022)	-	-	02
FISH for (8,21) RUNX1-RUNX1T1 fusion (created: 2022)	-	-	1
Microbial Hematology Lab			
Serum and BAL Galactomannan Assay	39	663	1290

Training:

PhD Student (Undergoing training/ passed) : 11

DM Student (Undergoing training/ passed) : Nine (Undergoing training)

PDCC student (Undergoing training/ passed) : Three (Undergoing training)

Short-term trainees : Seven

New Course: "3D-Organoids in Cancer Biology and Regeneration" the 01/02 optional course for PhD and DM students of the Institute

New course: "Basic stem cell biology" the 01/02 optional course for PhD and DM students of the Institute

Research Completed

Funding Agency: SGPGIMS

Title of the project: "Micro-RNA mediated regulation of Th17 and Treg cells in Aplastic anemia and their correlation with Immunosuppressive therapy"

Results Arrived: We observed an altered ratio of Th17:Treg cells and an up-regulation of miR-155, miR-17 and miR-146 while a down-regulation of miR-181, miR-126, miR-16 and miR-326 in the peripheral blood T-cells of acquired aplastic anemia patients. The miR-16, miR-181 and miR-326 may have a role in the alteration Th17:Treg cells ratio in the disease.

Funding Agency: DST, Govt. of India

Title of the project: "Evaluation of Cardiomyogenic Potential of cKit⁺ Human Amniotic Fluid Mesenchymal Stem Cells"

Results Arrived: Our results showed that c-Kit⁺ amniotic fluid mesenchymal stem cells rescue in vitro I/R induced injury of cardiomyocytes showing *in vitro* cardiomyogenic potential of these stem cells. The in vivo cardiomyogenic studies are currently ongoing to validate these *in vitro* results.

Research in Progress

Funding Agency: NHM, Govt. of India.

Title of the Project:“Strategies for early detection and counseling of thalassemia carriers”

Funding Agency: SGPGIMS

Title of the Project:“Evaluation of Peripheral blood Leukemic Stem cells count and Leukemic Stem Cell/ Normal hemaopoietic stem cells ratio as a predictor of Tyrosine Kinase Inhibitor response in Chronic Myeloid Leukemia”

Funding Agency: NHM, Govt. of India.

Title of the Project:“Strengthening Towards Comprehensive Hemophilia Care Services in Uttar Pradesh”

Funding Agency: SGPGIMS

Title of the Project:“Standardization and validation of in-house methods for ADAMTS-13 activity and anti CHF-antibody”.

Funding Agency: SGPGIMS

Title of the Project:“Diagnostic Utility of ADAMTS-13 Assay and PLASMIC Score in Patients of Thrombotic Microangiopathies”.

Funding Agency: SGPGIMS.

Title of the Project:“Determination of cell of origin subtypes in diffuse Large B cell Lymphoma by immunohistochemistry and gene expression profiling using RNA based nanostring platform and its correlation with the clinical outcome”

Funding Agency: DST -SERB, Govt. of India

Title of the Project:“Elucidating the Molecular Mechanism of Histone Demethylase KDM5A Mediated Leukemogenesis”.

Funding Agency: Wellcome Trust- DBT India Alliance.

Title of the Project:“Deciphering the role of epigenetic mechanisms in normal and malignant hematopoiesis”.

Funding Agency: DBT, Govt. of India

Title of the Project:“Deciphering the role of bone marrow mesenchymal stem cell-derived exosomes in the pathobiology of aplastic anemia”.

Funding Agency: SGPGIMS

Title of the Project:“Generation of iPSC- derived HLA negative Hematopoietic Stem cells: A step towards treatment of Aplastic Anemia”.

Funding Agency: DST-SERB, Govt. of India,

Title of the Project:“Generation and differentiation of foot print free human induced pluripotent stem cells into pancreatic β -cells: A giant leap toward a clinical-grade cell source for diabetes treatment”.

Funding Agency: ICMR, Govt. of India



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Title of the Project: "Generation of Bioengineered Human Pancreatic Organoid Model for Environmental Diabetogens Screening: A step towards targeted therapy for Diabetes"

Funding Agency: DST-SERB, Govt. of India,

Title of the Project: "Development of human iPSC derived 3D lung organoid as a model for Idiopathic pulmonary fibrosis (IPF) disease: A potential preclinical platform for screening of anti-fibrosis drug and novel biomarker discovery".

Funding Agency: Novartis

Title of the Project: "An Indian Multi-Centric Phase IV study to assess the safety of Crizanlizumab with or without hydroxyurea therapy in Sickle cell disease patients with Vaso-occlusive crises".

Funding Agency: ICMR, Govt. of India

Title of the Project: "Deciphering the inter-relationship of Copy Number Variations (CNV) and Mono-/Biallelic TP53 Inactivation in different Genetic Subgroups of Multiple Myeloma"

Funding Agency: SGPGIMS

Title of the Project: "Comparative study of the cytogenetic and immunophenotypic profile of plasma cells with respect to serum free light chain assay in plasma cell proliferative disorders".

Funding Agency: SGPGIMS

Title of the Project: "Evaluation of the prevalence of Invasive Aspergillosis and optimal duration of Anti-fungal therapy in Acute Leukemia patients using Quantitative Galactomannan Antigen and Aspergillus DNA Assays"

Funding Agency: SGPGIMS

Title of the Project: "Evaluating the Role of Liquid Chromatography-Tandem Mass Spectrometry in Therapeutic Monitoring of Methotrexate in Acute Lymphoid Leukemia".

Funding Agency: DBT, Govt. of India.

Title of the Project: "Development of Indigenous CAR T-cell Therapy with Enhanced Efficacy and Safety".

Funding Agency: ICMR, Govt. of India

Title of the Project: "Understanding the epigenetic basis of lympho-myeloid switch: An escape mechanism from CD19+CAR T-cell therapy".

Funding Agency: SERB-DST, Govt. of India.

Title of the Project: "Understanding the molecular basis of MEF2D-rearranged oncogenic fusion proteins in Leukemogenesis"

Funding Agency: ICMR, Govt. of India.

Title of the Project: "Investigating molecular and cellular mechanisms of therapy-induced plasticity in colon cancer".

Funding Agency: SGPGIMS

Title of the Project: "Analysis of causative erythrocyte membrane proteins and correlation with disease severity in Hereditary Spherocytosis".



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Publications

Indexed Publications:

1. Chauhan P, Gupta A, Bhandari PC, Gupta R, Kashyap R. Primary pediatric myelofibrosis with a novel calreticulin gene mutation. *Pediatr Blood Cancer* 2022; 69: e29597. doi: 10.1002/pbc.29597.
2. Chauhan P, Gupta A, Gopinathan M, Sanjeev, Garg A, Khanna S, Gupta R, Rahman K, Chandra D, Singh MK, Nityanand S. Real-world challenges in the management of acute myeloid leukemia: a single-center experience from North India. *Ann Hematol* 2022; 101:1261-1273. doi: 10.1007/s00277-022-04814-x.
3. Chaturvedi CP, Hashim Z, Tripathy NK*. A New and Highly Sensitive Serum Mannoprotein Lateral Flow Assay for Point-of-Care Diagnosis of Invasive Aspergillosis (Tripathy Method). *Cureus* 2022; 14: e26025. doi: 10.7759/cureus.26025.
4. G Mathiyazhagan, S Aggarwal, P Chauhan, A Gupta, R Kashyap. High-Dose Methotrexate-Induced Dermatological Eruption: A Rare Manifestation of Chemotoxicity. *Indian J Med Paediatr Oncol* 2022; 43: 431-433. doi: 10.1055/s-0042-1748939
5. Gupta R, Gupta, P., Rahman, K. et al. Immunophenotypic Characterization and Ploidy Analysis of Neoplastic Plasma Cells by Multiparametric Flow Cytometry. *Indian J Hematol Blood Transfus* 2022; 38: 473-480. doi.org/10.1007/s12288-021-01477-y
6. Gupta A, Desai N, Sanjeev, Chauhan P, Nityanand S, Hashim Z, Gupta M. Clinical profile and outcome of COVID-19 in haematological malignancies: experience from tertiary care centre in India. *Ann Hematol* 2022; 101:69-79. doi: 10.1007/s00277-021-04644-3.
7. Hasan F, Chauhan P, Gupta, A Yadav S, Kashyap R. Spondyloenchondrodysplasia with immune dysregulation: Role of sirolimus. *Pediatr Blood Cancer* 2022; 69: e29672. doi: 10.1002/pbc.29672.
8. Hashim Z, Nath A, Khan A, Neyaz Z, Marak RSK, Areekkara P, Tiwari A, Srivastava S, Agarwal V, Saxena S, Tripathy N, Azim A, Gupta M, Mishra DP, Mishra P, Singh RK, Gupta D, Gupta A, Sanjeev OP, Ghatak T, Ghoshal U, Dhiman RK, and Tripathy NK*. New insights into development and mortality of COVID-19-associated pulmonary aspergillosis in a homogenous cohort of 1161 intensive care patients. *Mycoses*, 2022. doi: 10.1111/myc.13485.
9. Hashim Z, Neyaz Z, Marak RSK, Nath A, Soniya Nityanand S, and Tripathy NK*. Practice Guidelines for the Diagnosis of COVID-19 Associated Pulmonary Aspergillosis in Intensive Care Setting. *J Intensive Care Medicine*, 2022; 22: 8850666211047166. doi: 10.1177/08850666211047166.
10. James MM, Pal N, Sharma P, Kumawat M, Shubham S, Verma V, Tiwari RR, Singh B, Nagpal R, Sarma DK, Kumar M. Role of butyrogenic Firmicutes in type-2 diabetes. *Journal of Diabetes & Metabolic Disorders*. 2022 Jul 14:1-0.
11. Kumar V, Shukla SK, Choudhary M, Gupta J, Chaudhary P, Srivastava S, Kumar M, Kumar M, Sarma DK, Yadav BC, **Verma V***. Ti₂C-TiO₂ MXene Nanocomposite-Based High-Efficiency Non-Enzymatic Glucose Sensing Platform for Diabetes Monitoring. *Sensors(Basel)*. 2022 Jul 26;22(15):5589.
12. Kumar, S., Gupta, A., Ora, M. et al. Prognostic Role of Interim 18-Fluorodeoxyglucose-PET in Diffuse Large B Cell Lymphoma: Experience from a Tertiary Care Centre in North India. *Indian J Hematol Blood Transfus* 2022; 38: 211-222 .doi: 10.1007/s12288-021-01441-w.
13. Kumawat M, Sharma P, Pal N, James MM, Verma V, Tiwari RR, Shubham S, Sarma DK, Kumar M. Occurrence and seasonal disparity of emerging endocrine disrupting chemicals in a

- drinking water supply system and associated health risk. *Sci Rep.* 2022; 12: 9252. doi: 10.1038/s41598-022-13489-3.
14. M. Gopinathan, Gupta A, Rahman K, Nityanand Soniya. Acute lymphoblastic leukemia masquerading as hemophagocytic lymphohistiocytosis. *J Can Res Ther* 2022; 2022 Apr-Jun;18(3):774-776. doi: 10.4103/jcrt.JCRT_679_20.
 15. Priyanka Gupta, Seema Biswas, Manish K Singh, Ruchi Gupta. Neutrophilic Erythrophagocytosis and Reticulocytopenia; A Rare Manifestation of Cold Autoimmune Hemolytic Anemia. *Turk J Hematol* 2022; 39: 211-212. doi: 10.4274/tjh.galenos.2022.2022.0008.
 16. Rahman K, Singh MK, Chandra D, Gupta R, Sarkar MK, Gupta P, Gupta A. CD 26 expression on circulating Cd34+/CD38- progenitor population is a specific marker and reliable tool for the rapid flow cytometric diagnosis of chronic myeloid leukemia – A single center validation study. *Int J Lab Hematol* 2022; 44: 524-530. doi:10.1111/ijlh.13826.
 17. Rahman K, Chandra D, Singh MK, Singh S, Gupta P, Yadav S, Gupta R. Biclonal cluster lymphoma: SLL/CLL and FL diagnosed on fine needle aspirate flow cytometry – Report of an interesting case. *Cytometry B- Clinical Cytometry* 2022; 102:320-322. doi: 10.1002/cyto.b.22082
 18. Raza S, Rajak S, Srivastava J, Tewari A, Gupta P, Chakravarti B, Ghosh S, Chaturvedi CP, Sinha RA. ULK1 inhibition attenuates telomerase activity in hepatic cells. *Biochim Biophys Acta Mol Cell Res.* 2022; 1869: 119355. DOI: 10.1016/j.bbamcr.2022.119355.
 19. Sarma DK, Dubey R*, Samarth RM, Shubham S, Chowdhury P, Kumawat M, Verma V, Tiwari RR, Kumar M*. The Biological Effects of Polystyrene Nanoplastics on Human Peripheral Blood Lymphocytes. *Nanomaterials (Basel).* 2022 May 11;12(10):1632.
 20. Sarma DK, Kumar M, Dhurve J, Pal N, Sharma P, James MM, Das D, Mishra S, Shubham S, Kumawat M, Verma V, Tiwari RR, Nagpal R, Marotta F. Influence of Host Blood Meal Source on Gut Microbiota of Wild Caught *Aedes aegypti*, a Dominant Arboviral Disease Vector. *Microorganisms.* 2022; 10: 332. doi: 10.3390/microorganisms10020332.
 21. Sarma DK, Kumar M, Balabaskaran Nina P, Balasubramani K, Pramanik M, Kutum R, Shubham S, Das D, Kumawat M, Verma V, Dhurve J, George SL, Balasundreshwaran A, Prakash A, Tiwari RR. An assessment of remotely sensed environmental variables on Dengue epidemiology in Central India. *PLoS Negl Trop Dis.* 2022;16: e0010859. doi: 10.1371/journal.pntd.0010859.
 22. Shah A, Kumar A, Katiyar S, Gupta A, **Chaturvedi CP***. Upfront screening by quantitative real-time PCR assay identifies NUP98-NSD1 fusion transcript in Indian AML patients. *Diagnostics* 2022; 3001. doi: 10.3390/diagnostics12123001.
 23. Singh MK, Paswan, V., Dwivedi, S. *et al.* An Analysis of M-protein in Plasma cell Dyscrasia Patients Identifies that IgG Lambda Subtype is More Commonly Associated with Normal Serum Free Light Chain (SFLC) Ratio. *Ind J Clin Biochem* 2022; 37: 466-472. doi.org/10.1007/s12291-021-01017-5
 24. Singh, AK, Neyaz, Z., Verma, R., Gupta, A., Mishra, R., & Mishra, P. Diagnostic yield and safety of percutaneous CT-guided biopsy of retroperitoneal lesions and analysis of imaging features. *Acta Radiologica* 2022;63: 149-158. doi: 10.1177/0284185121990286.
 25. Singh SK, Singh A, Kumar V, Gupta J, Umrao S, Kumar M, Sarma DK, Leja M, Bhandari MP, Verma V*. Nanosheets Based Approach to Elevate the Proliferative and Differentiation Efficacy of Human Wharton's Jelly Mesenchymal Stem Cells. *Int J Mol Sci.* 2022;23: 5816.
 26. Singh K*, Akhtar MS*. Hofmeister Series Salts have an Unusual Effect on the Stability of *Toxoplasma gondii* Ferredoxin NADP+ Reductase. *Protein Pept Lett.* 2022;29(12):1099-1107.

27. Singh K*, Kumari S, Singh B, Choubey RB, Mitra DK, & Rai AK. Jurkat T Cells are Immunophenotypically Distinct from T-Cell Acute Lymphoblastic Leukemia Cells Due to High-Level Surface Expression of CD5. *Cancer Invest.* 2022; 40(8):675-679.
28. Srivastava J, Katiyar S, Chaturvedi CP, Nityanand S*. Extracellular vesicles from bone marrow mesenchymal stromal cells of severe aplastic anemia patients attenuate hematopoietic functions of CD34⁺ hematopoietic stem and progenitor cells. *Cell BiolInt* 2022; 46: 1970-1976. DOI: 10.1002/cbin.11885.
29. Shubham S, Kumar M, Sarma DK, Kumawat M, Verma V, Samartha RM, Tiwari RR. Role of air pollution in chronic kidney disease: an update on evidence, mechanisms and mitigation strategies. *Int Arch Occup Environ Health.* 2022 ;95:897-908. doi: 10.1007/s00420-021-01808-6.

Non-Indexed Publications: None

Chapter(s) in Book(s): None

Book(s): None

Visiting Professors

Dr Mohammad Feroz Alam., Assistant professor; 01.09.2022 to 30.09.2022

Departmental Highlights:None

New Initiatives

Started New OPDs including Hemaostasis and Thrombosis Clinic, Thalassemia Clinic, and Pediatric Hemato-oncology Clinic.

Started Matched unrelated donor BMT procedure.

Started rare transplants of Primary Amyloidosis, Plasma Cell Leukaemia, Emberger's syndrome.

Started new diagnostic lab investigations viz. FISH panel for ALL, EMA binding test, Comprehensive AML and ALL molecular panel, MPN reflex panels, and NUP 98 for acute leukemia.

Patents: None

DEPARTMENT OF HOSPITAL ADMINISTRATION

STAFF

Name of Faculty Members:

1. Rajesh Harsvardhan HoD, Hospital Administration

Awards & Honours Conferred to Faculty Members

- SGPGIMS has been awarded by Ms. Sangeeta Singh, CEO-SACHIS, AB-PMJAY, Uttar Pradesh on the occasion of National Doctor's Day, 1st July, 2022 for treating beneficiaries & thereby supporting India's journey towards ensuring equitable access to quality health care service to all.
- Conferred with the award 'Chandragupta - The Young Administrator Award' by the Academy of Hospital Administration on 5th August 2022
- Chairperson in Nutricon 2022 for the session 'A Rational Approach to Nutritional Assessment' held on 3th & 14th August 2022

Administrative Activities:

The contribution of Department of Hospital Administration in the institute for the year are mentioned vide infra:

Accomplishments of SOTTO - U. P.

1. Awareness session through Medical Camp was organized at Thakur Public School by Lions Club, Lucknow on 2nd January, 2022
2. Awareness session at IGNOU, Regional Center to sensitize young minds about the importance of Organ & Tissue Donation on 3rd March, 2022
3. Awareness session at SBI Bank, SGPGIMS Branch, Lucknow to sensitize the banking sector employees regarding organ donation was conducted by SOTTO - U. P. on 4th March, 2022
4. Awareness session on Organ & Tissue Donation was conducted in Indian Oriental Bank, Lucknow, in order to sensitize the stakeholders about the prospects of organ donation on 11th March, 2022
5. To create awareness about organ donation & to subsequently augment the organ donor pool of Uttar Pradesh, a Cyclothon was organized by IMS-BHU in collaboration with SOTTO, U. P. & with support from National Organ & Tissue Transplant Organization (NOTTO) & National Medicos Organization, on the occasion of World Kidney Day, on 12th March, 2022. The basic aim of the Cyclothon was to create awareness about Kidney health, related issues & ways to prevent it.
6. Awareness program & liver donor felicitation was organized by SOTTO - U. P. & Departments of Hepatology, Gastroenterology & Surgical Gastroenterology on the occasion of World Liver Day, 19th April, 2022
7. An awareness session on Role of Police in Organ & Tissue Donation was conducted for GRP Police Officers at Police Headquarters, Lucknow on 23rd April, 2022
8. SOP on the role of Police Department in the case of Deceased Organ Donation was formulated by Dr. R. Harsvardhan & successfully implemented for the entire state of U. P.

9. Pledge Desk was setup on National Seminar Legal Aspect of Medical Practice (LAMP) at SGPGIMS on 01st May, 2022
10. Janas Initiatives organized a program on 12th June 2022 at village Hemriya, Behraich. On this occasion Nodal Officer, SOTTO - U. P. spoke about the various facts and myths about Organ & Tissue Donation and sensitized audiences about the importance of Organ & Tissue Donation. Later Pledge drive was conducted in which participants took pledge and submitted Form 7 of Organ Donation
11. SOTTO - U. P. successfully conducted pledge drive on Organ & Tissue Donation at Atal Bihari Vajpayee, Academic Block, Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow during the CME program on Legal Opinion on Rights & Defences for Doctors. Guest of Honor was Mr. D.K. Thakur, IPS (Commissioner of Police, Lucknow) and Chief Guest was Mr. Vinod Shahi (Addl. Advocate General U. P.) dated 23rd July, 2022
12. An awareness session on occasion of World Hepatitis Day & Pledge Drive through Help Desk organized by Deptt. of Hepatology, SGPGIMS in collaboration with Deptt. of Gastroenterology, KGMU and supported by SOTTO - U. P. & Deptt. of Hospital Administration conducted on 28th July 2022
13. DoHA& SOTTO, U.P., established transplant centres in BHU, Varanasi after 20 years & at GIMS, Noida, September, 2022
14. SOTTO - U. P. organized a two-day Awareness session cum Pledge Drive was conducted on 1st & 2nd October, 2022 by SOTTO - U. P. at 19th National Book Fair, Balrampur Garden, Opposite Doordarshan Kendra, Lucknow, U. P.
15. Team of SOTTO started an initiative to conduct IEC session on Organ Donation, with each session lasting around 30 minutes, starting from 17-10-2022, weekly. Till date, 17 departments have been covered.

Contributions in Apex Trauma Center:

- 5 Pack Systems
- Patients Feedback System: The QR code-based system was developed for patients to give feedback on hospital services.
- Parking allocation for Staff and faculty
- Routine fire safety training/ mock drills
- Central control room also ensures daily monitoring and eliminates Administrative concerns of hospital services

Organizational, Structural & Functional Segregation of Department of Hospital Administration:

Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) Cell:

A total of **7250 beneficiaries** has availed the treatment under AB-PMJAY at SGPGIMS till date. **SGPGIMS has been awarded by Ms. Sangeeta Singh, CEO-SACHIS, AB-PMJAY, Uttar Pradesh on the occasion of National Doctor's Day, 1st July, 2022** for treating beneficiaries & thereby supporting India's journey towards ensuring equitable access to quality health care service to all.

	2022
Beneficiaries	2560



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Hospital Infection Control Cell:

Department has taken lead to establish Hospital Infection Control Cell. It works under the umbrella of SGPGIMS Hospital Infection Control Committee (SHICOM).

Accomplishments of Hospital Infection Control Cell, DoHA

1. Awareness Program on World Hand Hygiene Day, 2022 on 05-05-2022 was organized by Hospital Infection Control Cell, Department of Hospital Administration, SGPGIMS. (185 nursing officer & students were trained)
2. 14th Longitudinal In-service Training Program was organized by the Hospital Infection Control Cell & Biomedical Waste Management Committee, Department of Hospital Administration, SGPGIMS at Apex Trauma Centre, SGPGIMS on 26-02-2022. (49 nursing officers were trained)
3. Resident & ICN, Hospital Infection Control Cell took administrative round of 18 ICUs from 01-08-2022 to 20-09-2022
4. A Workshop on surgical & endoscopic instruments reprocessing was organized by the Hospital Infection Control Cell, Department of Hospital Administration at Seminar Hall, DoHA, Central Library on 15th October, 2022
5. An awareness session was organized in different departments of institute by Hospital infection control cell on the occasion of International Infection Prevention week from 16 Oct' 2022 to 22 Oct' 2022. (32 wards were covered)
6. An onsite training session was organised on Hand Hygiene Practice organized by the Hospital Infection Control Cell on 05-11-2022. (10 nursing officers were trained)
7. An Awareness Program & Vaccination Campaign on World Immunization Day, 2022 was organized by the Hospital Infection Control Cell, Department of Hospital Administration under the aegis of SGPGIMS Hospital Infection Control Committee (SHICOM), SGPGIMS, Lucknow, U. P. on 10th November, 2022 at Seminar Hall, General Hospital, SGPGIMS
8. An awareness program was conducted by Hospital Infection Control Committee at Prof. Soma Kaushik Auditorium, SGPGIMS on World's AIDS Day Dec 1' 2022. (66 nursing officers attended the program)
9. The Hospital Infection Control Cell organized six sessions of Workshop on Best Practices & Best Outcomes vis-à-vis IV Access & Care Bundle in collaboration with Hospital Infection Society at H. G. Khurana Auditorium, SGPGIMS from 7-12-2022 to 10-12-2022. We had organized a workshop on sample collection along with mannequin & dummy arms-based hands-on training on two parallel skill stations for our In-service nursing officers. We trained 600+ nursing officer from various patient care area with a strength of 80 per batch.

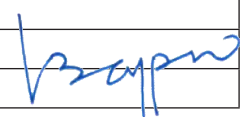
Patient Safety Cell:

The department has also been entrusted with the responsibility to organize 01 **Course on Patient Safety in Healthcare** for residents of SGPGIMS as a part of the elective course **55 Residents** were provided training in the year 2022. The overall objective of this course is to enhance understanding towards patient safety by way of adding perspective on patient safety

Adverse Drug Reaction Monitoring Cell (ADRM):

647 Adverse Events have been reported from the month of **July 2021 to till date.**

	2022
No. of ADR Reporting	107
No. of AEFI Reporting	281



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Competent Authority/Hospital Based Authorization Committee(CA/HBAC):

Streamlined the work of Competent Authority mandated to grant No Objection Certificate under THOA Act, 1994. Since its inception, a total number of **823 NOCs** have been issued by Competent Authority & **07 NOC** have been issued by Hospital Based Authorization Committee. 130 NOCs have been granted in the year 2022.

	2022
No. of NOC given in CA	130
No. of NOC given in HBAC	02

RAN:

The Rashtriya Arogya Nidhi (RAN) scheme was implemented in SGPGIMS & a total of **28 Pre-authorizations** have been conducted in the year 2022.

Pandit Deendayal Upadhyay Rajya Karmchari Cashless Chikitsa Yojna (PDDURKCCY)

Cashless medical treatment facility being provided to the government servants, retired government servants & their dependent families of Uttar Pradesh state by G.O. No. - 1/2022/10/5-1-22-19 G/2016 Dated 07-01-2022 & 71-1002 (002)/25/2022/114/2022/I/232507/2022 dated 07-01-2022, issued by Govt. of U.P. This facility will be available in all government hospitals empaneled under Ayushman Bharat Pradhan Mantri Jan Arogya Yojna (AB-PMJAY) in U.P. In this scheme, cashless treatment is being commissioned without any financial limit in Government Medical Institutions/ Hospitals in U.P. & PDDURKCCY was implemented at SGPGIMS, U. P. on 13th January, 2023.

	2023
Beneficiaries	140

NIRF Ranking:

The department has been responsible for obtaining, scrutinizing & homogenizing, uploading & submission of data of SGPGIMS on the online portal for NIRF Ranking. In the year 2022, SGPGIMS has secured **7th Rank** in the country from over 100 medical institutions

	2022
NIRF Ranking	7 th

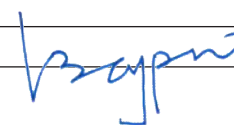
Teaching & Training Activities:

Following full time & part time teaching program apart from the training activities were undertaken by the Department in the year 2021:

Sl. No.	2022
PG-HA	04

- Masters in Hospital Administration (MHA):** A total of 28 students completed the MHA course till the year 2022.
- Short Term Trainees (STT):** Till date the department has provided training to more than 124 STTs.

STT	2022
	14


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iii. **Following Teaching Programs are currently in its currency:**

- a.
- Certificate Course in Community Health for Nurses (CCHN):**
- A total of 05 batches have completed training in the department since the commencement of the program.

Sl. No.	2022
No. of Students	54

- c.
- PGDHHM:**
- SGPGIMS has completed
- 22 batches**
- of PGDHHM Program, training over
- 332 students**
- .

Sl. No.	2022
No. of Students	16

- d.
- CHCWM:**
- Course is of 6 months in duration & Teaching Program consists of one contact program which is inclusive of both talk by experts, hospital visit. As SGPGIMS have a modern inhouse hi-tech BMW Processing Unit, this course is functional here. This is only of its kind in entire North U. P. & has been authorized under BMMW Rules, 2016, Air Act & Water Act.

Sl. No.	2022
No. of Students	12

- f.
- CFAID:**
- The Certificate in First AID Course is of 6 months in duration & Teaching Program consists of one contact program which is inclusive of both talk by experts, hospital visit & practical session. This program is being run in collaboration with ATC & Department of Emergency Medicine.

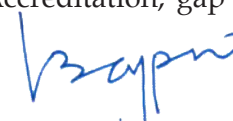
Sl. No.	2022
No. of Students	56

Research Activities:

MHA Batch 2020 -22 completed research on the following topics:

Research in Progress (PG-HA Batch 2021-23):
Projects

1. To assess the level of KAP vis-à-vis Hepatitis B vaccination status of healthcare workers and to strengthen compliance by executing appropriate interventions, so as to improve the current status of vaccination in a Tertiary Healthcare Teaching Institute in Northern India.
2. A study to rationalise the Healthcare (clinical & medical) record forms in use at Trauma centres; so as to develop an evidence-based trauma registry and to recommend policy framework, if required in a Tertiary Healthcare Teaching Institute in Northern India
3. A study to assess the baseline patient safety parameters w.r.t National Patient Safety Implementation Framework & to assess the impact of an appropriate intervention on its compliance in pre-identified areas of the Tertiary Healthcare Institute in Northern India.
4. A study to assess the process of organ & tissue retrieval, transplantation & all intermediary steps vis-à-vis guidelines provided by the THOT Act & Rules in DGME authorized Transplant/Retrieval/Transplant & Retrieval centers so as to recommend suitable interventions & ensure compliance with THOT Act & Rules
5. Evaluation of a tertiary care teaching institute with regard to NAAC Accreditation, gap identification & vis-a-vis fulfillment of the gaps, of any.



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6. A study to ascertain the cost of Healthcare Associated Infections (HAIs), so as to communicate the ALOS and the total cost incurred (including out-of-pocket expenditure & social cost) vis-à-vis suggest containment measures, if required in a Tertiary Healthcare Teaching Institute in Northern India.

Publications:

1. Harsvardhan R, Alvi S, Arora T, Srivastava A. A Study to assess the impact of an ongoing capacity building program for nursing staff on augmentation of Knowledge, Attitude and Practice (KAP) of the trainees at Program Study Centre (PSC), Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS), Lucknow. J Indira Gandhi Inst Med Sci 2022;8:36-42.
2. Harsvardhan, R.; Srivastava, Ankita; Mehrotra, Ayush; Singh, Saurabh; Gupta, Gaurav; Kumari, Shweta; Alvi, Saima. A meta-analysis of quality assessment reports using prevalidated tool to evaluate the quality of health-care services in three-core domains biomedical waste management, Hospital Infection Control Practices, and Patient Safety Practices in government health-care organizations of U.P.. Journal of Indira Gandhi Institute Of Medical Sciences 8(1):p 28-32, Jan-Jun 2022. | DOI: 10.4103/jigims.jigims_49_21
3. Harsvardhan R, Kushwaha R, Gupta R. A study on low-cost model of hospital pharmacy at a government healthcare teaching institute, as a feedforward measure of control. J Indira Gandhi Inst Med Sci 2022;8:43-50.
4. Harsvardhan R., Singh S.; Evidence Based Infection Prevention & Control: Guidelines for Hospital Construction & Renovation; Journal of the Academy of Hospital Administration; Volume 34 No. 1 January June 2022
5. Harsvardhan R, Kushwaha R, Gupta R. A study on low-cost model of hospital pharmacy at a government healthcare teaching institute, as a feedforward measure of control. J Indira Gandhi Inst Med Sci 2022;8:48-55.
6. Harsvardhan R, Srivastava A, Mehrotra A, Singh S, Gupta G, Kumari S, et al. A meta-analysis of quality assessment reports using prevalidated tool to evaluate the quality of health-care services in three-core domains biomedical waste management, Hospital Infection Control Practices, and Patient Safety Practices in government health-care organizations of U.P. J Indira Gandhi Inst Med Sci 2022;8:28-32.
7. Harsvardhan R, Alvi S, Arora T, Srivastava A. A Study to assess the impact of an ongoing capacity building program for nursing staff on augmentation of Knowledge, Attitude and Practice (KAP) of the trainees at Program Study Centre (PSC), Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS), Lucknow. J Indira Gandhi Inst Med Sci 2022;8:36-42.
8. Harsvardhan, R.; Choudhari, Swati. Patient Safety vis-à-vis Safe Surgery: The Current Perspective. Journal of Indira Gandhi Institute Of Medical Sciences 8(2):p 77-81, Jul-Dec 2022. | DOI: 10.4103/jigims.jigims_33_22
9. Harsvardhan R, Kumar R, Mehrotra A. Legal aspect of medical practice: A sojourn. J Indira Gandhi Inst Med Sci 2022; 8:98-104
10. Harsvardhan R, Jaiswal A, Kapoor P, Halder R. A study to rationalize the health-care (clinical and medical) record forms in use at SGPGIMS hospital, in conformance with inter/national guidelines, so as to ensure structural and contextual uniformity while updating the same for prospective in-house consumption by the end users. J Indira Gandhi Inst Med Sci 2022;8:128-33.



11. Harsvardhan R, Mehrotra A, Agarwal A, Sharma P, Pandey G, Behari A. Assessment of Human Factors & Ergonomics effecting Patient Safety Culture in a Tertiary Healthcare setting of a South Asian country. Journal of Patient Safety and Quality Improvement. 2022;71-82. Doi: 10.22038/PSJ.2022.66344.1364
12. Harsvardhan R, Arora T, Singh S, Lal P. Cost Analysis on Total Cost Incurred (Including Out-of-pocket Expenditure and Social Cost) During Palliative Care in Cases of Head-and-Neck Cancer at a Government Regional Cancer Centre in North India. Indian J Palliat Care. 2022 Oct-Dec;28(4):419-427. doi: 10.25259/IJPC_23_2022. Epub 2022 Aug 23. PMID: 36447504; PMCID: PMC9699913.
13. Harsvardhan R, Sharma DK, Gupta S, Arya SK, Singh IB, Kushwaha R. Introduction to Costing of Inpatient Care Services. CPMS-V10 [Internet]. 2022 Aug. 26 [cited 2023 Apr. 30];:1-21. Available from: <https://stm.bookpi.org/CPMS-V10/article/view/8061>

Chapter In Books:

1. S. Sathpathy, S.V. Adhish and R.Harsvardhan; Self-Management Skills: Essential for Excellence in Health Management; In: Textbook Management of Healthcare Systems, Oxford
2. Rajesh Harsvardhan, Shakti Kumar Gupta, Sunil Kant, R Chandrashekhar; Catheterization Laboratory Facility; In: Textbook Biomedical Translational Research(Drug Design Discovery), Springer Publications
3. R.Harsvardhan, Tulika Gupta; Introduction to Hospital Infection Control & Hand Hygiene; Emerging trends in Disease & Health Research; Vol-9, 24 June 2022, Pg: 143-154
4. Raj Kumar, Rishabh Kumar, R. Harsvardhan, A. K. Mahapatra; Brain Stem Death; In: Textbook of Traumatic Brain Injury; Raj Kumar, Ved Prakash Maurya, A. K. Mahapatra; 3rd Edition, Nahi Publications; Pg.: 780-792
5. R. Harsvardhan, Rishabh Kumar, Raj Kumar; Indian Law on Organ Transplant; In: Textbook of Traumatic Brain Injury; Raj Kumar, Ved Prakash Maurya, A. K. Mahapatra; 3rd Edition, Nahi Publications; Pg.: 793-803

Guest Faculty: None

Department Highlights:

1. Department of Hospital Administration, SGPGIMS, under the aegis of **Dr. R. Harsvardhan, Registrar, Birth & Death & Department Head**, also an expert in the legal field organized a **State Level Seminar on Registration of Birth & Death Act: Principles & Practices**, on **26th March, 2022** so as to ensure that the Registration of Births & Death are carried out as per the RBD Act. More than 300 participants participated for it.
2. Department of Hospital Administration, SGPGIMS in collaboration with Government Medical College, Banda organized **Forensic Medicon from 27th April to 01st May 2022. Total 750+ delegates** attended the conference
3. Laws are designed to protect individuals when making decisions about their healthcare. These laws set out the responsibilities of healthcare professionals hence it is imperative that the medical fraternity be well versed with the law of the land, keeping the same in mind, Department of Hospital Administration, SGPGIMS in collaboration with Regional Chapter, Academy of Hospital Administration, U. P., Lucknow, organized a **National Seminar on "Legal Aspects of Medical & Managerial Practice" (LAMP)** on 1st May, 2022. The seminar aimed at **understanding implementation & reducing the litigations associated with the legal aspects related with medical practices.**

4. The Department of Hospital Administration, SGPGIMS in collaboration with **Rajyoga Education and Research Foundation** organized a Spiritual Session on “**GENES, EMOTIONS & EPIGENETICS: How Thoughts Regulate Life**” on 7th May, 2022.
5. Department of Hospital Administration, SGPGIMS had also organized **Induction Cum Training Program** for newly recruited staff (Nursing/MLT/JMLT).
6. **Apart from this many other awareness programs like World Rabies Day, World Cancer Day, World Aids Day, World Stroke Day, World Environment Day, International Day of Yoga, etc. are convened accordingly**

Awards & Honours Conferred to Departement:

1. Best Poster Presentation Award in National Conference, 2022 to Dr.R. Harsvardhan, HoD, Hospital Administration and Dr. Tanvi Arora, Resident, Deptt. of Hospital Administration.

Patents: None



DEPARTMENT OF HEPATOLOGY

STAFF

- | | |
|--|---|
| 1. Radha Krishan Dhiman, MD, DM, FAMS, FACG, FRCP Edin., FRCP London, FAASLD | Professor and Head |
| 2. Akash Roy, MD, DM | Assistant Professor
Left on 31 st March 2022 |
| 3. Surender Singh, MD, DM | Assistant Professor |
| 4. Ajay Kumar Mishra, MD, DM | Assistant Professor
Joined on 11 th July 2022 |

Departmental Activities

Awards and Recognitions

Dr RK Dhiman

- Dr K. N. Jalan Oration, Indian Society of Gastroenterology, delivered on 19 February 2022

Membership of Societies

Dr RK Dhiman

Fellow

- American College of Gastroenterology (FACG)
- National Association of Medical Sciences (FAMS)
- Royal College of Physician, Edinburgh (FRCP Edinburgh)
- Royal College of Physician, London (FRCP London)
- Fellow, American Association for the Study of Liver Diseases (FAASLD)

Member:

- American Association for the Study of Liver Diseases (AASLD),
- American Society of Gastrointestinal Endoscopy (ASGE),
- European Association for the Study of the Liver (EASL),
- National Academy of Medical Sciences (MNAMS) till 2010,
- Indian Society of Gastroenterology (ISG),
- Indian Association for study of the liver (INASL)
- Society of Gastrointestinal Endoscopy of India (SGEI)

Dr Akash Roy

- American Association for the Study of Liver Diseases (AASLD),
- European Association for the Study of the Liver (EASL),
- Indian Association for study of the liver (INASL)

Dr Surender Singh

- American Association for the Study of Liver Diseases (AASLD),



- European Association for the Study of the Liver (EASL),
- Indian Association for study of the liver (INASL)

Dr Ajay Kumar Mishra

- American Association for the Study of Liver Diseases (AASLD),
- European Association for the Study of the Liver (EASL),
- Indian Association for study of the liver (INASL)

Patient Care Services (Department was started on 16th February 2021)

Serial	Services	No in 2021
1	New registration in OPD	397
2	No of follow-up patients	2650
3	Total number of OPD patients	3047
4	No of ICU admission	156
5	No of patients admitted in ward	262
6	Total number of patients admitted	418

Training

None

Research Projects

1. Intramural: None
2. Extramural: None

Publications of journal articles

1. Hashim Z, Nath A, Khan A, Dhiman RK et al. New insights into development and mortality of COVID-19-associated pulmonary aspergillosis in a homogenous cohort of 1161 intensive care patients. *Mycoses*. 2022 Nov;65(11):1010-1023. doi: 10.1111/myc.13485.
2. Baghel SS, Keshri AK, Mishra P, Dhiman RK et al. The Spectrum of Invasive Fungal Sinusitis in COVID-19 Patients: Experience from a Tertiary Care Referral Center in Northern India. *J Fungi (Basel)*. 2022 Feb 24;8(3):223. doi: 10.3390/jof8030223.
3. Chugh Y, Katoch S, Sharma D, Dhiman RK et al. Health-Related Quality of Life Among Liver Disorder Patients in Northern India. *Indian J Community Med*. 2022 Jan-Mar;47(1):76-81. doi: 10.4103/ijcm.ijcm_1033_21.
4. Gupta H, Nigam N, Singh S, Roy A, Dhiman RK. Immune Boosting Gone Wrong? A COVID-Concoction-Conundrum. *J Clin Exp Hepatol*. 2022 Jan-Feb;12(1):235-236. doi: 10.1016/j.jceh.2021.09.022.
5. Dhariwal S, Roy A, Taneja S, Bansal A, Gorski U, Singh S, De A, Verma N, Premkumar M, Duseja A, Dhiman R, Singh V. Assessment of Sarcopenia Using Muscle Ultrasound in Patients With Cirrhosis and Sarcopenic Obesity (AMUSE STUDY). *J Clin Gastroenterol*. 2022 Aug 9. doi: 10.1097/MCG.0000000000001745.
6. Roy, A, Verma, N, Singh, S, Pradhan, P, Taneja, S, Singh, M. Immune-mediated liver injury following COVID-19 vaccination: A systematic review. *Hepatol Commun*. 2022; 6: 2513– 2522. <https://doi.org/10.1002/hep4.1979>



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7. Gupta H, Nigam N, Singh S, Roy A, Dhiman RK. Immune Boosting Gone Wrong? A COVID-Concoction-Conundrum. *J Clin Exp Hepatol*. 2022 Jan-Feb;12(1):235-236. doi: 10.1016/j.jceh.2021.09.022.
8. Dhariwal S, Roy A, Taneja S, Bansal A, Gorski U, Singh S, De A, Verma N, Premkumar M, Duseja A, Dhiman R, Singh V. Assessment of Sarcopenia Using Muscle Ultrasound in Patients With Cirrhosis and Sarcopenic Obesity (AMUSE STUDY). *J Clin Gastroenterol*. 2022 Aug 9. doi: 10.1097/MCG.0000000000001745.
9. Roy, A, Verma, N, Singh, S, Pradhan, P, Taneja, S, Singh, M. Immune-mediated liver injury following COVID-19 vaccination: A systematic review. *Hepatol Commun*. 2022; 6: 2513– 2522. <https://doi.org/10.1002/hep4.1979>
10. Gupta H, Nigam N, Singh S, Roy A, Dhiman RK. Immune Boosting Gone Wrong? A COVID-Concoction-Conundrum. *J Clin Exp Hepatol*. 2022 Jan-Feb;12(1):235-236. doi: 10.1016/j.jceh.2021.09.022.
11. Dhariwal S, Roy A, Taneja S, Bansal A, Gorski U, Singh S, De A, Verma N, Premkumar M, Duseja A, Dhiman R, Singh V. Assessment of Sarcopenia Using Muscle Ultrasound in Patients With Cirrhosis and Sarcopenic Obesity (AMUSE STUDY). *J Clin Gastroenterol*. 2022 Aug 9. doi: 10.1097/MCG.0000000000001745.
12. Singh, S., Bush, N. and Taneja, S. (2022), Simple bedside tests as an alternative to sarcopenia HIBA score in predicting sarcopenia and mortality in cirrhosis. *Hepatol Commun*, 6: 3280-3280. <https://doi.org/10.1002/hep4.1988>
13. Singh S, Bush N, Taneja S. Daily Step Count as Prognostic Marker in Cirrhosis: So Close yet so Far! *Clin Gastroenterol Hepatol*. 2023 Feb;21(2):561. doi: 10.1016/j.cgh.2022.04.005.

Book Chapter

None

Conference Presentation

1. Poster presentation at EASL 2021.
2. Paper presentation at APDW 2021.
3. Paper presentation at INASL 2021.

Workshop/Conference Organized

None

DEPARTMENT OF MATERNAL AND REPRODUCTIVE HEALTH

STAFF

Name of Faculty Members:

1. Mandakini Pradhan, MD, DNB, DM	Professor & Head
2. Amrit Gupta, MS	Professor
3. Indulata, MD, DNB	Professor
4. Sangeeta Yadav, MD	Addl. Professor
5. Neeta Singh, MS	Addl. Professor

Activities

Awards and Recognitions

Dr. Mandakini Pradhan

- Member of International society of Ultrasound in Obstetric and Gynaecology
- Chairperson of FOGSI Genetics and Fetal Medicine Committee
- "FOGSI DHEERA Award" on 16.9.2022 by President FOGSI
- Chair of the committee of Rh Neg Pregnancy of "Stillbirth Society of India"
- Vice president of Fetal Medicine Society of India UP Chapter
- Awarded Fellowship of Indian College of Obstetrics and Gynecology(FICOG)

Dr Amrit Gupta

- Awarded the annual membership of British Society for Endocrinology
- Elected as Treasurer LOGS (2021-2023)
- Elected as Treasurer Indian Menopausal Society of India (2021-2023)
- Elected as executive member UP chapter IFS(2021-2023)
- Appointed as city Representative of UPSC-AGOI (2021-2023).

Dr Indulata

- Selected as International faculty (Instructor) of Fundamental Critical Care Support- -Obstetrics Course (FCCS_OBS) of Society of Critical Care Medicine, USA in June, 2022

Dr Sangeeta Yadav

- Awarded Fellowship of Indian College of Obstetrics and Gynecology(FICOG) at AICOG-Indore,2022

Dr Neeta Singh

- Awarded Fellowship of Indian College of Obstetrics and Gynecology(FICOG) at AICOG-Indore,2022



Invited sessions and chairpersons/lectures for Conferences: 2022 (Name of faculty and Session)

Dr Mandakini Pradhan

- Invited faculty in Pre Congress workshop on fetal medicine and second international conference of Fetal Medicine, Dhaka, Bangladesh Society of obstetrics and gynecology on 8th September 2022
- Fetal therapy
- Epigenetics in Perinatal care
- *Global Conference on Updates in Obstetrics & Gynaecology (GCUOG 2022)* from 15th - 17th July 2022 at Hyderabad organised by FOGSI. Talked on “Maternal Near Miss - Lessons to be Learned”
- 25th January 2022: SONO web pulse in second trimester scan “prenatal diagnostic techniques”
- 12th February 2022: “PG force” PG academic programme web series speaker on basics of genetics for obstetrician and gynecologist
- 18th June 2022: FOGSI-ICOG annual conference “GOOGLY” at Navi Mumbai: “Bad Obstetric History”
- 27th Aug 2022: InSARG biannual Conference at Agra: Moderate a Panel on “Genetics Disorder in ObgyPractice”
- 18th November, 2022: FOGSI West Zonal Conference with Yuva 2022 on “Fetal Therapy” at Ranthambore, Rajasthan.
- 23rd Nov 2022: Star Pravah Knowledge series: Genetics of Recurrent Pregnancy Loss
- 27th Sept 2022: Key note address on “First trimester aneuploidy screening methodology: challenges in Indian context” by Gorakhpur Society of OBGY.

Dr Indulata

- Presented E- moderated poster on “**fetal malformation with placenta accreta spectrum - two difficult tales in a pregnancy**” at 30th World Congress on Controversies in Obstetrics, Gynecology & Infertility (COGI) 2022 Conference, from 24-26th Nov 2022, Amsterdam, Netherlands.
- Presented oral paper on “a rare case of Takayasu arteritis and its complication in pregnancy: a case report” in 14th ISPAT Biennial conference held at Hotel Clark Avadh on 15th May 2022

Dr Sangeeta Yadav:

- Panelist in the Panel on Medical Perplexities in Third Trimester in 14th ISPAT Biennial National Conference on 15th May 2022
- Moderated the panel on “Current Protocols in Aneuploidy Screening” organized by ISOPARB Lucknow in association with ISOPARB Kolkata on 18th May 2022
- Panelist in the Panel on High Risk Pregnancy in the National CME on “From Dilemmas to Decision making in High Risk Pregnancy” on 4th September 2022
- Panelist in the Panel on “Controversies and Consensus in FGR” organized by Fetal Medicine and Genetics Committee, FOGSI on 13th December 2022
- Talk on “Pregnancy and Hypertension: case series and guidelines” on 14th Foundation Day of Maternal and Reproductive Health, SGPGIMS on 17th December



Dr Neeta Singh

- Comparison of Cardiomyogenic Potential of Amniotic Fluid Mesenchymal Stromal Cells Derived from Normal and Isolated Congenital Heart Defective Fetuses. Presented at 3rd World Congress on Cardiac Sciences – 2022” held on 30th January 2022, Virtually by BioGenesis Health Cluster, Bengaluru, Karnataka, India. (Received best paper award)
- Congenital Urinary Tract Obstruction: Associations and Implications. Presented at ISPAT, Lucknow, May 2022
- Antenatal Fetal vascular malformations. Presented at ISPAT, Lucknow, May 2022
- Pheochromocytoma in pregnancy. Presented at East Zone Yuva FOGSI, Ranchi, 3rd September 2022
- Mirror syndrome in pregnancy: a case report. Presented at East Zone Yuva FOGSI, Ranchi, 3rd September 2022
- Guest speaker on ‘Inverting the pyramid of antenatal care’ organised by Obstetrics and Gynaecology Society of Northern India, 20th March 2022
- Guest speaker on ‘Late evolving anomalies in third trimester, What next?’ in East Zone YuvaFOGSI , 2nd September 2022
- Guest speaker on ‘Rh negative pregnancy – prevention and management’ at 8th AOGSBJ, Bhagalpur, Bihar on 11th November 2022
- Panelist in ‘Optimising intervention in FGR’ at 28th BOGSCON, Patna on 3rd December 2022.

Membership of Societies

(Membership of professional bodies funded by Institute)

Dr Mandakini Pradhan

- International Society of Ultrasound in Obstetrics and Gynaecology
- Lucknow Obstetrics and Gynaecology Society

Dr Amrit Gupta

- British Endocrinology Society
- Lucknow Obstetrics and Gynaecology Society

Dr Sangeeta Yadav

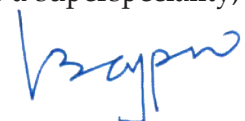
- International Society of Ultrasound in Obstetrics and Gynaecology
- Lucknow Obstetrics and Gynaecology Society
- Indian Society of Prenatal Diagnosis and Therapy

Dr Neeta Singh

- Member of Royal College of Obstetrics and Gynaecology
- Lucknow Obstetrics and Gynaecology Society
- Society of Fetal Medicine

Teaching Workshops/ CME's organized 2022

1. 14th Foundation Day celebration and CME on Maternal & Fetal Medicine as a superspeciality, SGPGIMS on 27th Nov 2022.



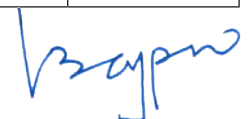
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2. organised workshop on prevention of RH isoimmunization under aegis of Stillbirth society of India on 29th January 2022
3. InSARG Biannual Conference on 29th Aug 2022
4. Workshop on Preventive Oncology in AGOICON 2022
5. Scientific Chairperson of AGOICON 2022
6. U P ISAR Conclave 2022 Conference on Infertility and High-Risk Pregnancy from 1st -2nd Oct 2022

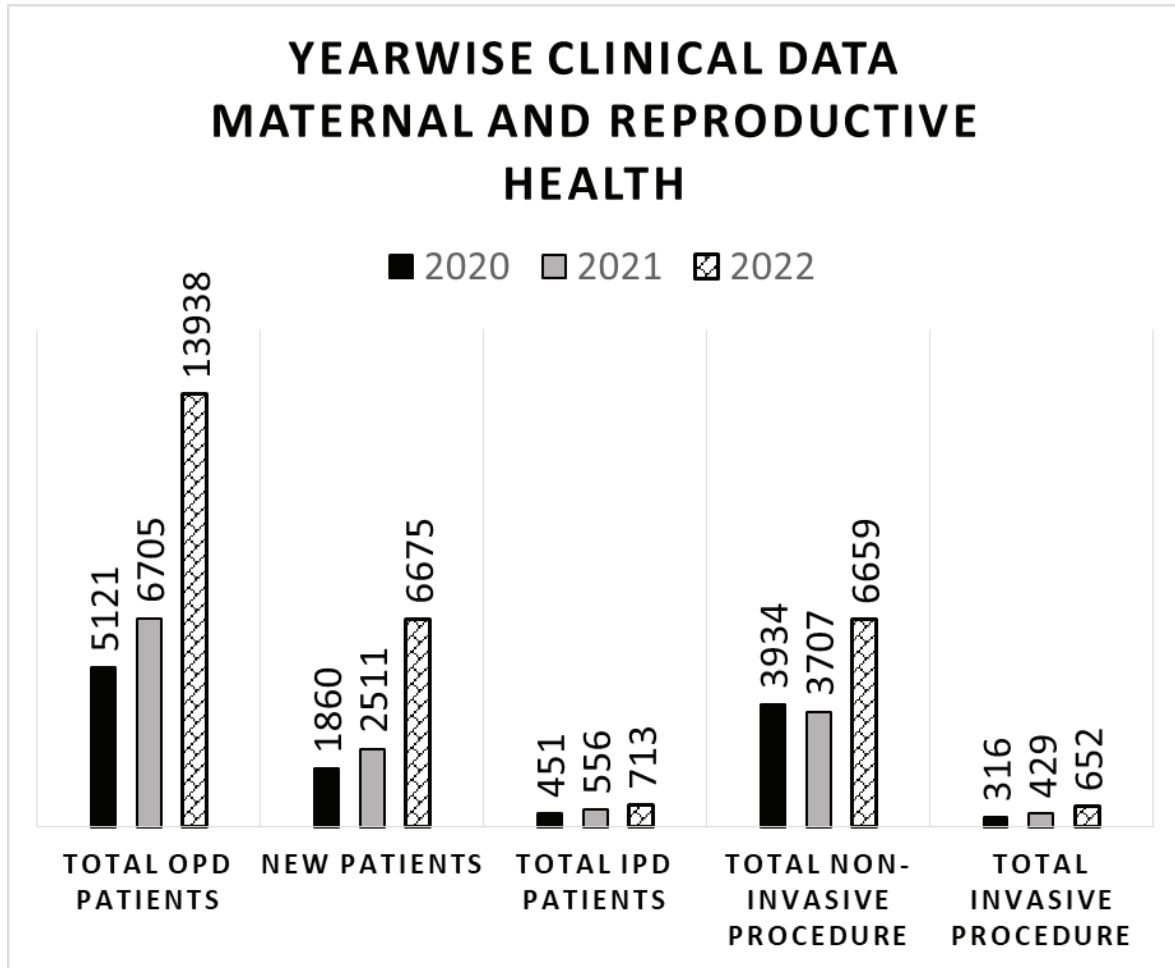
Service

Year-wise available clinical data (last three years 2020,2021,2022) for department of Maternal and Reproductive Health

S.No	Parameters	2020	2021	2022
1	Number of New patients in OPD	1860	2511	6675
2	Number of Old/ Follow-up patients in OPD	3261	4194	7263
3	Total patients in OPD	5121	6705	13938
4	Total number of patients admitted (IPD)	451	556	713
5	Total number of Intervention			
	• Normal Delivery	36	41	50
	• Operative delivery	265	272	317
	• Termination of Pregnancy	15	33	18
	• Other operation (ectopic pregnancy, Caesarian hysterectomy and laparotomy)			
6	Total number of Prenatal noninvasive & invasive diagnostic Procedures done	4166	4042	6828
	• Non-invasive	3934	3707	6659
	• Ultrasound			
	• Total Invasive diagnostic procedure	232	335	483
	• Amniocentesis	213	293	447
	• Chorionic villous sampling	12	34	26
	• Cordocentesis	7	8	10
7	Total number of prenatal therapeutic procedures done	84	94	169
	• Intrauterine transfusion	63	64	147
	• Multifetal pregnancy reduction	17	25	18
	• Selective fetal reduction	2	2	2
	• Fetal shunt, amnioinfusion, amnioreduction, placental embolizationetc	2	3	2
8	Total invasive fetal procedures done	316	429	652



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Training

PDCC: 4

Short term trainee: 1

Research projects

Completed:

1. Triage of antenatal care through telehealth during COVID-19 pandemic , 2022. Funding :Departmental (PI: Dr Mandakini Pradhan), Status: Accepted for publication in Journal of Family Medicine and Primary Care. Summary report: This was a prospective observational study. 3,360 teleconsultations were sought by 862 antenatal patients. The antenatal cases were referred for either maternal, fetal or both indications in 24.7, 54.8 and 20.5% of the cases, respectively. Women were classified as low risk (61.6%), high risk (35.7%) and severe risk (2.7%). In 1.4% of the patients, history and review of the records could not be done through telemedicine. In 20.4% cases, teleconsultation avoided a hospital visit. In 34.3%, hospital visit could be planned on a specific later date. 5.
2. Folate Receptor Alpha is Decreased in Pregnancy Affected with Fetal Neural Tube Defect: A Case Control Study. 2022. Funding: Departmental (PI: Dr Neeta Singh). Published in Neurology


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India. Summary report: This was a prospective case control study in which Pregnant women with fetal neural tube defect in ongoing pregnancy were enrolled as cases and equal number of matched pregnant women without any fetal congenital malformation were recruited as controls. Serum FOLR1 levels were analyzed in cases and controls during pregnancy and six weeks after delivery. Mean serum FOLR1 concentration during pregnancy was 70.5pg/ml (range:23.8 - 98.5pg/ml) and 103.9pg/ml (range:70- 110pg/ml) in cases and control respectively. Serum level of FOLR1 was 448.9pg/ml (range:133.5-475) and 414.5pg/ml (range:269.7- 412.5) in cases and controls at 6 weeks postpartum respectively. There was statistically significant difference between cases and control during pregnancy but not at 6 weeks postpartum ($p=0.092$). There was significant increase in level of FOLR1 in both cases and control at 6 weeks postpartum as compared to level during pregnancy.

3. Fetal Klippel Trenauney Weber Syndrome: antenatal diagnosis and postnatal management. 2022. Funding: Departmental (PI: Dr Neeta Singh). Accepted in Journal of Indian Association of Paediatric Surgeons. Summary report: This was a retrospective observational study of all pregnant women who were antenatally diagnosed with KTWS and postnatally confirmed at a tertiary care centre in north India between 2012-2021. During the study period, four pregnant women were diagnosed with KTWS in the fetus on sonography. Three patients were multigravida whereas one was a primigravida. Pregnancy outcomes were a liveborn child, two medical terminations of pregnancy and an intra-uterine fetal death. KTWS was confirmed in all cases. The liveborn child underwent treatment for the vascular malformation and is alive and healthy at four years of age.

Research in progress

Funding agency, Name of project, Investigators

1. SGPGIMS: Serum Calprotectin as a Diagnostic Marker of Intrahepatic cholestasis of Pregnancy, Dr Sangeeta Yadav
2. DST: Evaluation of Cardiomyogenic Potential of cKIT+ Human Amniotic Fluid Mesenchymal Stem Cells, as Co-PI Dr Neeta Singh

Publications

1. Singh N, Misra R, Misra P, Shaleen A, Pradhan M. Folate Receptor Alpha is Decreased in Pregnancy Affected with Fetal Neural Tube Defect: A Case Control Study. *Neurology India*. 2022;70(5):1836-39.
2. Gupta A, Yadav S, Seduchidambaram M, Singh N, Pradhan PK, Pradhan M. Triage of antenatal care through telehealth during COVID-19 pandemic in a tertiary care centre of North India. *Journal of Family Medicine and Primary Care*. 2022 Mar;11(3):1055.
3. Yadav S, Goel A, Lingaiah R, Pradhan M, Katiyar H, Aggarwal R. Serum Bile Acid Levels in Women With Intrahepatic Cholestasis of Pregnancy in India. *Journal of Clinical and Experimental Hepatology*. 2022;12(2):379-83.
4. Gupta A, Dubey K, Sharma G, Gupta R. Pregnancy with Renal Disease: Present Scenario in Tertiary Care Institute in Northern India. *J ObstetGynaecol India*. 2022 Jun;72(3):201-207.
5. Srivastava A, Srivastava P, Mathur S, Mishra S, Abbas S, Gupta A, Mishra P, Tiwari M, Sharma LK. Analysis of cellular and cell free mitochondrial DNA content and reactive oxygen species levels in maternal blood during normal pregnancy: a pilot study. *BMC Pregnancy Childbirth*. 2022 Nov 16;22(1):845.



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6. Pradhan A, Mishra P, Tiwari S, Choure K, Gupta A. Prediction of Low Birth Weight by Quadruple Parameters in High-Risk Pregnancies. Int J Appl Basic Med Res. 2022 Oct-Dec;12(4):277-283.
7. Indu I, Amrit G; Deepti S, Ashmina R; Sandeep S. Management of pregnant female with Haemophilia-A: A case report. Journal of Family Medicine and Primary Care 2022;11(9):5683-85.
8. Lata I, Gupta R, Gupta A, Prasad P. Fetal malformation with placenta accreta spectrum (incretta): Two different tales in a pregnancy-A rare case report. J Surg Spec Rural Pract 2022; 3:74-6.
9. Mandakini Pradhan. Management of Rh-negative Pregnancy. In: Nandita Palshetkar, Rohan Palshetkar, Mittal Pratima, Garg Ruchika, Gupta Sadhana. editors. FOGSI Handbook of Antenatal Care. India: Jaypee Brothers Medical Publishers (P) Ltd.; 2022. p.157-160.
10. Pradhan Mandakini. Fetal Abnormalities: Definitions, Etiology and Pathophysiology. In: Alpesh Gandhi, Parikshit Tank, Ameya Purandare. editors. FOGSI's Postgraduate Obstetrics: A Textbook (Vol 1). India: Jaypee Brothers Medical Publishers (P) Ltd.; 2022. p. 122-125.

Visiting Professors: None

Departmental Highlights

The department established itself as a referral center for complicated pregnancy. Apart from Uttar Pradesh patients were referred from neighboring states like Bihar, Madhya Pradesh, Odisha, Jharkhand etc. Prevention of pregnancy complications by early screening, prenatal diagnosis and prenatal therapy are the thrust area of the department. It's the only center in Uttar Pradesh to have facility for prenatal diagnosis and therapy. It's one of the center in India to have training course in **Maternal and Fetal medicine**. The aim of it is to generate more skilled manpower in this field so as to improve maternal and neonatal health indicators of the country.

New Initiatives

To start academic program as fellowship in Maternal and Fetal Medicine.

DEPARTMENT OF MEDICAL GENETICS

STAFF

Name of Faculty Members:

1. Shubha R Phadke, MD (Ped.), DM (Med. Genetics)	Professor and Head
2. Kausik Mandal, MD (Ped.), DM (Med. Genetics)	Additional Professor
3. Deepti Saxena, MS (Obst. & Gyne.), DM (Med. Genetics)	Associate Professor
4. Amita Moirangthem, MD (Ped.), DM (Med. Genetics)	Associate Professor
5. Anshika Srivastava, MSc (Biochem.), Ph.D. (Med. Genetics)	Assistant Professor
6. A. Haseena, MD (Ped.), DM (Med. Genetics)	Assistant Professor (Contractual) joined Nov 2022
7. Somya Srivastava, MS (Obst. & Gyne.), DM (Med. Genetics)	Assistant Professor (Contractual) joined Nov 2022

Activities

Awards & Honours: Nil

Presiding over a national level CME program of national /international conference: Nil

Invited lectures:

Name of the faculty and session

Dr S R Phadke

- Training course on Pediatric Medical Genetics in Genetic Research Centre, ICMR -NIRRH, Mumbai
- PEDICON 2022 Noida
- Stillbirths Etiology and Genetic Counseling' Panel discussion, Stillbirth Society of India
- West Zonal FOGSI conference with YUVA 2022-23 at Ranthambore, Rajasthan
- National Symposium on Genetic disorders- From Bench to bedside, Gurugram, Haryana.
- Dr P K Mishra orations on 68th foundation day, KGMU, Lucknow
- 14th biennial conference of ISPAT, Lucknow

Dr Kausik Mandal

- ESI Academic session, Lucknow
- Thalassemia: Genetics, Mumbai Hematology group
- LSD awareness, New Delhi
- ISPAT National conference, Lucknow
- Ophthalmology genetics
- SMA taskforce: CureSMA India
- ICMR-NIRRH, Mumbai
- Department of Hematology NRS, Kolkata
- ICH Kolkata Conference



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- Academic session, KGMU, Lucknow
- LSD diagnosis, PGICH Noida
- Online Lecture series, GeneTOP, SIAMG
- National symposium on LSD, Gurugram
- CME on Fetal medicine, Prayagraj
- CME on Neurogenetics, RMLIMS, Lucknow

Dr. Deepti Saxena

- Stillbirths Etiology and Genetic Counseling, Panel discussion, Stillbirth Society of India
- “Fetal malformation: utility of genetic test - 37th Annual ISOPARB National conference, Varanasi - 6-8 May, 2022.
- Panelist in Webinar on “Unravelling Fetal Mysteries” organized by Lucknow ISOPARB in association with Kolkata ISOPARB - 18 May, 2022.
- Pediatric Medical Genetics, Genetic research Centre, ICMR-NIRRH, Mumbai

Dr. Anshika Srivastava

- 18th Asian Oceanian Congress of Neurology (AOCN) and 29th Annual Conference of the Indian Academy of Neurology (IANCON), New Delhi.

Receipt for prize or medals by the staff for academic purpose: Nil

Visits abroad or to other institution for academic purpose with dates:

- Dr Amita Moirangthem attended ICNC 2022–17th International child neurology congress held in Antalya, Turkey from October 3 - 7, 2022.

Members of international societies.

Dr. Deepti Saxena:

- Member of American Society of Human Genetics
- Member of European Society of Human Genetics
- Member of International Society of Prenatal Diagnosis
- Member of International Society of Ultrasound in Obstetrics and Gynaecology

Dr. Anshika Srivastava

- Member of American Society of Human Genetics
- CMEs organized
- August 2022: 19th ICMR course on Medical Genetics and genetic counselling
- December 2022: 7th annual conference of Society of Indian Academy of Medical genetics

Service

S. No.	Parameters	2020	2021	2022
1	Total number of patients in OPD	1804	5579	10048
2	Total number of patients admitted (IPD)	3135	2250	3964
3	Total number of antenatal ultrasounds done	694	683	1158

4	Total number of antenatal invasive procedures done	219	232	427
5	Total number of laboratory tests done	4804	5577	9942
	a) Sanger sequencing	402	620	965
	b) Multiplex Ligation Probe Amplification	408	752	1036
	c) Cytogenetic microarray	35	80	144
	d) Karyotype	588	1033	1498
	e) Biochemical enzyme	113	265	373
	f) Quantitative Fluorescent Polymerase chain reaction	208	227	429
	g) Beta thalassemia screening	3050	2600	5497

Training

- At present, there are 7 senior residents (6 enrolled in DM course and 1 in PDCC in Molecular genomics and genetics). 5 students are enrolled in Ph.D program. There are also 2 fellows under DBT and 1 under Genzyme fellowship.
- Number of students passed in final year examination(DM):2
- Number of students who completed Ph.D: 4
- Number of students passed in PDCC exam:1

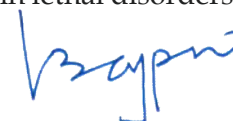
Research projects

Completed: Nil

Research in Progress

Funding agency, Name of project, Investigator

1. ICMR: Study of genotypes and phenotypes of autosomal recessive osteogenesis imperfecta and search for new genes in patients with osteogenesis imperfecta with no mutation in known genes, Dr S R Phadke
2. The Indian Movement Disorder Registry and Biobank: Clinical and Genetic Evaluation of Movement Disorders in Indian Patients, Dr S R Phadke
3. Training of in-service Clinicians from Government Hospitals and Outreach Program for Aspirational Districts, Dr S R Phadke
4. National registry for rare and other inherited disorders, Dr S R Phadke
5. Shire Biotech India Pvt. Ltd.: A Post Marketing Surveillance (PMS) Study for VPRIV (Velaglucerase alfa) in India Dr S R Phadke
6. SERB: Study of Complexities of Genomic and Chromosomal Abnormalities in Couples and in Products of Conception from Recurrent Pregnancy Loss Multicentric, Dr Kausik Mandal
7. Extramural (Takeda): Phase IV clinical trial: Replagal for Fabry Disease, Dr Kausik Mandal
8. Extramural (corporate): Genetic modifiers in Indian cohort of patients with Beta-Thalassemia, Dr Kausik Mandal
9. ICMR: Use of next generation sequencing techniques in identification of causative etiology in fetuses with abnormal ultrasound findings and identification of novel genes in lethal disorders, Dr Deepti Saxena
10. ICMR: Indian Undiagnosed Diseases Program, Dr Amita Moirangthem



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11. DBT: Mission Program on Pediatric Rare Genetic Disorders, Dr Amita Moirangthem
12. ICMR: Identification of genetic variants and their functional evaluation in the pathogenesis of inherited cardiomyopathies, Dr Anshika Srivastava
13. DBT: Probing the dynamic balance of histone H2AUb1 regulatory axis in hypertrophic cardiomyopathy and early heart development, Dr Anshika Srivastava
14. DBT: Functional characterization of rare founder alleles causing neurodevelopmental disorders for biomarker identification and community genetics surveillance, Dr Anshika Srivastava
15. ICMR: Whole-exome sequencing based genetic testing and functional characterization of rare pathogenic alleles causing neurodevelopmental disorders for biomarker identification Dr Anshika Srivastava
16. DBT: Harnessing genome sequencing and engineering (CRISPR/Cas9) technologies for identification of shared genetic and molecular etiology in pediatric and adult cardiomyopathies Dr Anshika Srivastava

Publications

1. Agrawal N, Verma G, Saxena D, Kabra M, Gupta N, Mandal K, Moirangthem A, Sheth J, Puri RD, Bijarnia-Mahay S, Kapoor S, Danda S, H SV, Datar CA, Ranganath P, Shukla A, Dalal A, Srivastava P, Devi RR, Phadke SR. Genotype-phenotype spectrum of 130 unrelated Indian families with Mucopolysaccharidosis type II. *Eur J Med Genet.* 2022 Mar;65(3):104447. doi: 10.1016/j.ejmg.2022.104447. Epub 2022 Feb 8. PMID: 35144014
2. Chaudhary AK, Gholve A, Nagarajaram HA, Dalal AB, Gupta N, Dutta AK, Danda S, Gupta R, Sankar HV, Bhavani GS, Girisha KM, Phadke SR, Ranganath P, Bashyam MD. Ectodysplasin pathogenic variants affecting the furin-cleavage site and unusual clinical features define X-linked hypohidrotic ectodermal dysplasia in India. *Am J Med Genet A.* 2022 Mar;188(3):788-805. doi: 10.1002/ajmg.a.62579. Epub 2021 Dec 4. PMID: 34863015
3. Congenital Hyperinsulinemia of Infancy: Role of Molecular Testing in Management and Genetic Counseling. *Indian J Pediatr.* 2022 Apr;89(4):395-398. doi: 10.1007/s12098-021-04014-x. Epub 2022 Feb 19. PMID: 35182381
4. Gupta N, Kaur R, Phadke S, Sharma P, Nampoothiri S, Saxena D, Kabra M. Monosomy 1p36: Report of a cohort of 13 Asian Indian patients. *Am J Med Genet A.* 2022 Apr;188(4):1317-1322. doi: 10.1002/ajmg.a.62630. Epub 2022 Jan 6. PMID: 34989134
5. Jacob P, Bhavani GSL, Shah H, Galada C, Nampoothiri S, Kamath N, Phadke SR, Muranjan M, Datar CA, Shukla A, Girisha KM. Pseudoachondroplasia: Phenotype and genotype in 11 Indian patients. *Am J Med Genet A.* 2022 Mar;188(3):751-759. doi: 10.1002/ajmg.a.62566. Epub 2021 Nov 9. PMID: 34750995
6. Masih S, Moirangthem A, Shambhavi A, Rai A, Mandal K, Saxena D, Nilay M, Agrawal N, Srivastava S, Sait H, Phadke SR. Deciphering the molecular landscape of microcephaly in 87 Indian families by exome sequencing. *Eur J Med Genet.* 2022 Jun;65(6):104520. doi: 10.1016/j.ejmg.2022.104520. Epub 2022 May 12. PMID: 35568357
7. Mishra R, Kulshreshtha S, Mandal K, Khurana A, Diego-Álvarez D, Pradas L, Saxena R, Phadke S, Moirangthem A, Masih S, Sud S, Verma IC, Dua Puri R. COASY related pontocerebellar hypoplasia type 12: A common Indian mutation with expansion of the phenotypic spectrum. *Am J Med Genet A.* 2022 Aug;188(8):2339-2350. doi: 10.1002/ajmg.a.62768. Epub 2022 May 2. PMID: 35499143
8. Nagral A, Mallakmir S, Garg N, Tiwari K, Masih S, Nagral N, Unavane O, Jhaveri A, Phadke S, ArunKumar G, Aggarwal R. Genomic Variations in ATP7B Gene in Indian Patients with Wilson

- Disease. Indian J Pediatr. 2022 Sep 16. doi: 10.1007/s12098-022-04250-9. Online ahead of print. PMID: 36112267
9. Sait H, Moirangthem A, Agrawal V, Phadke SR. Autosomal recessive spinocerebellar ataxia-20 due to a novel SNX14 variant in an Indian girl. Am J Med Genet A. 2022 Jun;188(6):1909-1914. doi: 10.1002/ajmg.a.62701. Epub 2022 Feb 23. PMID: 35195341
 10. Sait H, Sajjan SM, Phadke SR. Haemophilia management programme: Transformation during COVID-19. Indian J Med Res. 2022 May-Jun;155(5&6):472-477. doi: 10.4103/ijmr.ijmr_1941_21. PMID: 36124495
 11. Sait H, Shambhavi A, Pandey M, Ravichandran D, Phadke SR. T2 olivary nuclei hyperintensities: A characteristic neuroimaging finding in FIG4 related leukoencephalopathy. Am J Med Genet A. 2022 Dec 18. doi: 10.1002/ajmg.a.63084. Online ahead of print. PMID: 36529678
 12. Sait H, Srivastava P, Dabadghao P, Phadke SR. Kallmann Syndrome and X-linked Ichthyosis Caused by Translocation Between Chromosomes X and Y: A Case Report. J Reprod Infertil. 2021 Oct-Dec;22(4):302-306. doi: 10.18502/jri.v22i4.7657. PMID: 34987993 Free PMC article.
 13. Solomon BD, Adam MP, Fong CT, Girisha KM, Hall JG, Hurst ACE, Krawitz PM, Moosa S, Phadke SR, Tekendo-Ngongang C, Wenger TL. Perspectives on the future of dysmorphology. Am J Med Genet A. 2022 Dec 9. doi: 10.1002/ajmg.a.63060. Online ahead of print. PMID: 36484420
 14. Srivastava P, Chaudhry C, Kaur A, Phadke SR, Panigrahi I. How Experts Make a Call: Copy Number Variation Analysis in Unusual/Rare Case Scenarios. Neurol India. 2022 Jan-Feb;70(1):148-154. doi: 10.4103/0028-3886.338651. PMID: 35263867
 15. Tripathi P, Agarwal S, Tewari S, Mandal K. Status of Catalase, Glutathione Peroxidase, Glutathione S-Transferase, and Myeloperoxidase Gene Polymorphisms in Beta-Thalassemia Major Patients to Assess Oxidative Injury and Its Association with Enzyme Activities. J Pediatr Genet. 2021 Apr 12;11(3):198-212. doi: 10.1055/s-0041-1723961. eCollection 2022 Sep.

Chapters in Books: Nil

Visiting Professors

1. Prof Akhilesh Pandey from Mayo Clinic, Minnesota, July 2022
2. Dr Madhulika Kabra, Professor, Genetics Unit, Department of Pediatrics, AIIMS, New Delhi, August 2022
3. Dr Ratna Dua Puri, Professor & Senior Consultant, Centre for Medical Genetics, GRIPMER, Sir Gangaram Hospital, New Delhi August 2022
4. Dr Ashwin Dalal, Head, Diagnostics Division, Centre for DNA Fingerprinting and Diagnostics, Hyderabad August 2022
5. Dr Sankar VH, Professor, Department of Pediatrics, Government Medical College, Thiruvananthapuram August 2022
6. Dr Neerja Gupta, Additional Professor, Genetics Unit, Department of Pediatrics, AIIMS, New Delhi August 2022
7. Dr SJ Patil, Consultant, Clinical Genetics, Narayana Hrudayalaya Hospitals / Mazumdar-Shaw Medical Center, Bangalore August 2022
8. Dr Koumudi Godbole, Consultant Medical Geneticist, Deenanath Mangeshkar Hospital & Research Center, Pune August 2022



9. Dr. Sheetal Sharda, Director, Clinical Genomics Development, and Implementation August 2022
10. Dr Shagun Aggarwal, Additional Professor, Department of Medical Genetics, Nizam's Institute of Medical Sciences, Hyderabad August 2022
11. Dr Chaitanya Datar, Clinical Geneticist, Bharati Hospital and KEM Hospital, Pune August 2022
12. Dr Dhanya Lakshmi N, Associate Professor, Department of Medical Genetics, Kasturba Medical College, Manipal August 2022

Departmental Highlights

1. Public Awareness Program: World Down syndrome day, World Thalassemia day
2. The department is a pioneer in the state for providing intrathecal antisense oligonucleotide therapy for spinal muscular atrophy. At present 13 children are receiving the medicine.
3. Started new master course: 2-year MSc program in genetic counselling for science graduates.
4. The annual 2-week ICMR course on medical genetics and genetic counseling for clinicians completed 19 years with the 2022 batch.
5. Under DBT funded program for training the clinicians, the department has a successful outreach program providing newborn screening and beta thalassemia screening in two aspirational districts, namely; Bahraich and Shravasti.
6. In December 2022, the department organized the 7th annual conference of Society of Indian Academy of Medical genetics in the campus of SGPGI which was attended by many international and national geneticist. This event was also covered by the media.

DEPARTMENT OF MICROBIOLOGY

STAFF

Faculty Members

1. Ujjala Ghoshal, MD	Professor and Head
2. Rungmei S K Marak, MD	Professor
3. Richa Misra, MD	Additional Professor
4. Chinmoy Sahu, MD, DNB, PDCC	Additional Professor
5. Atul Garg, MD	Associate Professor
6. Sangram Singh Patel, MD	Associate Professor
7. Nidhi Tejan, MD, PDCC	Assistant Professor
8. Richa Sinha, MD	Assistant Professor

CME/Training organized by department

Two days training about BSL-2(14/03/2022 and 15/03/2022)

The department conducted 2 days training of Biosafety level-2 for laboratory technicians as requested by Department of Medical Education, Government of UP.10 HCW from various hospitals of UP government participated in the event. They were trained in various molecular techniques, biosafety, establishment of biosafety level-2 laboratory, biomedical waste management.

World TB Day CME (March 22, 2022)

On the occasion of World TB Day, the department organized a CME cum TB adoption and nutrition program for children.

TB Experts shared information about tuberculosis and nutrition. Awareness about various aspects of tuberculosis was done.

CME cum Village & Patient Adoption Program for diagnosis, treatment and nutritional monitoring on **World TB Day** on March 16, 2023

CME on COVID-19, SGPGI-GADVASU-IVS-ASM 2022 (March 26, 2022)

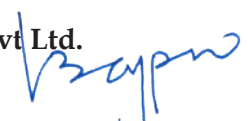
The department of Microbiology, SGPGIMS organized an online **CME on COVID-19** on March 26, 2022 in collaboration from GADVASU, Ludhiana, Indian Virology Society and American Society for Microbiology. More than 1000 participants from all around India, USA, West Indies, Russia participated.

Speakers from USA, France and India discussed on various issues related to corona virus variants. More than 1000 participants from different parts of the world including USA, Russia, West -Indies and various parts of India actively participated.

Hands on Training On Leptospirosis - SGPGIMS (22 July 2022)

All the aspects related to Leptospira (infecting agent, pathogenesis, detection and management) were discussed in the workshop conducted in the department on 22nd July 2022.

CME on "Antibiotic Stewardship" on 03/08/2022 in collaboration with Pfizer Pvt Ltd.



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CME/Workshop organized

1. CME cum Village & Patient Adoption Program for diagnosis, treatment and nutritional monitoring on **World TB Day** on March 16, 2023
2. Poster and rangoli competition on **World Hand Hygiene Day** on 5th May, 2022
3. CME on **World AIDS Day** on December 1, 2022 with emphasis on Needle Stick Injuries (NSIs)
4. Best Practices for Best Outcomes –**Hands on training** in IV line care including Bundle approach from December 8-10, 2022.

Members of international societies

Dr Ujjala Ghoshal

- European Society of Clinical Microbiology & Infectious Diseases
- American Society for Microbiology (6387)
- Royal Society of Tropical Medicine and Hygiene (11864)
- The Asian Neurogastroenterology and Motility Association (36)
- Life member of Indian Society of Medical Microbiology (LM805\98)
- Hospital Infection Society of India (L-1043)
- Life member of Indian Society of Pathology and Microbiology (LM 1642\99)

Dr Rungmei S K Marak

- Secretary of Association of Medical Microbiologists (UP-UK Chapter IAMM); 2021-2023
- American Society for Microbiology (ASM), USA Annual member
- International Society for Human and Animal Mycology (ISHAM), Gold member
- European Society for Clinical Microbiology & Infectious Diseases (ESCMID) Annual member
- Indian Association of Medical Microbiology (IAMM) Life member
- Indian Society of Medical Mycology (ISMM) Life member
- Hospital Infection Society of India (HISI) Life member

Dr Richa Mishra

- European Society for Clinical Microbiology & Infectious Diseases (ESCMID)
- International Nosocomial Infection Control Consortium
- International Society for Infectious Diseases
- Indian Association of Medical Microbiologists
- American Society of Microbiology
- Hospital Infection Society of India

Dr Chinmoy Sahu

- Life member of Indian Association of Medical Microbiologists
- Annual Member, ESCMID
- Annual member- ASM, USA

Dr Atul Garg

- Life member of Indian Association of Medical Microbiologists



Dr Sangram Singh Patel

- Life member of Indian Association of Medical Microbiologists

Presiding over CME/Conference**Dr. Rungmei S K Marak****1. Presiding International Level CME/ Workshop**

- International Pre-Conference Laboratory Practices CME Workshop. September 20, 2022.
- Media for diagnosis of Cryptococcus. 21st Congress of International Society for Human and
- Animal Mycology (ISHAM), 21st to 24th September 2022. The Ashok, New Delhi.

2. Invited lectures National/Inter with dates

- Invited lectures at wet-workshop on 14th Annual Workshop on Basic and Molecular Diagnostics in Mycology. Sri Ramchandra Institute of Higher Education & Research (SRIHER), Chennai. March 30 to April 2, 2022.
- Collection and processing of specimens for the diagnosis of fungal infections
- Onychomycosis
- Clinical aspects of dermatophytic infection

Oral Presentations/Posters/Presiding in conferences**Dr. Richa Mishra**

1. As an invited delegate in the **State Task Force (STF) Workshop** of Uttar Pradesh held at Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly in September, 2022
2. Attended the **ID Conclave** in November 2022, held at Hinduja Hospital in Mumbai

Dr. Chinmoy Sahu

- Chaired and moderated a symposium titled "One health programme and prevention of parasitic zoonotic diseases." In Tropacon 2022, Kolkata, India from 22/09/2022 to 24/09/2022
- Talk on "Bertiellasis-an emerging parasitic zoonosis" in NE-Tropacon 2022 in Mizoram, India from 9/11/2022 to 10/11/2022.

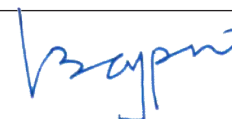
Dr. Nidhi Tejan

- Delivered a lecture on 'Biosafety cabinets and levels' in BSL-2 training on 14-15th March 2022 at SGPGIMS.

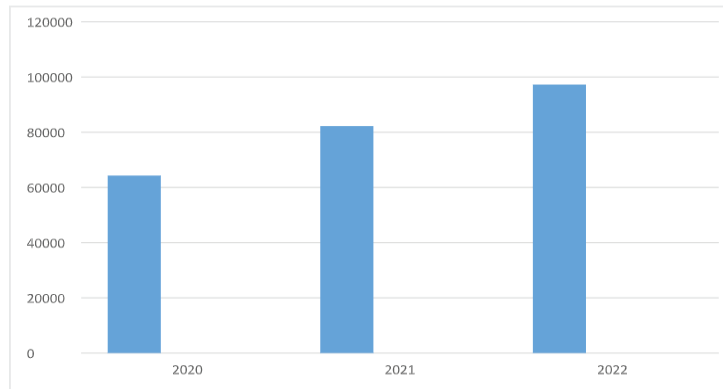
Service

Samples received and tested in the department

Year	Sample Processed
2020	64305
2021	82223
2022	97268



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Clinical Services

Bacteriology Lab:

The various tests in our bacteriology section are:

1. Routine aerobic & anaerobic bacteriology for culture & sensitivity
2. Automated blood culture system (BACTEC, BD)
3. Automated Bacterial Identification & susceptibility system (PHOENIX) and Vitek
4. Procalcitonin assay for management of sepsis
5. Test for scrub typhus
6. Antibiotic sensitivity testing (routine and automated sensitivity testing)
7. Rapid bacterial diagnosis by advanced diagnostic technique like MALDI-TOF

Mycobacteriology

1. Mycobacteriology Routine culture & Automated by BacT/Alert3D
2. Rapid diagnosis by GeneXpert system
3. MTB complex genotype & Rif/INH resistance
4. Diagnosis of nontubercular mycobacteria especially in immunocompromised patients.
5. Real time PCR for Mycobacterium tuberculosis
6. RNTCP program also run by the department

Parasitology

1. Stool Microscopy for Ova, Cysts and Parasites
2. Stool Culture for identifications of enteric pathogens and antibiotic sensitivity testing Culture for Clostridium difficile
3. Toxin A and B detection for "Clostridium difficile"
4. Microscopy for haemo-parasites like Malaria and Filaria, Leishmania etc
5. Antigen detection tests for haemo-parasites like Plasmodium Vivax and falciparum and Wucheriabancrofti (Filaria) etc
6. Antigen detection tests for Giardia, & Cryptosporidium et in stool.
7. Antibody detection tests for Entamoeba, Echinococcus, Leishmania etc
8. Special staining methods like Modified Trichrome stain and Modified Trichrome stain for opportunistic pathogens like Cryptosporidium, Cyclospora, Cystoisospora and Microsporidium

9. Occult blood test in stool: Rapid test
10. Reducing substance in stool
11. Fecal Calprotectin test

Serology and microbial immunology

1. Serological tests for TORCH infections to detect congenital infections
2. Serological tests for HIV, leptospirosis, dengue
3. Widal test, VDRL test
4. Inflammatory markers like CRP, ASO tests
5. Serological testing for
6. Herpes Simplex,
7. Dengue,
8. Chikungunya,
9. Japanese Encephalitis
10. E B Virus,
11. Toxoplasma IgG avidity testing etc

Virology

1. COVID 19: RTPCR, Truant, Antigen detection and serological testing.
2. RTPCR for
 - Dengue
 - Herpes Simplex,
 - Japanese Encephalitis,
 - Swine flu,
 - Chikungunya.
3. Tzanck Smear for inclusion bodies
4. Virus isolation and culture for Enterovirus, Measles, Dengue etc

Mycology

1. Mycology including microscopy, culture, identification
2. Special stains for *Histoplasma capsulatum*
3. Testing for *Pneumocystis jirovecii*
4. Diagnosis of new fungi by MALDI-TOF
5. Antifungal drug sensitivity testing for yeasts and mycelial fungus

Hospital Surveillance and Infection Control Program

1. Surveillance of OTs and wards for microbial bioload
2. Air and water sample testing for microbial contamination
3. Infection Control round and Antimicrobial Stewardship

Training:

1. Two MD (Microbiology) students appeared and passed



2. One PDCC (Infectious Diseases) appeared and passed
3. Six MD (Microbiology) students and one PDCC (Infectious Diseases) are undergoing training
4. Three PhD students are undergoing training

Research Completed

1. IPC Capacity Building- Orientation Training for COVID-19 Preparedness and IPC for Healthcare Facilities: 2021-2023: Bill and Melinda Gates Foundation.
2. Environmental Surveillance of Severe acute respiratory syndrome Coronavirus 2 in India; 2021-2023: ICMR-NIV.
3. Study of epidemiology of extra-pulmonary fungal infections among renal transplant recipients.

Results: Extra pulmonary fungal infections were diagnosed in 103 (6.3%) among 1649 renal recipients studied. The fungal infections ranged from benign lesions like phaeohyphomycosis to fatal cryptococcal meningitis. Most common agent of extra-pulmonary fungal infections were phaeohyphomycosis followed by candidiasis and cryptococcosis.

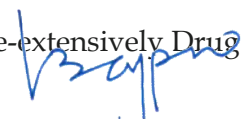
4. Study of Nocardiosis in kidney transplant recipients and a tertiary care experience.

Results: The most common clinical presentation was pulmonary infection (75.0%) followed by disseminated disease (25%). Nocardial infection was diagnosed in 12 patients (1.1%) among 1108 patients studied. Infection occurred at a median of 26 months (range 4-235) after kidney transplantation however four of the cases occurred with one year of transplantation. In 41.7 % of the cases breakthrough Nocardia infection occurred and these patients received a daily single strength of cotrimoxazole as prophylaxis. Microscopy was positive in 100% of the cases and culture was isolated from 10 patients. All isolates were susceptible to amikacin, imipenem and linezolid however 60% of the isolates were resistant to cotrimoxazole which is used as 1st line therapy.

Cytomegalovirus reactivation in critically ill immunocompetent patients with septic shock: 2022: 5 Lakh: SGPGI

Research in progress

1. Characterization of epidemic plasmids, elucidation of evolutionary mechanism in carbapenem resistant Gram-negative bacteria and strategies to overcome carbapenem resistance. 37 lakhs: ICMR (2020-2023.)
2. Understanding the role of gut microbiome associated immuno-metabolomic modulations in patho-physiology of autoimmune hepatitis. 67 lakhs: DHR (technically approved).
3. Antimicrobial susceptibility testing and molecular characterization of Minocycline and Omadacycline resistance: 5 lakhs (2021-2023) SGPGI
4. Cytomegalovirus reactivation in mechanically ventilated patients and its impact on clinical outcome." **SERB DST funded. 2022-2025.**
5. Cytomegalovirus antiviral resistance in solid organ and hematopoietic stem cell transplant recipients. **ICMR funded. 2023-26**
6. Seroprevalence and cross- reactivity of different neglected tropical diseases in blood culture negative febrile patients in a tertiary care center: A descriptive study from Patients with Urinary Tract Infection: 4.5 lakh (2021-2023) SGPGI.
7. New XpertMTB/XDR assay: a prospective single centre pilot study
8. Clinical, Demographic, Psychological and Molecular Profile in Patient of Pre-extensively Drug Resistant in Pulmonary Tuberculosis



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SGPGIMS, Lucknow

Publication

1. Arya A K, Garg A, Pal S, et al. (March 31, 2023) Evaluation of Rapid Antigen Test as a Marker of SARS-CoV-2 Infectivity. *Cureus* 15(3): e36962. DOI10. 7759/cureus.36962.
2. Baghel SS, Keshri A K, Mishra P, Marak Rungmei S K, ManogaranRS, Verma PK et al. The Spectrum of Invasive Fungal Sinusitis in COVID-19 Patients: Experience from a Tertiary Care Referral Center in Northern India. *J Fungi*. 2022; 8 (3): 223-35.
3. Chauhan P, Gupta A, Sahu C, Desai N, Nityanand S. Outbreak of *Ralstonia mannitolilytica* Infection in Hemato-Oncology Unit: Case Series and Review of Literature. *Indian J Med Paediatr Oncol* 2022; 43(02): 201-207.
4. Dubey, A., Siddiqui, T., Kar, M., Sahu, C., & Singh Patel, S. (2022). A Rare Case Report of *Pseudomonas oryzae* Bacteraemia from North India in a Terminally Ill patient. *Journal of Advances in Microbiology*, 22(5), 1-4.
5. Ghoshal U, Jain M. A review on point of care tests in parasitology, <https://doi.org/10.1016/j.ijmmb.2022.02.003>, PMID: 35248402, March 2022.
6. Ghoshal U, Siddiqui T, Tejan N, Verma S, Pandey A, Ghoshal UC. Cyclosporiasis In immunocompetent and immunocompromised patients–A Twelve years’ experience from a tertiary care centre in Northern India. *Tropical Parasitology*. 2022;12(2):94.
7. Ghoshal U, Siddiqui T, Tejan N, Verma S, Pandey A, Ghoshal UC. Cyclosporiasis In immunocompetent and immunocompromised patients–A Twelve years’ experience from a tertiary care centre in Northern India. *Tropical Parasitology*. 2022 Jul 1;12(2):94.
8. Hashim Z, Nath A, Khan A, Neyaz Z, Marak Rungmei S. K., Areekkara P et al. New Insights into Development and Mortality of COVID-19-Associated Pulmonary Aspergillosis in a Homogenous Cohort of 1161 Intensive Care Patients, First published: 18 June 2022 <https://doi.org/10.1111/myc.13485>.
9. Jain S, Bhadauria B, Prasad R, Gurjar M, M, Yaccha M, Shanmugham S, Kaul A, Marak Rungmei S K, Nath A, Prasad N. Aetiology, management, and outcome of lower respiratory tract infection in renal allograft recipients - A report from a tropical country. *Lung India* 2022; 39 (6):545-552.
10. Kar M, Dubey A, Patel SS, Siddiqui T, Ghoshal U, Sahu C. Characteristics of Bacterial Colonization And Urinary Tract Infection After Indwelling Of Double-J Ureteral Stent and Percutaneous Nephrostomy Tube. *J Global Infect Dis* 2022; 14(2): 75-80.
11. Kar M, Dubey A, Sahu C, Patel SS. *Pseudomonas mosselli*: A case series on its potential as a rare opportunistic pathogen in immunocompromised patients. *South Asian Journal of Research in Microbiology* 2022; 12(1): 50-54.
12. Kar M, Singh R, Dubey A, Sahu C, Patel SS. *Achromobacter xylosoxidans* subspecies *denitrificans* endocarditis in a patient with prosthetic aortic valve: A case report and review of literature. *Journal of Clinical and Diagnostic Research*. 2022 Sep, Vol-16(9): DD01-DD03.
13. Kumar M, Sahu C, Kumar R, Mahdi A. Effect of Antiretroviral Therapy (Haart) on Cd4 Cell Counts, Viral Load And Progression To Acquired Immunodeficiency Syndrome In Human Immunodeficiency Virus (HIV-1) Positive Patients. *Int J Recent Sci Res* 2022; 13(09), pp. 2198-2204.
14. Nabeel M, Sahu C, Gurjar M. Toxic shock syndrome. *India Point of Care* Accepted).
15. Nandi SS, Sawant S, Gohil T, Lambe U, Sangal L, Patel D, Krishnasamy K, Ghoshal U, Harvey P, Deshpande J. Poliovirus nonpermissive CD155 knockout cells derived from RD cell line for handling poliovirus potentially infectious materials in virology laboratories, PMID: 35642597 DOI: 10.1002/jmv.27897, *J Med Virol*. 2022 Jun 1.

16. Pathak A, Tejan N, Dubey A, Chauhan R, Fatima N, Jyoti, Singh S, Bhayana S, Sahu C. Outbreak of colistin resistant, carbapenemase (bla_{NDM} , $bla_{OXA-232}$) producing *Klebsiella pneumoniae* causing blood stream infection among neonates at a tertiary care hospital in India. *Front Cell Infect Microbiol* 2023. Volume 13-2023.
17. Sahu C, Singh S, Patel SS, Yaduvanshi N, Singh S, Ghoshal U. A study on susceptibility profiles, resistance mechanisms and follow-up of Fosfomycin and other Urinary antibiotics against multidrug resistant gram-negative UTI isolates at a tertiary care centre of North India. *J Clin Diagn* 2022; 16(3): DC31-DC35.
18. Sahu C, Singh S, Patel SS, Yaduvanshi N, Singh S, Ghoshal U. A study on susceptibility profiles, resistance mechanisms and follow-up of Fosfomycin and other Urinary antibiotics against multidrug resistant gram-negative UTI isolates at a tertiary care centre of North India. *J Clin Diagn* 2022; 16(3): DC31-DC35.
19. Sahu C, Singh S, Pathak A, Singh S, Patel SS, Ghoshal U et al. Bacterial coinfections in COVID: Prevalence, antibiotic sensitivity patterns and clinical outcomes from a tertiary institute of Northern India. *J Family Med Prim Care* 2022; 11 (8): 4473-4478 doi: 10.4103/jfmprc.jfmprc_41_22S.
20. Sahu, Chinmoy; Singh, Sweta; Patel, Sangram Singh; Yaduvanshi, Nidhi; Singh, Sanjay; Ghoshal Ujjala, Susceptibility Profile and Clinical Response of Fosfomycin and Other Antibiotics against Multidrug Resistant Gram-Negative Urinary Isolates: A Cross-sectional Study. *Journal of Clinical & Diagnostic Research*. Mar 2022, Vol. 16 Issue 3, p31-35. 5p.
21. Shukla M, Garg A, Dhole TN, Chaturvedi R. Exaggerated levels of some specific TLRs, cytokines and chemokines in Japanese encephalitis infected BV2 and neuro 2A cell lines associated with worst outcome. *Virology Journal*. 2023 Jan 27;20(1):16.
22. Siddiqui T, Kar M, Dubey A, Patel SS, Sahu C. In-vitro activity of Isepamicin against Gram-negative bacteria in comparison to other aminoglycosides routinely used at a teaching hospital in Northern India. *J Lab Physicians* 2023. DOI: 10.1055/s-0043-1761928.
23. Siddiqui T, Kar M, Dubey A, Patel SS, Sahu C. In-vitro activity of Isepamicin against Gram-negative bacteria in comparison to other aminoglycosides routinely used at a teaching hospital in Northern India. *J Lab Physicians* 2023.
24. Siddiqui T, Kar M, Dubey A, Sahu C, Ghoshal U. Intracranial space occupying lesion with hydatid cyst: a rare infestation of hydatid isolate from intracranial cystic lesion. *South Asian Journal of Parasitology* 2022; 6(2): 27-32.
25. Siddiqui T, Patel SS, Sinha R, Ghoshal U, Sahu C. *Ralstoniamannitolilytica*: an emerging multidrug-resistant opportunistic pathogen in a tertiary care hospital setting. Published: 31 May 2022 <https://doi.org/10.1099/acmi.0.000367>.
26. Siddiqui T, Patel SS, Dubey A, Kar M, Sahu C, Ghoshal U. Bacteriological profiles and antibiotic susceptibility of neonatal sepsis in a university hospital of Northern India. *J Family Med Prim Care* 2023; 12: 493-498.
27. Siddiqui T, Patel SS, Dubey A, Kar M, Sahu C, Ghoshal U. Bacteriological profiles and antibiotic susceptibility of neonatal sepsis in a university hospital of Northern India. *J Family Med Prim Care* 2023; 12:493-498.
28. Siddiqui T, Sahu C, Patel SS. Clinical and microbiological profile of patients with blood stream infections caused by *Burkholderiacepaci* complex (BCC). *J Lab Physicians* (accepted).
29. Singh AK, Neyaz Z, Verma R, Gupta A, Mishra R, Mishra P. Diagnostic yield and safety of percutaneous CT-guided biopsy of retroperitoneal lesions and analysis of imaging features. *Acta Radiol*. 2022 Feb;63(2):149-158. doi: 10.1177/0284185121990286. Epub 2021 Feb 2. PMID: 33530697.

30. Singh R, Chaudhary R, Sahu C, Patel SS. A case of sepsis by a rare pathogen *Delftiaacidovorans* in a patient undergoing chemotherapy. J Clin Diagn Res (Accepted).
31. Singh R, Sahu C, Patel SS, Hashim Z. Trends of Drug resistance to the commonly used antibiotics to combat COVID-19 pandemic: A study from a tertiary care institute of Northern India. J Family Med Prim Care (Accepted).
32. Singh R, Sahu C, Patel SS, Hashim Z. Trends of Drug resistance to the commonly used antibiotics to combat COVID-19 pandemic: A study from a tertiary care institute of Northern India. J Family Med Prim Care (Accepted).
33. Misra R*, Kar M, Mohindra S, Gupta A. Acid fast bacillus smear, mycobacterial culture and Xpert MTB/RIF assay for the diagnosis of tuberculous peritonitis in patients with and without end stage renal failure. Access Microbiol. 2022 Aug 11;4(8):acmi000414. doi: 10.1099/acmi.0.000414. PMID: 36133176; PMCID: PMC9484662.
34. Rajesh Harsvardhan, Richa Misra, Ruchi Kushwaha, Narayan Prasad. Hand hygiene: An effective key HIC parameter for reducing healthcare-associated infections in a haemodialysis unit – Identification and analysis of work system factors. J Patient Safety Infection Control 2022; 10:10-3.
35. Harsvardhan R, Kushwaha R, Misra R, Prasad N. A study to assess the impact of appropriate intervention/s on compliance w.r.t. key hospital infection control parameters in dialysis unit of a tertiary healthcare teaching institute in India. J Indira Gandhi Inst MedSci 2023; 9:75-84.
36. Misra R*, Omar A, Verma H, Harsvardhan R. A study on post intervention impact assessment of antibiotic prescribing practices in the neurosurgery ICU, under antimicrobial stewardship program. J IndiraGandhi Inst Med Sci 2023; 9:47-55.

Book Chapter

1. Ravishankar Manogaran, Arulalan Mathialagan, Amit Keshri, Govind Buskute, Ashutosh Kumar, Arun K Srivastava, Rungmei SK Marak, Sanjay Behari. Cranio-Cerebral Mucormycosis. In Rhino-Orbito-Cerebral Mucormycosis. Springer Publishers 2022. p.147-64.
2. Prasad, K.N., Sahu, C. (2022). Strongyloidiasis. In: Parija, S.C., Chaudhury, A. (eds) Textbook of parasitic zoonoses. Microbial Zoonoses. Springer, Singapore.
3. Prasad, K.N., Sahu, C. (2022). Bertiellosis. In: Parija, S.C., Chaudhury, A. (eds) Textbook of parasitic zoonoses. Microbial Zoonoses. Springer, Singapore.
4. Kalra, Sonali K., and Nidhi Tejan. "Free Living Amoebas" Encyclopaedia of Infection and Immunity (2022): 532-543.
5. Tejan N, Bhatnagar N; Clinical Key Essentials Point of Care India, August 2022.
6. Sinha, R., Rahul (2023). Heterogeneity in Tuberculosis. In: Rezaei, N. (eds) Tuberculosis. Integrated Science, vol 11. Springer, Cham. https://doi.org/10.1007/978-3-031-15955-8_3

Awards and Honours

1. First Prize Best poster award in Mycology (Dr. Rungmei S K Marak) International e-Conference CHET MYCOCON 2022. November 9-10, 2022.
2. First Prize in ePoster presentation titled "Clinical and Microbiological Characteristics of Infectious Peritonitis at a Tertiary Care Centre in Northern India" (Dr. Richa Mishra) during the 12th Annual Conference of Clinical Infectious Diseases Society, India (CIDSCON 2023)



Departmental Highlights

COVID-19 related work

1. With the ongoing COVID-19 pandemic and since ICMR chose the Department of Microbiology from SGPGIMS for conducting RT-PCR tests since March 19th 2020, initially COVID -19 laboratory was established for patients attending SGPGI and later this facility was extended to provide services to various districts of UP. A dedicated 24x7 COVID-19 laboratory for this pandemic was established from scratch and continued testing samples from almost 25 districts at this laboratory. Laboratory was processing 4000-5000 plus samples every day. Support of other faculty members, all staff members, members from NHM and PNPSP-WHO polio project and SGPGI administration esp. Director Dr. R K Dhiman is gratefully acknowledged.
2. Till date we have processed more than 4 lakh samples. Ours is the centre which had processed more than 6200 samples in a day, one of the highest in India, which is a matter of pride for the institute. Our department team worked 24x7 continuously away from their families without any holidays. Laboratory not only performed RT-PCR tests, but also rapid microchip based -PCR tests i.e., TrueNAT that helped in providing quick results for emergency care patients. The Department started sample collection centre at SBI E-corner near PMSSY building. Later when the case load started increasing, two more collection booths near SBI E-corner and one more collection booth near RCH-1 were added for the benefit the patients by prompt sample collection and rapid testing.

DEPARTMENT OF MEDICAL ONCOLOGY

STAFF

Name of Faculty Members:

1. Dr. Punita Lal
Prof & Head, Medical Oncology
(Professor, Radiotherapy & Additional Charge
as Head of Department, Medical Oncology)

Activities

The Board of studies was conducted in 2021 consequently, the Faculty selection interview was held in December 2022 and Faculty was selected in the Department of Medical Oncology. Dr.SatyaSadhanSarangi was selected as the first faculty from the interview held in December 2022, as an Assistant Professor in this Department.

The Department of Medical Oncology is in its nascent stages, primary aim is to provide comprehensive care to the cancer patients.

Service : Nil

Training: Nil

Research Completed: Nil

Research In Progress: Nil

Publications: Nil

Chapters: Nil

Visiting Professors: Nil

Awards & Honours: Nil

Departmental Highlights: Nil

New Intiatives: Nil

Patents: Nil

DEPARTMENT OF MOLECULAR MEDICINE & BIOTECHNOLOGY

STAFF

Name of Faculty Members:

- | | |
|--------------------------------------|---|
| 1. Swasti Tiwari, Ph.D., FRCP (Edin) | Professor & Head
joined the department in December
2009 (took over as Head, w.e.f. July 2013) |
| 2. Alok Kumar, PhD | Associate Professor
joined the department in November 2018 |
| 3. Lokendra Kumar, PhD | Assistant Professor;
joined the department in November 2018 |
| 4. Santosh Kumar Verma, PhD | Assistant Professor;
joined the department in March 2019 |

Activities

Awards and Recognitions

Dr. Swasti Tiwari:

- Elected as a Fellow of the Royal College of Physicians of Edinburgh, (FRCP).
- Award for the best research paper on 3rd Research Day, SGPGIMS, Research cell, SGPGIMS
- Nominated as an Eminent Expert of the Board of Governors (BoGs) of NIPER by GoI,
- Nominated as VICE Chairperson: Institutional Committee for Stem Cell Research Therapy (IC-SCRT), KGMU.
- Nominated as member Institutional Ethics Committee of Kalyan Singh Super Specialty Cancer Institute.
- Nominated as member Academic Committee of Central Drug Research Institute (CDRI), Lucknow.

Invited sessions and chairpersons/lectures for Conferences: 2022

Name of faculty and Session

Dr. Swasti Tiwari

- 'Omics in chronic kidney disease', North Zone Conference of Indian Academy of Biomedical Sciences (NZIABSCON2022), PGIMER, Chandigarh.
- 'miROME in kidney diseases' International Virtual Conference on Non-coding RNAs in Health and Disease, AIIMS Bhopal.
- 'The usefulness of exosomes in chronic kidney disease', Xth International Conference of Indian Academy of Biomedical Sciences (IABS), KGMU/ERA University Lucknow.

Dr. Alok Kumar

- 12th conclave of Ramalingaswami re-entry fellowship, Department of Biotechnology and Regional Center for Biotechnology, Government of India.
- 'World No Tobacco Day', Siddharth University, Kapilvastu, Siddharth Nagar (UP).

Dr. Lokendra Sharma

- 7th World Cancer Congress, Ramanashree California Resort, Yelahanka, Bangalore.

Membership of Societies

Membership of professional bodies funded by Institute

Dr. Swasti Tiwari

- American Physiological Society (APS)
- International Society for Extracellular Vesicles (ISEV)

Teaching Workshops/ CME’s organized 2022

- “New Molecular Diagnostic Targets for Women’s Reproductive Health”, September 24, 2022.
- “Omics in Molecular Medicine”, December 17, 2022.
- “Methods in Cancer Cell Biology”, September 23, 2022.

Services.

The department provides blood investigations to assess risk high-risk pregnancies and Cervical cancers risk in women.

Year-wise number of investigations (last three years 2020, 2021, 2022).

S.No	Parameters	2020	2021	2022
	Total Number of:			
1	Serum Alfa fetoprotein	381	957	1506
2	Quadruple test	160	175	189
3	Double marker test	196	173	234
4	Serum HCG	32	55	130
5	Homocysteine	263	528	1181
6	HPV	61	198	197

Teaching and Training

PhD program:

Total number of undergoing PhD in the year 2022: 14 students.

Total number of awarded PhD in the year 2022 : 02 students.

Academic activities:

Journal Club	Monday
Data presentation	Tuesday /Wednesday
Laboratory meetings/experimental protocol	Thursday
Seminar	Friday
CGR	Saturday



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M.Sc.Molecular Medicine and Biotechnology:

We are running the program under the College of Medical Technology. The First batch of **two** students has been enrolled in November 2022.

Short term (3-6 months) Training Program in Methods in Molecular Medicine and Biotechnology:

Hands-on training in Methods in Molecular Medicine and Biotechnology to Master students from different colleges/ universities. Total number of students joined/completed the short term training program in the year 2022 (upto 31st March 2023): 32 students.

Research Completed in 2022:

Funding agency, Title of project, Summary report, Name of PI

- 1. DBT, Role of extra domain A fibronectin (FN-EDA) in mediating insulin resistance (IR) in mice,** Summary report: Through this project we determined the role of cellular fibronectin (CFN) containing the alternatively spliced extra domain A (FN-EDA) in causing insulin resistance through toll-like receptor 4 (TLR4). We showed that FN-EDA may cause IR through TLR4 by decreasing glucose disposal rate following glucose and insulin load. Targeting FN-EDA thus can be considered as a possible therapeutic strategy to delay prediabetes progression to diabetes (PMID: 32499562), PI: Dr. Swasti Tiwari.
- 2. DBT, Monitoring placental health & function across pregnancy using placental derived nanovesicles in maternal blood-full,** Summary report: Through this project we showed that placental alkaline phosphate positive exosomes transcriptome changed with gestational age advancement in healthy women. We also demonstrated that the transcriptome expressed crucial placental genes involved in early embryonic development, such as actin cytoskeleton organization, appropriate cell positioning, DNA replication, and B-cell regulation for protecting mammalian fetuses from rejection. Thus, ExoPLAPin maternal blood could be a promising source to study the placental genes regulation for non-invasive monitoring of placental health (PMID: 35004728), PI: Dr. Swasti Tiwari.
- 3. Intramural, Validation of 'Hi-Screen" test for COVID-19 Developed at SGPGI,** Summary report: We developed an assay that rapidly detected SARS-CoV-2 RNA in clinical samples in a cost-effective manner. The assay would be useful in pandemic management by facilitating mass screening. The methodology and results have been published in Intervirology 2022 (PMID: 35193136), PI: Dr. Swasti Tiwari.
- 4. DBT Ramalingaswamy Re-entry, Autophagy regulation of microglia/macrophage phenotype and catecholaminergic neuronal function followed by Japanese encephalitis virus infection,** Summary report: In our experiments, we observed that autophagy is functional during the early stages of infection and becomes dysfunctional as JE viral infection progresses over time, which results in the accumulation of autophagosome proteins and is associated with deleterious cellular cascades such as iron accumulation and neuronal cell death pathways, PI: Dr. Alok Kumar
- 5. DST-SERB, Investigation of metastatic potential of mitochondria and associated mechanisms using trans-mitochondrial cybrids.** Summary report: Results suggested that increased mitochondrial biogenesis and respiratory activities contributes to higher metastatic potential and metabolic adaptation of cancer cells. In addition, targeting of mitochondria in high metastatic cells through specific inhibitors of mitochondrial pathways restricted the growth and metastatic potential of these cells. Altogether, the outcome of study would be useful to combine mitochondrial targeting agents with existing cancer chemotherapeutics in improving

treatment strategies. (Publication: Rai NK, et al Oncol Lett 20: 313, 2020), PI: Dr. Lokendra K. Sharma

6. **ICMR, Targeting mitophagy in breast carcinogenesis through mitochondrial-mediated mechanisms**, Summary report: Results from this study suggest that among different breast cancer subtypes, triple negative breast cancer (TNBCs); mitochondria are significantly compromised and associated with compensatory increase in mitochondrial biogenesis and defective autophagy flux, which may contribute to their proliferation. Targeting of mitochondria through inhibiting mitochondrial respiratory chain or autophagy induction by rapamycin selectively sensitizes the TNBCs compared to non-TNBCs types and therefore could be a useful approach of regulating TNBCs proliferation. (Publication: Srivastava A, et al Curr Drug Targets. 2021 Aug 24. doi: 10.2174/1389450122666210824144907; Rai NK, Biochemistry and Biophysics Reports 26 (2021) 100931), PI: Dr. Lokendra K. Sharma.
7. **Intramural, Targeting of Glioblastoma Stem Cells through modulation of mitochondrial mechanisms for developing effective Therapeutic Approaches**, Summary report: In this study, we were able to establish 3-D spheroid culture protocol for enriching glioma initiating cells (GICs) from cell lines and from primary cultures of human GBM patient's tissue along with their characterization for stemness markers. Functional alteration of mitochondrial pathways in these GICs indicates a potential role of mitochondria in the survival/proliferation of GICs. In addition, combinatorial effect of mitochondrial modulators with TMZ showed increased sensitivity to GICs formation and in reducing stemness potential. Overall, studies on identifying the role of autophagy and/or mitophagy and their therapeutic targeting could be useful in developing effective therapeutic approaches for GBM treatment. PI: Dr. Lokendra K. Sharma.
8. **Intramural, Comparison of Cytotrophoblast Cell-Fusion Markers in Placenta of Early and Term Gestation (A Pilot Study)**, Summary report: In this study we have established ex-vivo culture of human cytotrophoblast (CTB) cells leading to primary cell derived syncytiotrophoblast formation. We are characterizing how CTB cells regulate cell-fusion during different gestation stages during course of placenta development, PI: Dr. Santosh Kumar Verma

Research in Progress 2022:

Funding agency, Title of project, Name of PI

1. **ICMR, CARE on Kidney Diseases-Biomarkers & newer therapeutic, Dr. Swasti Tiwari**
2. **DBT, Monitoring placental health & function across pregnancy using placental derived nanovesicles in maternal blood-full, Dr. Swasti Tiwari**
3. **ICMR, Renal transcriptome regulation in diabetic kidney disease, Dr. Swasti Tiwari**
4. **DBT Ramalingaswamy Re-entry, Autophagy regulation of microglia/macrophage phenotype and catecholaminergic neuronal function followed by Japanese encephalitis virus infection, Dr. Alok Kumar.**
5. **Gant-in Aid scheme of Department of Health Research, Role of human umbilical cord mesenchymal stromal cells (hucMSCs) derived exosomes in CNS drug delivery molecules for the modulation of chronic neuroinflammation, pain-related behavior and motor function in the young injured brain, Dr. Alok Kumar.**
6. **DBT- Women and Child Health Programme, Determination and establishment of key molecular therapeutic approach for remodeling of pericardial heart valve of Tetralogy of Fallot, Dr. Alok Kumar.**



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7. **ICMR**, Establishment of microparticle as a liquid biopsy tool for post-traumatic stress disorders (PTSD), **Dr. Alok Kumar**.
8. **DST**, Exploring the impact of an osteoblast-like cell subpopulation differentiated from breast cancer cells on tumorigenic activity and its possible therapeutic potential, **Dr. Lokendra K. Sharma**.
9. **DBT**, Identifying therapeutic targets for blocking Infection of highly pathogenic SARS-CoV-2 at an early stage: developing novel screening assay with minimal bio-hazard risk, **Dr. Santosh Kumar Verma**.
10. **SERB-DST**, Role of Emerging SARS-CoV-2 variants in reshaping of serological responses of COVID-19 recovered patients and in vaccinated individuals: Study in North Indian Population. **Dr. Santosh Kumar Verma**.
11. **Intramural**, Comparison of Cytotrophoblast Cell-Fusion Markers in Placenta of Early and Term Gestation (A Pilot Study), **Dr. Santosh Kumar Verma**.

Publications:

Indexed Publications:

1. Basak M, Chaudhary DK, Takahashi RU, Yamamoto Y, Tiwari S, Tahara H, Mittal A. Immunocyte Derived Exosomes: Insight into the Potential Chemo-immunotherapeutic Nanocarrier Targeting the Tumor Microenvironment. *ACS Biomater Sci Eng*. 2023 Jan 9;9(1):20-39.
2. Ghosh D, Singh A, Kumar A, Sinha N. High mobility group box 1 (HMGB1) inhibition attenuates lipopolysaccharide-induced cognitive dysfunction and sickness-like behavior in mice. *Immunol Res*. 2022 Oct;70(5):633-643.
3. Khandpur S, Awasthi A, Behera MR, Purty AJ, Singh NP, Tiwari S. Kidney disease burden in an Asian Indian population: Effect of the new 2021 serum creatinine CKD-EPI equation. *Diabetes Res Clin Pract*. 2022;193:110120.
4. Kumar V, Mishra S, Sharma R, Agarwal J, Ghoshal U, Khanna T, Sharma LK, Verma SK, Mishra P, Tiwari S. Development of RNA-Based Assay for Rapid Detection of SARS-CoV-2 in Clinical Samples. *Intervirology*. 2022;65(4):181-7.
5. Rai B, Kumar Maurya P, Srivastava M, Mishra P, Hasan Asif M, Tiwari S. An In-Silico Approach to Identify Therapeutic Target and Markers Associated with Diabetic Nephropathy. *Curr Diabetes Rev*. 2022.doi: 10.2174/1573399819666220610191935.
6. Sharma R, Sahoo B, Srivastava A, Tiwari S. Reduced insulin signaling and high glucagon in early insulin resistance impaired fast-fed regulation of renal gluconeogenesis via insulin receptor substrate. *J Cell Biochem*. 2022;123(8):1327-39.
7. Srivastava A, Srivastava P, Mathur S, Abbas S, Rai N, Tiwari S, Tiwari M, Sharma L. Lipid Metabolism and Mitochondria: Cross Talk in Cancer. *Curr Drug Targets*. 2022;23(6):606-27.

Book Chapters

1. Tiwari M, Sharma LK, Saxena AK. Potential Role of Cancer Stem Cells in Glioblastoma: A Therapeutic Aspect. In: Agrawal A, Kunwar DS, editors. *Glioblastoma*. IntechOpen; 2022.

Department Highlights:

1. In the year 2022, the department has 11 ongoing projects is going from various funding agencies, including DBT, SERB, ICMR and DST.
2. The department has successfully completed 8 research projects this year.



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3. The department is successfully running ICMR *Centre of Advance Research and Excellence on Kidney Diseases- Biomarkers & newer therapeutics*.
4. Departmental faculty member has been elected as a Fellow of the Royal College of Physicians of Edinburgh, a member of Board of Governors (BoGs) of NIPER by GoI, and nominated as VICE Chairperson of Stem cell ethics committee of KGMU.
5. PhD students and Faculty members of the Department received Best Research paper awards at the 2nd Research Day events of the institute in 2022.
6. The departmental faculty members have published 7 peer reviewed publications, and 1 book chapters in the year 2022.
7. Two PhD students have been awarded the degrees, 14 students are perusing PhD course in the year 2022.
8. First batch of students under the Master's program in Molecular Medicine and Biotechnology joined in 2022.

DEPARTMENT OF NEONATOLOGY

STAFF

Name of Faculty Members:

1. Dr Kirti M Naranje MBBS, MD (Ped.)	Additional Professor & Head
2. Dr Anita Singh MBBS, MD (Ped.), DNB Neonatology	Additional Professor
3. Dr Aakash Pandita MBBS, MD (Ped.), DNB Neonatology	Assistant Professor (Contractual) DOR: 31-3-2022
4. Dr Akanksha MBBS, MD (Ped.)	Assistant Professor (Contractual)
5. Dr Abhishek Paul MD (Ped.), DNB Neonatology	Assistant Professor (Contractual) DOJ: 15-7-22
6. Dr Abhijeet Roy MBBS, MD (Ped.), DM Neonatology	Assistant Professor (Bonded) DOJ: 21-11-22

Activities

Awards and Recognitions

Dr. Kirti Naranje

- National Instructor for Neonatal Resuscitation Program India, 2022
- Clinical Expert Member for State Technical Advisory Unit for SAM management under UNICEF, India
- External expert for AIIMS Rishikesh DM examination 2022 Nov-Dec
- External expert for AIIMS Rishikesh DM examination 2022 May-June
- External expert for SRHUPDCC examination 2022
- External expert for Post-Doctoral Fellowship-Neonatology examination, September-2022.
- Member for national Committee of NNF Online Education and Learning for Nurses (NOEL-N).
- Founder member - India NBS task force of international Newborn brain society
- Abstract reviewer for International Pediatric Academic Society (PAS) meeting held in Washington DC , USA 2023

Dr Anita Singh

- National Instructor for Neonatal Resuscitation Program India, 2022
- Mentor for Neonatal modules for "Emergency crisis and Management solution"
- Divisional Co-ordinator for National PG Quiz
- External expert for AIIMS Rishikesh DM examination 2022 May-June
- External expert for Post-Doctoral Fellowship-Neonatology examination, September-2022.
- External Expert for neonatal equipment procurement, RMLIMS, Lucknow
- Abstract reviewer for International Pediatric Academic Society (PAS) meeting held in Washington DC , USA 2023
- Member - India NBS task force of international Newborn brain society



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Dr Aakash Pandita

- National Instructor for Neonatal Resuscitation Program India, 2022
- Appointed as editorial board member Clinical medicine insight: Pediatrics
- Appointed as editorial board member: Frontiers in pediatrics
- Appointed as editorial board member: Journal of Pediatric and Neonatal care

Dr. Abhijeet Roy

- Best Research Paper award (Research Day) Medical Category, SGPGI 2022

Invited sessions and chairpersons/lectures for Conferences: 2022**Name of faculty and Session****Dr. Kirti Naranje**

- Dr Kirti Naranje was invited for lecture on topic “Lumbar puncture and ventricular tap in neonates” on 3rd April 2022 by Lucknow neonatology foundation masterclass series.
- Faculty for Panel discussion Setting up of NICU at Ventilation workshop at Orchha Palace, Jhansi in UPPEDICON at 28th and 29th November 2022.
- As a faculty for the topic “Non-invasive ventilation/CPAP/HFNC” and “ case based Ventilator graphics” at Ventilation workshop at Orchha Palace, Jhansi in UPPEDICON at 28th and 29th November 2022
- As faculty for panel discussion on topic “Genetic counseling. Pretest and Post-test” on 17th February at MPIACON 2023 at SGPGIMS, Lucknow
- As a moderator for international webinar series by International newborn brain society (NBS) – online session on Assess Four “Great Neonatal Neurological Syndromes” Using EEG-State Analyses: Time-dependent Neurobiological Information for Clinical Decision-Making. By Prof Mark Scher on 11th August 2022.
- As a Faculty for PG-CME session on Endocrine emergencies in NICU at national NEOCON 2022 at Kolkata, West Bengal on 2nd December 2022
- As special invitee for the “Stoma care & wound management” Workshop at 09:00AM on 12th August 2022 at Pediatric Surgery Seminar Room, PMSSY 4th floor, SGPGIMS at UPUKSCON 2022 Conference
- As a mentor for the session on Approach to a hypotonic neonate in online PG Teaching program by Academy of Pediatrics, UP on 20th May 2022
- As a chairperson for session on challenges of nutritional assessment or screening in pediatric population in NUTRICON-2022 on 13th/14th August 2022 at KGMU, Lucknow
- As a Chairperson: Session on “Evaluation of fetus & newborn in genomics era”. “Symposium on Prenatal, Perinatal and Neonatal Genetics” on 11th December 2022 a part of the annual conference of the Society of Indian Academy of Medical Genetics at SGPGIMS, Lucknow
- Faculty for Pediatric COVID 19 training of doctors in Uttar Pradesh 2021-22 organized by Directorate of Medical Education, Uttar Pradesh

Dr. Anita Singh

- Faculty for Pediatric COVID 19 training of doctors in Uttar Pradesh 2021-22 organized by Directorate of Medical Education, Uttar Pradesh



- Invited faculty for workshop on Neonatal Procedures in Annual NEOCON-2022 at Kolkata
- Invited faculty for workshop on Neonatal Procedures in NEOMAP conference-2022 at Varanasi
- As a faculty for the topic “Surgical emergencies in neonate” for ECMS virtually on 13th May 2022.
- As a faculty for the topic “Monitoring of Ventilated Neonates” and “case based scenario in neonatal ventilation” at Ventilation workshop at Orchha Palace, Jhansi in UPPEDICON at 28th and 29th October 2022
- Invited for lecture on topic As a faculty for the topic “Post hemorrhagic hydrocephalous in neonate” Practice points CME in neonatology at Sir Ganga Ram Hospital on 24th April 2022.
- As faculty for the “ABG and X ray lecture” at Medanta Hospital on 30th September 2022.
- As a faculty for the topic “Monitoring of Ventilated Neonates” and “case based scenario in neonatal ventilation” at Ventilation workshop at Orchha Palace, Jhansi in UPPEDICON at 28th and 29th November 2022.

Dr Aakash Pandita

- Faculty speaker for CPAPA in National Pedicon 2022 AT Noida.

Dr Akanksha Verma

- Faculty speaker on topic ‘Congenital anomalies & Pediatric surgeons by Department of Pediatric Surgery in December 2022 at SGPGIMS
- As a faculty for the topic “Follow up of low birth weight babies” at Orchha Palace, Jhansi in UPPEDICON at 28th and 29th November 2022.

Dr. Abhijeet Roy

- As a faculty for the topic “Troubleshooting in ventilation ” at Ventilation workshop at Orchha Palace, Jhansi in UPPEDICON at 28th and 29th November 2022.

Membership of Societies

Dr. Kirti Naranje

- Member, International Pediatric Simulation Society (IPSS) and INSPIRE society 2020 till date
- Education Committee member of International Newborn Brain Society 2021-2023
- Member, Nationwide Quality of Care Network (NQOCN), India (2021-2026)
- Member, Guidelines International Network 2021-22

Dr Anita Singh

- Member, Guidelines International Network 2021-22
- Member of International Newborn Brain Society 2021-2022
- Member, International Pediatric Simulation Society (IPSS) and INSPIRE society 2020 till date

Dr Aakash Pandita

- Member, National Neonatology Forum

Dr Akanksha verma

- Member, International Pediatric Simulation Society (IPSS) and INSPIRE society 2020 till date



Dr Abhishek Paul

- Education Committee member of International Newborn Brain Society
- Member, International Pediatric Simulation Society (IPSS) and INSPIRE society 2020 till date

Teaching Workshops/ CME's organized 2022

- Symposium on 'Preterm Nutrition' Hybrid mode 8th May 2022
- Pediatric Covid Capacity building, 2022

Service

Year-wise data of Department of Neonatology

S.No	Parameters	2020	2021	2022
1	Number of New patients in OPD	457	552	500
2	Number of Old/ Follow-up patients in OPD	2151	3335	4064
3	Total patients in OPD	2608	3887	4564
4	Total number of patients admitted (IPD)	439	470	680
5	Total number of neonates on warmers	358	360	478
6.	Total number of patients on ventilator	178	220	402
7.	Total number of Neonates on phototherapy	292	243	350
8.	Total exchange transfusion	51	75	85

Training

The Department of Neonatology started running one-year Post Doctoral Certificate Course (PDCC) in Neonatology since year 2017 with 02 seats. The PDCC seats were increased to 06 from year 2018. At present, the department has 06 number of candidates undergoing 1-year training for Post Doctoral certificate.

The Department of Neonatology is also running D.M. in Neonatology since year 2019. The two candidates have completed their D.M. course in Neonatology in August 2022. At present, 06 number of candidates are undergoing D.M. training in the department.

Research Projects

Completed

1. Wrist vs ear pulse oximetry for neonates during resuscitation: a randomised controlled trial
Funding (None) PI: Dr. Kirti M Naranje, **Summary Report:** This trial was conducted in a level III neonatal unit over a 6-month period (July2022-December2022).Ninety six neonates were randomised with 48 each in ear and wrist group.The primary outcome was time to reliable display of SpO₂ and heart rate (HR) from the time of application of sensor to infant.The mean time(seconds) to reliable display of signal from application was similar in both groups (67.1±41.4 vs 74.5±48.2 P=0.42).
2. The effect of open versus closed endotracheal tube suctioning systems on outcome in ventilated newborns: A Randomized Controlled Trial
Funding (Intramural) PI: Dr. Anita Singh, **Summary Report** The primary aim was to compare differences in partial pressure of oxygen (SpO₂), heart rate (HR), respiratory rate (RR) and Premature Infant Pain Profile (PIPP) pain score in newborns

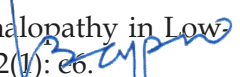
undergoing endotracheal tube suctioning with closed (CS) vs. open (OS) method. 54 neonates (29 and 25 in CS vs. OS group respectively) were included. The change in SpO₂ was lower in CS group [p value 0.011]. The change in HR and pain score was statistically lower during closed suctioning (p value =0.002 and 0.022 respectively).

3. Rate of self extubation in neonates with endotracheal tube fixation with central vs. corner method **Funding (None) PI: Dr. Anita Singh** **Summary:** 50 patients were randomised (open labelled). No. of self extubation/100 ventilation in intervention group was 4.45±5.78 days where as in control group was 8.65±11.69 days (p value=0.91). The method of endotracheal tube fixation does not play important role in preventing accidental extubation. Other factors should be studied to decrease the accidental extubation.
4. Prevalence of Congenital anomalies and their outcome in neonates admitted to a referral centre in northern UP **Funding (None) PI: Dr. Kirti M. Naranje** **Summary:** The incidence of CA's in this study was 8.9% (332/ 3734 neonates), with 49 babies having involvement of multiple systems. This is the highest reported incidence of birth defects from the country till now. The most commonly involved system was the cardiovascular system (33.4%) similar to many other studies, followed by the gastrointestinal (19.8%) and genitourinary (19.8%) system. More than half (57.5%) of these defects were correctable with pediatric surgery and surgical cardiovascular services. However, only a small proportion of neonates who required surgery could undergo timely surgical management. 62.6% (79/ 126) neonates received surgical correction, but only 11% of the babies eligible for cardiac surgery could receive the intervention. The reason for low rates of repair were mostly due to delayed referral and financial constraints. Out of 332 neonates with CBDs, 62% were discharged successfully, 16.8% expired, 17.4% left against medical advice, and 3.6% were referred to other centers.
5. Neurodevelopmental outcomes of Rh isoimmunized infants by DASII scale in a tertiary care centre **Funding (None) PI: Dr. Kirti M. Naranje** **Summary:** There were 1333 neonatal admissions during the study period; 43 Rh-negative isoimmunised mothers & 35 Rh-negative nonisoimmunised mothers delivered during this period. On DASII scale, median mental developmental quotient (DMeQ) was 96 (IQR 95-101) and median motor developmental quotient (DmoQ) was 96 (IQR 91-101). A score of less than 70 was found in 1 (2.5%) baby in DMeQ and none of the babies in DmoQ. The median age at follow-up was 20 (IQR 18-24) months. None of the infants had bilateral or unilateral blindness/ocular abnormality or deafness. Overall, the incidence of NDI (PDI/MDI < 70, deafness and/or blindness) was 2.5% (1/41). Mental and Motor developmental quotient was comparable in hydropic and non hydropic babies as well as in IUT and Non- IUT groups.

Research in progress

1. Norepinephrine versus epinephrine for fluid refractory septic shock in neonates: A Randomized Controlled Trial (Pilot Study) **Funding (None) PI: Dr. Kirti M Naranje**
2. Cardiovascular transition in late preterm & term neonates during early postnatal period (first 72 hours of life): A prospective observational study **Funding (None) PI: Dr. Anita Singh,**
3. Respiratory viral infections in a level 3 NICU of Northern India: a prospective observational study **Funding (Intramural) PI: Dr. Akanksha Verma**

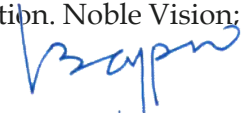
Publications

1. Bellos I, Devi U, Pandita A. Therapeutic Hypothermia for Neonatal Encephalopathy in Low and Middle-Income Countries: A Meta-Analysis. *Global Neonatal Res.* 2022;2(1): e6. 

2. Bellos I, Devi U, Pandita A. A systematic review of surfactant delivery via laryngeal mask airway, pharyngeal instillation, and aerosolization: Methods, limitations, and outcomes. *PediatrPulmonol.* 2022 Mar;57(3):675-684.
3. Roy A, Bajpai S, Verma A, Singh A, Naranje K. A case of fleeting reactive arthritis in an infant: Extended effect of COVID antibodies from mother. *Indian J Pediatr.* 2022;89(7):653-654.
4. Roy A, Verma MK, Singh A, Naranje K, Mandal K. Familial Infantile Liver Failure Syndrome 1: Novel LARS1 Gene Mutation. *Indian J Pediatr.* 2022;89(1):87-88.
5. Singh A, Mandelia A, Kawdiya A, Naranje K, Nigam N. Evolution of Antenatally Diagnosed Bronchogenic Cyst in an Infant. *Journal of Indian Association of Pediatric Surgeon.* 2022;27(2):116-118.

Chapter(s) in Books 2022

1. Naranje K. Introduction to Nutritional Requirement of High-Risk Neonate in Holistic Concepts of Neonatal Nutrition. In: Bishen Singh Mahendra Pal Singh, 2022; Girish Gupta, Anita Singh.
2. Naranje K, Paul A. Approach to baby with colic in: Holistic Concepts of Neonatal Nutrition. M/s Bishen Singh Mahendra Pal Singh; 2022
3. Naranje K, Roy A. Gut Microbiota in Neonatal Health (Prebiotics, Probiotics, Synbiotics and HMO). In: Bishen Singh Mahendra Pal Singh, Holistic Concepts of Neonatal Nutrition, 2022; Girish Gupta, Anita Singh.
4. Naranje K, Dalal N. Nutrition Counselling. In: Bishen Singh Mahendra Pal Singh,. Holistic Concepts of Neonatal Nutrition, 2022; Girish Gupta, Anita Singh
5. Anita Singh. Nutrition in Metabolic Bone Disease. In: Bishen Singh Mahendra Pal Singh, Holistic Concepts of Neonatal Nutrition, 2022; Girish Gupta, Anita Singh.
6. Singh A, Roy A. Human Milk Fortification and Supplements. In: Bishen Singh Mahendra Pal Singh. Holistic Concepts of Neonatal Nutrition, 2022; Girish Gupta, Anita Singh.
7. Singh A, Verma A. KMC & Nutrition in Newborn in: Holistic Concepts of Neonatal Nutrition. Singh B, Mahendra Pal S, eds. 2022. M/s Bishen Singh Mahendra Pal Singh
8. Singh A. Infections & infant feeding (HIV, Hep B & C, CMV, TB, Syphilis, Covid, Etc) in: Holistic Concepts of Neonatal Nutrition. M/s Bishen Singh Mahendra Pal Singh; 2022.
9. Gupta G. Decision making in respiratory care of newborns in: Holistic Care of Newborns on CPAP. Noble Vision; 2022.
10. Vasanthan T. Types of CPAP and Interfaces in: Holistic Care of Newborns on CPAP. Noble Vision; 2022.
11. Verma A. Monitoring and nursing care during CPAP in: Holistic Care of Newborns on CPAP. Noble Vision; 2022.
12. Naranje K. HHHFNC in: Holistic Care of Newborns on CPAP. Noble Vision; 2022.
13. Singh A. Recent Literature and its evidences in: Holistic Care of Newborns on CPAP. Noble Vision; 2022.
14. Verma A. Physiological Considerations in Mechanical Ventilation in: Holistic Care of Newborns on CPAP. Noble Vision; 2022.
15. Pandita A. Chest X-ray in: Holistic Care of Newborns on Mechanical Ventilation. Noble Vision; 2022.
16. Pandita A. Blood gases in: Holistic Care of Newborns on Mechanical Ventilation. Noble Vision; 2022.



17. Singh A. Lung USG in: Holistic Care of Newborns on Mechanical Ventilation. Noble Vision; 2022.
18. Naranje K. Non-invasive Respiratory monitoring in: Holistic Care of Newborns on Mechanical Ventilation. Noble Vision; 2022.
19. Singh A. Disease Specific Ventilation in: Holistic Care of Newborns on Mechanical Ventilation. Noble Vision; 2022.
20. Singh A. Sedation and Analgesia in: Holistic Care of Newborns on Mechanical Ventilation. Noble Vision; 2022.
21. Singh A, Gupta DM, Rawat S. History Taking in Respiratory System in: IAP National Respiratory Chapter Textbook of Pediatric Pulmonology. Noble Vision; 2022
22. Singh A, Gupta DM, Decision making in Respiratory System: IAP National Respiratory Chapter Textbook of Pediatric Pulmonology. Noble Vision; 2022
23. Singh A, Prevention of EUGR: Handbook of Neonatal Clinical Practices, 978-9354659119

Editors in Books

1. Gupta G, Singh A, Chetan C. Holistic care of newborns on mechanical ventilation. 1st ed. Noble Publishers; 2022
2. Gupta G, Patra S, Chetan C, Kumar R, Naranje KM, Singh A, Tewari V, Pandita A. Holistic concepts of neonatal nutrition. 1st ed. M/s Bishen Singh Mahendra Pal Singh Publishers; 2022

Patents: Nil

Visiting Professors

Nil

Highlights of the department

The department of Neonatology continues to provide comprehensive, state-of-the-art intensive care to critically ill newborns in this region and adjoining states as well. The department presently runs 10 beds -Level III NICU which is one of the advanced NICUs across the State with neonatal ward and OPD services.

Some of the services offered by the department includes services like:

1. Non-invasive and Invasive ventilation
2. High frequency ventilation
3. Laminar flow hood -TPN preparation
4. Point of care Ultrasound
5. Therapeutic hypothermia
6. Universal Hearing screening
7. T -Piece resuscitator
8. ROP screening
9. Newborn screening
10. Kangaroo Mother care
11. Follow up of high-risk neonates
12. Special clinics



Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow

13. Perinatal counselling
14. Immunization services

New Initiatives

1. The Department of Neonatology at SGPGIMS has taken a lead by initiating real time neuro-monitoring for neonates and infants in our NICU. Continuous EEG monitoring of eligible babies is being done via the EEG module of the multipara patient monitor installed in our intensive care unit. The electrode placement is completely non-invasive using a cap with scalp electrodes and is friendly for small babies. Four EEG waves from the fronto-parietal and central areas of the brain are displayed on the monitor. This monitoring will help in detecting electrographic seizures which can further fine tune the treatment of neonatal seizures. The characteristic wave pattern will also help in counseling and prognostication.

Department of Neonatology

Awards and honours: 2022

1. Dr Shivani Bajpai (SR PDCC): Second best poster presentation at State level Paediatric conference, UPEDICON 2022
2. Dr Neha Dalal (SR DM): First consolation prize in poster presentation on 13th Research Day, SGPGI 2022
3. Dr Neha Dalal(SR DM): Gold medal in oral paper presentation, Delhi NEOCON, 2022.

DEPARTMENT OF NEPHROLOGY

STAFF

Name of Faculty Members:

1. Prof. Narayan Prasad, MD, DNB (Med), DM,DNB, MNAMS (Nephro), FISN, FASN, FRCP (London)	Professor & Head
2. Prof. Anita Saxena, MD, PhD	Professor
3. Prof. Anupama Kaul, MD, DM (Nephro)	Professor
4. Dr. D.S. Bhadauria, MD, DM (Nephro)	Additional Professor
5. Dr. M.R. Patel, MD, DM (Nephro)	Assistant Professor
6. Dr. Monika Yachha, MD, DM (Nephro)	Assistant Professor
7. Dr. M.R. Behera, MD, DM (Nephro)	Assistant Professor
8. Dr. Ravi S Kushwaha, MD, DM (Nephro)	Assistant Professor
9. Dr. Veeranki Vamsidhar, MD, DM (Nephro)	Assistant Professor (Contractual)
10. Dr. Jeyakumar Meyyappan, MD, DM (Nephro)	Assistant Professor (Contractual)
11. Dr. Harshita Sharma, MD, DM (Nephro)	Assistant Professor (Contractual)
12. Dr. Abdullah, MD, DM (Nephro)	Assistant Professor (Contractual)
13. Dr. Basavraj S, MD, DM (Nephro)	Assistant Professor (Contractual)

Residents:

SR (DM Registered) :	18
PDF :	2 (1 Renal Transplant Medicine+1 Intervention Nephrology)
SR Hospital Services :	1

Activities

Awards and recognition

Dr. Narayan Prasad

International Award

1. **International Society of Nephrology- Mentorship Program** for being a mentor dedicated to helping kidney health professionals from all over the world to grow their nephrology skills and contribute to a future where all people have equitable access to sustainable kidney health, August 25, 2021
2. **The Transplant Society (TTS) Champions**, Asia region, 19th February 2021
3. **Deputy Chair of the International Society of Nephrology- South Asia Regional Board- 1921-1923.**
4. Council member of the International Society of Nephrology- 2021-2023
5. Executive member- International Society of Nephrology-Sister Renal Centers Committee-2019-21
6. Executive Member - International Society of Nephrology-Renal Sister Programme
7. Executive Member - South Asia Regional Board, International Society of Nephrology

8. Editorial Board – Seminar in Dialysis
9. Editor, Indian Point of Care (Elsevier)

National Awards

1. Secretary, Indian Society of Nephrology
2. Associate Editor, Indian Journal of Nephrology.
3. Associate Editor, Indian Society of Organ Transplantation
4. Editor-in-Chief, Indian Journal of Transplantation
5. Secretary, Society of Renal Nutrition & Metabolism
6. Executive member, Indian Society of Organ Transplantation

Government of India (Ministry of Health & Family Welfare)

1. **Technical expert** for the National Oversight Committee (NatCom) Meeting for Pradhan Mantri National Dialysis Programme F. No. NHSRC/HCT/NatComt 2t-22 I }L/NCD'II (Pt' 1) Government of India Ministry of Health and Family Welfare Department of Health and Family Welfare (NCD-II Section), 7th April 2021

Dr. Dharmendra Bhadauria

- Council Member of Indian Society of Organ Transplantation
- Council Member of North-zone chapter of Indian Society of Nephrology

Dr. Veeranki Vamsidhar

- Best Paper Award - 27 Annual Conference of North Zone - Indian Society of Nephrology 2022-23 5 to 6 March 2022, Varanasi
- Rekha Memorial Tanker Awarded the ISNCON 2022 held on 1st to 4th December, 2022 at Pune.

Dr. Jeyakumar Meyyappan

- Torrent Young Scholar Award (2022) – All India level Finalist (Microlabs - TYSA).
- Best Community film award in the International Society of Nephrology WCN 2022 for the film titled – “For some the wait never ends. (International Society of Nephrology)
- Young Nephrologist Award for the paper titled “The adverse effects of high dose corticosteroid on infectious and noninfectious sequelae in Renal Transplant Recipients with Coronavirus disease 19 in India”. ISN Frontiers Meet – September 2022, New Delhi, (International Society of Nephrology).
- Best Mini Oral Presentation “A Study of Long-Term Outcome of Mycophenolate Dose Modulation in Renal Allograft Recipients With SARS-CoV2 Infection During COVID-19 Pandemic”. Indian Society of Organ Transplantation held in Nagpur – October 2022

Dr. Abdullah

- Best poster award, ISNCON 2022, Pune.

Invited sessions and chairpersons/lectures for Conferences: 2022

Name of faculty and Session

Prof. Narayan Prasad

- Induction and infection risk in renal transplantation. International Soc Nephrology Frontier meeting, New Delhi, 22-25 September 2022



- Speaker at Inaugural function International Soc Nephrology Frontier meeting, New Delhi, 22-25 September 2022
- Management of hypertension in retarding the progression of CKD. 52nd Annual Conf of Indian Soc Nephrology, 1st December 2022, Pune
- Topic- Transplant in Sensitized patients. ISNEASTCON 2022 (Indian Society of Nephrology, East Zone) to be held on 16th and 17th Sept 2022, at Swosti Premium, Bhubaneswar.
- Panelist Topic: current approaches to kidney transplantation in HLA-sensitized kidney transplant candidates. In collaboration with ISN and Stephen Jordon. on 19th May 2022 (Thursday, 8:00 pm to 10:00 pm) at Hotel Lalit, Delhi-
- Clinicopathological Conference (CPC)-Clinical discussant- North-zone Indian Society of Nephrology, 26th April 2022 (Diagnosis arrived Kikuchi Disease)
- Clinicopathological Conference (CPC)- Clinical Discussant: North-zone Indian Society of Nephrology, 6th March 2022, Varanasi (Diagnosis- relapse of PR-3 ANCA)
- Guest Speaker at India's First National Health Awareness Month | 1st May 2022 Integrated Health & Wellbeing Council, India's premier healthcare advocacy institute
- Optimal immunosuppression to reduce cardiometabolic complications after kidney transplant. 2nd Update in Hypertension NEPHCON2022 from the 6th May to the 8th May 2022, Mahabaleshwar, Pune
- Optimal Immunosuppression to reduce Cardiometabolic complications after Kidney Transplant. Seventh kidney Transplant Update- A Practical approach to be held at, Hotel Pride Plaza Aerocity, Delhi on 2nd-3rd April 2022
- 7th Annual Midterm Conference of the ISOT 2022 to be held at Patna
- Speaker: The Pre-transplant immunological workup: How to proceed at a resource limited setting? 26 March 2022, time : 14:20 - 14:40

Prof. Anupma Kaul

- AKI in cancer patients .52nd Annual Conference of Indian Society Nephrology, 1st to 4th December 2022, Pune

Dr. D.S. Bhaduria

- Non diabetic kidney disease in diabetics- Nephrologists View. 52nd Annual Conference of Indian Society Nephrology, 1st to 4th December 2022, Pune

Dr. Manas Ranjan Patel

- Tunneled catheter placement: challenges and solutions. 52nd Annual Conference of Indian Society Nephrology, 1st to 4th December 2022, Pune

DR. Manas Ranjan Behera

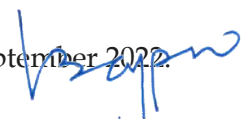
- Journal Review on "Kidney Transplant". 27th Annual Conference of the North Zone Chapter of Indian Society of Nephrology Conference, Varanasi (5th to 6th March 2022).

Dr. Ravi Shankar Kushwaha

- A case of atypical HUS: How you approached. 52nd Annual Conference of Indian Society Nephrology, 1st to 4th December 2022, Pune

Teaching Workshops/ CME's organized 2022

1. Nutritional Walkathon, organized by Department of Nephrology on 28th September 2022



2. CME on Glomerular Disease & Foundation Day of Department of Nephrology, SGPGIMS, Lucknow on 14th and 15th May 2022.
3. World Kidney Day, Department of Nephrology, SGPGIMS, Lucknow on 10th March 2022.

Membership of Societies

Prof Narayan Prasad

- International Society of Nephrology (ISN-WCN)
- American Society of Nephrology (ASN)
- European Renal Association (ERA)
- The Transplantation Society
- International Society for Peritoneal Dialysis (ISPD)
- American Society for Histocompatibility and Immunogenetics (ASHI)
- Indian Society of Nephrology (ISN)
- Indian Society of Organ Transplantation (ISOT)
- Society of Renal Nutrition & Metabolism (SRNM)
- Life member of AVATAR

Prof Anupma Kaul

- International Society of Nephrology (ISN-WCN)
- Indian Society of Nephrology (ISN)
- Indian Society of Organ Transplantation (ISOT)
- Society of Renal Nutrition & Metabolism (SRNM)

Dr D S Bhaduria

- International Society of Nephrology (ISN-WCN)
- American Society of Nephrology (ASN)
- Indian Society of Nephrology (ISN)
- Indian Society of Organ Transplantation (ISOT)
- Society of Renal Nutrition & Metabolism (SRNM)

Dr Manas Ranjan Patel

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)
- Indian Society of Renal Nutrition and Metabolism (SRNM)
- Life member of AVATAR
- American Society of Nephrology (ASN)

Dr Monika Yachha

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)



- Indian Society of Renal Nutrition and Metabolism (SRNM)
- American Society of Nephrology (ASN)

Dr Manas Ranjan Behera

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)
- Indian Society of Renal Nutrition and Metabolism (SRNM)
- Life member of AVATAR
- American Society of Nephrology (ASN)

Dr Ravi Shankar Kushwaha

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)
- Indian Society of Renal Nutrition and Metabolism (SRNM)
- Life member of AVATAR
- American Society of Nephrology (ASN)

Dr. Veeranki Vamsidhar

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)
- Indian Society of Renal Nutrition and Metabolism (SRNM)

Dr. Jeyakumar Meyyappan

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)
- Indian Society of Renal Nutrition and Metabolism (SRNM)

Dr. Harshita Sharma

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)
- Indian Society of Renal Nutrition and Metabolism (SRNM)

Dr. Abdullah

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)
- Indian Society of Renal Nutrition and Metabolism (SRNM)

Dr. Basavraj S

- Life member of Indian Society of Nephrology (ISN)
- International Society of Nephrology (ISN-WCN)
- Indian Society of Renal Nutrition and Metabolism (SRNM)



Services

Clinical Services

		2022	2021	2020
OPD	Total patients	59176	41901	11301
	New patients	3436	5321	2348
	Follow-up patients	48947	31433	18744
	Transplant patients	6793	5147	6568
Admissions	Ward admissions	2479	2209	771
	ICU admissions (ICU-Dialysis)	533	399	283
Kidney transplants	Live donor ABO compatible	70	16	36
	Live donor ABO incompatible	22	1	9
	Cadaveric donor	5	0	0
Emergency services	Emergency consultations	1575	1488	1620
	Emergency admissions	438	543	552
	Interdepartmental consultation	1105	936	1287
Dialysis procedures	Hemodialysis sessions (HD)	38198	34361	33040
	Online hemodiafiltration sessions (OLHDF)	1399	1283	552
	Plasmapheresis	488	350	259
	Continuous renal replacement therapy (CRRT)	127	167	96
	SLED	1288	791	752
	AVF	394	368	336
	IJV Insertion	1022	872	618
	Permacath insertion	427	323	304
	Permacath removal	151	103	91
	New patients	1367	1074	964
	Femoral insertion	1568	1353	1036
Dressing	810	551		

Laboratory Services

Total number of investigations of Renal Lab and Transplant Immunology Lab		2022	2021	2020
Renal Lab	Hematology (Hb, TLC, HCT, ESR, DLC, CBC, Retic)	26155	14706	9503
	Viral machine quantitative PCR, HBV DNA, HCV RNA	15231	580	537
	Biochemistry: KFT, LFT, lipid profile, electrolytes, Mg, Phos, Ca ⁺⁺ , uric acid, amilage, blood sugar, Iron TIBC, UIBC, HDL	123467	69456	41072
	Drug assays: CsA, Tacrolimus	8675	6522	4159
	Hormonal-PTH, Vitamin D	16174	10878	5095
	Iron profile: Iron, TIBC, folate, B12, ferritine	49466	31270	6481
	Serology: HIV, HCV, HBsAg, CMV, IgG, CMV IgM	17283	15327	6101

Transplant Immunology Lab	Flow cross match (flow Cytometric)	182	165	55
	Donor specific antibody	165	130	76
	HLA typing (A, B, DR, DP, DQ)	864	752	346
	PRA (Panel Reactive antibody)	186	34	19
	Single antigen	219	205	64

Training

At present, there are 17 senior residents enrolled in DM Nephrology program, one in Post Doctoral Fellow in Renal Transplantation and one in Post Doctoral Fellow in Intervention Nephrology programme.

Number of students appeared in the final year examination (PG): 6

Number of students who passed in final year examination (PG): 6

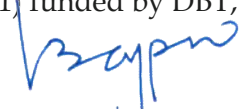
Research Projects

Completed

1. CREDENCE study. 28431754DNE3001 A Randomized, Double-blind, Event-driven, Placebo-controlled, Multicenter Study of the Effects of Canagliflozin on Renal and Cardiovascular Outcomes in Subjects With Type 2 Diabetes Mellitus and **IEC Code: 2015-130-DT-87 (Prof. Narayan Prasad)**
2. KREMEZIN KR-09-03. A randomized, multicentre, parallel, open label, active controlled, phase III study to evaluate the clinical efficacy and safety of Kremezin® on suppression of Progression of Chronic Renal (Prof. Narayan Prasad)
3. **IEC CODE : A07 PGI/DT/IEC/51 16.07.2010.** Changes in Th1 and T-reg cell profiles in renal transplant recipient with and without Basiliximab induction (Prof. Narayan Prasad).
4. Effect of Tacrolimus on P-glycoprotein Expression on Different T cells Lymphocytes in Steroid Resistant Nephrotic Syndrome Patients (Prof. Narayan Prasad)
5. BKV-nephropathy in renal transplant recipients: clinical manifestation and comparison with acute rejection (Prof. Narayan Prasad).
6. Role of multidrug resistant P-gp, MRP-1 and polymorphism of MDR-1 gene in steroid resistant and steroid sensitive nephrotic syndrome. ICMR (Prof. Narayan Prasad)

Research in progress (Funding agency, Name of project, Investigators)

1. **ICMR - Gut microbiome profiles in renal allograft recipient with chronic antibody-mediated rejection.** Proposal ID YSS/2020/000193PRCYSS - funded by Department of Health Research, ICMR, New Delhi (Projected fund Rs.30 lacs). **(PI -Prof. Narayan Prasad)**
2. **ICMR - Role of Levothyroxine on progression of Chronic Kidney Disease in subclinical hypothyroid populations - A Multicentric randomized controlled trial** funded by Indian Council of Medical Research, New Delhi. **(PI -Prof. Narayan Prasad)**
3. **ICMR - Role of vascular endothelial growth factor on acute renal allograft rejection.** ICMR funding IEC 2014-205-EMP-EXP PGI/BE/895/2014- ICMR -no.5/4/7-7/2014-NCD. **(PI -Prof. Narayan Prasad)**
4. **DBT - Indian Chronic Kidney Disease (ICKD) study (AN1-VI/SGSOP 08/V1)** funded by DBT, New Delhi. **(PI -Prof. Narayan Prasad)**



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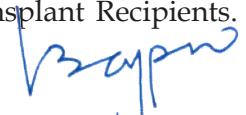
5. **ICMR - Therapeutic Evaluation of Steroids in IgA Nephropathy Global low dose study (TESTING study INDIA) (GI-R-01-2011)-SGPGIMS site - Sponsored by ICMR, New Delhi.(PI -Prof. Narayan Prasad)**
6. **Indian Society of Nephrology-To establish a registry of Indian Society of Nephrology epidemiology, clinical characteristics and outcomes of AKI in India. IEC 2017-113-EMP-97/ PGI/BE/478/2017 - II - sponsored by.(PI -Prof. Narayan Prasad)**
7. **Indian Society of Nephrology - Evaluation of clinical and environmental factors associated with chronic kidney disease of unknown origin (CKDu) in India. IEC 2017-92-IP-97 PGI/BE/501/2017 Sponsored by Indian Society of Nephrology.(PI-Dr. D.S. Bhadauria)**
8. **Intramural - "Biochemical performance and clinical outcomes of the "high sieving" polyethersulfone dialyzers in comparison to standard dialyzers",(PI-Dr. Manas Ranjan Patel)**
9. **Intramural - Serum galactose-deficient IgA1 as a potential biomarker for monitoring disease activity and response to therapy in IgA nephropathy. IEC code: 2020-252-IMP-EXP-29(PI- Dr Monika Yachha)**
10. **ICMR - Renal Fibrosis - Correlation Among Histomorphometry, Urinary Biomarkers, and Shear Wave Elastasonography.ICMR Ad-hoc Research Project 2019-3305.PI-Dr Manas Ranjan Behera)**
11. **Indian Society of Nephrology - Effect of oral sodium bicarbonate on FGF-23/klotho axis and bone health in patients with chronic kidney disease.ISN-La-Renon Research Grant (PI-Dr Manas Ranjan Behera)**
12. **Intramural - Effect of Phosphodiesterase V Inhibitor on fibroblast derived from biopsy specimen of IgA nephropathy: An in-vitro study. (PI-Dr Manas Ranjan Behera)**

Clinical drug trials

1. A phase 3 randomized, open label (sponsor - blind), active controlled, parallel group, multicenter, event driven study in non-dialysis subjects with anemia associated with chronic kidney disease to evaluate the safety and efficacy of daprodustate compared to darbepoetin alfa funded by GSK.(PI -Prof. Narayan Prasad)
2. A Randomized, Double-blind, event-driven, Placebo-Controlled, Multicenter Study of the Effects of Canagliflozin on Renal and Cardiovascular Outcomes in Subjects with Type 2 Diabetes Mellitus and Diabetic Nephropathy (*CREDENCE Study- IN00132*). (PI -Prof. Narayan Prasad)
3. FLOW-Effect of semaglutide versus placebo on the progression of renal impairment in subjects with type 2 diabetes and chronic kidney disease funded by Novo Nordisk.(PI -Prof. Narayan Prasad)

Publications:

1. Shanmugham S, Prasad N, Kaul A, Bhadauria D, Patel M, Yachha M, et al. Evanescent renal allograft cortical necrosis from living donor renal transplantation: A lesson learned over two decades. *Transpl Immunol.* 2022 Apr;71:101558. (Pubmed: 35217167)
2. Prasad N, Chellapan A, Srivastava A, Bhadauria D, Kaul A, Patel M, et al. ABO-incompatible Repeat Kidney Transplantation: Coping with the "Twin Immunological Barrier." *Indian J Nephrol.* 2022;32(1):82-6. (PMID: 35283567)
3. Prasad N, Yadav B, Singh M, Gautam S, Bhadauria D, Patel M, et al. Humoral Immune Response of SARS-CoV-2 Infection and Anti-SARS-CoV-2 Vaccination in Renal Transplant Recipients. *Vaccines (Basel).* 2022 Mar 3;10(3):385. (PMID: 35335017)



4. Prasad N, Khurana M, Behera M, Yaccha M, Bhadauria D, Agarwal V, et al. Clinicopathologic Manifestations of Immunoglobulin A Nephropathy in a Northern Indian Cohort: A Mute Assassin with Delayed Diagnosis. *Indian J Nephrol.* 2023;33(1):12–21. (PMID: 37197052)
5. Dhanorkar M, Prasad N, Kushwaha R, Behera M, Bhadauria D, Yaccha M, et al. Impact of Early versus Late Referral to Nephrologists on Outcomes of Chronic Kidney Disease Patients in Northern India. *Int J Nephrol.* 2022;2022:4768540. (PMID: 35692284)
6. Bhadauria DS, Kumar P, Tiwari P, Kaul A, Negi TS, Rai P, et al. Liver Stiffness is Reduced to Normal After Successful Renal Transplantation: A Prospective Cohort Study. *J Clin Exp Hepatol.* 2022;12(6):1445–50. (PMID:36340304)
7. Vamsidhar V, Bhadauria D, Meyyappan J, Patel MR, Yaccha M, Kaul A, et al. Outcome of mild SARS-CoV-2-infected renal transplant recipients managed by supervised home-based self-monitoring. *Infect Dis Now.* 2022 Aug;52(5):286–93. (PMID:35667559)
8. Bhadauria D, Kumar S, Yachha M, Kaul A, Patel MR, Kushwaha RS, et al. Efficacy and safety of bortezomib in the treatment of active antibody-mediated rejection in adult kidney-transplant recipients: A single-center retrospective study. *Indian J Transplant* 2022;16:101-6. *Int J Trans.* 2022;16:101–6.
9. Asthana S, Kute V, Shah U, MohankaR,, Sahay M, Chinnadurai R, et al. Consensus statement on organ donation from COVID-positive deceased donors - Indian Society of Organ Transplantation, Liver Transplant Society of India and Indian Society for Heart and Lung Transplantation. *Indian J Transplant.* 2022;16:8–16.
10. Yadav B, Prasad N, Agrawal V, Jain M, Agarwal V. Role of pathogenic T-helper cells-17 in chronic antibody-mediated rejection in renal allograft recipients. *Indian J Transplant.* 2022;16(1):88–95.
11. Bhadauria DS, Katiyar H, Goel A, Tiwari P, Kishore RVK, Aggarwal A, et al. Antibody Response to ChAdOx1 nCoV-19 (AZD1222) Vaccine in Kidney Transplant Recipients. *Vaccines (Basel).* 2022 Oct 11;10(10):1693. (PMID:36298558)
12. Veeranki V, Prasad N, Meyyappan J, Bhadauria D, Behera MR, Kushwaha R, et al. The adverse effects of high-dose corticosteroid on infectious and non-infectious sequelae in renal transplant recipients with coronavirus disease-19 in India. *Transpl Infect Dis.* 2022 Dec;24(6):e13908. (PMID:35870131)
13. Prasad N, Bansal SB, Yadav B, Manhas N, Yadav D, Gautam S, et al. Seroconversion Rate After SARS-CoV-2 Infection and Two Doses of Either ChAdOx1-nCoV COVISHIELD™ or BBV-152 COVAXIN™ Vaccination in Renal Allograft Recipients: An Experience of Two Public and Private Tertiary Care Center. *Front Immunol.* 2022;13:911738. (PMID:35844596)
14. Prasad N. Straight versus Coiled Peritoneal Dialysis Catheter: Conclusion is Not Straightforward. *Indian J Nephrol.* 2022;32(4):285–7. (PMID:35967542)
15. Kute VB, Guleria S, Bhalla AK, Sharma A, Agarwal SK, Sahay M, et al. ISOT Consensus Statement for the Kidney Transplant Recipient and Living Donor with a Previous Diagnosis of COVID-19. *Indian J Nephrol.* 2022;32(4):288–90. (PMID: 35967531)
16. Khurana M, Prasad N, Behera M, Yachha M, Kushwaha R, Agarwal V, et al. Two Decades Outcomes of Posttransplant Immunoglobulin A Nephropathy in Live Donor Renal Transplantation. *Indian J Nephrol.* 2022;32(4):312–9. (PMID:35967532)
17. Jain S, Bhadauria D, Prasad R, Gurjar M, Yaccha M, Shanmugham S, et al. Aetiology, management, and outcome of lower respiratory tract infection in renal allograft recipients - A report from a tropical country. *Lung India.* 2022;39(6):545–52. (PMID:36629234)



18. Prasad N, Yadav B, Prakash S, Yadav D, Singh A, Gautam S, et al. Association of Human Leucocyte Antigen Polymorphism with Coronavirus Disease 19 in Renal Transplant Recipients. *Vaccines (Basel)*. 2022 Oct 30;10(11):1840. (PMID: 36366349)
19. Sinha S, Ajayababu A, Thukral H, Gupta S, Guha SK, Basu A, Gupta G, Thakur P, Lingaiah R, Das BK, Singh UB, Singh R, Narang R, Bhowmik D, Wig N, Modak DC, Bandyopadhyay B, Chakrabarty B, Kapoor A, Tewari S, Prasad N, Hashim Z, Nath A, Kumari N, Goswami R, Pandey S, Pandey RM. Efficacy of Bacillus Calmette-Guérin (BCG) Vaccination in Reducing the Incidence and Severity of COVID-19 in High-Risk Population (BRIC): a Phase III, Multi-centre, Quadruple-Blind Randomised Control Trial. *Infect Dis Ther*. 2022 Dec;11(6):2205-2217. doi: 10.1007/s40121-022-00703-y. Epub 2022 Oct 15. Erratum in: *Infect Dis Ther*. 2023 Mar;12(3):1017-1018. PMID: 36242739;
20. Kaul A, Bhaduarua D, Yachha M, Behera MR, Kushwaha R, Prasad N, et al. Impact of Kidney Donation on Pregnancy Outcomes: A Retrospective Analysis. *Indian J Nephrol*. 2022;32(5):439-44. (PMID: 36568592)
21. Kaul A, Pandey A, Behera MR, Yachha M, Bhaduarua D, Patel MR, Kushwaha R, Prasad N. Midterm eGFR Predicts Pregnancy Outcomes: An Observational Study. *J Assoc Physicians India*. 2022 Dec;70(12):11-12.
22. Sharma H, Bhadauria D, Goel A, Yaccha M, Gurjar M, Kaul A, Veeranki V, Shamungham S, Jain M, Mohindra S, Prasad N. Co-existence of acute pancreatitis with hemolytic uremic syndrome: "The dilemma of a rare organ cross-talk". *Pancreatology*. 2022 Sep;22(6):823-825.
23. Kaul A, Bhaduarua D, Behera MR, Kushwaha R, Prasad N, Yachha M, Patel M, Kalitha J. Psychosocial health and quality of life among kidney donors following transplantation. *Transpl Immunol*. 2022 Oct;74:101649.
24. Shanmugham S, Bhadauria D, Agrawal V, Jain M, Yaccha M, Kaul A, Vamsidhar V, Meyyappan J, Prasad N. The diagnostic and therapeutic dilemma of the co-existence of BK virus nephropathy with acute rejection - an experience from a single Centre and review of the literature. *Transpl Immunol*. 2022 Jun;72:101581.
25. Meyyappan J, Prasad N, Kushwaha R, Patel M, Behera M, Bhadauria D, Yaccha M, Kaul A, Agrawal V. Health-Related Quality of Life Score and Outcomes in Living Donor Renal Transplant Recipients With COVID-19. *Exp Clin Transplant*. 2022 Jan;20(1):42-51.
26. Chandrashekhar P, Kaul A, Bhaduarua D, Prasad N, Behera M, Kushwaha R, Patel M, Yachha M, Srivastava A. Risk of tuberculosis among renal transplant recipients receiving rituximab therapy. *Transpl Infect Dis*. 2022 Dec;24(6):e13963.
27. Mathews T, Pushkar D, Kaul A, Bhaduarua D, Prasad N, Patel M, Behera M, Yachha M, Kushwaha R, Srivastava A. Early versus Late acute graft pyelonephritis: A retrospective analysis of graft and patient outcomes. *Transpl Immunol*. 2022 Dec;75:101657.
28. Sharma H, Behera MR, Bhadauria DS, Khushwaha RS, Yachha M, Patel MR, Kaul A, Prasad N. High mortality and residual kidney damage with Coronavirus disease-19-associated acute kidney injury in northern India. *Clin Exp Nephrol*. 2022 Nov;26(11):1067-1077.
29. Jose L, Kaul A, Bhadauria D, Kushwaha R, Nandan R, Lal H, Prasad N, Behera MR, Patel MR. Desmopressin Acetate Before Percutaneous Ultrasound-Guided Kidney Biopsy in Patients with Renal Failure - Is it Really Beneficial? *Indian J Nephrol*. 2022 Sep-Oct;32(5):430-434. doi: 10.4103/ijn.IJN_553_20. Epub 2022 May 11. PMID: 36568600; PMCID: PMC9775618.
30. Prasad N, Yadav AK, Kundu M, Jaryal A, Sircar D, Modi G, Sahay M, Gopalakrishnan N, Vikrant S, Varughese S, Baid-Agrawal S, Singh S, Gang S, Parameswaran S, Ghosh A, Kumar V, Jha V. Renin-angiotensin blocker use is associated with improved cardiovascular mortality

in Indian patients with mild-moderate chronic kidney disease-findings from the ICKD study. Front Med (Lausanne). 2022 Dec 20;9:1060148.

Books: None

Chapter in books

1. Narayan Prasad "Peritoneal dialysis" book "Postgraduate Medicine" Jaypee Brothers Medical Publishers Pvt. Ltd
2. Narayan Prasad. Chronic Kidney Disease-Mineral Bone Disease: An Overview, Chapter 4; Academic wing of Association of Physicians of India (API)@2020 Indian College of Physicians, page-29-41
3. Challenges In Diet In Patients On Peritoneal Dialysis In Nutritional Challenges in CKD In South East Asia. Authors Dr Anita Saxena and Dr Amit Gupta Editor Dr Georgi Abraham
4. Anita Saxena and Amit Gupta Nutrition in postrenal transplant patient Editor Dr Georgi Abraham and Dr Anusha Hand book of renal transplantation in developing countries
5. M.R. Patel. A Chronic Kidney Disease 5 Patient in Peritoneal Dialysis with Ultrafiltration Failure

Visiting Professors

1. **Prof. Sanjeev Sethi**, MD, PhD, Mayo Clinic, Rochester, Minissota, USA visiting in the Department of Nephrology, SGPGI on 19th July 2022.

Departmental Highlights

Clinical

Beside daily bed side teaching rounds, and weekly clinical grand rounds, department conducts morning teaching sessions on daily basis, in which presentations includes seminars, journal club, case discussions and combined meetings with Pathology, Radiology, Nuclear Medicine, Urology, Telemedicine Sessions with SRMC, Chennai and Raebarely.

1. **Advanced Renal & Transplant Centre**- By 2021, we are going to have "Advanced Renal and Transplant Centre". The department will have the capacity of 208 beds including 111 dialysis stations, which will be the largest dialysis provider in India. It will enable us to provide maintenance hemodialysis to the people as well which is not possible at present because of high load of acute care and bridging the ESRD patients to renal transplantation consume capacity and infrastructure. The advance transplant centre will have 6 operation theatres, which will enable the capacity with 2-3 transplant per day. The department intends to increase the number of transplants mainly through increasing deceased donors and swap transplants.
2. **Critical Care Nephrology** -Department is planning to increase no of beds from 8 to 24 in next 5 years.
3. **Intervention in Nephrology** - Department is planning to have one more fluoroscope and DSA to facilitate intervention nephrology programme.
4. **Division of Pediatric Nephrology** - Department proposes to start pediatric nephrology unit in next 5 year.
5. **Renal & Transplant Immunology Lab**- Department also plans to upgrade transplant immunology lab and intend to provide for HLA typing by next generation sequencing, CDC cross match, DNA figure-printing and testing for non-HLA antibody.
6. **Advance Centre For Prevention of Malnutrition In Chronic Kidney Disease**



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7. **Patient Education and Training – Department planning to improve patient education and training through**
- Counsellor
 - Medical Social Worker
 - Psychologist
 - Renal Nutritionist (by strengthening existing one)
 - Audio-visual programme

New Initiatives

Department also wants open new course and increase existing seats as below

- Post-Doctoral Fellowship (PDF) in Critical Care Nephrology**
- Post-Doctoral Certificate Course In Dialysis**
- Advance Certificate Course in Renal Nutrition**
- Post-Doctoral Fellowship in Transplant Immunology**
- Increase seats for Post-Doctoral Fellowship (PDF) in Renal Transplantation**
- Increase seats for Doctorate in Medicine (DM) in Nephrology**
- Diploma in Dialysis Technology**

Research Activity

To enhance the research activity, department planning to achieve following objectives

- Upgrading research lab to facilitate cell culture and genomic studies.
- Strengthening of transplant immunology research facility

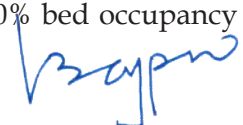
Academic activities: The academic activities (case discussion, seminar and journal clubs) of the department were never suspended. The department quickly subscribed the WebEx platform for the academic activities.

Dr Prasad collected data from different part of India, which was published in a reputed Journal of Nephrology, Kidney International reports with good impact factor of 3.34. One entire issue of Indian Journal of Nephrology dedicated to the care of COVID during the pandemic was published under his editorial review.

Service:

Dialysis services: It was challenging to provide dialysis to this enormous number of MHD patients. The screening and prevention of SARS-CoV-2 in the MHD unit, was adopted. The department made the protocol for the dialysis at institute, which was approved by the director. Dialysis facilities were created at four different places: 1. Main dialysis unit, 2. Holding area 3. Rajdhani COVID hospital-1 and 4. RCH-II. None of the patients needing dialysis were refused. All COVID suspect patients were dialysed in Holding area. We are proud to say, we have provided 1400 dialysis sessions to 295 COVID positive patients at RCH.

OPD and Indoor services: Department was instrumental in providing eOPD and physical OPD during the COVID period. Approximately 4000 patients were consulted through eOPD during these days. The Indoor and intensive care unit by department of Nephrology had 100% bed occupancy throughout the COVID period.



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Transplant Services: The transplantation was temporarily suspended for a few months initially in April and May 2020; however, the department resumed renal transplantation gradually and approximately 15 renal transplantation was performed during this period. Moreover, we continued admitting our renal transplantation patients with complications with approximately 100% occupancy of the Kidney Transplant Units.

Renal and Transplant Immunology lab services: The renal lab continuously supported the all the services of the department and institute as well whenever required. The lab is the backbone of the renal transplantation, and the lab performed all the services required for successful transplantation at the institute or beyond the institute.

DEPARTMENT OF NEUROLOGY

STAFF

Name of Faculty Members:

1. Dr. Sunil Pradhan, MD(Med), DM(Neuro), FAMS, FNASc, FICP, FRCP (Edin), D.Sc (Hon)	Professor & Head (Retired on June 30, 2022)
2. Dr. Golla Nagesh Babu, M.Sc (Biochemistry), Ph.D (Life Sciences)	Professor
3. Dr. Sanjeev Jha, MD (Medicine), DM (Neurology)	Professor (took over as Head, w.e.f. 1 st July 2022)
4. Dr. Jayantee Kalita, MD (Medicine), DM (Neurology)	Professor
5. Dr. Vimal Kumar Paliwal, MD (Medicine), DM (Neurology)	Professor
6. Dr. Vinita Elizabeth Mani, MD (Medicine), DM (Neurology)	Associate Professor
7. Dr. Ruchika Tandon, MD (Medicine), DM (Neurology)	Associate Professor
8. Dr. Prakash Chandra Pandey, MD (Medicine), DM (Neurology)	Assistant Professor (Contractual) Joined in August 2021
9. Dr. Jadhav Mahesh Suresh, MD (Medicine), DM (Neurology)	Assistant Professor (Contractual) Joined in November 2022
10. Dr. Gutti Nagendra Babu, MD (Medicine), DM (Neurology)	Assistant Professor (Contractual) Joined in November 2022

Activities

Awards and Recognitions

Dr. Jayantee Kalita

- Guest of Honor API-CON, Guwahati on Physician Day (Subject: Oration-Social implication of neurology in education and health planning).
- Delivered the “HP Barma Oration” in Annual Conference of API-CON, Assam (Topic: Neurological Sub rate of memory and learning).

Dr. Vinita Elizabeth Mani

- Honored for selfless service by the Uttar Pradesh Masihi Association.

Invited sessions and chairpersons/lectures for Conferences: 2022

Name of faculty and Session

Dr. Jayantee Kalita

- 5th Tuberculosis meningitis international consortium meeting The Cohen Quad, Exeter College, University of Oxford, 2022.
- American Neurological Association meeting in October in Chicago (in person) called: “A String of Pearls: Key Considerations in the Care of Neurological Infections.”, 2022.

- 18th Asian Oceanian Congress of Neurology & 29th Annual Conference of the Indian Academy of Neurology(AOCN-IANCON), 2022
- 28th Annual Conference of UP-UK Neuroscience Society, 2022
- XXXI Annual Conference of Assam State Chapter (APICON, ASSAM), 2022
- 70th annual conference of **Neurological Society of India** - NSICON,2022

Dr. Vinita Elizabeth Mani

- Stroke Summer School, Indian Stroke Association.

Dr. Ruchika Tandon

- AOCN-IANCON - New Delhi
- Movement Disorders Update in IMS, BHU

Membership of Societies:

Dr. Jayantee Kalita

- European Academy of Neurology
- American Neurological Association
- Indian Academy of Neurology
- Association of Physicians of Indian
- Neurological Society of India

Dr. Vinita Elizabeth Mani

- Indian Stroke Association
- Dr. Ruchika Tandon
- Movement Disorder Society
- Indian Academy of Neurology
- Neurological Society of India
- UP- Association of Physicians

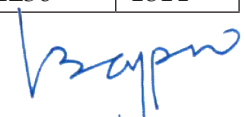
Teaching Workshops/ CME's organized 2022

- **Workshop on World Stroke Day"** 2022 - October 29, 2022.
- **Workshop on World Parkinson's Day-** April 11,2022
- **Workshop on World Encephalitis Day** - March 18, 2022

Service

Year-wise available clinical data (last three years 2020, 2021, 2022) for department of Neurology

S.No	Parameters	2020	2021	2022
1.	Number of New patients in OPD	3605	7832	17106
2.	Number of Old/ Follow-up patients in OPD	11111	12616	35014
3.	Total patients in OPD	14716	20448	52120
4.	Total number of patients admitted (IPD)	724	1230	1814



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5.	Total number of Neurophysiology Procedures done			
	• EEG	540	1267	1832
	• EMG / NCV	618	1239	1947
	• EPs	102	237	348

Training

At present, there are 19 senior residents enrolled in DM Neurology program & PDF Neurophysiology program including 6 (3rd year DM residents), 6 (2nd year DM residents), 6 (1st year DM residents) & 1 (PDF resident)

Number of students appeared in the final year examination (PG) : 6

Number of students who passed in final year examination (PG): 6

Research projects

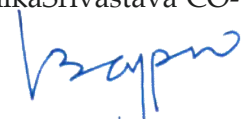
Completed :

1. Expression of death and survival signals in Tuberculosis Meningitis: Correlation with disease severity and outcome. **Funding-** Intramural. **Summary report:** There were 40 patients with TBM whose mean age was 31.6 years and 50% were females. TBM patients had higher expression of death (caspase-3, TNF α , IL6, and MDA) and suppression of survival biomarkers (XIAP, catalase and GSH) compared to the healthy controls. Caspase-3 positively correlated with TNF α , IL6 and MDA, and negatively with XIAP, GSH and catalase. Patients with longer duration of illness and definite TBM had higher expression of caspase-3. Patients who died has higher expression of caspase-3 and suppression of XIAP compared to those who survived.

Research in progress

Funding agency, Name of project, Investigators

2. **Novartis** - A- 2 year randomized, 3 arm double blind non inferiority study comparing the efficacy and safety of ofatumumab and siponimod versus fingolimod in pediatric patients with multiple sclerosis followed by open label extension, PI: Dr. Jayantee Kalita
3. **Medpace** - A randomized, double-blind, multicenter, placebo-controlled phase 3 study with open-label period to evaluate the efficacy and safety of Inebilizumab in adults with Myasthenia Gravis, PI: Dr. Jayantee Kalita
4. **UPCST** - A study of neurologic Wilson disease with reference to cognitive and neuropsychiatric abnormality, PI: Dr. Jayantee Kalita
5. **ICMR** - HTA of National Stroke Care Registry Programme development of Hospital Based Stroke Registries (HBSR) in different regions of India, PI-Dr. Jayantee Kalita, CO-PI Dr. Ruchika Tandon, Dr. Vivek Singh (Co-PI)
6. **Genova Biopharmaceuticals Ltd.** - Clinical Trial to assess the efficacy and safety of TNF-TPA in Acute Ischemic stroke, PI: Dr. Jayantee Kalita
7. **Intramural funded** project on Music Therapy in Parkinsonism, PI: Dr. Ruchika Tandon
8. **ICMR**- Functional Characterization of rare founder alleles causing neurodevelopmental disorders for biomarker identification and community genetics surveillance, PI: Anshika Srivastava CO-PI Dr. Ruchika Tandon



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Publications

1. Pradhan S, Anand S. A New Surface Technique for Phrenic Nerve Conduction Study. *Neurol India*. 2022 Sep-Oct;70(Supplement):S117-S122. doi: 10.4103/0028-3886.360904. PMID: 36412357.
2. Pradhan S, Bansal R, Das A, Pardasani V, Malhotra HS, Kushwaha S, Mishra VN. Osteo-Cutaneous Trophic Changes in Complex Regional Pain Syndrome and their Reversal with Steroids. *Neurol India*. 2022 May-Jun;70(3):1119-1124. doi: 10.4103/0028-3886.349675. PMID: 35864648.
3. Mulmuley, M., Ambwani, V., Jha, S., Pradhan, S., Katiyar, S. and Chaudhary, N. (2020), Renal involvement in voltage-gated potassium channel complex antibody-associated diseases. *ClinExpNeuroimmunol*, 11: 242-245. doi.org/10.1111/cen3.12605
4. Gupta M, Paliwal VK, Babu GN. Serum fractalkine and 3-nitrotyrosine levels correlate with disease severity in Parkinson's disease: a pilot study. *Metab Brain Dis*. 2022 Jan;37(1):209-217. doi: 10.1007/s11011-021-00801-9. Epub 2021 Aug 3. PMID: 34342811.
5. Kalita J, Kumar M, Misra UK. Prognostic Significance of Serial Nerve Conduction in GB Syndrome. *Neurol India*. 2022 Sep-Oct;70(5):1995-2002. doi: 10.4103/0028-3886.359245. PMID: 36352600.
6. Kalita J, Chaudhary SK, Kumar B, Jadhav M. Case Report: Focal Myoclonus with a Striatal Lesion as a Presentation of Subacute Sclerosing Panencephalitis. *Am J Trop Med Hyg*. 2022 May 9;106(6):1729-31. doi: 10.4269/ajtmh.22-0046. Epub ahead of print. PMID: 35533695; PMCID: PMC9209915.
7. Tripathi A, Kumar M, Kalita J, Kant S, Misra UK. Renin, antidiuretic hormone (ADH), and ADH receptor levels in cerebral salt wasting associated with tuberculous meningitis. *Neurol Sci*. 2022 May;43(5):3361-3369. doi: 10.1007/s10072-021-05681-6. Epub 2022 Jan 5. PMID: 34988719.
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10. Shukla R, Kalita J, Haldar R, Misra UK. Blood-CSF-barrier permeability in tuberculous meningitis and its association with clinical, MRI and inflammatory cytokines. *J Neuroimmunol*. 2022 Nov 15;372:577954. doi: 10.1016/j.jneuroim.2022.577954. Epub 2022 Aug 28. PMID: 36075158.
11. Kalita J, Tripathi A, Shukla R, Misra UK, Kumar S. Role of Caspase-3, TNF- α , and IL6 mRNA Expression in Intracranial Tuberculoma. *MolNeurobiol*. 2022 Aug;59(8):4869-4878. doi: 10.1007/s12035-022-02901-8. Epub 2022 Jun 2. PMID: 35654994.
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15. Chaudhary SK, Kalita J, Misra UK. Sensory Ganglionopathy in Hansen's Disease: Report of a Patient and Review of Literature. *Indian J Lepr* 2022. 94: 343-348

16. Warriar S, Chaudhary SK, Kalita J, Tripathi A, Misra UK. A Comparative Study of Diagnosis and Treatment of Pott's Spine Amongst Specialists and Super Specialists in India. *Neurol India*. 2022 Sep-Oct;70(Supplement):S200-S205. doi: 10.4103/0028-3886.360937. Erratum in: *Neurol India*. 2023 Jan-Feb;71(1):200. PMID: 36412369.
17. Kalita J, Shukla R, Pandey PC, Misra UK. Balancing between apoptosis and survival biomarkers in the patients with tuberculous meningitis. *Cytokine*. 2022 Sep;157:155960. doi: 10.1016/j.cyto.2022.155960. Epub 2022 Jul 9. PMID: 35820324.
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20. Misra UK, Warriar S, Kalita J, Tripathi A, Kumar S. Treatment response and complications during management of Pott's spine. *J Neuroimmunol*. 2022 Dec 15;373:577979. doi: 10.1016/j.jneuroim.2022.577979. Epub 2022 Oct 10. PMID: 36270077.
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26. Gupta M, Paliwal VK, Babu GN. Serum fractalkine and 3-nitrotyrosine levels correlate with disease severity in Parkinson's disease: a pilot study. *Metab Brain Dis*. 2022 Jan;37(1):209-217. doi: 10.1007/s11011-021-00801-9. Epub 2021 Aug 3. PMID: 34342811.
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32. Sanjeev OP, Verma A, Mani VE, Singh RK. COVID-19 vaccine-related functional neurological disorders in the emergency department. *CJEM*. 2022 Jun;24(4):455-456. doi: 10.1007/s43678-022-00272-6. Epub 2022 Mar 2. PMID: 35235181; PMCID: PMC8889866.
33. Chaudhary SK, Chavan A, Tandon R. Anti-NMDA receptor encephalitis with “Hockey stick sign” mimicking CJD. *Neurol Sci*. 2023 Feb;44(2):741-743. doi: 10.1007/s10072-022-06455-4. Epub 2022 Oct 17. PMID: 36251206.

Chapter(s) in Book(s) 2022

1. Kalita J, Mritunjai Kumar, Mahesh Jadhav. Clinical and electrophysiological pitfalls in the diagnosis of neuromuscular junction disorders. Pitfalls in the diagnosis of neurological disorders. 2022. Jayapee Brothers (Medical Publishers (P) Ltd).
2. Tuberculous Meningitis. Jayantee Kalita, Roopali Mahajan APICON 2022
3. Recent Advances in the Treatment of Parkinson’s Disease and Dystonia’ in ‘Advances in Neurosurgery Research’ 2022 .Nova science publishers
4. ‘Movement Disorders in Autoimmune Diseases’ in ‘Movement Disorders-A Problem Based Approach’ 2022. Nova science publishers

Visiting Professors

1. Dr. Navneet Kumar, Professor, Neurologist, Former principal GSVM, M. C. Kanpur and principal Kannauj Medical College ,Topic- causes of Parkinson’s disease - World Parkinson’s Day 2022 – April 11, 2022

Departmental Highlights

1. The department of Neurology has always been in the forefront of clinical work, academic activities and research since its foundation. We run busy outpatient clinics, round the clock emergency services besides catering to inpatients, many of whom are critically ill requiring intensive care with ICUs and HDUs. We also have a neurophysiology lab where we perform electrophysiological tests, and a neurochemistry lab where various research projects are conducted. Our faculty have numerous publications in internationally renowned journals, and the past year has been no exception.
2. We have initiated and are running the Deep Brain Stimulation programme for the patients of Parkinson’s disease and other movement disorders along with the Department of Neurosurgery.
3. We are consolidating the epilepsy surgery program along with the dept. of Neurosurgery, and are also running an acute stroke and vascular intervention program along with Neuroradiology. We had upgraded our wards which were already running with ventilators to ICUs and HDUs.

New Initiatives

1. A visionary stroke program, the Golden Hour Project, is under consideration. This ambitious endeavor aims to inaugurate a dedicated stroke unit, complemented by Critical Care Neurology in collaboration with Interventional Radiology and Neurosurgery. This initiative holds the potential to further elevate the department’s impact and contributions.
2. We have upgraded our wards which were already running with ventilators to ICUs and HDUs.

DEPARTMENT OF NEUROSURGERY

STAFF

Name of Faculty Members:

1. Dr. Raj Kumar, MS, MCh	Professor and Head
2. Dr. Sanjay Behari [#] MS, MCh	Professor
3. Dr. Awadhesh Kumar Jaiswal, MCh	Professor
4. Dr. Arun Kumar Srivastava, MS, MCh	Professor
5. Dr. Anant Mehrotra, MS, MCh	Additional Professor
6. Dr. Amit Keshri, MS	Additional Professor
7. Dr Kuntal Kanti Das, MS, MCh	Associate Professor
8. Dr. Jayesh Sardhara Chunnilal ^{\$} MS, MCh	Associate Professor
9. Dr. Ravi Sankar, MS	Associate Professor
10. Dr. Kamlesh Singh Bhaisora [*] MS, MCh	Associate Professor
11. Dr. PawanKumar Verma [*] MS, MCh	Associate Professor
12. Dr. Ved Prakash Maurya [*] MS, MCh	Associate Professor
13. Dr. Ashutosh Kumar, MS, MCh	Assistant Professor (contractual basis)
14. Dr. Priyadarshi Dikshit, MS, MCh	Assistant Professor (contractual basis)
15. Dr. SoumenKanjilal, MS, MCh	Assistant Professor (Bond)
16. Dr. Guramritpal Singh, MS, MCh	Assistant Professor (Bond)

On deputation since 1st April 2022 as the Director of Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram, Kerala.

\$ Resigned in June 2022.

* Apex Trauma Center faculty: the awards, recognitions and invites of the faculty is included in the ATC annual report.

Activities

Awards and Recognitions:

Dr. Raj Kumar

- Certificate of Thanks & Appreciation by Echo Syria Academy for Culture, Love & Peace, Syria for efforts in enriching the literary and cultural arena and raising the banner of love and peace in 2022.
- NSSI Conference March 2022 judge in award paper session of NSSI conference on 5th March 2022 held at AIIMS Rishikesh, Uttara Khand.
- 'Bahujan Ratna Award' by National Buddha Mahasammelan on 09/10/2022 at Manyawar Kashiram Sanskritik Raily Sthal, Ashiyana, Lucknow.
- Bharat Ratna Dr. A P J Abdul Kalam Honorary Award, 2022 given by Talimi Bedari on 15/10/2022 at Lucknow.



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Dr. Awadhesh Kumar Jaiswal

- Best paper award (Senior author) in 28th UP-UK NEUROCON 2022, BHU, Varanasi, 9-10 October 2022.

Dr. Arun Kumar Srivastava

- Third best paper award UPUK NEUROCON.
- Best Paper award NSSICON.

Dr. Amit Kumar Keshri

- Nominated: Acting HOD- Department of Head and Neck Surgery, SGPGIMS.
- Assistant Chief Librarian: SGPGIMS, Lucknow.
- Member: SGPGI, Medical Board.
- Member: HIS Advisory Committee, SGPGIMS.
- Fellowship: Foundation of Head and Neck Oncology Travel Fellowship 2022 at Tata Memorial Centre, Mumbai, 2022.
- Member: Expert Committee Member, Department of Health Resource, ICMR, New Delhi.
- President: Association of Otolaryngologist of India, UP Chapter.
- Governing Body Member: Association of Otolaryngologists of India.
- Member: National ENT consent Draft Guidelines 2022.
- National Trainer for ENT Care: National Health Systems Resource, Government of India.
- National Award: Economic Times National Doctor Day Award for Inspiring ENT specialist of India 2021-2022.
- WHO World Hearing Day Report-Contribution from India.
- Mentor: Started the Cochlear Implant Program in RML Institute of Medical Sciences, Lucknow.
- Member: UP state Selection Committee for Prizes for Work in area of Disabilities.
- Member: State level Committee for Cochlear Implant program, Uttar Pradesh.
- Member: Post COVID Mucormycosis State Advisory Committee.
- Co-opted Member: State level COVID Advisory Committee.
- Examiner: Undergraduate and Post Graduate Examiner, KGMU, RML Institute for Otolaryngology.

Dr. Kuntal Kanti Das

- Section Editor, Comprehensive Neurosurgery, a book published by Bohr publishers.
- Workshop faculty, micro suturing, and drilling at SKULLBASECON-Jodhpur
- Selected as national executive, Indian Society of Peripheral Nerve Surgery.
- Invited speaker by National Board of Examination.

Dr. Ashutosh Kumar

- WFNS Best Young Neurosurgeon Award, 2022, Bogota, Colombia.

Invited sessions and Chairpersons/ Lectures for Conferences**Name of faculty and Session****Dr. Awadhesh Kumar Jaiswal**

- Brain and Spine Oncology Update, RGCIRC, New Delhi, 12th March 2022.



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- 8th NEUROENCOCON 2022, New Delhi, 25th-27th March 2022.
- NSI Webinar on Endoscopic surgery for pituitary region tumor 30th April 2022.
- IMA, College of Medical Practitioner, Kanpur 6th May 2022.
- KNACON 2022, JSS Medical College, Mysore, Tamil Nadu, 10th-12th June 2022.
- NSI-BOE, Journal Club, 30th July 2022.
- NSI-BOE, Virtual OR step by step, 03rd August 2022.
- NESCON 2022, New Delhi, 12th-14th August 2022.
- 10th NESONCON, Pokhara, Nepal, 9th-10th September 2022.
- UP-UK NEUROCON 2022, BHU, Varanasi, 9th-10th October 2022.
- ISMINS 2022, New Delhi, 26th-28th October 2022.
- IFNE Midterm Meeting 2022, Hyderabad, 29th-30th October 2022.
- 14th NSI Foundation and 25th Instructional Course, Nagpur, 19th-20th November 2022.
- 26th Annual Scientific Meeting of Indonesian Neurosurgical Society (PIT PERSPEBSI), Bandung, Indonesia, 28th-30th November 2022.
- 70th NSICON 2022, Agra, 7th-11th December 2022.

Dr. Arun Kumar Srivastava

- NSSICON, March 2022 (Virtual); AIIMS Rishikesh.
- CVJ live surgery workshop, INK- Kolkata.
- ISPNS-AIIMS Bhubaneswar-Odisha.
- 8th WFSBSM, Rio Brazil, March 2022.

Dr. Anant Mehrotra

- SKULLBASECON, October 2022.
- NSICON, December 2022.
- NSI webinar (virtual).
- Skull base symposium, NSICON, December 2022.
- NSICON, December 2022.
- NSICON, December 2022.
- NEUROVASCON, October 2022.
- IFNE Midterm Meeting, October 2022.
- ISMINS 2022, New Delhi, 26-28 October 2022.
- 10th NESONCON, Pokhara, Nepal, 9-10 September 2022.
- NSI webinar, April 2022.
- NSI online course, June 2022.

Dr. Amit Kumar Keshri

- NESCON-2022, 12-14th AIIMS, New Delhi, August 2022.
- Lateral Skull Base Surgery Workshop, Gruppo-otologico, Piacenza, Italy 19th-23rd September 2022.
- COMPLICON- 2022, AIIMS, Jodhpur, 01st-02nd October 2022.
- SANGYAN-2022, AIIMS Patna 15th-16th October 2022.



- CIGICON-2022, Gurugram, 4th-6th November 2022.
- Mentor for Cochlear Implant Surgery a RMLIMS, Lucknow-9th October 2022.
- Online e-CME on Sleep Apnea Surgery and Endoscopic Skull Base Surgery, 03rd July 2022.
- Clinical Grand Round, Anterior Skull BASE, CMC, Vellore 28th November 2022.

Dr. Kuntal Kanti Das

- National Board of Examination.
- NSI Journal Club.
- 4th Asian-Oceanian Society of Intraop monitoring, Chennai, October 2022.
- ISMINS, New Delhi, October 2022.
- SKULLBASCON-NIMHANS, November 2022.
- NSICON-Agra, December 2022.
- NSICON-Agra, December 2022.

Dr. Ravi Sankar

- Skull base surgery society of India interim meeting, SAIMS Auditorium, Indore, 29th-30th April 2022.
- Skull Base Ride-2022, Jaipur, 30th-31st July 2022.
- 30th ISOCON 2022, Bhubaneswar, 11th-13th November 2022.
- SAIMS Auditorium, Indore, 29th-30th April 2022.
- Skull Base Ride-2022, Jaipur, 30th-31st July 2022.
- BALANCE CON 2022, Goa, 12th-15th May 2022.
- NASBS- 2022, Phoenix, USA, 8th-20th February 2022.

Membership of Societies

Dr. Raj Kumar

- Life member of Neurological society of India.
- Life member of Indian Society of Pediatric Neurosurgery.
- Life member of UP Neurosciences Society, Lucknow.
- Life member of Neuro-otological Society of India.
- Life member of National Magnetic Resonance Society.
- Life member of National Spinal Society.
- Permanent member of ACNS, Japan.
- Affiliated member European society of Pediatric Neurosurgery Germany.
- Member of International society for Pediatric neurosurgery.
- Life member of National Academy of Sciences, India (Prayagraj).
- Life member of National Academy of Medical Sciences of India, New Delhi.
- Life member of National Trauma Society of India.
- Life member of Skull Base Society of India.
- Member of Genome India International (GII), India (20 October 2008).
- Member of Science Advisory Board (SAB), Arlington, VA (21 October 2008).
- Life member of Neurological Surgeons Society of India.



Dr. Awadhesh Kumar Jaiswal

- Life member of Neurological society of India.
- Life member of Skull Base Surgery Society of India
- Life member of Neurotrauma society of India.
- Life member of Neuro Endoscopy Society of India.

Dr. Arun Kumar Srivastava

- Life member of Neurological society of India.
- Life member of Neurological *Surgeons' Society of India.*
- Life member of International Society of Pediatric Neurosurgery.
- Life member of Skull Base Surgery Society of India.
- Life member of Neurotrauma society of India.
- Life member of Indian Society of Pediatric Neurosurgery.

Dr. Anant Mehrotra

- Member of 01-02 course committee, SGPGI.
- Member of Medical Education Unit, SGPGI.
- Life member of Neurological Society of India.
- Life member of Neurosurgical Society of India.
- Life member of Skull Base society of India.
- Life member of Neuro endoscopic society of India.
- Life member of Cerebro-vascular society of India.
- Life member of MISSAB.
- Life member of UPUK-Neuroscience Society.

Dr. Amit Kumar Keshri

- Life member of American Academy of Otolaryngology-Head and Neck Surgery.
- Life member of Skull Base Surgery Society of India.
- Life member of The Association of Otolaryngologists of India.
- Life member of Neuro-otological and Equilibrium Society of India.
- Life member of Cochlear Implant Group of India.
- Life member of Foundation of Head and Neck Oncology.

Dr. Kuntal Kanti Das

- Life member of Indian Society of Peripheral Nerve Surgery.
- Life member of Neurological society of India.
- Life member of Neurological Surgeons' Society of India.
- Life member of Skull Base Surgery Society of India.
- Life member of Cerebrovascular Society of India.

Dr. Ravi Sankar

- Life member of American Academy of Otolaryngology-Head and Neck Surgery.
- Life member of American Neurotology society.



- Life member of Skull Base Surgery Society of India.
- Life member of The Association of Otolaryngologists of India.
- Life member of Neuro-otological and Equilibrium Society of India.

Dr. Ashutosh Kumar

- Life member of Neurology India.
- Life member of Neuro Spinal Surgeons Association.

Teaching Workshops/ CMEs organized

1. Neurotrauma Update, 2022.
2. 4th Dr. DK Chhabra oration and Dr. VK Jain oration 2022 involving the “update on keyhole surgery”.

Services

		2020	2021	2022
OPD registrations	New registrations	4865	6212	13273
	Follow up	13303	20989	36721
Surgical procedures	Major surgeries	1088	1863	2597
	Minor surgeries	356	362	300
In Patients		1238	1463	2103

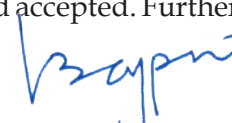
Training

1. At present there are 16 senior residents enrolled in MCh neurosurgery program, with 5 post-doctoral fellows. There are 2 senior residents under neuro-otology with two residents enrolled for Post-Doctoral Certificate Course.
2. Number of students appeared in the final year examination (PG): 5
3. Number of students who passed in final year examination (PG): 5

Research Projects

Completed:

1. **Project:** Serum EGFR in high grade gliomas, **PI:** Dr Kuntal Kanti Das, Funding, SGPGIMS, Lucknow, **Status:** Data collection complete except quantification of serum EGFR, likely to be finished 1 month from now. Will be submitted for publication in 2 months' time. **Summary report:** Forty cases of high glioma were included (M:F=1.8:1) with 8 (20%) grade 3 and 32 (80%) grade 4 gliomas. We included 10 controls as well. The final analysis will be done after getting results of serum EGFR.
2. **Project:** Development of Prosthetic Pinna, **PI:** Dr Amit Kumar Keshri. **Funding:** IIT Kanpur. **Status:** approved and accepted. **Summary report:** Prosthetic Pinna is fully developed using Computer Assisted Design and Computer assisted Modelling with mechanism for retaining them on face with Magnets and Titanium Fixtures. Project was submitted as Master Program Thesis in Design Department Of IIT, Kanpur and the Thesis was approved and accepted. Further Development of Pinna for Clinical use and Marketing is under process.



3. **Project:** Referral Support for Cochlear Implant PI: Dr Amit Kumar Keshri. **Funding:** RBSK, NRHM Uttar Pradesh. **Status:** completed. **Summary report:** Established State of the art Audiology Lab with equipment and presently every month more than 50 Pediatric patients are being tested for Oto Acoustic Emission, BERA, ASSR and Free field Audiometry and play Audiometry. It also has a speech therapy lab for post cochlear implant children and their rehabilitation. Monthly reports are sent to Funding agency with yearly review. Many booklets for the hearing impaired designed, printed and distributed for the benefit of hearing impaired.
4. **Project:** ATRX and P53 expression in a series of glioma patients. **PI:** Anant Mehrotra; **Funding:** Intramural, SGPGIMS; **Summary report:** A prospective study of 71 consecutive cases of glioma. 79% of cases were above 18 years. Majority of the cases had history between one month to one year. Only 2 cases had history of more than 5 years. Nearly 50% of cases had tumour in the frontal lobe. 32 out of 71 cases had grade IV glioblastoma, 4 cases had gliosarcoma. One fourth of cases had grade II glioma. Among the grade II lesions, half had loss of ATRX and p53 overexpression. Four cases had grade I pilocytic astrocytoma and two cases had ATRX loss and overexpression of p53.

Research in Progress

1. Clinico- radiological, Urodynamic outcome and metabolic effects of surgical detethering in patients of spinal dysraphism- a prospective study.
Funding: SGPGI. (PI: Dr Ved Prakash Maurya)
2. An assessment of accuracy of construct placement during CV junction surgery using CT reconstructed image Vs 3D printed models: A Randomized clinical trial.
Funding: SGPGI. (PI: Dr Pawan Kumar Verma)
3. Molecular characterization of Juvenile nasopharyngeal angiofibroma.
Funding: SGPGI. (PI: Dr Amit Kumar Keshri)
4. Clinico- radiological, histopathological characterization of medulloblastoma consensus and its application in molecular subgroup-based risk adjusted therapy.
Funding: SGPGI. (PI: Dr Kamlesh Singh Bhisora)
5. Clinico-radiological and Immuno-histopathological characterization of craniopharyngioma for risk stratification and development of prognostic model.
Funding: SGPGI. (PI: Dr Ved Prakash Maurya)
6. Does use of a dural sealant during endoscopic endonasal repair of dural defect prevent cerebro spinal fluid leak.
Funding: SGPGI. (PI: Dr Awadhesh Kumar Jaiswal)
7. Expression of programmed death ligand 1 in pituitary adenoma
Funding: SGPGI. (PI: Dr Awadhesh Kumar Jaiswal)
8. Expression of programmed death ligand 1 in pituitary adenoma
Funding: SGPGI. (PI: Dr Awadhesh Kumar Jaiswal)
9. Establishment of Microparticle as a liquid biopsy tool for post-traumatic stress disorders (PTSD)
Funding: ICMR. (PI: Dr Ved Prakash Maurya)
10. Molecular taxonomy to define prognosis and severity of traumatic brain injury
Funding: UP-CST. (PI: Dr Pawan Kumar Verma)
11. Incidence, determinants, and development of risk scoring system of long-term complication in Covid 19 recovered patients; A cohort study.



Funding: DST. (PI: Dr Amit Kumar Keshri)

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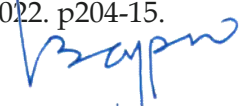
Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow

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Book published

1. 'Textbook of Traumatic brain Injury'. In: Kumar R, Maurya VP, Mahapatra AK. Mahi Publication, Ahmedabad. Third Edition, 2022. ISBN: 978-93-95581-19-6.

Visiting Professor

None

Departmental Highlights

1. Public awareness programs including walkathon was conducted by the department under the aegis of Prof. Raj Kumar for the Road Traffic Accidents.
2. Round the clock emergency services for major cranial and spinal cases needing emergent intervention.
3. Annual orations held, aimed at continuous knowledge upgradation for the department as well as nearby institutions, focussing on various recent advances in different subspecialties of neurosurgery.

New Initiatives

1. **Advances in Neuro-oncology field-** Tumor bank with our own laboratory, endoscopic skull base surgery, accessing middle cranial fossa surgery, key-hole surgeries for variety of neuro oncology cases being performed in all the aspects of brain tumors.

2. **Advances in Neuro-otology-** Cochlear implant surgery.
3. **Minimally Invasive spine surgery-** The department had emerged as a major neurosurgical center for minimally invasive spine center in India in the last five years. All major procedures like endoscopic discectomy to minimally invasive fusion (TLIF/OLIF), and deformity corrections are being performed extensively in the department.
4. **Neuro endoscopy-** The department has reached a new height in the field of endoscopy which includes all spectrum of procedures involved in cranial and spinal endoscopy. The extended neuro endoscopic procedures performed at few centres in the country and our department at SGPGI is the torch bearer in this emerging subspecialty.
5. **Skull base Surgery-** The skull base procedures are one of the most challenging subsets of surgeries which requires extensive and thorough knowledge of the neuroanatomy as well as awareness of the distorted anatomy due to the diseased condition. Our department performs a gamut of lateral skull base procedures with the assistance of Neuro-otology as a team. The extended skull base surgery of anterior skull base cover majority of the neuro oncology cases in this area including pituitary tumors, craniopharyngioma, anterior skull base meningiomas as well as complex vascular surgery.

Closure of the report

DEPARTMENT OF NUCLEAR MEDICINE

STAFF

Name of Faculty Members:

1. Dr. S. Gambhir, MBBS, DNB	Professor & Head
2. Dr. P. K. Pradhan, MBBS, MD, DNB	Professor
3. Dr. S. Barai, MBBS, MD	Professor
4. Dr. A. Arya, MBBS, MD	Professor
5. Dr. Manish Dixit, MSc (chemistry), Phd	Addl. Professor
6. Dr Manish Ora, MBBS, MD	Associate Professor
7. Dr Aftab H Nazar, MBBS, MD	Associate Professor

Activities

Awards and Recognitions

Dr. P K Pradhan

- Presidential Oration on “Telemedicine in Post Pandemic Era: Way Forward “ for Telemedicine Society of India in 18th International Conference of Telemedicine Society of India on 10-12th Nov.2022,AIMS,Cochin by Dr. Pradhan.
- Member of Editorial Committee: 1. Indian Journal of nuclear medicine. 2. Asia-Ocenia Journal of nuclear medicine. 3. Frontline Medicine
- Referee/Reviewer of a journal: 1. Nuclear medicine communications. 2. Indian Journal of nuclear medicine. 3. Asia-Ocenia Journal of nuclear medicine. 4. Frontline Medicine
- Dr. S. Barai is Referee/reviewer of Indian Journal of nuclear medicine

Invited sessions and chairpersons/lectures for Conferences: 2022

Name of faculty and Session:

Dr. Manish Dixit:

- Invited talk “The Role of Radiometal Isotopes: Concept For Theragnostic Radiopharmaceuticals” in BITS Ranchi.
- Invited talk on “Zr-89 Production and Its Application As Pet Immuno Agent: Our Preliminary Experience” in SNMICON 2021, 16-18 Dec 2022

Dr. Amitabh Arya:

- Invited lecture 23rd NAPCON [National conference on pulmonary Diseases] conference, jointly held by the Indian chest Society & National College of Chest Physicians. 31 Mar – 3 April 2022, Varanasi, Uttar Pradesh, India.
- Invited lecture 1st Oncological CME in Lucknow .Organised by Hanuman Prasad Poddar Cancer Hospital & Research Institute, Gorakhpur with collaboration of Indian Medical Association, Lucknow. 6 Aug 2022, IMA Hall, River Bank Colony, Lucknow.
- Invited lecture Artificial intelligence in medical diagnostics.Indian Council of Medical Research, Department of Health research, Ministry of Health & Family welfare, Govt. Of India. 25-26 Nov. 2022, JIPMER, Pondicherry, India. Invited as chairperson.

Dr. Aftab H. Nazar:

- Invited faculty: 3rd Mid-Term Conference of ISO”, being organized by “Lucknow Oncology Association” 9-10Apr 2022.
- Invited faculty: “THERANOS CONCLAVE 2022”, under the aegis of Society of Nuclear Medicine, northern chapter, panel discussion on CARCINOMA PROSTATE. 3Sep 2022, Delhi.
- Session chairperson: 54th Annual Conference of the Society of Nuclear medicine (India) SNMICON 2022, AIIMS New Delhi. 8-11Dec 2022

Membership of Societies

Membership of professional bodies funded by Institute: None.

Teaching Workshops/ CME's organized 202

1. Cyclotron produced radio Isotopes: Tools, Needs & Road ahead, foundation day symposium Dept. of Nuclear medicine, SGPGI: organised by Department. 10-11Sep 2022.

Service

Patient care Services

	2021	2022
OPD patient:	2402	3378
Patient Admitted	121	286
Number of day care procedure	6209	9991
Radionucleid therapies	644	1021

Training

1. MD Program: at present total 17 residents are enrolled in MD programs
2. MSc Nuclear Medicine technology: total 7 students are enrolled in 2 years MSc
3. MSc Radiopharmaceuticals: Total 2 students are enrolled in 2 years MSc

Numberofstudentsappearedinthefinal yearexamination (PG) : 6

Number of students who passed in final yearexamination (PG): 5

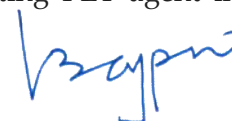
Research projects

Completed in 2022: none

Research in progress

Funding agency, Name of project, Investigators

1. SGPGIMS, Novel synthetic route of precursor synthesis for [¹⁸F]-Auximin PSMA PET Tracer: Chemistry Methodology Innovation. Dr. S. Gambhir, Dr. Manish Dixit.
2. SGPGIMS, Comparative Analysis of ⁶⁸Ga-PSMA PET/CT With ^{99m}Tc-PSMA Gamma Camera Imaging In Recurrent Carcinoma Prostate. Dr. S. Gambhir, Dr. Manish Dixit.
3. SGPGIMS, Therapeutic application of the ⁶⁴CuC₁₂ an Auger electron-emitting PET agent in recurrent high-grade brain tumours. Dr. S. Gambhir, Dr. Manish Dixit.



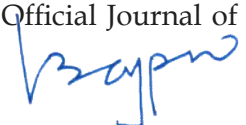
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4. IAEA, Vienna, The production of Zirconium-89 and the Development of Zr-89 Radiopharmaceuticals."Dr. S. Gambhir, Dr. Manish Dixit.
5. DHR-Grant in Aid -New Delhi, Diagnostic and therapeutic application of the $^{64}\text{CuCl}_2$ an Auger electron emitting PET agent in high-grade brain tumors: A randomized control trial." Dr. S. Gambhir, Dr. Manish Dixit.
6. DHR-Grant in Aid -New Delhi, Development and evaluation of antiepileptic based radiotracers for imaging epileptic lesions in Refractory Epilepsy." Dr. S. Gambhir, Dr. Manish Dixit.
7. MoHFW, Govt. of India, Grant-In-Aid support to undertake awareness activities and maintaining the existing infrastructure and activities at RRC), SGPGIMS, Lucknow under the National Medical College Network Project. Dr. P K Pradhan.
8. NTPC, NRHQ, Lucknow, U.P. Establishment of Telemedicine Facility in the Hospitals of National Thermal Power Corporation (NTPC), North Region (NRHQ). Dr. P K Pradhan.
9. Lucknow Smart City Limited (LSCL), Govt. of U.P. Operation of Smart Health ATM Center in the City of Lucknow. Dr. P K Pradhan.
10. Dr. K.L.Garg Memorial Charitable Trust, Lucknow. Mobile Tele-oncology and Primary Care Project. Dr. P K Pradhan.
11. National Health Mission, Govt. of U.P. Establishment of Telemedicine HUB at SGPGI under Ayushman Bharat-Health & Wellness Center Project, Dr. P K Pradhan.

Publication:

1. Singh K, Rathore U, Rai MK, Behera MR, Jain N, Ora M, et al. Novel Th17 Lymphocyte Populations, Th17. 1 and PD1+ Th17, are Increased in Takayasu Arteritis, and Both Th17 and Th17. 1 Sub-Populations Associate with Active Disease. Journal of Inflammation Research. 2022;15:1521.
2. Ora M, Soni N, Nazar AH, Mehrotra A, Mishra P, Gambhir S. Effect of Whole-body [18F] Fluoro-2-deoxy-2-d-glucose Positron Emission Tomography in Patients with Suspected Brain Metastasis. Indian Journal of Neurosurgery. 2022;
3. Misra DP, Tomelleri A, Rathore U, Benanti G, Singh K, Behera MR, Ora M, Gambhir S et al. Impact of Geographic Location on Diagnosis and Initial Management of Takayasu Arteritis: A Tale of Two Cohorts from Italy and India. Diagnostics (Basel). 2022 Dec 9;12(12).
4. Misra DP, Rathore U, Mishra P, Singh K, Thakare DR, Behera MR, Ora M, Gambhir S et al. Comparison of Presentation and Prognosis of Takayasu Arteritis with or without Stroke or Transient Ischemic Attack – A Retrospective Cohort Study. Life. 2022 Nov;12(11):1904.
5. Islam SN, Naqvi SMA, Raza A, Jaiswal A, Singh AK, Dixit M, Barnwal A, Gambhir S, Ahmad A; Mycosynthesis of highly fluorescent selenium nanoparticles from *Fusarium oxysporum*, their antifungal activity against black fungus *Aspergillus niger*, and in-vivo biodistribution studies. 3 Biotech 12, 309 (2022).
6. Akhilesh SK, Shanker N, Subhash KC, Sanjay G, Dixit M. Fully Automated Synthesis of Nitrogen-13-NH₃ by SHIs HM-18 Cyclotron and Dedicated Module for Routine Clinical Studies: Our Institutional Experiences. Indian J Nucl Med. 2022 Jan-Mar;37(1):50-53. doi: 10.4103/ijnm.ijnm_92_21.
7. Chandan Kumar Jha, Anjali Mishra, Prasanta Kumar Pradhan, Sanjay Gambhir, Gaurav Agarwal, Gyan Chand, Amit Agarwal, Saroj Kanta Mishra. Outcome of 18f-Fluorodeoxyglucose Positron Emission Tomography (PET) - Directed Resections in Differentiated Thyroid Carcinoma (DTC): Experience in a Developing country, Indian J Surg Oncol. 2022 Mar; 13(1): 23-27.

8. Vikram Sharanappa ,Raouef Ahmed Bichoo,Anjali Mishra,Prasanta Kumar Pradhan,Saroj Kanta Mishra. Circumferential Laryngotracheal Resection in Thyroid Cancer: Experience and Outcome in a Single Center. Indian J Otolaryngol Head Neck Surgery.2022 Oct; (Suppl 2) : 2629-2635.
9. Amrit Gupta, Sangeeta Yadav, Malathy Seduchidambaram, Neeta Singh, Prasanta K Pradhan, Mandakini Pradhan, Triage of antenatal care through telehealth during COVID-19 pandemic in a tertiary care center of North India; J Famil Med Prim Care.2022 Mar;11(3):1055-58.
10. Sharma S, Singh V, Ora M, Nazar AH, Gambhir S. Extensive Extramedullary Involvement at Presentation in B-Cell Acute Lymphoblastic Leukemia. Clin Nucl Med. 2023 Feb 17;
11. Saini VK, Ora M. Extensive Drop Metastases From Pineal Gland Tumor: A Case Report. Clin Nucl Med. 2023 Jan 1;48(1):e35-6.
12. Singh V, Ora M, Nazar AH. Sciatic Nerve Involvement in Rosai-Dorfman Disease. Radiology: Imaging Cancer. 2022;4(4):e220046.
13. Singh V, Ora M, Gambhir S. Malignant tracheoparenchymal fistula in primary mediastinal B-cell lymphoma detected on fluorodeoxyglucose positron emission tomography/computed tomography. Indian J Nucl Med. 2022;37(4):367.
14. Singh V, Mishra A, Kalimuthu L, Ora M, Nazar AH, Gambhir S. Utility of F-18 fluorodeoxyglucose positron emission tomography - computed tomography in primary thyroid lymphoma. Indian Journal of Nuclear Medicine. 2022 Oct 1;37(4):379.
15. Singh V, Dixit S, Ora M, Nazar AH. Metabolic flare phenomenon mimicking disease progression on 18 Flouride-Fluorodeoxyglucose PET/CT scan in Ca breast treated with paclitaxel-based chemotherapy. Asia Oceania Journal of Nuclear Medicine and Biology. 2022;
16. Saini VK, Markam K, Ora M. Gastrointestinal Stromal Tumor with Extensive Lymph Node and Skeletal Metastases. Radiology: Imaging Cancer. 2022;4(5):e220083.
17. Saini VK, Markam K, Nazar AH, Ora M, Gambhir S. Skeletal metastases of unknown primary: a rare presentation of carcinoma pancreas on fludeoxyglucose positron emission tomography-Computed tomography. Indian Journal of Nuclear Medicine. 2022;37(1):97.
18. Saini VK, Markam K, Nazar AH, Ora M, Gambhir S. Relapsed carcinoma cervix presented with multiple rare visceral metastases: Role of 18f-fluorodeoxyglucose positron emission tomography/computed tomography. Indian Journal of Nuclear Medicine. 2022 Oct 1;37(4):373.
19. Saini VK, Mammoottil AE, Nazar AH, Pavecha P, Ora M, Gambhir S. Utero-Ovarian involvement in non-hodgkin's lymphoma on 18F-Fluorodeoxyglucose positron emission tomography/computed tomography: A case series and literature review. Indian Journal of Nuclear Medicine. 2022;37(1):64.
20. Saini VK, Mammoottil AE, Hassan AN, Ora M, Gambhir S. Metastatic urinary bladder carcinoma on palliative chemotherapy showing rapid progression on interim fluorodeoxyglucose positron emission tomography/computed tomography. Indian Journal of Nuclear Medicine. 2022;37(1):105.
21. Mishra A, Saini VK, Jain B, Arya A, Ora M, Gambhir S. F-18 fluorodeoxyglucose positron emission tomography/computed tomography in a case of subcutaneous T-cell lymphoma presenting as breast mass and panniculitis-like features: A rare entity. Indian Journal of Nuclear Medicine. 2022 Jul 1;37(3):281.
22. Jain B, Saini VK, Mishra A, Ora M, Gambhir S. Extensive pleural involvement in pediatric T-Cell lymphoblastic lymphoma. Indian Journal of Nuclear Medicine: IJNM: The Official Journal of the Society of Nuclear Medicine, India. 2022;37(2):175.



23. Review Article: Misra DP, Jain N, Ora M, Singh K, Agarwal V, Sharma A. Outcome Measures and Biomarkers for Disease Assessment in Takayasu Arteritis. *Diagnostics*. 2022 Oct;12(10):2565.
24. Review Article: Mishra G, Srivastava K, Rais J, Dixit M, Kumari Singh V, Chandra Mishra L. CRISPR-Cas9: A Potent Gene-editing Tool for the Treatment of Cancer. *Curr Mol Med*. 2023 Feb 13. doi: 10.2174/1566524023666230213094308.

Chapter(s) in Book(s) 2022: None

Visiting Professors : None

Departmental Highlights

Services

The department provides comprehensive Nuclear medicine diagnostic, therapeutic and *in vitro* studies. The PET-CT has been providing oncological imaging services to the patients from UP and near -by states. The diagnostic Oncological studies with FDG are being offered as a matter of routine with very short appointment for the procedure. This is not only helping patients from within the institute but patients from other institutes in Lucknow but other patients of UP who need PET-CT scans for their treatment and followup, as the department is offering PET-CT scans at much lower cost as compared to private and corporate sector. Cyclotron for production of short-lived radio-isotopes for PET-CT has been working and is producing radio pharmaceuticals like ¹⁸F-FDG, ¹³N-Ammonia etc. The ⁶⁸Ga-DOTANOC PET-CT imaging for neuroendocrine tumors and ⁶⁸Ga-PSMA for prostate imaging has been well established and has helped patients of such disease to be fully diagnosed and treated at SGPGIMS. State of the art dual head SPECT- CT Gamma cameras installed in the department of Nuclear Medicine help cope-up the load of the patients and to keep the waiting time as minimum as possible for patients. It offers excellent imaging performance for virtually all patient studies including those related to Cardiac, Brain, Kidney, Bone, Thyroid, Cancer patients, Joint, infection and inflammatory disorders. The unique feature of image fusion i.e. fusion of nuclear medicine SPECT image with CT image enables increased diagnostic information and precise tumour localization for optimal patient management.

The department of nuclear medicine at SGPGIMS being the only department in the entire State of UP caters to invitro studies like GFR determination for renal transplant patients. Not only the patients from UP but also from other States like Bihar, Orissa, Jharkhand, West Bengal etc. the patient from Nepal also frequents the department for their investigation and treatment.

Department of nuclear medicine is the largest department of country in term of number of beds in high dose therapy ward. Department is offering conventional and cutting edge Radionuclide therapies (Lu-177 PSMA, Lu-177 DOTA) at affordable cost.

Investigations:

Following investigations and therapeutic procedures are carried out routinely as patient care services by the department.

Bone Marrow, Brain perfusion SPECT, CSF (Cisternography), G.I. Bleeding detection study, Gastric Emptying, Heart (First Pass), Heart (MUGA), Hepatobiliary scintigraphy, Renal cortical scan (DMSA), Lacrimal Duct, Liver Spleen, Lymphatic System (Lymphoscintigraphy), Meckel's Diverticulum, Myocardial Infarct, Myocardial Perfusion (Tc99m-MIBI), Gastroesophageal reflux study, Parathyroid Imaging, Perchlorate Discharge Test, Phleboscintigraphy, Radio Iodine Uptake, Radioiodine Whole Body scan, Renal Transplant Study, Diuretic Renogram, Renovascular Hypertension (Renogram with Intervention), Salivary glands, Skeletal System, Testicular Scan, Thyroid Scan, Vesico-urteric

Reflux study, Tumor imaging with Thallium-201 and Tc99m-MIBI, and *In-Vitro* Studies, infection imaging, GFR measurement by plasma clearance method..

Estimation of GFR by sample method and in a very short spare of time large number of tests have already been performed after proper standardization. This diagnostic procedure introduced by the department has found to be of immense clinical utility in the overall management of the cases of renal dysfunction.

Due to availability of Samarium-153 by BRIT, BARC, it has been possible to introduce this therapy for palliation of pain caused by skeletal metastases. The department runs an OPD on 5 days a week for follow up of thyroid patients treated with radioiodine. They constitute both benign (hyperthyroid) and malignant disorders.

Around 11012 procedure (Gamma scans, PET/CT scans, GFR studies and therapies) were performed by department for the reporting year.

New Initiatives

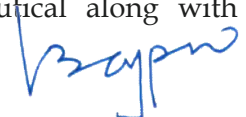
Future Plans

Patient Care

1. Enhancement of patient services through new ten bedded radioactive isolation ward, like 1-131 and Lu-177-DOTA therapy. These are specialized therapies and presently having waiting time of 3 months or more as SGPGIMS is the major center for these therapies in Uttar-Pradesh and eastern India.
2. Pain clinic using low cost indigenized pain palliation radionuclide therapy for terminally ill cancer patient. This is an already ongoing process and department is planning to increase the procurement of this radioisotope to cater more patients.
3. Making available radio-ligands like [¹⁸F]-tau protein tracers, ¹¹C-Arylbenzothiazole for β -amyloid imaging, for brain imaging with PET-CT. These ligands are available at very few centers around the globe and the department can provide these in next six months to a year.
4. Installation of 2nd PET-CT scanner to increase throughput and reduce waiting period. To meet out the increasing demand and reduce the waiting period already need is being felt for second PET-CT. Since it's a costly equipment the cost can be met either through government resources OR THROUGH PPP as per the modalities decided and permitted by the government.
5. Procurement of state of the art gamma cameras for organ specific investigations like CZT camera for non invasive imaging of heart will take the quality to the international level and shorten appointment waiting period for cardiac imaging patients but cost involved has to be worked again either through governmental resources or PPP model. The time line will depend on availability of funds or early decision to go for PPP.

Research

1. Synthesis of newer PET radiopharmaceutical for Tumor/Cancer diagnostics imaging such as [¹⁸F]-Fluro propyl glutamate derivative, ^{99m}Tc-Galatosylated Human Serum Albumin, ⁶⁴Cu labeled glycido-urea based imaging agents. This offers benefit of diagnosing disease in respective organs which are not detectable by standard diagnostic modalities.
2. To explore and indulge in 'MAKE IN INDIA' theme to provide low cost indigenized radio pharmaceutical synthesizer for in-house production of radiopharmaceutical along with technical institutes of India like Indian Institute of Technology (IIT).



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Executive Registrar
SGPGIMS, Lucknow

DEPARTMENT OF PATHOLOGY

STAFF

Name of Faculty Members:

1. Narendra Krishnani, M.D	Professor
2. Seema Sharma, M.D	Professor and Head
3. Manoj Jain, M.D	Professor
4. Vinita Agrawal, M.D, PDCC (Renal Pathology)	Professor
5. Niraj Kumari, M.D	Professor (Joined AIIMS Raebareli on 4/10/2020 on lien for 2 years)
6. Sushila Jaiswal, M.D	Professor
7. Ritu Verma, M.D	Professor
8. Ram Nawal Rao, M.D	Professor
9. Neha Nigam, M.D, PDCC (Hepatopathology)	Associate Professor
10. Pallavi Prasad, M.D, PDCC (Renal Pathology)	Assistant Professor
11. Raghavendra L, M.D	Assistant Professor

Activities

Awards and Honors

Dr Vinita Agrawal

- Third prize in the global Banff 30th anniversary Competition in one of the most reputed International Conference, 2022 Banff-CST (Canada Society of Transplantation) Joint Meeting, held at the Banff Centre for Arts and Creativity, Banff, Canada, September 19- 23, 2022 (attended and presented online).
- Editorial Board Member of an International Journal 'Glomerular Diseases'.
- Editorial Board Member of Indian Journal of Nephrology.

Invited sessions and chairperson/ lectures for Conferences 2022

Dr Seema Sharma

- Conducted breakfast session on 'Inherited Thrombophilia' in Annual conference of Indian association of Pathologists & Microbiologists APCON 2022, 2-4th December, Bengaluru.
- Chaired session on 'Role of Peripheral Blood Smears in Diagnosis' in UP-PATHCON 15-16th October 2022, Greater Noida
- Invited lecture on "Bone marrow biopsy in solid tumors" in MARROWCON under aegis of Indian college Hematology, 14-15April 2022, Varanasi
- Chairperson in MARROWCON under aegis of Indian college Hematology, 14-15April 2022, Varanasi

Dr Manoj Jain

- Chairperson in 27th Annual Conference of the North Zone Chapter of Indian Society of Nephrology, 5-6th March, 2022 Varanasi



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- Chairperson in Indian Society of Organ Transplantation Mid-term CME 26-27th March 2022 Patna
- Invited faculty in ISRTPCON 2022, 28-31st July, JIPMER
- Talk on 'Diabetic Nephropathy: Update on Teravaert Classification and its relevance in clinical practice.
- Talk on Renal involvement in Familial Metabolic disorders
- Invited talk on 'Protocol renal graft biopsies: Utility and limitations' and 'Electron Microscopy in Renal allograft Biopsy' in ISOT 2022, 12-16th October, Nagpur

Dr Vinita Agrawal

- Talk on the topic 'Genetic Glomerular Disease: Causes and Diagnostic evaluation' in Webinar organized by Women in Nephrology (WIN INDIA)-ISRTP on 28th January, 2022.
- Delivered a lecture on 'Tissue Histology in the Diagnosis of Rheumatic Diseases' for DNB students in Medicine and Rheumatology, on 31st March, 2022. Conducted by National Board of Examinations, New Delhi.
- Invited lecture on 'Submission of Application and Review Process' at the one-day workshop on 'Biomedical Research on Human Subjects: Ethical Issues', July 14th 2022, at CSIR-IITR, Lucknow, India.
- Invited lecture on 'Podocytopathies' at the 15th Annual Conference and International CME of the Indian Society of Renal and Transplantation Society (ISRTP), held from 28th to 31st July, 2022 at JIPMER, Puducherry.
- Invited lecture on 'Molecular Analysis of renal allograft biopsies: where do we stand' at the 32nd Annual Conference of Indian Society of Organ Transplantation (ISOT 2022), Nagpur, 13th October, 2022.
- Invited lecture on 'Case discussion with virtual microscopy, IF and EM- transplant scenario' at the 52nd Annual Conference of the Indian Society of Nephrology (ISNCON 2022), 1st Dec. 2022 in Pune.
- Invited lecture on 'Approach to native renal biopsy in nephrotic syndrome with case discussion' at the Annual Conference of the Indian Association of Pathologists & Microbiologists (APCON 2022), Bengaluru, 2nd Dec. 2022.
- Chairperson in the session on 'Minimal Change in Nephrotic Syndrome in Children' in the CME on Glomerular Disease & Foundation Day Celebration of the Department of Nephrology, SGPGIMS, Lucknow, 14th-15th May 2022.
- Chairperson, session on 'Medical liver biopsies: A pattern-based approach' in the masterclass on Approach to Medical Liver biopsies, held on 6th June, 2022 at Dept. of Pathology, RMLIMS, Lucknow.
- Invited panelist in the tumor board at the 29th Annual Conference of the Association of Gynecological Oncologists of India, held at Hotel Clarks Awadh, Lucknow, 4th-6th Nov. 2022.
- Attended the 'Implementation of Academic Bank of Credit (ABC) in Higher Education Institutions' National seminar, organized by IQAC cell Avinashilingam Institute for Home Science and Higher Education for Women, on 23rd March, 2023.

Dr Sushila Jaiswal

- Invited faculty in NESONCON, Pokhara, Nepal, 9th and 10th September 2022
- Invited faculty in 14th NSI foundation and 25th instructional Course, Nagpur, 19-20 November 2022

- Invited faculty in 26th Annual Scientific Meeting of Indonesian Neurosurgical Society 28-30 November 2022 Indonesia

Dr Ritu Verma

- Faculty in CME on XXIV IAP-ID Annual CME 2022 - “Diagnostic Update & Molecular Advances in Endocrine Organ Lesions” 16-17th September 2022, Department of Pathology, SGPGIMS, Lucknow

Dr Pallavi Prasad

- Faculty in CME on XXIV IAP-ID Annual CME 2022 - “Diagnostic Update & Molecular Advances in Endocrine Organ Lesions” 16-17th September 2022, Department of Pathology, SGPGIMS, Lucknow
- Invited talk on “Changing histology in diabetic kidney disease” at ISNCON 2022, Pune [1st-4th Dec, 2022].

Membership of Societies

Dr Seema Sharma

- International Society of Lab Hematology

Dr Manoj Jain

- Renal Pathology Society, USA

Dr Ram Nawal Rao

- International Academy of Cytology at Sydney Australia

CME organized 2022

- XXIV annual CME of the International Academy of Pathologists- Indian Division (IAP-ID) on ‘Diagnostic Update & Molecular Advances in Endocrine Organ Lesions’, organized by the Department of Pathology, SGPGIMS, Lucknow, on 16th -17th Sept. 2022. Venue : Telemedicine center, SGPGIMS , conducted in hybrid mode.

Services

Year-wise Patient care Services / Investigations carried in the Department of Pathology (2020-2022)

S.No	Investigation	No. of Tests year wise		
		2020	2021	2022
1	Histopathology including Frozen section	6009	10506	14094
2	Cytopathology	4503	6750	9048
3	Immunohistochemistry (IHC)	1162	1707	2384
4	Electron Microscopy (EM)	205	331	395
5	Urinalysis and Body Fluids	19761	37681	58920
6	Hematology tests	245892	412976	606413
7	Coagulation tests	30664	62825	85301
8	Clinical Chemistry tests	607530	949595	1385524

9	Molecular Pathology	79	37	228
	Total	915805	1482408	2162307

Training

At present, there are 11 Junior Residents enrolled in M.D Pathology program including 3(3rd year), 4(2nd year) and 4(1st year).

2 Senior residents are enrolled in PDCC (Renal Pathology) program.

3 Scholars are enrolled in PhD program.

Number of Students appeared in final year examination (PG):4

Number of Students passed in final year examination (PG):4

Research Projects

Completed during 2022

Funding: SGPGIMS. Evaluation of 1p and 19q chromosome status in oligodendroglioma tumors.
 PI: Dr Sushila Jaiswal. Two years; 01.07.2018-30.06.2022. Rs 5 lakhs. **Summary report:** Forty cases of oligodendroglioma were enrolled. Most common location was frontal lobe. Morphology on H & E stain was suggestive of oligodendroglioma in 28 cases and anaplastic oligodendroglioma in 12 cases. IDH-1 mutation was noted in 35 cases. 1p 19q co-deletion done by FISH was noted in 34 cases. Final pathological diagnosis was oligodendroglioma (n=25), anaplastic oligodendroglioma (n=9), astrocytoma (n=3) and anaplastic astrocytoma (n=3). 1p 19q co-deletion is the molecular signature of oligodendroglioma. After the completion of the project, this test has been successfully introduced for routine diagnostic purpose in the molecular pathology lab of the department.

Research in Progress

- SERB-DST.** Circulating microparticles and monocyte activation in IgANephropathy (sanctioned 2019) (Dr Vinita Agrwal, PI).
- ICMR.** Circulating endothelial microparticles and microvascular injury in renal allograft dysfunction (sanctioned 2019) (Dr Vinita Agrawal, PI).
- UPCST.** Expression of mismatch repair (MMR) protein in glioma. (Dr Sushila Jaiswal, PI).
- ICMR.** Renal Fibrosis- Correlation among Histomorphometry, Urinary biomarkers and Shear wave elastography. (Dr Pallavi Prasad, Co-PI).
- SGPGI.** Role of serum biomarker in high grade glioma. (Dr Sushila Jaiswal, PI).
- SGPGI.** Expression of mismatch repair (MMR) protein in glioma. (Dr Sushila Jaiswal, PI).
- SGPGI.** Role of Immunohistochemistry in subtyping and differentiating Progressive Familial intrahepatic Cholestasis from other causes of Pediatric Cholestatic disease. (Dr Neha Nigam, PI)
- SGPGI.** Study of Factor-H related proteins in Complement-3 glomerulopathy. (Dr Pallavi Prasad, PI)
- SGPGI.** Study of Programmed Death Ligand-1 (PDL-1) expression and its role as Predictive Biomarker in Esophageal Carcinoma. (Dr Pallavi Prasad, PI)

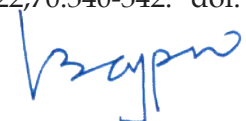


Lt Col Varun Bajpai VSM
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Publications

Indexed Publications

1. Manickam N, Agrawal V, Prasad P, Jain M, Prasad N. Clinico-Histological Features of Thrombotic Microangiopathy in Renal Biopsies: A Retrospective Study. *Turk PatolojiDerg.* 2022; 38(1):1-8. English. doi: 10.5146/tjpath.2021.01536. PMID: 34514568.
2. Verma S, Mandelia A, Jain M, Bhatia V, Lal H. Feminising adrenocortical oncocytoma presenting as precocious puberty: a case report and literature review. *J Pediatr Endocrinol Metab.* 2022
3. Meyyappan J, Prasad N, Kushwaha R, Patel M, Behera M, Bhadauria D, Yaccha M, Kaul A, Agrawal V. Health-Related Quality of Life Score and Outcomes in Living Donor Renal Transplant Recipients With COVID-19. *Exp Clin Transplant.* 2022 Jan; 20(1):42-51. doi: 10.6002/ect.2021.0332. PMID: 35060448.
4. Biswas SN, Elhence A, Agrawal V, Ghoshal UC. Gastric Antral Vascular Ectasia as the First Presentation of Primary Biliary Cholangitis. *Cureus.* 2022 Jan 27;14(1):e21676. doi: 10.7759/cureus.21676. PMID: 35237475; PMCID: PMC8882223.
5. Shanmugham S, Bhadauria D, Agrawal V, Jain M, Yaccha M, Kaul A, Vamsidhar V, Meyyappan J, Prasad N. The diagnostic and therapeutic dilemma of the co-existence of BK virus nephropathy with acute rejection - an experience from a single Centre and review of the literature. *Transpl Immunol.* 2022 Jun; 72:101581. doi: 10.1016/j.trim.2022.101581. Epub 2022 Mar 14. PMID: 35301106.
6. Gopan A, Sen Sarma M, Har B, Singh RK, Agrawal V, Yachha SK. An unusual cause of obstructive jaundice in childhood: Intra-cholechal malignant neuroendocrine tumour. *J Paediatr Child Health.* 2022 Oct;58(10):1895-1898. doi: 10.1111/jpc.16060. Epub 2022 Jun 18. PMID: 35716114.
7. Sait H, Moirangthem A, Agrawal V, Phadke SR. Autosomal recessive spinocerebellar ataxia-20 due to a novel SNX14 variant in an Indian girl. *Am J Med Genet A.* 2022 Jun;188(6):1909-1914. doi: 10.1002/ajmg.a.62701. Epub 2022 Feb 23. PMID: 35195341.
8. Shanmugham S, Prasad N, Kaul A, Bhadauria D, Patel M, Yaccha M, Kushwaha R, Behera M, Agrawal V, Srivastava A. Evanescent renal allograft cortical necrosis from living donor renal transplantation: A lesson learned over two decades. *Transpl Immunol.* 2022 Apr; 71: 101558. doi: 10.1016/j.trim.2022.101558. Epub 2022 Feb 23. PMID: 35217167.
9. Srivastava S, Manisha R, Dwivedi A, Agarwal H, Saxena D, Agrawal V, Mandal K. Meckel Gruber and Joubert Syndrome Diagnosed Prenatally: Allelism between the Two Ciliopathies, Complexities of Mutation Types and Digenic Inheritance. *FetalPediatrPathol.* 2022 Dec; 41(6):1041-1051. doi: 10.1080/15513815.2021.2007434. Epub 2021 Nov 25. PMID: 34821546.
10. Tripathi D, Awasthi R, Agarwal V, Agrawal V, Rathore RKS, Sharma K, Pandey CM, Gupta RK. Diffusion Tensor and Dynamic Contrast-Enhanced Magnetic Resonance Imaging Correlate with Molecular Markers of Inflammation in the Synovium. *Diagnostics (Basel).* 2022 Dec 5;12(12):3041. doi: 10.3390/diagnostics12123041. PMID: 36553048; PMCID: PMC9776499.
11. Prasad P, Singh A, Yachha M, Agrawal V, Pandey R, Jain M, Bhadauria D. Fabry Disease: Report of Two Cases with Uncommon Presentation. *Indian J Nephrol.* 2022 Nov-Dec;32(6):625-628. doi: 10.4103/ijn.ijn_263_21. Epub 2022 Oct 2. PMID: 36704583; PMCID: PMC9872913.
12. Attri G, Singh S, Kumar KG, Joseph J, Bhaisora KS, Srivastava AK, Jaiswal S, Behari S. Symptomatic Spinal Intramedullary Metastasis (SIM) in a Postoperative Case of Low-Grade Intracranial Oligodendroglioma after Nine Years. *Neurology India* 2022;70:340-342. doi: 10.4103/0028-3886.360919. PMID: 36412393



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13. Hashim Z, Khan A, Areekkara P, Neyaz Z, Nath A, Jaiswal S, Mohindra S. Thrombosis leading to acute abdomen in corona visus disease-19: A case series. *Indian J Gastroenterol.* 2022; 41(3): 313–318. Published online 2022 Jul 30. doi: 10.1007/s12664-022-01260-5
14. Rai, V, Jaiswal S, Bhawan N, Mithilesh B. Intraventricular papillary glioneuronal tumor with high proliferation index and CD117 positivity. *Journal of Cancer Research and Therapeutics* 2022. DOI: 10.4103/jcrt.jcrt_434_21
15. Rai V, Saha A, Verma R, Jain V, Baro B Histopathological spectrum of duodenal polyps in a retrospective ten-year study. *Discoveries (Craiova).* 2022 Mar 21;10(1):e143. doi: 10.15190/d.2022.2. eCollection 2022 Jan-Mar. PMID: 36518221
16. Kumari N, Verma R, Agrawal V, Singh UP. Primary Renal Well-Differentiated Neuroendocrine Tumors: Analysis of Six Cases from a Tertiary Care Center in North India with Review of Literature. *Int J SurgPathol.* 2022 Jul 29;10668969221113494. doi: 10.1177/10668969221113494. PMID: 35903907
17. Gupta L, Nune A, Naveen R, Verma, R R, Prasad P, Kharbanda R, Rathore U, Rai MK, Singh MK, Anuja AK, Agarwal V. The prevalence and clinical characteristics of anti-HMGCR (anti-3-hydroxy-3-methyl-glutaryl-coenzyme A reductase) antibodies in idiopathic inflammatory myopathy: an analysis from the MyoCite registry. *Rheumatol Int.* 2022 Jul;42(7):1143-1154. doi: 10.1007/s00296-021-05063-3. Epub 2022 Jan 15. PMID: 3503184
18. Singh AK, Neyaz Z, Verma R, Gupta A, Mishra R, Mishra P. Diagnostic yield and safety of percutaneous CT-guided biopsy of retroperitoneal lesions and analysis of imaging features. *Acta Radiol.* 2022 Feb;63(2):149-158.
19. Malage S, Kumar A, Saxena R, Rao RN. Rectal arteriovenous malformation: a report of two cases, review of literature and management algorithm. *Iran J Coloectal Res.* 2022; 10:2-8
20. Verma V, Rao RN. Cytokeratin 19 expression in intrathoracic neoplasms: First study utilizing cellblocks, evaluating the role of a rarely used cytokeratin for lung cancers. *Diagnostic Cytopathology.* 2022; 50:105–111 DOI: 10.1002/dc.24927
21. Rao RN, Sengar P. Isolated Intestinal Neuronal Dysplasia- Type B of Ileum: a Rare occurrence. *Indian J PatholMicrobiol* 2022 Jul-Sep;65(3):673-675. doi: 10.4103/ijpm.ijpm_636_21
22. Gupta H, Nigam N, Singh S, Roy A, Dhiman RK. Immune boosting gone wrong? A COVID-Concoction Conundrum. *J Clin Exp Hepatol,* 2022. Jan-Feb , 12(1): 235-236
23. Sinha S, Ajayababu A, Thukral H, Gupta S, Guha SK, Basu A, Gupta G, Thakur P, Lingaiah R, Das BK, Singh UB. Efficacy of Bacillus Calmette–Guérin (BCG) vaccination in reducing the incidence and severity of COVID-19 in High-Risk Population (BRIC): a phase III, multi-centre, quadruple-blind randomised control trial. *Infectious Diseases and Therapy.* 2022 Dec;11(6):2205-17
24. Yadav S, Goel A, Lingaiah R, Pradhan M, Katiyar H, Aggarwal R. Serum Bile Acid Levels in Women with Intrahepatic Cholestasis of Pregnancy in India. *Journal of Clinical and Experimental Hepatology.* 2022 Mar 1;12(2):379-83.
25. Prasad P, Verma J, Kumar Singh R, Yadav R. Carcinosarcoma of gallbladder with osteosarcomatous differentiation- a case report with review of literature. *Indian Journal of Surgical Oncology.* 2022;13(4):731-40.
26. Malakar S, Elhence A, Prasad P, Ghoshal UC, Pandey G, Mohindra S. Primary gastric mucormycosis presenting with post-Coronavirus disease-19 upper gastrointestinal bleed. *Indian Journal of Gastroenterology.* 2022 Nov 19:1-2.
27. Prasad P, Singh A, Yachha M, Agrawal V, Pandey R, Jain M, Bhadauria D. Fabry disease: Report of two cases with uncommon presentation. *Indian Journal of Nephrology.* 2022 Nov 1;32(6):625-8.

28. Pandey PC, Kalita J, Sardhara J, Jain N, Prasad P. Racemose neurocysticercosis simulating tuberculous meningitis. *European Journal of Clinical Microbiology & Infectious Diseases*. 2022 Nov;41(11):1361-4.
29. Lata I, Gupta R, Gupta A, Prasad P. Fetal malformation anencephaly with placenta accreta spectrum (increta): Two different tales in a pregnancy–A rare case report. *Journal of Surgical Specialties and Rural Practice*. 2022 Sep 1;3(3):74.
30. Chhabra R, Misra S, Prasad P, Khati S. Meningeal Melanocytoma-A Clinicohistological Masquerader. *Neurology India*. 2022 Sep 1;70(5):2153.

Book Chapter

1. Surya V Seshan, Vinita Agrawal, Manoj Jain. Organized Deposits In Kidney Disease. In: Claudio Ponticelli, R Kasi Visweswaran, Editor. *Current Progress in Nephrology Vol 3*, Publisher: TreeLife Media; 2022. p. 358. ISBN: 9789383989737.

Visiting Professor: None

Departmental Highlights

1. Clinico- pathological slide seminars are held in association with clinical departments, viz. Gastrointestinal & Hepatic Pathology, Renal Pathology, Immunopathology, Neuropathology, Endocrine Pathology and Urologic Pathology.
2. DM/M.Ch/MD students from clinical departments posted in the department for 2-4 weeks are trained in pathology related to their specialty.
3. Lectures delivered for the Nursing College, SGPGIMS and B.Sc./M.Sc. Laboratory Technology courses by faculty and residents of Pathology.
4. Department regularly participates in Telepathology program held at Centre for Telemedicine
5. Conference XXIV IAP-ID Annual CME 2022 - “Diagnostic Update & Molecular Advances in Endocrine Organ Lesions” 16-17th September 2022 was organized by the department. Several International speakers shared their research work in different fields and had a great participation.
6. Online NMC inspection was successfully conducted during the final exit exam of MD students.
7. Mr Rashid Akhtar, TO received award for best technical officer in the Foundation Day Celebration of the Institute.

New initiatives

1. Several new tests were started in the routine clinical chemistry laboratory including tumor markers (CA-19.9, CA-15.3, CEA, PSA profile, AFP, CA-125), Iron profile, Urine albumin to Creatinine ratio and Microalbumin.
2. Augmentation of IHC panel with the introduction of H3K9me3 antibody for patient care in the immunohistochemistry laboratory was done.
3. New tests were inducted in Molecular Pathology Lab as 1p19q status in glial tumours, EGFR amplification by FISH and BRAF mutation by Realtime PCR in low-grade astrocytoma.
4. In view of the increasing demand of enhancing the sub-speciality in Pathology a new PDCC (Post Doctoral Certificate Course) in Hepatopathology was started.



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DEPARTMENT OF PEDIATRIC GASTROENTEROLOGY

STAFF

Name of Faculty Members:

- | | |
|-------------------------------|-------------------------------------|
| 1. Ujjal Poddar, MD, DNB, DM. | Professor and Head |
| 2. Anshu Srivastava, MD, DM | Professor |
| 3. Laxmi Kant Bharti, MD. | Professor (Applied Human Nutrition) |
| 4. Moinak Sen Sarma, MD, DM | Associate Professor |

Activities:

Awards/Honours: conferred on the members of the faculty

Dr. Ujjal Poddar

- **World's top 2% scientists** (Gastroenterology/Hepatology), prepared by a group of researchers of Stanford University, and published by Elsevier, October 10, 2022.
- The **Best Research Paper Award** in the category of Professor (Medical) for the year 2022 presented on Institute's (SGPGIMS) foundation day (December 14, 2022).
- Indian Society of Gastroenterology (ISG) - core member of Guideline formulation Committee on rational use of PPI (2022),
- Indian Society of Gastroenterology - core member of Guideline formulation Committee on Corrosive injury in Gastrointestinal tract.

Dr. Anshu Srivastava

- **Dr J R Srivastava oration-** awarded by Kanpur Branch of Indian Association of Pediatrics, 24th December 2022

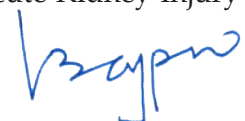
Dr. Moinak Sen Sarma

- **Young Investigator Award:** European Society of Pediatric Gastroenterology Hepatology and Nutrition (ESPGHAN) 54th Annual Meeting, Copenhagen, Denmark 2022
- **Presiding over a national level CME program of national/international conference with date (month, days, year format)**

Dr Anshu Srivastava

Chairperson/panelist

- Essentials and advances in chronic constipation at Bangalore 23-24th Jan 2022. Session- Chronic constipation: Multidisciplinary team (MDT) approach
- 62nd Annual Conference of Indian Society of Gastroenterology-ISGCON 2021 on 12th & 13th February 2022 at Pune. Chairperson for State of Art Lectures on Emerging Therapy in Celiac Disease and Best practices in obtaining and reporting of biopsies: A report of ISG-IAPM Joint consensus February 13, 2022
- Clinical scenario Pediatric Liver Disease and Transplantation (CSPLD and T) Institute of Liver and Biliary Sciences, New Delhi. Jan 20-21, 2022. Panelist for Session on Acute Kidney Injury and Adrenal Insufficiency in children with Chronic Liver Disease.



Dr Moinak Sen Sarma

- **Invited faculty lecture:** Adrenal insufficiency in CPSS. International Registry on Congenital Portosystemic Shunts (CPSS) July 2022, Geneva, Switzerland
 - **Faculty session:** Relative adrenal insufficiency in cirrhotics. PGIMER, Chandigarh, India, September 2022
 - **Faculty session:** PGIMER, Chandigarh, India, August 2022
 - **Faculty session:** DNB classes: Approach to metabolic liver diseases (online), September 2022
3. *Invited lectures (national conference and national CME only)*

National**Dr. Ujjal Poddar**

- 25th Annual Conference of the All India Society of Gastroenterology (West Bengal chapter): WB-ISGCON, February 19-20, 2022, Digha (Kolkata), Guest lecture: AVH mimics in children: fact may be stranger than fiction.
- 7th Annual Conference of Bhopal Institute of Gastroenterology in association with IMA greater Bhopal-branch, April 8-9, 2022, Bhopal, Guest lecture: Diagnostic dilemmas in Pediatric chronic liver disease.
- Indian Academy of Pediatrics-Tamil Nadu State Chapter, 'Post Graduate Clinics in Pediatrics': (Virtual) Moderator: "Infant with jaundice" on April 16, 2022, 7:30-9:30 PM.
- Clinics in Pediatric Gastroenterology-2022, Kolkata, May 16, 2022. Guest lecture (1) Approach to UGI bleeding. (2) IBD: How to go about it? a pediatrician's perspective, (3) Panel discussion: (a) chronic liver disease, (b) chronic diarrhea (panelist).
- Maharashtra Academy of Pediatrics, Online CME, Maha Mentor Mentees, Liver diseases in children, Moderator, 2nd August 2022.
- 29th Annual Scientific Meeting of Indian Society for Study of Liver Diseases (INASL), August 4-7, 2022, New Delhi. (1) Guest lecture: Biliary atresia: an overview of prolonged native liver survival. (2) Judge for poster session: Pediatric Hepatology.
- 5th Annual Meeting of Uttar Pradesh-Uttarakhand state chapter of Indian Association of Pediatric Surgeon, SGPGI, Lucknow, August 12-14, 2022. (1) Chairperson: Session of Biliary atresia. (2) Chief guest for inauguration of 'Stoma care & wound management" workshop.
- Annual Office Practice CME of Institute of Child Health, Kolkata, August 15, 2022, Guest lecture: Inflammatory Bowel Disease (IBD) and Intestinal TB: Confusion to solution.
- 6th PGI GI-Emergency program, September 24-25, 2022. Panelist in panel discussion on acute liver failure in the ICU.
- Indian Academy of Pediatrics-Tamil Nadu State Chapter, 'Post Graduate Clinics in Pediatrics': (Virtual) Moderator: "Approach to a child with UGI bleeding" on October 22, 2022, 7:30-9:30 PM
- UPISGCON-2022, Varanasi, November 12-13, 2022, Guest lecture; Jaundice in children: approach by a hepatologist.
- Annual conference of National Neonatology Forum (NEOCON 2022), Kolkata, December 1-4, 2022. Guest lecture: "Cholestasis in the newborn infant-case based learning"
- IBD-Delhi 2022, 4th Asia-Pacific IBD Clinical Forum and 7th Crohn's and Colitis Foundation (India) National Meeting, Delhi, December 2-4, 2022, Panelist in panel discussion: Monogenic IBD and its relevance in adult population: When to test?

- 9th Kolkata Liver Meeting 2022, December 16-18, 2022, Kolkata, Guest lecture, “Biomarkers in Pediatric liver disease s- How can we contextualise?”

Dr. Anshu Srivastava

- “IAP Pedicon 22” at Greater Noida on 19-23 March 2022. Topic- Pediatric Inflammatory Bowel Disease; can early bird catch the worm?
- Invited Faculty lecture for Pediatric Gastroenterology, PGIMER Chandigarh on 24th Jan 2022. Topic: Basics of esophageal and anorectal manometry as applicable to pediatric gastroenterology.
- Webinar event for speciality of Pediatric Gastroenterology, conducted by National Board of Examinations, New Delhi, India. Lecture on “Crohn’s disease: Diagnosis and Management”. July 6th 2022.
- Invited speaker for “Midterm meeting of ISG 2022”, Kolkata, 15-17 July 2022, Topic- Challenges in management of IBD in children
- “Bengal SPGHAN CON 2, 30-31 July, Kolkata. Lecture on IBD in children in India-difficulties in management AIH and its mimickers: moderator for panel discussion
- Invited lecture in “23rd Annual meeting of Allahabad Branch of IMA (AMACON’2022)” 25th September 2022. Prayagraj, Topic- Pediatric Constipation
- 30th Annual Scientific Meeting of the Indian National Association for the Study of the Liver (INASL) 4-8th August 2022, New Delhi. Lecture on “Overview of diagnostic challenges in familial cholestatic syndromes”
- Invited faculty for Annual ISPGHAN (Indian Society Pediatric gastroenterology, hepatology and nutrition) meeting, Jaipur, 7-9th oct -
 - a) Moderator for session on PIBD.
 - b) Lecture on “Application of radiology in Pediatric GI and hepatology practice” in the preconference workshop on GI radiology

Dr. Laxmi Kant Bharti

- Invited faculty for “Mid Term CME” at tomoribo institute of health & medical sciences, Naharlagun, Arunachal Pradesh on 22-23rd July 2022. Delivered a lecture on “Enteral and Parenteral Nutrition.”
- Invited faculty at 4th International conference on “ GAFEF-2022) at Pokhara, Nepal, from 17-17th September, 2022. Chaired a session on “Food technology and Research”.
- Invited Faculty at 9th Annual conference of Indian Society of Pediatric Gastroenterology, Hepatology and Nutrition (ISPGHAN-2022) on 7th October, 2022. Participated in Pre-Conference workshop and delivered a lecture on “Nutrition in GI and Liver Disease”.

Dr. Moinak Sen Sarma

- **Lecture:** Neonatal cholestasis: diagnostic workup and algorithm for surgeons, 5th Annual Meeting of Uttar Pradesh-Uttarakhand State Chapter of Indian Association of Pediatric Surgeons (IAPS, Lucknow, India, August 2022
- Lecture: Approach to chronic liver diseases in children, Liver Mirror Lucknow, India August 2022
- Lecture: Cases in chronic liver diseases in children, Liver Mirror Lucknow, India, August 2022
- **Lecture:** New insights in celiac disease: 3rd Litfest of Indian Society of Pediatric Gastroenterology Hepatology and Nutrition, Chennai, India, August 2022
- **Lecture:** Pediatric IBD 360 Degree Overview. Indian Academy of Pediatrics: (GAPIC Online), August 2022

- **Lecture:** Wilson disease: Challenges and developments. North East Gastro Meet, Guwahati, India, April 2022
- **Faculty session:** ISPGHAN (Indian Society of Pediatric Gastroenterology Hepatology and Nutrition) Case Presentation-GI Case. Feb 3, 2022. Online
- **Lecture:** Relative adrenal insufficiency in cirrhotics. CSPLD (Clinical Scenarios in Pediatric Liver Diseases) January 2022, Institute of Liver and Biliary Sciences, New Delhi, India. Online
- **Faculty teaching:** Dept of Pediatric Gastroenterology, PGIMER Chandigarh. Jan 25, 2022. Online.
- **Lecture:** Advances in the management of esophageal strictures: 9th annual conference of ISPGHANCON, Jaipur, India 2022

4. *Receipt of prizes or medals by the staff for academic purposes*

Other Awards (awards to residents)

1. **Young Investigator Award**, 54th Annual Meeting of the European Society of Paediatric Gastroenterology, Hepatology and Nutrition, Copenhagen, Denmark, June 22-25, 2022, **Srinivas S Vadlapudi**, Poddar U, Srivastava A, Sen Sarma M. Home-based disimpaction with polyethylene glycol (PEG) in children with functional constipation: is it the way forward? A randomised control trial.
2. **Young Investigator Award**, 54th Annual Meeting of the European Society of Paediatric Gastroenterology, Hepatology and Nutrition, Copenhagen, Denmark, June 22-25, 2022, **Arghya Samanta**, Poddar U, Kumar B, Lal R, Sen Sarma M, Srivastava A, Upadhyaya VD, Mandela A, Yachha SK. When to start endoscopic surveillance for esophageal varices in children with biliary atresia? (Poster).
3. **Best paper award** in VOICE: Video of interesting cases in Endoscopic, 9th Annual Conference of Indian Society of Pediatric Gastroenterology, Hepatology and Nutrition (ISPGHANCON-2022), October 7-9, 2022, Jaipur. **Srinivas S Vadlapudi** "Biliary ascariasis: Gate crashers are not always welcome."
4. **Prof SS Agarwal award 2022** for best research: **Parijat Ram Tripathi** (Guide: **Moinak Sen Sarma**)
5. Third prize to **Nitu Kumari** at ISPGHANCON 2022, Jaipur: Bile Acid Synthetic Defects: Clinical Profile and Natural History of Twelve Patients from a Tertiary Care Centre (Guide: **Moinak Sen Sarma**)
6. **Best DM thesis Award** of Indian Society of Gastroenterology for the year 2022: ISGCON-2022 at Jaipur. Student: Jayendra Seetharaman. (Guide: **Ujjal Poddar**).

5. *Visit abroad or to other institutions for academic purpose with dates/period of visit*

Conference Presentations (a) International;

Dr. Ujjal Poddar

- 24th Annual Scientific Congress of Sri Lanka College of Pediatricians-2022, Colombo, Sri Lanka, April 24-26, 2022. Plenary lecture (virtual), "What a pediatrician should know about celiac disease in a low prevalent country?"
- The 1st Asia Pan Pacific Society of Pediatric Gastroenterology, Hepatology and Nutrition (APPSPGHAN) Endoscopy Masterclass, June 2-3, 2022, Bangkok, Thailand (online). Guest lecture: Endoscopic management of UGIB (variceal and nonvariceal).



- 23rd Congress of Latin American Society of Pediatric Gastroenterology, Hepatology and Nutrition (LASPGHAN QUITO 2022 Congress), Ecuador, June 1-4, 2022 (Online): Guest lecture: Challenges to control GI bleeding by therapeutic endoscopy.
- 54th Annual Meeting of European Society of Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN-2022), Copenhagen, Denmark, June 23-25, 2022. Oral presentation: "Very early onset Inflammatory Bowel Disease (VEO-IBD): Clinical differentiation between monogenic and non-monogenic VEO-IBD. **Poddar U**, Aggarwal A, Jayalakshmi K, Sen Sarma M, Srivastava A, Yachha SK. JPGN 2022; G-P-. PP
- Dubai Pediatric Club (DPC): Pediatric Gastroenterology CME on September 18, 2022 (virtual): guest lecture: intestinal TB versus Crohn's disease.
- 15th Congress of Asia Pan Pacific Society of Pediatric Gastroenterology, Hepatology and Nutrition (APPSPGHAN), and the 43rd Malaysian Pediatric Association Congress, Kota Kinabalu, Sabah, Malaysia, October 12-15, 2022. Guest lecture: Portal Hypertension.
- 5th International Conference of Bangladesh Society of Pediatric Gastroenterology and Nutrition (BASPGAN), Dhaka, Bangladesh, November 5-7, 2022. Guest lecture: Pediatric Inflammatory Bowel Disease: a Pediatrician's perspective.
- 5th International Conference of Bangladesh Society of Pediatric Gastroenterology and Nutrition (BASPGAN), Dhaka, Bangladesh, November 5-7, 2022. Guest lecture: Approach to metabolic liver disease.
- 8th Annual Conference of Dubai Pediatric Club (DPC), November 26-27, 2022 (Virtual). Case presentation in Pediatric Gastroenterology panel. "A child with chronic small bowel diarrhea".

Dr. Anshu Srivastava

- "15th Congress of APPSGHAN and 43rd Annual congress of the Malaysian Paediatric Association" 12th-15th October 2022, Kota Kinabalu, Malaysia. Topic- "Acute viral hepatitis: Experience from Asia".

Dr. Laxmi Kant Bharti

- **The Nutrition Society of Australia 2022 Conference**, 29th November - 2nd December 2022 at Perth. Presented poster paper "Nutritional status in children with Acute Pancreatitis

Dr. Moinak Sen Sarma

- European Society of Pediatric Gastroenterology Hepatology and Nutrition (ESPGHAN) 54th Annual Meeting, Copenhagen, Denmark. **Young investigator award**. Is selenium deficiency in gluten-free diet an additional link to thyroid dysfunction in celiac disease? **Sen Sarma M**, Gopan A, Yachha SK, Srivastava A, Poddar U, Mathias A, Neelu
- **Invited faculty lecture:** Adrenal insufficiency in CPSS. International Registry on Congenital Portosystemic Shunts (CPSS) July 2022, Geneva, Switzerland

6. *Members of international societies*

Dr. Ujjal Poddar: European Society of Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN)

Dr. Anshu Srivastava: North American Society of Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN)

American College of Gastroenterology (ACG)

American Association of Study of Liver Disease (AASLD)



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Dr. Laxmi Kant Bharti: Co-Editor, Acta scientific Pediatrics

Dr. Moinak Sen Sarma: Member of European Society of Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN)

7. *CMEs organized:* None

Service

Departmental Activities

Patient care services

S. No.	Patient	2020	2021	2022
1.	Old follow-up	3070	4787	7360
2.	New Registration	364	892	1727
3.	Admission	533	765	7074

Investigation & Procedures

S. No.	Tests	2020	2021	2022
1	Hepatitis AVirus IgG	71	85	27
2.	Blood ammonia(Pediatric)	86	137	204
3	Galactose 1Phosphate Uridyl Transferase (Quantitative)	61	59	80
4.	Non Glucose reducing Substances	113	126	212
5.	Sweat chloride(Pediatric)	13	35	52
6.	Urinary copper (24 hrs collection)	141	274	511
7.	Hepatic copper	35	35	50
Total		520	751	1136

Pediatric Gastro Lab:

GI Pathophysiology and motility Lab

S. No.	Tests	2020	2021	2022
1	24 Hrs Ambulatory pH monitoring test	0	0	0
2.	Anorectal High resolution Manometry (pediatric)	1	3	5
3	Esophageal High resolution Manometry (pediatric)	4	12	7
4.	Glucose hydrogen breath test	1	3	57
Total		6	18	69

Endoscopy services

S. No.	Procedures	2020	2021	2022
1.	Upper Gastrointestinal Endoscopy (Diagnostic)	196	416	582

2.	Endoscopic Sclerotherapy	355	462	575
3.	Endoscopic Variceal Ligation -follow up	150	203	373
4.	Endoscopic Variceal Ligation -1st Session	30	52	70
5.	Esophageal Dilatation	207	333	444
6.	Foreign body removal	3	2	4
7.	Full colonoscopy + Polypectomy	14	33	38
8.	Glue Injection	2	3	4
9.	Proctosigmoidoscopy	27	39	90
10.	Short colonoscopy	1	2	4
11.	Antral controlled radial expansion dilatation	7	0	34
12.	Naso Jejunal Placement	9	20	8
13.	Endoscopic Retrograde Cholangiopancreatography -Papil- iotomy	1	4	11
14.	Achalasia Dilatation	2	10	8
15.	Pseudocyst drainage	2	4	4
16.	Common bile duct plastic stenting	0	1	8
17.	Common bile duct stone removal	0	4	8
18.	Full Colonoscopy	71	107	184
19.	Pediatric Argon Plasma Coagulation	2	3	3
20.	Endoscopic Ultrasound	6	15	33
21.	Capsule endoscopy	2	1	2
Total		1087	1744	2487

Training:

DM (Pediatric Gastroenterology): Two students joined and two students passed out

PDCC (Pediatric Gastroenterology): 04 students joined and 04 students passed out

Research completion during the year: None

Research in progress

Dr Moinak Sen Sarma

- Funding agency (in bold): **SGPGIMS**
- Intramural SGPGIMS: Intestinal Permeability and Bacterial Translocation in Spontaneous Bacterial Peritonitis in Children.
- Intramural SGPGIMS :Can we improve management of occult neurological changes in patients with hepatic Wilson disease?



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Publications

Indexed Publications

1. Seetharaman J, Poddar U, Yachha SK, Srivastava A, Sen Sarma M. Efficacy of amitriptyline in Pediatric Functional abdominal pain disorders: A randomized placebo-controlled trial. *J Gastroenterol Hepatol* 2022 April;37(4):685-691.
2. Poddar U, Samanta A. Foreign Body Ingestion in Children: The Menace Continues. *Indian Pediatrics* 2022;59:716-717.
3. Prasad D, Sen Sarma M, Yachha SK, Prasad R, Srivastava A, Poddar U, Kumar A. Can we predict early renal impairment in pediatric cirrhosis? *Indian J Gastroenterol.* 2022;41(2):135-142. doi: 10.1007/s12664-021-01190-8.
4. Tripathi PR, Sen Sarma M, Yachha SK, Aggarwal A, Bhatia V, Kumar A, Srivastava A, Poddar U. Relative Adrenal Insufficiency in Decompensated Cirrhotic Children: Does It Affect Outcome? *Am J Gastroenterol.* 2022 Jan 1;117(1):120-128. doi: 10.14309/ajg.0000000000001486. PMID: 34506335.
5. Gopan A, Sen Sarma M, Har B, Singh RK, Agrawal V, Yachha SK. An unusual cause of obstructive jaundice in childhood: Intra-choledochal malignant neuroendocrine tumour. *J Paediatr Child Health.* 2022 Oct;58(10):1895-1898. doi: 10.1111/jpc.16060. Epub 2022 Jun 18. PMID: 35716114.
6. Sen Sarma M, Yachha SK. Fever, ascites and rugged skin lesions. *J Paediatr Child Health.* 2022 May;58(5):930-931, doi: 10.1111/jpc.15624. Epub ahead of print. PMID: 34181794.
7. Mandelia A, Sharma MS, Mishra A, Siddiqui Y. Gastric adenomyoma with heterotopic pancreatic tissue. *J Indian Assoc Pediatr Surg* 2022;27:273-4.
8. Singh SK, Sarma MS. Hereditary fructose intolerance: A comprehensive review. *World J Clin Pediatr.* 2022 Jul 9;11(4):321-329. doi: 10.5409/wjcp.v11.i4.321. PMID: 36052111; PMCID: PMC9331401.
9. Sen Sarma M, Tripathi PR. Natural history and management of liver dysfunction in lysosomal storage disorders. *World J Hepatol.* 2022 Oct 27;14(10):1844-1861. doi: 10.4254/wjh.v14.i10.1844. PMID: 36340750; PMCID: PMC9627439.
10. Sarma MS, Ravindranath A. Pediatric acute viral hepatitis with atypical variants: Clinical dilemmas and natural history. *World J Hepatol.* 2022 May 27;14(5):944-955. doi: 10.4254/wjh.v14.i5.944. PMID: 35721282; PMCID: PMC9157701.
11. Devarapalli UV, Sarma MS, Mathiyazhagan G. Gut and liver involvement in pediatric hematolymphoid malignancies. *World J Gastrointest Oncol.* 2022 Mar 15;14(3):587-606. doi: 10.4251/wjgo.v14.i3.587. PMID: 35321282; PMCID: PMC8919016.
12. Yachha SK, Sarma MS, Mohan N, Wadhwa N, Kumar Vr N, Srinivasan R, Shah D, Soans S, Yewale V, Basavaraja GV, Parekh BJ. Indian Academy of Pediatrics Consensus Guidelines for Probiotic Use in Childhood Diarrhea. *Indian Pediatr.* 2022 Mar 10;S097475591600411. Epub ahead of print. PMID: 35273131
13. Ravindranath A, Sarma MS. Mitochondrial hepatopathy: Anticipated difficulties in management of fatty acid oxidation defects and urea cycle defects. *World J Hepatol* 2022; 14(1): 180-194 DOI: <https://dx.doi.org/10.4254/wjh.v14.i1.180>
14. Seetharaman J, Yadav RR, Srivastava A, Sarma MS, Kumar S, Poddar U, Yachha SK. Gastrointestinal bleeding due to pseudoaneurysms in children. *Eur J Pediatr.* 2022 Jan;181(1):235-243.
15. Gopan A, Srivastava A, Mathias A, Yachha SK, Jain SK, Mishra P, Sarma MS, Poddar U. Efficacy and predictors of pain response to combined antioxidants in children with chronic pancreatitis.

- Dig Dis Sci 2022 August 28, Epub ahead of print; DOI 10.1007/s10620-022-07676-5
16. Bolia R, Srivastava A. Editorial: testing for Epstein-Barr virus and treating autoimmune hepatitis-still a long way to go! *Aliment Pharmacol Ther.* 2022 Feb;55(3):364-365.
 17. Bolia R, Srivastava A. The search for optimum thiopurine metabolite levels in autoimmune hepatitis continues *J Hepatol.* 2022 Jan;76(1):220-222.
 18. Bolia R, Srivastava A. Liver Transplantation for Tyrosinemia Type 1 in the Developing World: Is It Really the Best We Can Offer? . *Indian J Pediatr.* 2022 May;89(5):427-428. doi: 10.1007/s12098-022-04128-w.
 19. Bolia R, Srivastava A. Liver Transplantation for Tyrosinemia Type 1 in the Developing World: Is It Really the Best We Can Offer? Authors' Reply. *Indian J Pediatr.* 2022 Aug;89(8):840. doi: 10.1007/s12098-022-04230-z.
 20. Bolia R, Goel AD, Sharma V, Srivastava A. Biliary diversion in progressive familial intrahepatic cholestasis: a systematic review and meta-analysis. *Expert Rev Gastroenterol Hepatol.* 2022 Feb;16(2):163-172.
 21. Lee WS, Arai K, Alex G, Treepongkaruna S, Kim KM, Choong CL, Mercado KC, Darma A, Srivastava A, Aw MM; APPSPGHAN PIBD Working Group. Medical management of pediatric inflammatory disease (PIBD) in the Asia-Pacific region: a position paper by the Asian Pan-Pacific Society for Pediatric Gastroenterology, Hepatology and Nutrition. *J Gastroenterol Hepatol* 2022; Dec 27. doi: 10.1111/jgh.16097. Epub ahead of print. PMID: 36574956.
 22. Lee WS, Arai K, Alex G, Treepongkaruna S, Kim KM, Choong CL, Mercado KC, Darma A, Srivastava A, Aw MM; APPSPGHAN PIBD Working Group. Management and monitoring of pediatric inflammatory bowel disease in the Asia-Pacific region: A position paper by the Asian Pan-Pacific Society for Pediatric Gastroenterology, Hepatology, and Nutrition (APPSPGHAN) PIBD Working Group: Surgical management, disease monitoring, and special considerations. *J Gastroenterol Hepatol* 2022 Dec 12. doi: 10.1111/jgh.16084. Online ahead of print.

Non-indexed Publications: None

While citing the Paper

Chapters(s) in Book(s)

1. Celiac disease. Poddar U. *PG Textbook of Pediatrics, 3rd Edition*, Edt. Piyush Gupta, Menon PSN, Ramji S, Lodha R, Jaypee Brothers Medical Publication (P), New Delhi 2022, Chapter 36.16, pp: 1819-1824.
2. Upender Shava, Anshu Srivastava. Liver abscess. Chapter 37.6, *PG Textbook Of Pediatrics (3 Vols. Set) :3/E 2022* By Piyush Gupta. Edition:3rd, Publisher: Jaypee Brothers Medical Publishers (P) Ltd Year: 2022
3. Rishi Bolia, Anshu Srivastava. Inflammatory Bowel Disease. Chapter 36.17 *PG Textbook of Pediatrics (3 Vols. Set) :3/E 2022* By Piyush Gupta. Edition:3rd, Publisher: Jaypee Brothers Medical Publishers (P) Ltd Year: 2022
4. Srivastava A, Bolia R, Yachha SK. Acute Gastrointestinal bleeding. In *Medical Emergencies in children*. Meherban Singh (Ed) CBS Publishers and Distributors India
5. LK Bharti and Sumit Kumar Singh. Published a book chapter on the topic "Recurrent iron deficiency anemia- how should I investigate and treat this child?" in the *International Text book on Pediatric Gastroenterology-51 Clinical questions and answers*. Edited by Dr Pankaj Vohra. ISBN: 978-93-90709-27-4. First Edition 2022.



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6. Moinak Sen Sarma, Surender Kumar Yachha. Portal Hypertension. The Liver and it's diseases in children. Paras publishers. 2022
7. Moinak Sen Sarma. Interpretation of LFT in different clinical situations. Online PG module in Pediatrics. Editor: Piyush Gupta. Jaypee Brothers publishers India 2022
8. Moinak Sen Sarma (convenor). Care of a child with chronic liver disease. 105 IAP Guidelines for Parents and Caregivers. Editor: Piyush Gupta. Jaypee Brothers publishers India 2022

Book: None

Visiting professors: None

Awards and honours received by the department: None

Departmental highlights

With the withdrawal of Covid-19 restriction in the year 2022, patient care services of the department improved tremendously. The out-patient attendance became double than the previous year (9,087 from 5, 679) and same was true for inpatient care (1,074 from 765).

In teaching front we have successfully conducted both theory and practical examination (online) of our four PDCC and two DM students. Two new DM students and four PDCC students joined our department in March-April 2022. We resume our daily physical teaching session for our students.

In research and publication front, the department's faculty members have done quite well in the year 2022. In the year 2022, the department has published 22 articles and 16 of them in various international journals of repute. Faculty members and residents received various prestigious international and national awards and delivered online and offline guest-lectures in various national conferences.

New initiatives: None

Patent: None

DEPARTMENT OF PEDIATRIC SURGICAL SUPERSPECIALTIES

STAFF

Name of Faculty Members:

- | | |
|--|----------------------|
| 1. Basant Kumar, MS, M.Ch, FIAPS, FICS, FIAGES, FMAS, FAIS | Professor & Head |
| 2. Vijai Dutta Upadhyaya, MS, M.Ch, FIAGES, FMAS | Professor |
| 3. Ankur Mandelia, MS, M.Ch | Additional Professor |

Activities

Awards and Recognitions

Dr. Basant Kumar

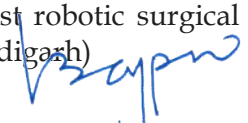
- Fellowship in Advanced Laparoscopic and Robotic Surgery (FALS – ROBOTIC SURGERY) Awarded by President of “Indian Association of Gastro-Endoscopic Surgeons” in 2022.
- Editorial Board Member of the – Indian Journal of Pediatric Surgery, Journal of Surgery (Science PG Publisher), World Journal of Surgery and Surgical Research (Open Access),
- Secretary, Association of Pediatric Surgical Oncology (APSO) - IAPS-2022-24.
- Secretary, UP-UK Chapter of IAPS (2022-2025).
- Invited guest lecture on EHPVO at IAPSCON-2022, Goa.
- Faculty and Session Moderator at Pediatric Surgery Update-2022 at MAMC, New Delhi.
- Jan-Feb, 2022: Completed da Vinci Robotic Surgery technology, console surgeon training & certification by Intuitive Inc., key member of the surgical team performing UP state’s first robotic surgical procedures in children under mentorship of Prof. Ravi Kanaujia (PGI, Chandigarh)
- Examiner /Paper setter for M.Ch. exit Exams and thesis at Institute/Medical College.
- Organizing Chairman for “5th Annual Meeting of Uttar Pradesh-Uttarakhand State Chapter of Indian Association of Pediatric Surgeons (IAPS)”, 12-14th August, 2022, SGPGIMS, Lucknow
- Awarded “Best Video Paper” award in GI session for paper titled “Familial Polyposis Coli: Difficulties in Surgical management” at 48th Indian Association of Pediatric Surgeons (IAPS) Annual Conference (IAPSCON), 13-16th October, 2022, Goa. (*Corresponding author; Paper was presented by PDF – Dr. Anju Verma).

Dr. Vijai Dutta Upadhyaya:

- Elected as executive member of Association of Pediatric Surgeons of India.
- Member for standard treatment guideline for pediatric surgeons prepared by Association of Pediatric Surgeon of India.
- Member of Research section of IAPS

Dr. Ankur Mandelia

- Jan-Feb, 2022: Completed da Vinci Robotic Surgery technology training & certification by Intuitive Inc., key member of the surgical team performing UP state’s first robotic surgical procedures in children under mentorship of Prof. Ravi Kanaujia (PGI, Chandigarh)



- Appointed as Sectional Editor (GI Surgery), Journal of Indian Association of Pediatric Surgeons (JIAPS)
- Nominated as Member of Specialist Board of Pediatric Surgery of National Board of Examinations (NBE), MOHFW, Gov. of India.
- Elected as “Executive committee member (Co-opted member)” of Pediatric Endoscopic Surgeons of India (PESI) for 2022-2024.
- Appointed as Review Editor on the Editorial Board of Pediatric Gastroenterology, Hepatology and Nutrition (specialty section of Frontiers in Pediatrics)
- Examiner for M.Ch. Thesis at AIIMS, New Delhi & VMMC & Safdurjung Hospital, New Delhi (2022-2023)
- Operating faculty for “Live operative workshop” at 17th Annual conference of Pediatric Endoscopic Surgeons of India (PESICON), 8-10th April, 2022, BHU, Varanasi
- Organizing Secretary for “5th Annual Meeting of Uttar Pradesh-Uttarakhand State Chapter of Indian Association of Pediatric Surgeons (IAPS)”, 12-14th August, 2022, SGPGIMS, Lucknow

Best paper awards:

- Awarded “Best Video Paper” award in Video session for paper titled “Laparoscopic colectomy with rectal Hartmann’s procedure for a case of juvenile polyposis coli: tips and tricks for multi-quadrant abdominal surgery” at 48th Indian Association of Pediatric Surgeons (IAPS) Annual Conference (IAPSCON), 13-16th October, 2022, Goa. (*Corresponding author; Paper was presented by PDF – Dr. Anju Verma)
- Awarded “Best Video Paper” award in Video session for paper titled “Laparoscopic hepatico-jejunostomy for choledochal cysts with variant biliary ductal anatomy: technical considerations and early results” at 17th Annual conference of Pediatric Endoscopic Surgeons of India (PESICON), 8-10th April, 2022, BHU, Varanasi. (*Corresponding author; Paper was presented by PDF – Dr. Rohit Kapoor)

Invited sessions and chairpersons/lectures for Conferences: 2022**Name of faculty and Session****Dr. Basant Kumar**

- Invited guest lecture on “EXTRA HEPATIC PORTAL VEIN OBSTRUCTION: Update” at IAPSCON-2022, Goa.
- Faculty and Session Moderator at Pediatric Surgery Update-24th - 27th March, 2022 at MAMC, New Delhi
- Guest Lecture on “Training of Nurses in Pediatric Surgery- Current Practices” on April 2022, at RMLIMS, Lucknow.
- Guest Lecture on “Undescended Testes” at Foundation Day of Department of Surgery 2022 at KGMU, Lucknow.

Dr. Vijai Dutta Upadhyaya

- Advances in diagnosis of Biliary atresia Annual Conference of Research Section of IAPS, 2022, AIIMS, Raipur)
- Infantile choledochal cyst (Bihar & Jharkhand Chapter of Pediatric Surgeons of India 2022)

Dr. Ankur Mandelia

- Invited faculty lecture “Liver Trauma & Hemobilia in Children”, Delhi Association of Pediatric



Surgeons (DAPS) - Annual Conference, AIIMS, New Delhi, 12-13th November, 2022 (hybrid mode)

- Invited faculty lecture “Pediatric Robotic Surgery Program At SGPGIMS, Lucknow: The Journey So Far”, “Indian Association of Pediatric Surgeons (IAPS)-Bihar & Jharkhand Chapter” 1st Annual Meeting, Kathmandu, Nepal; 21-23 August, 2022
- Invited faculty lecture “Evaluation of Surgical Jaundice in an infant”, “14th Pediatric Surgery Update”, Maulana Azad Medical College (MAMC), New Delhi, 24th - 27th March, 2022

Membership of Societies

Membership of professional bodies funded by Institute

Dr. Basant Kumar

- IPSO (International society of Pediatric surgical Oncology)
- PHO (PediatricHemato-Oncologist of India).
- SIOP (International Society of Pediatric Oncology).

Dr. Vijai Datta Upadhyaya

- International College of Surgeons
- Srilnaka College of Surgeron

Dr. Ankur Mandelia

- Membership of Indian Association of Pediatric Surgeons (IAPS)
- Membership of Pediatric Endoscopic Surgeons of India (PESI)
- Membership of Society of Pediatric Urology (SPU-IAPS)
- Membership of Surgical Oncology Section (SOS) of IAPS
- Membership of Society of Fetal Medicine (SFM)

Teaching Workshops/ CME's organized 2022

- UP.UK Chapter of IAPS (UPUKPSCON-2022) from 13-14th August 2022.
- Stoma Care Workshop for residents and staff nurses on 13th August 2022.
- International Childhood Cancer Day (ICCD-2022) on 15th February 2022 was celebration as “Childhood Cancer Awareness Day”.
- Pediatric Surgery Day Celebration in June 2022.

Service

Year -wise available clinical data (last three years 2020, 2021, 2022) for Department of Paediatric Surgical Superspecialties.

S. No	Parameter	2020	2021	2022
1	Number of New patients in OPD	363	498	526
2	Number of Old /Follow -up patients in OPD	2073	3193	4066
3	Number of Consultation in OPD	146	345	580
4	Total patients in OPD	2582	4036	5172
5	Total Number of Patients admitted (IPD)	452	673	773
6	Total Number of Surgeries performed	210	543	627
7	Total Number of :			

• Urodynamic Scans	52	154	207
• Day care chemotherapy	30	68	125
• Stoma care	170	287	358
• Rectal biopsies	12	46	78

Training

1. At present, there are 3 senior residents enrolled in MCh. Pediatric Surgery, Two Post-Doctoral Fellow (PDF) in Pediatric Gastrosurgery, one PDF each in Pediatric Oncosurgery and Pediatric Minimal Access Surgery.
2. Number of students appeared in the final year examination (PG): First student is appearing in 2023
3. Number of students who passed in final year examination (PG): None

Completed Research projects

1. Co-supervisor for thesis project of Dr. Preeti Joon, M.D. Anaesthesiology JR, Thesis title: Physiological and anaesthetic considerations of safe and optimal pneumoperitoneal pressures for laparoscopic surgery in children (Completed), Funding : Departmental (PI: Dr. Sanjay Dhiraj), Status: Communicated for publication.
2. Co-Investigator (Dr. Basant Kumar) in project of MD Anesthesiology Student (Dr. Faisal); Title: To study the causes of postponement / cancellation of operative procedures on the scheduled day of elective surgery in a tertiary care Superspecialties hospital- an observational prospective study [PI- Dr. Aruna Bharti]; completed and submitted, Funded by SGPGI.
3. Co-Investigator (Dr. Basant Kumar) in non-funded project of B.Sc. Nursing Students; Title: A study to assess the knowledge and practice on Urinary Catheter Care among parents of under five children in selected department, SGPGIMS, Lucknow, UP [PI- Halemani K].
4. Outcome of Umbilical Granuloma managed with Common Salt, PI: Vijai Datta Upadhyaya, Not Funded, Prospective study. Submitted in 2019, approved in 2020 completed in 2021 and published Singh A, Naranje K, Pandita A, Upadhyaya VD, Kumar B, Upadhyaya AD. Is application of salt for 3 days locally is sufficient to treat umbilical granuloma?. *Afr J Paediatr Surg.* 2021;18(3):160-163. doi:10.4103/ajps.AJPS_50_20

Research in progress

Funding agency, Name of project, Investigators

1. Intramural project, funded by SGPGI; Title: NMR based Bile fingerprinting to unfold the metabolic pattern of bile in pediatric surgical patients with biliary pathology - A Pilot study [PI- Dr. Vijai D Upadhyaya]. Approved in 2020 still running
2. Intramural project, funded by SGPGI; Title: Inflammatory response after open and laparoscopic inguinal hernia repair in children, Dr. Ankur Mandelia (PI), Dr. Basant Kumar, Dr. Vijai D. Upadhyaya, Dr. Durga Mishra.
3. Non-funded project of M.Ch Pediatric Surgery Student (Dr. Pujana Kennaganti); Title: Evaluation of safety and efficacy of ERAS (Enhance Recovery after Surgery) protocol in pediatric patients undergoing hepato-pancreatico-biliary surgery: A prospective randomized control study [PI- Dr. Basant Kumar], study completed, analysis going on for submission.
4. Co-Investigator (Dr. Basant Kumar) in project of M.Ch Pediatric Gastroenterology Student (Dr. Upasana Ghosh); Title: Usefulness and accuracy of Fibrosan in differentiating Biliary Atresia from other causes of NCS and its role in predicting prognosis of Biliary Atresia after Kasai Portoenterostomy [PI- Dr. Ujjal Poddar], funded by SGPGI.

- Intramural project; Title: Neuroblastoma and Wilm's Tumor: Co-relation of computed tomographic findings with serum/urine level of Fibroblast Growth Factor (bFGF) and serum Vascular Endothelial Growth Factor (VEGF) as a marker of prognosis [PI- Dr. Basant Kumar] funded by SGPGI; study completed, analysis going on for submission.

Publications

- Rahul R, Yadav P, Singh A, Verma P, Mayilvaganan S, Upadhyaya VD, Bhatnagar A, Pande S, Pradhan M, Saxena R. Impact of COVID-19 Pandemic Forced Lockdown on Non-COVID Super-specialty Surgical Case Management in India. [Year:2021] [Month:July-December] [Volume:16] [Number:2] [Pages:7] [Pages No:70 - 76]
- Upadhyaya VD, Bharti LK, Mishra A, Yousuf M, Mishra P, Kumar B. Constipation after surgery for anorectal malformations: Unrecognised problem until it is a problem. *Afr J Paediatr Surg* 2021, 21;18:67-71
- Singh A, Naranje K, Pandita A, Upadhyaya VD, Kumar B, Upadhyaya AD. Is application of salt for 3 days locally is sufficient to treat umbilical granuloma?. *Afr J Paediatr Surg*. 2021;18(3):160-163. doi:10.4103/ajps.AJPS_50_20
- Poddar U, Yachha SK, Upadhyaya VD, Kumar B, Borkar V, Malik R, Srivastava A, Endoscopic cystogastrostomy: Still a viable option in children with symptomatic pancreatic fluid collection, *Pancreatology*, 21, 4; 2021: 812-818,
- Kapoor R, Gupta A, Yadav PS, Mandelia A. Posterior Cloaca: Multicenter Experience of a Very Rare and Unusual Anorectal and Genitourinary Malformation. *J Indian Assoc Pediatr Surg*. 2022 Nov-Dec;27(6):707-712. doi: 10.4103/jiaps.jiaps_39_22. Epub 2022 Nov 14. PMID: 36714474; PMCID: PMC9878515.
- Mandelia A, Halder R, Siddiqui Y, Mishra A. Optimising working space for laparoscopic pyeloplasty in infants: Preliminary observations with the SGPGI Protocol. *J Minim Access Surg*. 2022 Jan-Mar;18(1):105-110. doi: 10.4103/jmas.JMAS_202_20. PMID: 35017400; PMCID: PMC8830566.
- Halemani K, Issac A, Mishra P, Dhiraaj S, Mandelia A, Mathias E. Effectiveness of Preoperative Therapeutic Play on Anxiety Among Children Undergoing Invasive Procedure: a Systematic Review and Meta-analysis. *Indian J Surg Oncol*. 2022 Dec;13(4):858-867. doi: 10.1007/s13193-022-01571-1. Epub 2022 Jul 9. PMID: 36687245; PMCID: PMC9845488.
- Mandelia A, Singh A. Partial Left Pericardial Agenesis in a Neonate. *J Indian Assoc Pediatr Surg*. 2022 Jul-Aug;27(4):507. doi: 10.4103/jiaps.jiaps_131_21. Epub 2022 Jul 26. PMID: 36238325; PMCID: PMC9552642.
- Kapoor R, Mandelia A, Farzana N, Nigam N, Dabadghao P, Sharma SP, Kanneganti P, Pande S. Bronchial Carcinoid Tumor in an Adolescent Female: Diagnosis and Management by a Multi-Disciplinary Team. *J Indian Assoc Pediatr Surg*. 2022 Jul-Aug;27(4):500-502. doi: 10.4103/jiaps.jiaps_132_21. Epub 2022 Jul 26. PMID: 36238335; PMCID: PMC9552641.
- Kapoor R, Mandelia A, Verma A, Kanneganti P. Giant renal parapelvic cyst with pelvi-ureteric junction obstruction in an infant: challenges in diagnosis and laparoscopic management. *BMJ Case Rep*. 2022 May 11;15(5):e249548. doi: 10.1136/bcr-2022-249548. PMID: 35545308
- Singh A, Mandelia A, Verma P, Naranje K, Gupta G. Giant Feeding Artery from Abdominal Aorta in Intralobar Pulmonary Sequestration. *J Indian Assoc Pediatr Surg*. 2022 Mar-Apr;27(2):270-272. doi: 10.4103/jiaps.JIAPS_372_20. Epub 2022 Mar 1. PMID: 35937111; PMCID: PMC9350659.
- Verma S, Mandelia A, Jain M, Bhatia V, Lal H. Feminizing adrenocortical oncocytoma presenting as precocious puberty: a case report and literature review. *J Pediatr Endocrinol Metab*. 2022

Mar 3;35(6):827-830. doi: 10.1515/jpem-2021-0707. PMID: 35245009.

13. Mandelia A, Sharma MS, Mishra A, Siddiqui Y. Gastric Adenomyoma with Heterotopic Pancreatic Tissue. J Indian Assoc Pediatr Surg. 2022 Mar-Apr;27(2):273-274. doi: 10.4103/jiaps.JIAPS_102_20. Epub 2022 Mar 1. PMID: 35937125; PMCID: PMC9350662.

Chapter(s) in Book(s) 2022

1. Mishra A, Mandelia A, Bajpai M. Urethral Plate Assessment in Hypospadias - Implications for Surgery, In: Progress in Pediatric Urology. New Delhi, Penwel publishers, vol. 25, 2022, pp.55-63.
2. Kumar B, Pathak M. Introduction, Classification and Staging Systems of Liver tumors. Book Title: BEST PRACTISE GUIDELINES in MANAGEMENT OF PEDIATRIC SOLID TUMORS. EDITOR: Dr. Sushmita Bhatnagar (Under publication).
3. Mosa H, Upadhyaya VD, Sharma SP, Mishra P - The Ureter, Handbook of Pediatric Surgery, 2022.

Visiting Professors

1. Prof. Ravi Kannoja, Professor, Pediatric Surgery, visited as mentor to start Robotic Surgery Program in department in February 2022.
2. Dr. HPS Miglani, Senior Pediatric Surgeon visited to mentor new surgical skill for UDT and Hypospadias.

Departmental Highlights

1. Department has elite status in country due to its work in pediatric gastro-surgery field. This year because of COVID - pandemic overall work was suffered but still we managed various difficult hepato-biliary cases (Biliary atresia, Choledochal cyst, Liver resection and spleno-renal shunt) and continued our routine surgeries during this period.
2. We are also performing level three laparoscopic procedures and are placed among top laparoscopic facility hospital in Northern India.
3. Department is also giving care to patients of solid organ cancer in pediatric age group and performed around 40 cases of advanced tumor including: liver, kidney and adrenal gland.
4. Department is now also gaining name in pediatric urology and managing all cases of pediatric urology.
5. Thoracoscopic surgeries and bronchoscopy is now commonly performed at our centre

New Initiatives

1. Two M.Ch. candidates will be trained every year. One candidate joined the department for 2020-23 sessions and two joined for 2022-2025 session.
2. One PDF candidate each in "Pediatric Onco-surgery" and "Pediatric Minimal Invasive Surgery" every year had been started from 2021. One PDF candidate is trained every year in each course
3. Two M.Ch. candidates will be trained every year from 2020-21 session. One candidate joined in 2020-2023 session and two candidates in 2022-2025 session
4. Department is doing advanced level Robotic surgery which is First of its kind in state of Uttar Pradesh

Patents: NONE.



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SGPGIMS, Lucknow

DEPARTMENT OF PLASTIC SURGERY AND BURNS

STAFF

Name of Faculty Members:

- | | |
|---|---|
| 1. Dr Rajiv Agarwal, MS, MCh, DNB (Gen Surg), | Professor and Head
DNB (Plast Surg), FRCSEd,
FRCSEng, FRCS(Glasgow) |
| 2. Dr Ankur Bhatnagar, MS, MCh, FACS, FICS | Professor |
| 3. Dr Anupama Singh, MS, MCh | Associate Professor |
| 4. Dr Rajiv Kumar Bharti, MS, MCh | Assistant Professor
(Date of Joining:06/02/2023) |
| 5. Dr Nikhilesh Kumar, MS, MCh | Assistant Professor
(Date of Joining:25/02/2023) |

Activities

Awards and Recognitions

Dr. Rajiv Agarwal:

- Organized conference on Plastic Surgery Day 15 July 2022

Dr. Ankur Bhatnagar

- Member Organizing Committee Mid Term CME BRASA (Annual Mid Term CME of Breast Reconstructive and Aesthetic Surgeons Association)
- Member of Organizing Committee (Annual Conference of Breast Reconstructive and Aesthetic Surgeons Association)
- APSI CME - Cleft & Craniofacial Anamolies March 2022
- Member of International Society- American Society of Plastic Surgery, American College of Surgeons
- Member Executive Committee Association of Plastic Surgeons of India.
- Member Executive Committee Venous Association of India.
- Appointed Member Advisory Committee -Engineering Section SGPGIMS.
- Continued as Sub Dean Student Affairs and Training SGPGIMS.
- Contributed to Question Banks for Plastic surgery entrance exam in multiple universities Including DNB.
- Member examination cell, for conduct of various exit and entrance exam of the Institute
- SGPGIMS Nodal officer for Medical Council of India.
- Member Data management Committee for COVID 19 Management -SGPGIMS
- Appointed Faculty for Diploma in Physiotherapy Course in College of Medical Technology - SGPGIMS
- Member MIS Cell SGPGIMS
- Member SGPGIMS Accreditation Committee for NABH
- Member of Faculty Forum SGPGIMS.



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- Managed E-OPD and E-CCS Duties as department representative
- Independently managed Entire COVID 19 Isolation ward of 36 COVID-19 positive patients for Two weeks as part of COVID management team of SGPGIMS.
- Helped the COVID taskforce in streamlining the working of Isolation ward during the period of stay in isolation ward
- Completed Basic Course in Bio Medical Research from ICMR
- Completed two week course in Emerging Trends in computer Science and I.T. (BVICAM Delhi)
- Appointed as Editorial Board Member for SGPGIMS, News Letter
- Multiple Research projects as PI/CO-PI.

Dr. Anupama Singh

- UPAPSICON-2022 and Cadaveric Flap Dissection Workshop chaired a Scientific Session
- Guest faculty in college of Medical Technology & allied health sciences SGPGIMS to teach plastic surgery to B.Sc., BPT, M.Sc. students.
- UPAPSICON-2022 and Cadaveric Flap Dissection Workshop chaired a Scientific Session
- Co treasurer UPAPSICON-2022 and Cadaveric Flap Dissection Workshop chaired Scientific Session
- Organized seminar on compressive neuropathy of upper limb on occasion of world surgery day (ISSH-Indian Society for Surgery of The Hand) 23rd August 2022

Service

Year-wise available clinical data (last three years 2020,2021,2022) for Department of Plastic Surgery.

S.No	Parameters	2020	2021	2022
1	Total Number of Patients attended	1876	1757	3537
2	Total number of major cases	785	635	655
3	Total number of minor cases	633	443	323

Training

Numberofstudentsundergoing Training in MCh: 3

Research Projects

Completed:

Title: Post Traumatic nerve regeneration pattern with autologous nerve graft and ultrathin silicon conduit **Funding:** Sanjay Gandhi Post Graduate Institute of Medical Sciences(SGPGIMS)As Co-Principal Investigator **Status:** Project Completed in 2020 and Published **Summary Report:** The silicone conduit graft may be an economical and effective alternative to presently available interposition grafts, however for short segments only.

Research in progress

Funding agency, Name of project, Investigators

1. Serdia Pharmaceuticals Mumbai In collaboration with Venous association of India. A Real World observational Registry of Management of Venous Leg ulcers in India. Dr Ankur Bhatnagar (Co Investigator).

Other ongoing research

1. Development of Prosthetic Pinna. To Develop Prosthesis with CAM-CAD Technology DIC (Design Innovation Centre) Project. **Funding Agency:** IIT, Kanpur **Status:** Under progress. Prosthetic Pinna Developed. Standardized the making of pinna with negative positive mode and 3D printing with colour match. Trials for Colour Stability underway Patent File -In process. Dr Ankur Bhatnagar (Co-Investigator).
2. Impact on Open Chronic Wound management in COVID-19 patients in a Dedicated COVID 19 Super-speciality tertiary Care Hospital. Is the wound SARS CoV2 (COVID-19) Positive? **Funding Agency:** Intramural (SGPGIMS) (Multricentric) Dr Anupama Singh (Co-Investigator)
3. Anthropometric measurements and analysis of the Auricle and determination of the age of maturity of the ear in the Indian population. **Funding Agency:** SGPGIMS

Dr Anupama Singh (Principal Investigator).

Publications

Indexed

1. Agarwal R & Agarwal S. Dr. Ramesh Chandra: An icon of Plastic Surgery in India. Ind J PlastSurg 2022; 55(03): 221-223.
2. Haldar R, Mishra P, Gurjar M, Sanjeev OP, Upadhyaya VD, Bhatnagar A, Bhadauria D, Agarwal V. Knowledge and compliance of hydroxychloroquine prophylaxis for severe acute respiratory syndrome coronavirus 2 infection among Indian health-care workers. Journal of Research in Pharmacy Practice. 2022 Jan 1;11(1):33

Chapter(s) in Book(s) 2022

1. Management of Scalp Injuries, Surgical Nuances of Head Injury, ISBN :9789395390248 Dr Ankur Bhatnagar.
2. Scalp Injury in book Surgical Nuances of Head Injury, (ISBN:978-93-95390-28-6) thieme publisher.

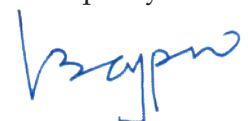
Departmental Highlights

The department has established itself as a referral centre for complicated plastic surgery problems related to vascular malformations, craniofacial surgery, peripheral nerve and brachial plexus surgery and revascularization surgery for treating diabetic foot. Patients with vascular malformations need a combined radiological and plastic surgery approach and hence with the availability of team approach these lesions are being treated successfully in the department. The department is also getting many patients with craniofacial malformations and with the help of neurosurgery colleagues we are able to successfully treat most of these patients. The department is also offering revascularization surgery for treating diabetic foot. The department is combining with the endocrine surgery department in providing immediate reconstruction for breast cancer patients after surgery.

Patents

Dr. Rajiv Agarwal

- A new biomedical device for improving shape of nose after septo-rhinoplasty: The total nasal conformer filed with ICMR.



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DEPARTMENT OF PULMONARY MEDICINE

STAFF

Name of Faculty Members:

1. Prof. Alok Nath, MD, DM, FCCP	Professor and Head
2. Dr. Ajmal Khan, MD, DM, FCCP	Additional Professor
3. Dr. Zia Hashim, MD, DM, FCCP	Additional Professor
4. Dr. Mansi Gupta, MD, DM, FCCP	Associate Professor

Residents / Students

DM Students	6
PDCC	4
Hospital Service Residents	2

Activities:

Name of Faculty

Academic activity

Dr. Alok Nath

- Invited gas guest faculty and delivered lecture at NAPCON 2022
- Invited as guest faculty at PACS 2022 and moderated and chaired a session at PACS 2022 on 07.08.2022.
- Invited guest faculty and moderated a session at NALCON (National Lung Cancer Conference) 2022 at AIIMS Jodhpur.
- Nominated as an Expert for making Consensus Statement on 'Diagnosis and Management Non IPF PF -ILD' in 2022.
- Nominated as an Expert for preparing National COPD Guidelines by The Indian Chest Society, the National College of Chest Physicians (India), and the Academy of Pulmonary Sciences in September 2022.
- Received 'Uttar Pradesh Gaurav Samman' in Nov 2022 by Minister of State Shri Asim Arun through Lucknow Tribune Group.
- Obtained life membership of United Academy of Pulmonary Medicine (UAPM)

Dr. Ajmal Khan

- National co-ordinator and organizer of teaching and training workshop on "Objective Structured Clinical Examination-OSCE" at the National Conference on Pulmonary Diseases-NAPCON, March 2022.
- Faculty at the 5th Annual Pulmonary, Critical Care, and Sleep Medicine Conference- PACS at Metro Hospitals NOIDA, delivered talk "Central Airway Obstruction - Practical Approach"; August 2022.
- Faculty at 20th All India Update in Pulmonary Medicine organized by Institute of Pulmocare & Research, Kolkata; Delivered a talk on "Case Based Learning: Pulmonary Eosinophilia"; September 2022.

- Faculty at 24th Joint National Conference on Pulmonary Diseases (NAPCON), Udaipur, Rajasthan, November 2022
- Delivered a talk on “Tropical Pulmonary Eosinophilia”
- Faculty for Advanced bronchoscopic techniques – Central Airway Obstruction
- Faculty at the 16th UP Tuberculosis & Chest diseases conference “UPTBCCON-2022” at Department of Pulmonary and Critical care Medicine, KGMU, Lucknow. Delivered talk on “Biological therapies of Lung Cancer – Recent Advances” October 2022
- Faculty at 6th National Conference of Respiratory Medicine, Interventional Pulmonology & Sleep Disorders, Annual update Jaipur Golden Hospital, Delhi, participated as expert panellist on “Multimodal Approach for Smoking Cessation”; December 2022
- Faculty at 13th NALCCON, Annual Conference of Indian Society for Study of Lung Cancer, Jodhpur, Rajasthan, January 2023, Participated as Chairperson “Recent Advances on Small Cell Lung Cancer”
- Obtained Life membership of United Academy of Pulmonary Sciences, India
- Nominated as an Expert for NCCP-ICS Joint Consensus -Based Clinical Practice Guidelines on Medical Thoracoscopy

Dr. Zia Hashim

- Invited gas guest faculty and delivered lecture at NAPCON 2022 on ‘Antifungal Therapy and prophylaxis in ICU’

Dr. Mansi Gupta

- National Co-Ordinator and organizer of teaching and training workshop on “Objective Structured Clinical Examination-OSCE” at the National Conference on Pulmonary Diseases- NAPCON, March 2022.
- Faculty at the 5th Annual Pulmonary, Critical Care, and Sleep Medicine Conference- PACS at Metro Hospitals NOIDA, delivered talk “Treatment of Pulmonary Embolism: ERS Guidelines 2019”; August 2022.
- Guest Speaker at the Post Graduate Assembly and Workshop on Rheumatology & Pulmonology (PGAWRP), at Department of Medicine, RMLIMS, Lucknow; Delivered a talk on “Case Based Learning: ABG Examination”; August 2022.
- Faculty at the 16th UP Tuberculosis & Chest diseases conference “UPTBCCON-2022” at Department of Pulmonary and Critical care Medicine, KGMU, Lucknow.
- Participated as workshop and skill development faculty for “Lung USG” and “Mechanical Ventilation in OADs”, at one-day workshop on Respiratory Critical Care, UPTBCCON-2022; October 2022.
- Delivered talk on “Role of USG in Pulmonary Medicine & Critical care- A Practical approach” at the conference, UPTBCCON-2022; October 2022

Services

Patient Care Services

	2022	2021	2020
OPD registration			
New patients	2891	1636	1749

Old patients	17752	11000	7232
Admission	969	573	368
Investigations			
Spirometry	3739	1982	772
Body Plethysmography	89	44	36
Diffusion studies	1373	796	461
Polysomnographies	198	50	62
Procedures			
Flexible Bronchoscopic procedures	975	576	283
EBUS Guided Procedures	127	56	44
Rigid bronchoscopy/Thoracoscopy procedures	58	33	40

Teaching and Training

Teaching Schedule

Seminar	Every Monday and Thursday
Bedside	Every Tuesday
Ward rounds	Twice daily
Pulmonary- Pathology Rounds	Once a month.
CGR	As per the schedule

Training

DM (Pulmonary Medicine) Students	2
PDCC (Interventional Pulmonology) 2	
Hospital Service Residents	4

Research Projects

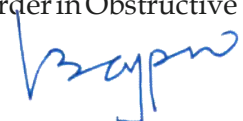
- Focus Areas:** Tuberculosis, Interstitial Lung Diseases, Airway Disorders, Sleep Medicine, Interventional Pulmonology.
- Intramural Grants:**

Dr. Alok Nath

- T-cell profile and metabolomic signatures in patients with pulmonary sarcoidosis and lymph node tuberculosis.
- A pilot study on the role of speckled tracing echocardiography for the diagnosis cardiac sarcoidosis among patients with systemic sarcoidosis.

Dr. Zia Hashim

- Assessment of Neurocognitive Dysfunction and Circadian Rhythm Sleep Disorder in Obstructive Sleep Apnea (OSA)



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Dr. Ajmal Khan

- Evaluation of biochemical and radiological features predicting pulmonary fibrosis in patients with COVID-19

Dr. Mansi Gupta

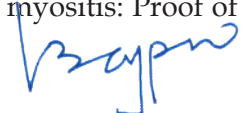
- Evaluation of Eosinophilic inflammation in COPD
- Role of Multiplex PCR in the evaluation of Granulomatous Inflammation.

Extramural Grants:

- Standardizing Real-Time Polymerase Chain Reaction (RT-PCR) on Blood and Broncho-Alveolar Lavage (BAL) to optimize the Diagnosis of Invasive Pulmonary Aspergillosis (IPA) (SRF Project- Miss. Shivani Srivastava)(ICMR: Rs 1521600) 2022
- Role of P-gp and HDAC2 and their reciprocal relationship in uncontrolled asthma. (ICMR) (Rs. 10,14,400) (PI: Dr. Zia Hashim) 2022
- ICMR Network on Pulmonary Fibrosis (Funded by ICMR) (Rs 51,16500.00)(PI: Dr. Alok Nath)

Publications

1. Hashim Z, Nath A, Khan A, Neyaz Z, Marak RS, Arekkara P, Tiwari A, Srivastava S, Mansi G, RK Dhiman, Tripathy N* et al: New Insights into Development and Mortality of COVID-19-Associated Pulmonary Aspergillosis in a Homogenous Cohort of 1161 Intensive Care Patients. *Mycoses* 2022.
2. Hashim Z, Gupta M, Nath A, Khan A, Neyaz Z, Tiwari S, Mishra R, Srivastava S, Gupta S: Prevalence of sleep apnea and lung function abnormalities in patients with acromegaly. *Lung India: Official Organ of Indian Chest Society* 2022, 39(1):58.
3. Hashim Z*, Ghatak T, Nath A, Singh RK: Role of low-dose tissue plasminogen activator in patients with refractory hypoxia due to presumed microthrombi in pulmonary vasculature in coronavirus disease 2019: A case series and review of the literature. *Lung India* 2022, 39(3):286-29
4. Hashim Z, Khan A, Arekkara P, et al. Thrombosis leading to acute abdomen in corona virus disease- 19:A case series. *Indian J Gastroenterol* 2022;41(3):313-18. (In eng). DOI: 10.1007/s12664-022-01260-5.
5. Mishra R, Hashim Z*, Gupta M, Chaturvedi R, Singh H, Nath A, Misra DP, Khan A, Rai MK, Srivastava S: Histone deacetylase-2 inducer like theophylline has a potential to improve glucocorticoid responsiveness in severe uncontrolled asthma by reducing P-glycoprotein/MRP-1. *Indian Journal of Rheumatology* 2022, 17(1):47.
6. Mishra P, Singh RK, Nath A, Pande S, Agarwal A, Sanjeev OP, Gupta D, Singh P, Ghatak T, Hashim Z: A novel epidemiological scoring system for the prediction of mortality in COVID-19 patients. *Transactions of The Royal Society of Tropical Medicine and Hygiene* 2022, 116(5):409-416.
7. Chaturvedi CP, Hashim Z, Tripathy NK: A New and Highly Sensitive Serum Mannoprotein Lateral Flow Assay for Point-of-Care Diagnosis of Invasive Aspergillosis (Tripathy Method). *Cureus* 2022, 14(6).
8. Anuja AK, Mehta P, Singh MK, Singh H, Nath A, Hashim Z, Khan A, Gupta M, Misra DP, Agarwal V: Peripheral T helper subset profiling in idiopathic inflammatory myositis: Proof of concept. *Reumatologia Clínica* 2022



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9. Sinha S, Ajayababu A, Thukral H, Gupta S, Guha SK, Basu A, Gupta G, Thakur P, Lingaiah R, Das BK, Singh UB, Singh R, Narang R, Bhowmik D, Wig N, Modak DC, Bandyopadhyay B, Chakrabarty B, Kapoor A, Tewari S, Prasad N, Hashim Z, Nath A, Kumari N, Goswami R, Pandey S, Pandey RM.. Efficacy of Bacillus Calmette-Guérin (BCG) Vaccination in Reducing the Incidence and Severity of COVID-19 in High-Risk Population (BRIC): a Phase III, Multi-centre, Quadruple-Blind Randomised Control Trial. *Infect Dis Ther* 2022;1-13. (In eng). DOI: 10.1007/s40121-022-00703-y.

Book Chapters : None

Awards

Dr. Alok Nath

- Uttar Pradesh Gaurav Samman by Shri Asim Arun, Minister of State organized by The Tribune Group

Dr. Zia Hashim

- **Icon of Health Certificate of Excellence** conferred by **Hon'ble Minister of Health Education Mr. Suresh Khanna** for services in *Pulmonary Medicine*

Visiting Professor : None

Highlights

In 2022 the department has started MODULAR OT ENABLED INTERVENTIONAL BRONCHOSCOPY UNIT which was inaugurated by Honorable Chief Minister Shri Yogi Aditya Nath Ji. In this unit following facilities are provided:

1. Medical Thoracoscopy
2. Rigid bronchoscopy and endobronchial interventions.
3. Airway stenting
4. Tumor debulking
5. Foreign body extraction

New Initiatives: None

Patents: None

DEPARTMENT OF RADIODIAGNOSIS

STAFF

Name of Faculty Members:

1. Sunil Kumar, M.D	Prof. & Head (till 30.09.2022)
2. Archana Gupta, M.D.	Prof. & Head (Head wef. 01.10.2022)
3. Hira Lal, M.D	Professor
4. Zafar Neyaz, M.D	Professor
5. Namita Mohindra, M.D	Additional Professor
6. Vivek Singh, DNB	Additional Professor
7. Rajanikant R. Yadav, M.D	Additional Professor
8. Raghunandan Prasad, M.D	Additional Professor
9. Neeraj Jain, DNB	Associate Professor
10. Anil Kumar Singh, M.D.	Assistant Professor
11. Anuradha Singh, M.D	Assistant Professor

Dr. Sunil Kumar, Prof. & Head superannuated on 30th September, 2022 & Dr. Raghunandan Prasad, Additional Professor resigned & relieved on 30th September, 2022. Dr. Archana Gupta, Professor took over the charge as Professor & Head in the Dept. of Radiodiagnosis on 1st October, 2022.

Activities:

Awards and recognitions:

Dr Namita Mohindra :

- Nominated as member of the National Committee of IRIA on Breast Cancer Awareness and Imaging (consisting of 8 radiologists from the country), which conducts out-reach programs in 2-tier and 3-tier cities.
- Section Editor for Radiology section of Neurology India Journal.

Dr Anuradha Singh :

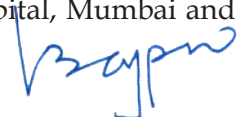
- Fellowship in Paediatric Body Imaging, from the 'The Hospital for Sick Children, Toronto', Canada.

National level CME: None

Invited sessions and chairpersons/lectures for Conferences: 2022

Dr Namita Mohindra

- 9th annual Conference of Breast Imaging Society of India (BISICON) at Ahmedabad 13th Nov 2022 (Faculty for Mammography session).
- Outreach program at Prayagraj (29th oct 2022)-As Member of National Committee of IRIA on Breast Cancer Awareness and Imaging, coordinated and delivered a lecture
- 'CME on Women's Imaging at Varanasi (organized by Tata Memorial Hospital, Mumbai and B.H.U)2nd oct 2022- Delivered a lecture.



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- 34th RICON 2022, Annual IRIA state conference of U.P at Kanpur(24th September-2022) faculty for Breast Imaging session.
- Interactive Quizzing session on 'Asymmetries and architectural distortions in Breast' in the 'BISI Metauniversity', organized by the Breast Imaging Society of India.21st July 2022
- Breast CME (Virtual) under the aegis of Asian Society of Mastology (ASOMA)5rd March 2022-delivered lecture on 'Breast imaging – Surgeon's perspectives'
- 'Case-based approach to Breast masses and asymmetries' in the webinar series organized by UP chapter of IRIA-3RD Feb 2022.
- Teaching series organized - by ICRI/IARI (8th Jan 2022) Lecture on - 'Breast masses and asymmetries'

Dr Anil Kumar Singh

- Role of Interventional Radiology in Gynaecological Malignancies: UPSCAGOI online CME December 2022

Dr Neeraj Jain

- IRIA Kerala PG teaching program 2022 - Case based approach to Cardiac Anatomy and Congenital Heart Disease
- CMR: Imaging planes and pulse sequences" on Friday 18 March 2022 - Online teaching program of Indian College of Radiology and Imaging (ICRI).

Dr Zafar Neyaz

- CT-guided percutaneous biopsies_ref online_2022

Prizes and Medals by students/staff

- Dr Robin Verma 3rd prize in poster presentation in IRIA Lucknow chapter meet Indian Radiological and Imaging Association 2022

Visit abroad or other institutions: None**Membership of Societies funded by the Institute :**

Membership of professional bodies funded by Institute

Dr Anil Kumar Singh : (fee paid from LRA)

- ISVIR membership 2022
- SIR membership 2022
- CIRSE membership 2023
- APSCVIR membership 2023

Dr Neeraj Jain :Radiological Society of North America (RSNA)

- Musculoskeletal Society of India
- European Society Of Radiology - not funded (free)
- Indian College of Radiology and Imaging (one-time fee paid)
- Indian Radiological and Imaging Association (one-time fee paid)

Dr Namita Mohindra :

- Breast Imaging Society of India (Life membership- paid in 2013)
- Musculoskeletal Society of India



- European Society Of Radiology - not funded (free)
- Indian College of Radiology and Imaging (Life membership paid earlier than 2013)
- Indian Radiological and Imaging Association

Dr Zafar Neyaz

- Society of Chest Imaging and Intervention

Dr Vivek Singh

- Indian Society of Neuroradiology
- Society of Therapeutic Neurointervention

Teaching Workshops/ CME's organized 2022

- RadAspire - 09/07/2022
- TechAspire - 15/05/2022
- Refresher Program For Nursing Staff in Radiology Department - 05/03/2022

Services

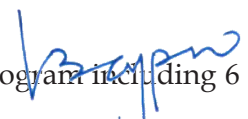
The department offers all the diagnostic investigations and therapeutic procedures (including Radiography, Sonography, Intravenous pyelography, Barium studies, Mammography, Computed Tomography, Magnetic resonance Imaging, Non vascular Interventional procedures and Digital Subtraction Angiography (DSA). These services are situated in the Main hospital building and also in PMSSY, New OPD and Apex Trauma Centre (RCH-I) Buildings.

Year-wise available data (last three years 2020,2021,2022) for Department of Radiology

	Particulars	Year 2020	Year 2021	Year 2022
1	Conventional Radiology (X-Rays)	93,164	34,301	62,244
2	Contrast Radiology (Barium / IVP)	1376	115	323
3	USGs (Gray Scale)	35,662	14,069	29046
4	USGs (Colour Doppler)	6468	1935	4764
5	USG guided FNAC / Aspirations etc	700	410	1666
6	CT Scans	22,724	8860	30958
7	CT guided FNAC / Biopsies	425	75	515
8	MRI (Plain / contrast)	8297	3802	7423
9	Angiography (Conventional/DSA)	1828	835	1064
10	Mammography	1660	765	1373
11	Any other investigation [intervention]	1985	1337	1586
	RCH-COVID-19 X-rays	-	5277	3446
	RCH- COVID-19 CT	-	728	1485
	RCH- COVID-19 USG	-	455	304

Training:

At present, there are 18 junior residents enrolled in the MD (Radiodiagnosis) program including 6



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(3rd year MD students), 6 (2nd year MD students) and 6 (1st year MD students).

There are 6 Senior residents enrolled in the PDCC (1 year post-doctoral fellowship) programs in three different subspecialties (Gastro-radiology, Vascular Radiology and Neuroradiology), and B Sc in Radiodiagnosis and Imaging technology. No visiting professor could be invited due to Covid pandemic.

MD Students – 18

PDCC students – 6

BSc in Radiodiagnosis and imaging technology students – 40

Apart from this there are senior residents(fellows) , who are trained via rotational postings in various Diagnostic and Interventional Radiological procedures.

Research completed:

1. Interventional radiology in the management of bile duct injuries and benign biliary strictures. PI Dr Archana Gupta. Student Dr Ayushi (Funding : Departmental, thesis project 2019-2022).
2. A retrospective analysis for prevalence of morphological , vascular and urological anomalies and variations in living renal donar by multidetector computed tomography. PI- Dr Hiralal. Student Dr Anjani Sai Durga. (Funding : Departmental, thesis project 2019-2022).
3. Role of percutaneous CT guided biopsy in pleural disease and correlation of CT features with the final diagnosis: a retrospective study. PI Dr Zafar Neyaz. Student Dr Iram Pasha. (Funding : Departmental, thesis project 2019-2022).Correlation of radiological and histopathological findings in patients of suspected idiopathic pulmonary fibrosis with “probable UIP” and “indeterminate for UIP” pattern on HRCT. PI Dr Zafar Neyaz. Student Dr Rupali. (Funding: Departmental, thesis project 2019-2022).
4. Role of shear wave elastography and Angio-PLUS in evaluation of breast masses. PI Dr Namita Mohindra. Student Dr Shubham Yadav (Funding : Departmental, thesis project 2019-2022).
Summary report : 79 women with breast masses were evaluated. Angio-PLUS showed higher mean vascular scores than CD (10.37 ± 2.41 vs. 5.53 ± 3.90 , $p < 0.001$); malignant masses had higher mean vascular scores than benign ($p < 0.001$).Vascular pattern descriptors on AP showed good correlation with histopathological results (PPV mesh 95.5%, radial 96.9% and NPV marginal orientation 90.5%). *Conclusions:* Angio-PLUS was more sensitive in depicting vascularity in breast masses than color Doppler and superior in differentiating benign from malignant breast masses. **Status:** Accepted for publication in Acta Radiologica. *published in Acta Radiol. 2023; 2841851231160076. doi:10.1177/02841851231160076. International Journal Impact factor 2.1*
5. “Multidetector Computed Tomography (MDCT): A one Step Imaging Modality for Preoperative Anatomical and Functional Evaluation of Potential Living Kidney Donors”. PI Dr. Raghunandan Prasad. Student Dr.Sarfraj Ahmad (Funding: Departmental, Thesis project 2019-2022).

Other completed research:

1. Mammographic characteristics of Granulomatous and non-granulomatous inflammation of the Breast and the utility of Adjunctive Digital Breast Tomosynthesis in lesion characterization. (PI: Dr Namita Mohindra, retrospective analysis of Departmental data), **Status:** Accepted for publication in Journal of Surgical Research. (*Published in Jan 2023;281:13-21. doi:10.1016/j.jss.2022.08.009. Epub 2022 Sep 12. PMID: 36108534. International Journal; Impact factor 2.5*)



Research in progress

Funding agency, Name of project, Investigators

1. Guerbet (France) CRO -SIRO clinpharmPvt .Ltd.(India). Safety and efficacy of trans arterial chemoembolization with lipiodol ultra fluid in the treatment of inoperable hepatocellular carcinoma in Indian patient – drug trial phase IV study. Dr Rajnikant R Yadav.
2. Bioquest. A prospective multicentric non- interventional real – world data collection registry to evaluate the effectiveness, safety and durability of SUPERA stent for the treatment of De Novo or re-stenotic superficial femoral artery or complex femoropopliteal artery lesions in Indian patients. Dr Rajnikant R Yadav.
3. ICMR. Design and development of detention kit and detention app for prostate cancer in collaboration with Centre for bio-medical research Lucknow UP. Dr Hira Lal.
4. Distinguish intestine tuberculosis and Crohn’s disease by analyzing CT scan
5. images using deep learning models in collaboration with IIT- Kanpur. Dr Archna Gupta.

Other ongoing research

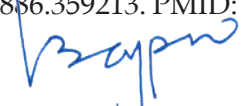
1. Current utility of trans gastric percutaneous drain for management of pancreatitis related retrogastric fluid collection. PI: Dr Rajnikant R Yadav. Student Dr Sarthak Agarwal (Funding : Departmental, thesis project 2020- 2023).
2. Assessment of renal elasticity in patients of glomerulonephritis and is comparison with histopathology and renal biomarkers PI: Dr Raghunandan. Student Dr Robin (Funding : Departmental, thesis project 2020- 2023).
3. Mammographic characteristics of Breast Carcinoma in young women and utility of Adjunctive Digital Breast Tomosynthesis; Correlation with histo-pathological features.Funding : Departmental (PI: Dr Namita Mohindra),**Summary** : 503 women were included, 126 were ≤40years and 377 >40 years age. Most patients presented with stage 3 cancers (48.5 %) followed by stage 2 (35.8%) and 4 (10.6 %). Distribution of molecular subtypes was significantly different among women below 40 years as compared to those above 40 years of age. Younger women were more commonly found to have TN cancers (n=41/123 33.3% ie one-third of all cancers in this age group were TN) as compared to older women in whom 81/487 22.3% were TN. (P value 0.015).Adjunct DBT was able to reveal underlying masses in 30/38 cases seen as asymmetry on DM alone.DBT was able to reveal more suspicious features in mass lesions, due to better characterization of lesion margins.
4. Brain MRI findings and their clinical correlation in patients with chronic kidney disease. PI: Dr Raghunandan. Student Dr Robin (Funding : Departmental, thesis project 2020- 2023).
5. Role of contrast enhanced and diffusion weighted MR imaging in differentiation of renal cell carcinoma subtypes.PI: Dr Vivek. 2021-2024
6. Assessment of role of quick whole body MRI in facilitating diagnosis in patients with suspected tubercular or metastatic brain lesions on imaging. 2021-2024.
7. Pre-operative loco regional assessment of carcinoma prostate by multi-parametric MRI and its correlation with PSMA PET -CT scan and histopathology. Dr Hiralal. 2021-2024.
8. Multiparametric ultrasound (mpUSS) for detection and localization of carcinoma prostate and its correlation with multiparametric MRI (mp MRI) and histopathology. Dr Hiralal. 2021-2024.
9. Correlation of transjugular liver biopsy core length with diagnosis and fibrosis score on histopathology and shear wave elastography. Dr Archna Gupta. 2021-2024
10. Prevalence of jugular bulb anomalies in patients with unilateral side locked headache.

11. Comparison of percutaneous ultrasound guided liver biopsy with EUS guided liver biopsy. Dr Rajnikant R Yadav. 2021-2024.

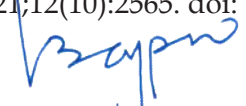
Publications

Indexed

1. Lal H, Singh P, Ponmalai K, Prasad R, Singh SP, Yadav P, Singh A, Bhadauria D, Kumar S, Agarwal V, Mishra P. Role of blood oxygen level-dependent magnetic resonance imaging in studying renal oxygenation changes in renal artery stenosis. *AbdomRadiol (NY)*. 2022 Mar;47(3):1112-1123. doi: 10.1007/s00261-022-03408-5. Epub 2022 Jan 20. PMID: 35059812.
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3. Singh UP, Madhavan K, Yadav P, Soni R, Lal H, Sureka SK, Kapoor R, Srivastava A. A Computed Tomography Angiography (CTA): Based score (SGPGI score) to predict level of difficulty, operative, and postoperative outcomes for right-sided radical nephrectomy. *Urologia*. 2022 Aug;89(3):347-353. doi: 10.1177/03915603211015541. Epub 2021 Jul 27. PMID: 34313503.
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8. Prasad SN, Sharma S, Singh V, Phadke RV. Endovascular management of pulmonary arteriovenous malformations presenting as multiple brain abscesses. *BMJ Case Rep*. 2022 Nov 22;15(11):e251593. doi: 10.1136/bcr-2022-251593. PMID: 36414347; PMCID: PMC9685250.
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Non Indexed

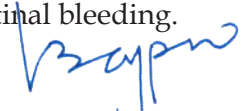
1. Vignesh, S., Prasad, S.N., Singh, V. *et al.* Angiographic analysis on posterior fossa hemorrhages and vascular malformations beyond aneurysms by CT angiography and digital subtraction angiography. *Egypt J Neurosurg* 37, 12 (2022). <https://doi.org/10.1186/s41984-022-00152-2>

Chapter(s) in Book(s) 2022 : None

7. Visiting Professor: None

8. Departmental highlights

1. Interventional Radiology Services: The Radiology Department offers cutting-edge interventional radiology services, which involve minimally invasive procedures guided by medical imaging techniques. Our highly skilled interventional team perform a wide range of procedures, such as:
 - Percutaneous tumor ablation: Using image guidance, we can precisely target and destroy tumors in various organs, including liver, kidney, and lung, without the need for surgery.
 - Angioplasty and stenting: We perform minimally invasive procedures to open blocked or narrowed blood vessels, commonly in the arteries of the brain, neck and limbs.
 - Embolization: We can block abnormal blood vessels or control bleeding by selectively delivering agents to the desired location, such as in cases of gastrointestinal bleeding.



- Biopsies and drainages: We use image guidance to accurately guide needle biopsies and place drainage catheters for the diagnosis and treatment of various conditions.
2. **Advances in MRI Studies:** Our Radiology Department utilizes state-of-the-art MRI technology to provide highly detailed images of the body's structures. With advances in MRI techniques, we can offer the following:
 - **Functional MRI (fMRI):** By detecting changes in blood flow, we can map brain activity and identify areas responsible for specific functions, aiding in the diagnosis and treatment of neurological conditions.
 - **Cardiac MRI:** by way of tissue characterization it helps in diagnosis of various conditions such as cardiac sarcoidosis and amyloidosis
 - **Magnetic resonance angiography (MRA):** By using specialized sequences, we can visualize blood vessels without the need for invasive procedures or contrast agent, enabling the assessment of vascular conditions like aneurysms or stenosis.
 3. **CT Angiographic Studies:** Our department provides comprehensive CT angiography services, including the evaluation of coronary arteries. These studies offer a non-invasive alternative to traditional catheter-based angiography and can provide detailed images of blood vessels throughout the body. With coronary angiography, we can assess the presence of blockages or abnormalities in the arteries supplying the heart, aiding in the diagnosis and management of cardiovascular diseases.
 4. **USG Shear Wave Elastography:** Ultrasound shear wave elastography is a technique employed by our Radiology Department to assess tissue stiffness. By measuring the propagation of shear waves, we can evaluate the elasticity of organs such as the liver, breast, and thyroid. This non-invasive method provides valuable information for the diagnosis of liver fibrosis, characterization of breast lesions, and identification of thyroid nodules, among other applications.

New Initiatives

New interventional procedures were performed :

- Treatment of ICA aneurysms with flow divertors
- Wide-neck cranial aneurysms treated with intra-saccular web device.
- Intracranial hypertension with dural sinus stenoses treated with angioplasty stenting.
- CT- guided percutaneous Gastrostomy.

Patents: None

DEPARTMENT OF RADIOTHERAPY

STAFF

Name of Faculty Members:

1. Shaleen Kumar, MD, DNB	Professor (& Head)
2. Punita Lal, MD, DNB	Professor
3. Neeraj Rastogi, MD	Professor
4. KJ Maria Das, MSc, PhD	Professor (Medical Physics)
5. Shalini Singh, MD, DNB	Professor
6. Sushma Agrawal, MD, DNB	Professor
7. Shagun Misra, MD, DNB	Addl. Professor

Activities

Awards and Recognitions

Dr Shaleen Kumar

- Energising a Cancer Institute - 'Think Tank' talk at Lucknow 29Oct2022
- President, UP Chapter of the Association of Radiation Oncologists of India

Dr Shalini Singh

- Best paper award for "CT based image guided brachytherapy in cervical cancer- evaluation of outcomes and complications"

Dr Sushma Agrawal

- Best paper award for "A pilot study of preoperative radiotherapy in partial responders to primary systemic therapy in locally advanced breast cancer." At UP Chapter, AROI, Bareilly, November 2022.

Dr Shagun Misra

- ESMO Asia Young Leadership Programme awarded at ESMO Asia 2022.
- Professional Enhancement Grant by Tata Trusts 2022 Observership program to learn SBRT in liver tumours the University of Pennsylvania, Pennsylvania, US.

Invited sessions and chairpersons/lectures for Conferences:

Dr Shaleen Kumar

- Chairperson- Teaching program- An overview of Hepato-Biliary-Pancreatic Tumors, at PRODVANCE 2022 (North Zone) under the aegis of Indian College of Radiation Oncology (ICRO), 23July2022, New Delhi
- Faculty - 'Predict, prevent and personalize: When, how and why to radiate a diffuse lower grade glioma?', at the Indian Society of Neuro-Oncology, 2022, Annual meeting - 13-14Aug2022, Gurugram
- Resource person- Association of Radiation Oncologists of India, West Bengal Chapter, 24Aug2022 to speak on, 'Conventional Radiotherapy Planning in Gliomas, Pituitary Adenomas and Brain Metastases'

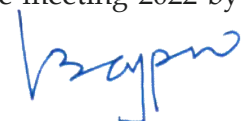
- Chairperson- Dr BN Lal Oration at the XXXIII Annual Conference of UP State Chapter of Association of Radiation Oncologists of India, 8-9 Oct 2022
- Participant in a Cancer Awareness Program aired by the Doordarshan, Lucknow – 7Nov2022
URL <https://www.youtube.com/live/HAMlqihx5-0?feature=share>
- Faculty - ‘9th AROI-ESTRO teaching course on advanced technologies in radiation oncology’ 10-13 November2022, Kolkata, to speak on ‘GTV/CTV/ITV/PTV concepts and ICRU guidelines’
- Moderator – ‘Data Sharing and Collaboration between Radiation Oncology Centres – Challenges and Opportunities’ at the Annual Conference of the Association of Radiation Oncologists of India, New Delhi, 1-4th Dec2022.
- Faculty – Zonal Conference of the Indian Association of Surgical Oncology, AIIMS Jodhpur, 10-11 Dec2022

Dr Punita Lal

- Invited for a talk on “Whole Breast RT in 1 week: should it become a standard of care” in the Second FSIBC Breast conference 2022: Breast Cancer Management: Recent advances and the way ahead” held online on 12th March, 2022, at Max Hospital, New Delhi.
- Invited for a talk on “Cardiac issues following breast cancer treatment” on the occasion of International Women’s Day, held on 8th March, 2022; organized by the department of Cardiology, SGPGI, Lucknow.
- Invited as a speaker for a presentation on “Palliative care services provided by tertiary care facility during Covid19 pandemic” in the 29th International Conference of the Indian Association of Palliative Care(IAPCON), held on 11th February, 2022, at Jaipur, Rajasthan.
- Invited as a Judge for a debate on “What’s in a name? Should we change the name of our specialty” in the 29th International Conference of the Indian Association of Palliative Care(IAPCON), held on 12th February, 2022, at Jaipur, Rajasthan.
- Invited as a panelist in a Breast Tumor board (Topic – rare tumors and rare situations in common cancer: sticky wicket) at the 8th Annual meeting of the ISMPOCON 2022, held on 22 January,2022, at Mumbai.
- Invited to chair a session on “Evaluation and follow up of advanced Larynx cancer patients treated by chemoradiotherapy” in the online Head and Neck Clinical Oncology Symposium, held on 5th April, 2022; organized by RCC, Trivandrum.
- Invited as a panelist in a panel discussion on “Management of advanced Larynophrayngeal cancers” in 22nd Annual conference of Federation of Head & Neck Oncology (FHNO) held at Guwahati between 4th-6th November, 2022
- Invited as a chairperson for a panel discussion on “Management of unknown primary” in 22nd Annual conference of Federation of Head & Neck Oncology (FHNO) held at Guwahati between 4th-6th November, 2022
- Invited talk on “Optimal cervical Level selection for radiation in Head and neck cancers” in 13th October, 2018, during the 32nd UPAROICON, held at SRMS Bareilly on 18th and 19th October,202
- Moderated a panel discussion on “Pediatric Radiation Oncology practices in India” in the AROICON held at New Delhi on 1st to 4th December, 2022.

Dr Neeraj Rastogi

- “Role of brachytherapy in cholangiocarcinoma” PRODVANCE North Zone meeting 2022 by Action Balaji Medical Institute at New Delhi on 23rd-24th July 2022.



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Executive Registrar
SGPGIMS, Lucknow

- “Is simple cholecystectomy with adjuvant chemoradiation an alternative to radical cystectomy in carcinoma of gallbladder” 33rd Conference of International Association of Surgeons, Gastroenterologists and Oncologists World Congress at Istanbul, Turkey 28th September -2nd October, 2022.
- “Non-surgical management of hepatocellular carcinoma” 2nd Jaipur Surgical Festival on hepaticobiliary cancer at Jaipur, India 2nd-4th December 2022.
- “How to treat resectable rectal cancer in 2022” 42nd Annual Conference of Association of Radiation Oncologists of India (AROICON 2019) at New Delhi, 1st -4th December 2022.

Dr Shalini Singh

- As Guest Speaker titled Radiotherapy in Medulloblastoma –Decision making in CTV delineation and dose schedule in 13th UPAROICON organised by SRIMS, Bareilly 8-6th October 2022.
- Speaker and faculty invitation in Medical and Radiation Oncology for Gynecological Cancer workshop titled Advances in Radiotherapeutic advances in Cervical Cancer, Kalam Center, KGMU, Lucknow 4th-6th Nov 2022.
- Invited to deliver talk in a debate titled Early radiotherapy is most optimal approach in low grade gliomas (against the motion) in 42nd AROICON 2022. New Delhi 1st December to 4th December 2022

Dr Sushma Agrawal

- Panelist for Affordable Cancer Care 2022, New Delhi, 14.5.22.
- Panelist for Adopting strategies of tobacco cessation on World No Tobacco Day, organized by Voice of Health Care, 31.5.22.
- Moderated a panel discussion on “Geriatric assessment” in the AROICON held at New Delhi on 1st to 4th December, 2022.
- Presented the Evaluation of cosmesis and late-effects in breast cancer survivors at the ESMO, Paris, October, 2022.
- Presented Loco-regional radiotherapy (RT) in Non-small cell lung cancer (NSCLC) with malignant pleural effusion (MPE) downstaged with chemotherapy (CT) at the AROICON, New Delhi, 2022.

Dr Shagun Misra

- XX Annual Virtual Conference “ Evidence Based Management of cancers in India EBM 2022”, 17th - 20th & 25th - 27th february 2022, Tata Memorial Hospital, Mumbai, Role Panelist: Practical treatment algorithm for mNSCLC: Systemic chemotherapy.
- 3rd Mid-Term Conference of Indian Society of Oncology (ISO) 2022, organized by “Lucknow Oncology Association” on 09th & 10th April 2022.
- 40th AROI-ICRO SUN PG Teaching Course on Lung Cancer, AIIMS Rishikesh 30th April & 1st May 2022
- Invited Faculty for Hands-on workshop on Liver malignancies in radiation oncology, AIG Hospitals, Hyderabad, 3rd & 4th September 2022
- 9th AROI ESTRO Advanced teaching Course at Kolkata, India from 10-13th November, 2022.
- 33rd UPAROICON 8th & 9th October 2022, Bareilly, Lecture on Chemoradiotherapy in carcinoma lung.
- ESMO Asia Congress 2022, Singapore 2nd to 4th December 2022



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Membership of Societies

Membership of Professional Bodies funded by Institute

Dr Shaleen Kumar

- Indian College of Radiation Oncology
- American Society for Radiation Oncology
- European Society for Therapeutic Radiology and Oncology
- European Society for Medical Oncology
- American Society of Clinical Oncology
- National Academy of Medical Sciences, India
- The Neuro-Oncology Society of India
- Malaysian Oncological Society

Dr Punita Lal

- Association of Radiation Oncologists of India
- Indian College of Radiation Oncology
- Indian Association of Palliative Care
- European Society for Therapeutic Radiology and Oncology
- European Society of Medical Oncology
- Association of Paediatric Surgical Oncology

Dr Neeraj Rastogi

- Association of Radiation Oncologists of India
- Indian College of Radiation Oncology
- Indian Medical Association

Dr KJ Maria Das

- American Association of Physicists in Medicine
- Association of Medical Physicists of India
- Association of Radiation Oncologists of India
- College of Medical Physics of India

Dr Shalini Singh

- Association of Radiation Oncologists of India
- European Society for Therapeutic Radiology and Oncology
- European Society of Medical Oncology
- Association of Gynae-oncologists of India
- Member of the Academy of Medical Sciences
- Indian College of Radiation Oncology

Dr Sushma Agrawal

- Association of Radiation Oncologists of India
- European Society for Therapeutic Radiology and Oncology



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SGPGIMS, Lucknow

- European Society for Medical Oncology
- American Society of Clinical Oncology

Dr Shagun Misra

- Association of Radiation Oncologists of India
- Indian College of Radiation Oncology
- European Society for Therapeutic Radiology and Oncology
- American Society for Radiation Oncology
- European Society of Medical Oncology
- Lung cancer Society of India

Service

New Patients seen: 3669

New Patients registered: 2809

OPD patients seen on Follow-up: 15356

Indoor admissions: 2503

Chemotherapy: 5383

External Beam Radiotherapy

Versa-HD: 697

Varian 2100: 794

CT scan:1851

Simulator:29

Brachytherapy: 293

Training

4 new MD students are recruited every year. 13 MD students were under training and 6 senior residents were trained.

4. Research completed during Jan 22- December22**Dr Punita Lal**

- Completed a retrospective audit of Salivary gland tumors- an audit from a tertiary care centre in Northern India.

Dr Neeraj Rastogi

- Dosimetric correlation of late rectum and bladder toxicity in patients of ca prostate treated with image guided IMRT

Dr Shalini Singh

- Implementation of CT Image based Intracavitary brachytherapy treatment in Cancer Cervix



Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow

Dr Sushma Agrawal

- A pilot study of preoperative radiotherapy in partial responders to primary systemic therapy in locally advanced breast cancer.

Dr Shagun Misra:

- Assessment of financial distress and its association with quality of life and symptoms in advanced cancer patients.

Research in progress**Dr Punita Lal**

- Hypo fractionated Radiation Therapy comparing a standard radiotherapy schedule (over three weeks) with a novel one week schedule in Adjuvant breast cancer: An open label randomised controlled study (HYPORT- Adjuvant). Co-Investigator in a Multicentric trial.

Dr Shalini Singh

A Prospective study of locally advanced , unresectable/inoperable, poor performance status, upper aerodigestive tract carcinoma, randomised between palliative regimens-20Gy/5fractions vs 14Gy/4 fractions (quad shot). Principal Investigator.

Dr. Sushma Agrawal

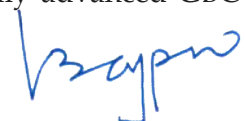
- A pilot study of neoadjuvant strategies in locally advanced gallbladder cancer. Principal Investigator.
- A randomised study of consolidation chemoradiation after first line Chemotherapy in advanced gallbladder cancer (Conquer Foundation, ASCO), Principal Investigator.
- A Prospective Study of Locally Advanced, Unresectable/ Inoperable, Good Performance Status, Upper Aerodigestive Tract Carcinoma Patients, Randomised Between Palliative Regimens – 70Gy/35# vs. 30Gy/10#, Principal Investigator.

Dr. Shagun Misra

- A pilot study to implement Liver SBRT in primary Hepatocellular Carcinoma and Oligometastatic liver disease at tertiary care centre. Principal Investigator.
- Assessment of quality of life and out of pocket expenses of patients with upper aerodigestive tract cancers receiving palliative chemo-radiotherapy and radiotherapy – An observational Study. Principal Investigator.

Publications

1. Chakraborty S, Chatterjee S. HYPORT adjuvant acute toxicity and patient dosimetry quality assurance results - Interim analysis. Hyport Adjuvant Author Group. Radiother Oncol. 2022 Sep;174:59-68.. PMID: 35817323.
2. Kumar D, Rastogi N, Agarwal S, Mishra S, Kumar S, Lal P, Singh S, Choudhary S. A comparative study of gemcitabine and cisplatin versus oral capecitabine alone in metastatic gallbladder cancer. J Cancer Res Ther. 2022 Jul-Sep;18(4):939-945. PMID: 36149144.
3. M.N. Alam, S. Agrawal, KJ Maria Das, N. Rastogi. Consolidation Chemo-radiation (cCTRT) improves survival in responders to first line Chemotherapy (CT) in Locally advanced GBC (LA-GBC): a new standard of care? Indian Journal of Cancer. 2022



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4. S. Agrawal, Rajan Saxena. Raised CA 19-9 levels detect Recurrences and impacts Overall and Disease free Survival in Radically Resected Gallbladder Cancer (GBC): A simple surveillance marker? Journal of Cancer Research and Therapeutics.2022
5. Md Nawed Alam, Sushma Agrawal, Neeraj Rastogi, KJ Maria Das. R.Saxena
6. Chemotherapy (CT) OR Chemoradiation (CIRT) in Postoperative (Simple Cholecystectomy) Gall bladder Cancer (GBC) with Residual disease, unsuitable for revision surgery?: Risk stratification and outcomes. Accepted for publication in Journal of Cancer Research and Therapeutics.2022
7. Consolidative radiation in partial responders/unresectable/recurrent disease after first-line/salvage chemotherapy in poor-risk nonseminomatous germ cell tumor prolongs survival: A new paradigm? Journal of Cancer Research and Therapeutics.2022

Chapters in books:

1. Punita Lal, Shagun Misra.: "Role of Radiotherapy in Endocrine tumors." IAES Textbook of Endocrine Surgery, Jaypee Brothers Medical Publisher, ISBN-13978-9390595051
2. Divya Khosla, Sushma Agrawal. Adjuvant Therapy in Gallbladder Cancers, published in Gallbladder Cancer, Current Treatment Options, Springer, 2022.

Departmental Highlights

The department celebrated its Annual Foundation Day on 16th August 2022, and conducted an online webinar for alumni on **Entrepreneurship in Radiation Oncology: Achievements and Challenges**. **Dr Hukku, Dr Anu Tiwari and Dr.PB Rao** spoke about their experiences and challenges of setting up new centre in New Delhi, Kanpur and Rajamundry respectively. The event was attended by 50 people in hybrid mode.

DEPARTMENT OF SURGICAL GASTROENTEROLOGY & CHBDT

STAFF

Name of Faculty Members:

1. Rajan Saxena, MS, FACS, FRCS, FMAS	Senior Professor & Head
2. Ashok Kumar, MS, M.Ch, FRCS, FACS, FMAS, FICS, FAMS, FASCRS, MBA	Professor
3. AnuBehari, MS, FMAS	Professor
4. Rajneesh Kumar Singh, MS, M.Ch	Professor
5. Ashok Kumar, MS	Additional Professor
6. Supriya Sharma, MS, DNB	Additional Professor
7. Ashish Singh, MS, M.Ch	Associate Professor
8. Rahul, MS, M.Ch	Associate Professor
9. Nalini Kanta Ghosh, MS, M.Ch., DrNB, FMAS	Assistant Professor (on contract since August 2021)
10. Somnath Malage, MS, M.Ch.	Assistant Professor (on contract since August 2021)

Departmental Activities:

Honours and Awards

1. Prof. Rajneesh K Singh was elected as the General Secretary of Indian Association of Surgical Gastroenterologist in 2021.
2. Dr. Nalini Kanta Ghosh, Assistant Professor, was awarded the Korean Society of Endoscopic and Laparoscopic Surgeons Travel Grant of US\$500 for his Video Presentation on Anterior Approach to Heller's Laparoscopic Cardiomyotomy in Achalasia Cardia in 2021.
3. Prof. Rajan Saxena - Best Research Paper Award in Surgical Category as Professor, 3RD RESEARCH DAY, SGPGIMS, 13.12.22.
4. Dr. Rahul - Best Research Paper Award in Surgical Category as Associate Professor, 3RD RESEARCH DAY, SGPGIMS, 13.12.22.

Invited sessions and chairpersons/lectures for Conferences: 2022

Prof. Rajan Saxena

- International Conference-IHPBA April 2022, New York, USA(Staged liver transplantation with delayed biliary reconstruction in the face of serious biliary disparity and severe bowel edema- a safe reality) - IASGCON 2022, Kolkata
- HCC with portal vein thrombosis- management; is it the same disease or different biology?
- Panel discussion in the session named "Devil's advocate" on the topics of "Managing the VIP patients, Disasters in ones life experience, Advice for the young surgeons"



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Prof. Anu Behari

- IHPBA India- 14th February 2022- Invited faculty lecture- Make-shift shunts-options and indications
- International Conference-IHPBA April 2022, New York, USA -

Three e-posters

11. Post Cholecystectomy Vascular Injuries: A Tertiary Care Centre Experience
12. Jaundice in patients with Gall bladder cancer (GBC) – a marker of advanced disease and poor prognosis
13. Open Cholecystectomy - A Safe Alternative, not a Failure!

Prof. Ashok Kumar

- International Conference-IHPBA April 2022, New York, USA(Comparative Study of Clinicopathological Features and Outcome of Standard Extended Cholecystectomy in Gall Bladder Cancer (GBC) with or without Adjacent Organ Involvement)

Visits abroad or to other Institutions for academia purposes with dates /period of visit:**Dr. Supriya Sharma**

- 33rd World Congress of the IASGO, Istanbul, Turkey.

Dr. Nalini Kanta Ghosh

- 6th Korean Digestive Disease Week, Incheon, December 1st – 3rd 2022

Member of International Societies:**Prof. Rajan Saxena**

- Fellow of American College of Surgeons
- Fellow of Royal College of Surgeons
- IHPBA
- The Transplantation Society
- iLDLTS

Prof. Ashok Kumar

- Fellow of American College of Surgeons
- Fellow of Royal College of Surgeons
- Fellow of American Society of Colon and Rectal Surgeons
- Fellow of International College of Surgeons

Teaching Workshops/ CME's organized 2022

Foundation Day Celebration, CME and ORATION

The Department celebrated its 34th Foundation Day on 20th December, 2023.

Inaugurated by the Director Prof. R.K. Dhiman, the main highlight of the event were:

Foundation Day Oration: A foundation Day Oration was instituted this year. The FIRST FOUNDATION DAY ORATION was delivered by PROF. R SURENDRAN, Former Director,

Institute of Surgical Gastroenterology, Stanley Medical College, Chennai on “The Future of Surgical Gastroenterology”.

ANS Mrs. Metty Morris was felicitated on this day for her exceptional contributions to the Department and the Institute in ‘Soma Care’.

Alumni of the Department Prof. Biju Pottakkat from JIPMER Pondicherry, Prof. TD Yadav from PGIMER Chandigarh, and DR. Kanwaljeet Singh, Senior Consultant Gastroenterologist from Jalandhar, delivered excellent talks in the CME.

Superannuation:

1. Mr. Anil Verma, Senior Technical Officer – 31ST JULY, 2022
2. Mrs. Meena Johri, Transplant Coordinator – 31ST AUGUST, 2022

Services:

Opd, Admissions, Discharges and Operative Work

Particular	2020	2021	2022
New Registration	696	1697	2325
Follow-up	5111	12000	17623
Admissions	637	771	2094
Operations (Surgery)	533	1240	1417

Teaching and Training:

1. 10 M. Ch Seats per year
2. Short Training Observership; 6 DNB students visited the department as short-term observers.
3. Visiting Professor – Nil

Frozen Section Lab: A New **Cryostat lab** was established in the CHBDT during the year. The lab is operated by the Department of Pathology under the supervision of Dr. Neha Nigam.

Training:

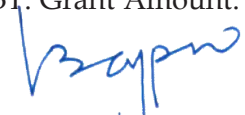
At present, there are 28 senior residents enrolled in M. Ch Surgical Gastroenterology program including 10 (3rd year M. Ch fellows), 9 (2nd year M.Ch fellows) and 9 (1st year M.Ch fellows).

Number of students appeared in the final year examination (PG) : 10

Number of students who passed in final year examination (PG): 10

Research Completed During the Year

1. Liver Resections for Benign Biliary Strictures. PI: Rajan Saxena. Funding Agency: None.
2. Role of Serum CRP, interleukin 6 and Serum albumin as predictors of anastomotic leak in colorectal surgery. PI: Ashok Kumar. Funding Agency: None.
3. Serum microRNA panel as a potential biomarker for early diagnosis of gall bladder cancer- a step towards personalized prevention. PI: Anu Behari. Funding Agency: DBT. Grant Amount: 48 Lakh



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4. Surgical obstructive jaundice: a surrogate marker of advanced disease in gallbladder cancer. PI: Anu Behari. Funding Agency: None.
5. Splenectomy without porto-systemic shunt in EHPVO-is it enough? PI: Anu Behari. Funding Agency: None.
6. A Study of Long-Term Outcomes of Surgery for Corrosive Esophageal Strictures–Comparison of Colon Versus Gastric Conduit Reconstruction. PI: Rajneesh K Singh. Funding Agency: None.
7. A retrospective study of Non-functional Pancreatic Neuro-endocrine tumours (NF-pNET)-Our experience’ PI: Rajneesh K Singh. Funding Agency: None.
8. Benign Tracheo-esophageal fistula in adults–Our experience. PI: Rajneesh K Singh. Funding Agency: None.
9. Comparative study of dunking and modified dunking versus duct to mucosa techniques of Pancreatico-jejunostomy. PI: Rajan Saxena. Funding Agency: None.
10. Role and efficacy of Indocyanine green fluorescence angiography (ICG FA) in intraoperative prediction of anastomotic leak post colorectal surgery-a prospective pilot study in a tertiary care hospital in India PI: Rajan Saxena. Funding Agency: None.

Research in Progress

1. Role of mitochondrial dynamic related proteins (Fusion and fission proteins) in north Indian colorectal patients. PI: Ashok Kumar. Funding Agency: SGPGI Intramural.
2. Investigation of mitochondrial dynamic related proteins (Fusion and fission proteins) and enzyme phosphatase calcineurin in north Indian colorectal patients. PI: Ashok Kumar. Funding Agency: None.
3. Deciphering the Role of Mitochondrial Quality Control in Colorectal Cancer Progression: A Potential therapeutic approach. PI: Ashok Kumar. Funding Agency: None.
4. Factors Affecting the QOL after stoma: A study on north Indian patients. PI: Ashok Kumar. Funding Agency: None
5. Role of ki 67 index in colorectal cancer. PI: Ashok Kumar. Funding Agency: None.
6. Incidental gall bladder cancer/premalignant gall bladder and gall bladder carcinoma a multicentric study. PI: Anu Behari. Funding Agency: National Center for Disease Informatics and Research, Bengaluru, India: Grant Amount: Salary for staff in cancer registry
7. Predictors of long-term (more than 5-years) survival in gallbladder cancer. PI: Anu Behari. Funding Agency: None.
8. Database creation for computational predictive analysis of treatment response assessment in Esophageal cancer patients in India. PI: Rajneesh K Singh. Funding Agency: ICMR
9. To evaluate the role of cell free DNA in Gall bladder cancer as a diagnostic and prognostic biomarker. PI: Ashish Singh. Funding Agency: SGPGI Intramural. Grant Amount: 4.85 Lacs
10. Correlation between Security of Pancreatico-jejunostomy As Verified By Air Insufflation Test And Outcomes of Pancreatico-jejunostomy Following Pancreatico-deuodenectomy. PI: Rajan Saxena. Funding Agency: None.
11. Development of AI (Artificial intelligence) assisted Progressive Web Application for specific symptomatology index to rapidly diagnose and identify (Hepato-Pancreaticobiliary) HPB diseases.PI: Rajan Saxena. Funding Agency: STPI-Medtech Dectrocel Startup.
12. Gravity dependent and hand-held push injection method of contrast cholangiography-A pilot study to compare outcomes and efficacy. PI: Rajan Saxena. Funding Agency: None.

13. Metagenomics of microbial communities in gallbladder bile from patients with gallbladder cancer or cholelithiasis and verification of bacterial infection history. PI: Anu Behari. Funding Agency: None.
14. Predictors of long-term (more than 5-years) survival in gallbladder cancer. PI: Anu Behari. Funding Agency: None
15. Predictors of shunt thrombosis in EHPVO. PI: Anu Behari. Funding Agency: None.
16. To evaluate the role of cell free DNA in Gall bladder cancer as a diagnostic and prognostic biomarker. PI: Ashish Singh Funding Agency: SGPGI Intramural. Grant Amount: 4.85 Lacs.

Publications

1. Kumar A, Ghosh NK. Journey of a Red Rubber Catheter from Uterus to Thoracic Cavity. J ObstetGynaecol India. 2022 Dec;72(Suppl 2):432-434. doi: 10.1007/s13224-022-01623-0. Epub 2022 Feb 24. PMID: 36457435; PMCID: PMC9701250.
2. Gopan A, Sen Sarma M, Har B, Singh RK, Agrawal V, Yachha SK. An unusual cause of obstructive jaundice in childhood: Intra-choledochal malignant neuroendocrine tumour. J Paediatr Child Health. 2022 Oct;58(10):1895-1898. doi:10.1111/jpc.16060. Epub 2022 Jun 18. PMID: 35716114.
3. Ghosh NK, Singh A, Rahul R, Singh RK, Goel A, Saxena R. Multifocal Small Bowel Angioectasias: Managed with Innovative, Nonresectional Surgical Procedure. Surg J (N Y). 2022 Aug 16;8(3):e169-e173. doi: 10.1055/s-0042-1744151. PMID: 35991490; PMCID: PMC9381361.
4. Rahul R, Haldenia K, Singh A, Kapoor V, Singh RK, Saxena R. Does Timing of Completion Radical Cholecystectomy Determine the Survival Outcome in Incidental Carcinoma Gallbladder: A Single-Center Retrospective Analysis. Cureus. 2022 Jul 8;14(7):e26653. doi: 10.7759/cureus.26653. PMID: 35949769; PMCID: PMC9357255.
5. Ghosh NK, Rahul R, Singh A, Sharma S, Kumar A, Singh RK, Behari A, Kumar A, Kapoor VK, Saxena R. Retroperitoneal Lymph Node Metastasis in Gallbladder Cancer: As Bad as Distant Metastasis. South Asian J Cancer. 2022 Mar 22;11(3):195-200. doi: 10.1055/s-0042-1742595. PMID: 36588607; PMCID: PMC9803534.
6. Bhaskar BK, Gutte SH, Gurjar M, Saran S, Rahul R, Sengar P. A Rare Case Report of Intra-abdominal Mucormycosis Complicating Acute Pancreatitis. Indian J Crit Care Med. 2022 Jun;26(6):736-738. doi: 10.5005/jp-journals-10071-24232. PMID: 35836631; PMCID: PMC9237150.
7. Kumar S, Vignesh S, Boruah DK, Gupta A, Yadav RR, Kapoor VK, Behari A, Sharma S. The Utility of Biliary Manometry in Assessing Early Catheter Removal After Percutaneous Balloon Dilatation of Hepaticojejunostomy Strictures. Cureus. 2022 Mar 2;14(3):e22761. doi: 10.7759/cureus.22761. PMID: 35251874; PMCID: PMC8890006.
8. Yadav A, Kumar A, Rastogi N, Siddiqui MH. Microsatellite instability in north Indian colorectal cancer patients and its clinicopathological correlation. S Afr J Surg. 2022 Mar;60(1):22-27. PMID: 35451265
9. Rahul, Kumar A, Verma A, Sanjeev OP, Singh RK, Ghatak T, Nath A. A questionnaire-based study on quality and adequacy of clinical communication between physician and family members of admitted Covid-19 patients. Patient Educ Couns. 2022 Feb;105(2):304-310. doi: 10.1016/j.pec.2021.09.013. Epub 2021 Sep 17. PMID: 34625320; PMCID: PMC8445776.
10. Gupta P, Dutta U, Rana P, Singhal M, Gulati A, Kalra N, Soundararajan R, Kalage D, Chhabra M, Sharma V, Gupta V, Yadav TD, Kaman L, Irrinki S, Singh H, Sakaray Y, Das CK, Saikia U, Nada R, Srinivasan R, Sandhu MS, Sharma R, Shetty N, Eapen A, Kaur H, Kambadakone A, de Haas R, Kapoor VK, Barreto SG, Sharma AK, Patel A, Garg P, Pal SK, Goel M, Patkar S, Behari

- A, Agarwal AK, Sirohi B, Javle M, Garcea G, Nervi F, Adsay V, Roa JC, Han HS. Gallbladder reporting and data system (GB-RADS) for risk stratification of gallbladder wall thickening on ultrasonography: an international expert consensus. *AbdomRadiol (NY)*. 2022 Feb;47(2):554-565. doi: 10.1007/s00261-021-03360-w. Epub 2021 Dec 1. PMID: 34851429.
11. Malviya NK, Behari A, Kumar A, Kapoor VK, Saxena R. Unconventional Shunts in Extrahepatic Portal Venous Obstruction-A Retrospective Review. *J Clin Exp Hepatol*. 2022 Mar-Apr;12(2):503-509. doi: 10.1016/j.jceh.2021.05.007. Epub 2021 May 29. PMID: 35535107; PMCID: PMC9077177.
 12. Kumar A, Ghosh NK. Colorectal cancer: Artificial intelligence and its role in surgical decision making. *Artificial Intelligence in Gastroenterology*. 2022 Apr 28;3(2):36-45.
 13. Alka Yadav, Ashok Kumar and Niraj Kumari. (2019). Young Age Colorectal Cancer, Family History of Cancer and Molecular Profiling- A Case Series of 5 Patients. *Journal of Medical Research and Case Reports* 1(2).
 14. Ghosh NK, Kumar A, Sharma VK, Verma V. Non-islet cell tumor-related hypoglycemia in a case of metastatic gastrointestinal stromal tumor: A rare paraneoplastic syndrome: A case report. *Apollo Medicine*. 2022 Oct 1;19(4):276-9.
 15. Malage S, Kumar A, Saxena R, Rao RN. Rectal Arteriovenous Malformation: A Report of Two Cases, Review of Literature, and Management Algorithm. *Iranian Journal of Colorectal Research*. 2022 Sep 1;10(3):103-9.
 16. Parray AM, Chaudhari VA, Bhandare MS, Madhabananda K, Muduly DK, Sudhindran S, Mathews J, Pradeep R, Thammineedi SR, Amal K, Chaudhary D, Jitender R, Pandey D, Amar P, Penumadu P, Kalayarasan R, Elamurugan TP, Kantharia C, Pujari S, Ramesh H, Somashekhar SP, Fernandes A, Sexena R, Singh RK, Lattoo MR, Shah OJ, Jeswanth S, Roy M, Thambudorai R, Shrikhande SV. Impact of Covid-19 on gastrointestinal cancer surgery: A National Survey. *Langenbecks Arch Surg*. 2022 Dec;407(8):3735-3745. doi: 10.1007/s00423-022-02675-6. Epub 2022 Sep 13. PMID: 36098808; PMCID: PMC9469820.
 17. Prasad P, Verma J, Kumar Singh R, Yadav R. Carcinosarcoma of Gallbladder with Osteosarcomatous Differentiation - a Case Report with Review of Literature. *Indian J Surg Oncol*. 2022 Dec;13(4):731-740. doi: 10.1007/s13193-022-01552-4. Epub 2022 May 27. PMID: 36687231; PMCID: PMC9845472.
 18. Singh K, Rathore U, Rai MK, Behera MR, Jain N, Ora M, Bhadauria D, Sharma S, Pande G, Gambhir S, Nath A, Kumar S, Sharma A, Agarwal V, Misra DP. Novel Th17 Lymphocyte Populations, Th17.1 and PD1+Th17, are Increased in Takayasu Arteritis, and Both Th17 and Th17.1 Sub-Populations Associate with Active Disease. *J Inflamm Res*. 2022 Mar 1;15:1521-1541. doi: 10.2147/JIR.S355881. PMID: 35256852; PMCID: PMC8898181.
 19. Kumar U, Sharma S, Durgappa M, Gupta N, Raj R, Kumar A, Sharma PN, Krishna VP, Kumar RV, Guleria A, Saraswat VA, Pande G, Kumar D. Serum Metabolic Disturbances Associated with Acute-on-chronic Liver Failure in Patients with Underlying Alcoholic Liver Diseases: An Elaborative NMR-based Metabolomics Study. *J Pharm Bioallied Sci*. 2021 Apr-Jun;13(2):276-282. doi: 10.4103/JPBS.JPBS_333_20. Epub 2020 Dec 16. PMID: 34349490; PMCID: PMC8291109.
 20. Sinha YV, Ghosh NK, Singh A, Rahul R. Migrated Feeding Tube: A Rare Complication of Distal Feeding Enteroclysis. *Asian Journal of Case Reports in Surgery*. 2022 Aug 20;14(3):15-20.

Visiting professors: None



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Departmental highlights & New initiatives

COVID RELATED HIGHLIGHTS: All faculty, residents and nursing staff as well as ward attendants and sanitary staff were posted for duty in the Covid hospital at various times throughout the year. This was in addition to handling administrative duties in various committees including the Quarantine committee, Health care workers surveillance committee and the departmental HCW surveillance committee. The faculty also took part in all the Covid-related academic activities conducted by the institute.

Patents:

Prof. Rajan Saxena (in progress)

- Development of AI (Artificial intelligence) assisted Progressive Web Application for specific symptomatology index to rapidly diagnose and identify (Hepato-Pancreaticobiliary) HPB diseases.

DEPARTMENT OF TRANSFUSION MEDICINE

STAFF

Name of Faculty Members:

1. Dr. R. K. Chaudhary, M.D.	Professor & Head
2. Dr. Priti Elhence, M.D.	Professor
3. Dr. Anupam Verma, M.D., PDCC	Professor
4. Dr. Prashant Agarwal, MD, PDCC	Professor
5. Dr. Atul Sonkar, MD	Professor
6. Dr. Dheeraj Khetan, MD	Addl Professor
7. Dr. Rahul Katharia, MD	Addl. Professor (Resigned w.e.f. 20 th July 2022)

Activities

Awards & Recognition

Prof R K Chaudhary

- Appointed as Chairman of Project Review & Steering Group for the project "Self Contained X ray based blood irradiator by Ministry of Electronics & Information Technology, Govt of India on Jan 18, 2022
- Chairman of Scientific Committee of the 47th national conference of Indian Society of Blood Transfusion & Immunohematology held at Jammu in Nov 2022

Prof Anupam Verma

- Awarded MAMS by National Academy of Medical Sciences (India) in October 2022.

Conference Chairpersons & Guest Lectures

Prof R K Chaudhary

- Delivered a guest lecture in 47th national conference of Indian Society of Blood Transfusion & Immunohematology held at Jammu in Nov 2022

Prof Priti Elhence

- Chairperson in International Society of Blood Transfusion Virtual CME on Blood Safety and Quality: Current practices of Blood Donor management. 26th March 2022 organised by Dept of Transfusion Medicine AIIMS, New Delhi.
- Review of AABB Technical Manual Chapter ABO and other carbohydrate blood group systems. Feb 2022.
- Guest lecture on 'Risk Management in BTS' at 'Transcon' 46th Annual National Conference of Indian Society of Blood Transfusion & Immunohematology. 12-13th March 2022 (Virtual)

Prof Anupam Verma

- Invited and participated as an External Expert for faculty selection at Mahamana Pandit Madan Mohan Malaviya Cancer Centre (MPMMCC) & Homi Bhabha Cancer Hospital (HBCH) at Varanasi on 8.4.2022 and on 2.9.2022.

- Invited and participated as an External Expert for selection of faculty in Transfusion Medicine at AIIMS Raebareilly on 30.4.2022.
- Invited as an External Expert for selection of faculty at Uttar Pradesh University of Medical Sciences, Saifai, Etawah on 11.5.2022.
- Member of the state level committee constituted by Medical Education Department, Govt of UP to design key performance indicators (KPI) for medical institutions in May 2022.
- Chairperson of the academic certificate committee of Asian Association of Transfusion Medicine (AATM) for initiating a global online certificate course “Advance Certificate in Transfusion Medicine”.

Prof Prashant Agarwal

- Speaker at national conference, Transmedcon September, 2022
- Chairperson at CME on Safe Blood at Ram Manohar Lohia Institute of Medical Sciences, December 10th, 2022
- Principal Assessor for National Accreditation Board of Hospitals (NABH)
- Member Executive Committee Indian Society of Transfusion Medicine
- Reviewer for Indian Journal of Haematology & Blood Transfusion
- Reviewer for Asian Journal of Transfusion Medicine
- Reviewer for Global Journal of Transfusion Medicine

Prof. Atul Sonkar

- As a panelist to session on “Panel Discussion: AIHA -Current knowledge and perspectives”, 46th TRANSCON National Conference hosted by Karnataka Chapter March 2022.
- Guest speaker at CME organized Dept of Public Administration at Lucknow University on 9th May 2022.
- Guest speaker on “Blood Transfusion Reactions” in a CME organized by Dept of Pathology at HIMS, Barabanki on 16th July 2022.
- Guest speaker on “How to establish Quality Control in TTI Lab” in Transmedcon 2022. Indore (MP), Sept 23-25 2022
- Reviewer for AJTS

Dr Dheeraj Khetan

- Chairperson for the session on “Hemotherapy” at 47th Annual national conference of Indian Society of Blood Transfusion and Immunohematology (ISBTI), held at Jammu from 11th to 13th Nov 2022.
- Guest speaker, Topic- “Evidence based PRP therapy” in the CME on clinical transfusion practices organized by RMLIMS, Lucknow on Dec 10, 2022.
- Guest speaker, Topic- “Serological challenges in RhD typing” at 47th Annual national conference of Indian Society of Blood Transfusion and Immunohematology (ISBTI), held at Jammu from 11th to 13th Nov 2022.
- Chairperson, Session: “Making blood safe for transfusion” in the 1st Annual Conference of Transfusion medicine (PED-OBGY-FUSION 2022) organized by SRMS- IMS Bareilly in Sep 2022
- Guest speaker, topic- “Phenotype vs genotype in D negative individuals” in 10th Annual National Conference of Indian Society of Transfusion Medicine (TRANSMEDCON 2022) organized by Government Medical College Indore, MP on 23-25 Sep 2023.



- Guest speaker, topic “ Post donation information management” in the CME on Blood safety and quality: current practices of blood donor management” organized by AIIMS, New Delhi on 26th Mar 2022.
- Guest speaker, topic- “Point of care testing” in the 46th Annual National Conference of Indian Society of Blood Transfusion & Immunohematology (ISBTI) organized by Karnataka chapter ISBTI on 12-13th Mar 2022.

Membership of Academic Societies

Prof Priti Elhence

- Member of ISBT
- Member of AABB

Prof Anupam Verma

- Membership of International Society of Blood Transfusion.

Prof Prashant Agarwal

- Member International Society of Blood Transfusion
- Member of :AABB

Services

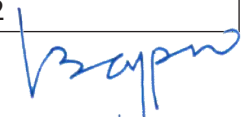
Component Prepared:

Components	No of units		
	2020	2021	2022
Total Blood collection	18854	19779	25141
Whole Blood	159	167	30
Leuco poor Red cells	17541	19612	25111
Platelet Concentrate	13949	15313	18171
Fresh Frozen Plasma	16146	19694	24881
Cryo Poor Plasma	1261	1397	1075
Cryoprecipitate	1261	1397	1075
Single Donor Platelet (Plateletpheresis)	1085	1343	1410

Approximately 99% of collected blood is subjected to component preparation.

No. of Component issued:

	2020	2021	2022
Components			No of units
Red Cell units	20889	25138	31655
FFP	11204	14436	17141
Platelets	13532	14151	14371
Cryoprecipitate	1096	1240	1008
CPP	335	342	912



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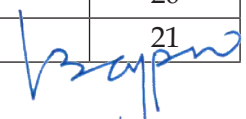
Component issued to various department:

Departments	2020	2021	2022
Gastro-Surgery	15.9	8.01	5.6
Urology & Renal Transplantation	7.2	5.54	3.3
Nephro & Dialysis	2.8	6.91	6.0
CVTS	8.6	6.21	4.7
NeuroSurgery	13	15.5	9.6
Gastro Med.	1.3	2.6	4.0
Genetics /	14	16.8	18.5
Immunology/Hematology	24.7	19.50	17.5
Radiotherapy/ G. Hospital	1.5	2.18	2.2
MICU/CCM/Post op	4.3	6.13	5.7
Others	6.1	9.20	22.4
RCH (Covid 19 Patients)	1.4	1.35	-

Outdoor / Indoor Blood Donation Camps:

Sr. no	Location	Organization/Organizer	Total donation
1	Kalyan Singh super speciality cancer institute & Hospital	KSSSCI	55
2	Regional Head Office ITBP, Jaitikhera Mohanlalganj, Lucknow	ITBP	32
3	Sacred Heart High Secondary School Sitapur	Sacred Heart High Secondary School	70
4	Dr. Ram Manohar Lohia National Law Univercity	Blood Connect	67
5	B.N. Collage Of Engineering And Tech Sitapur Road	B.N. Collage	31
6	SRMU, Deva Road Lucknow	SRMU	53
7	BBAU Raibareli Road Lko	BBAU	50
8	Maharaja Agresen Vidhyalay Moti Nagar Lko	Maharaj Agarsen Vidhyalaya	20
9	ITI Mohanlalganj Lucknow	Blood Commando Foundation	18
10	SantNirankari Mandal Branch Lucknow	Sant Nirankari	87
11	SGPGIMS Blood Bank, Lucknow	Stree Welfare Foundation	5
12	SGPGIMS Blood Bank, Lucknow	SGPGI Staff	8
13	SGPGIMS Blood Bank, Lucknow	Orbit Development and Reform Society	19
14	Aplomb Health Care Ashiyana Lucknow	Aplomb Health Care Ltd	27

Sr. no	Location	Organization/Organizer	Total donation
15	SGPGIMS Blood Bank, Lucknow	Blood Commando Foundation	9
16	Golden Tulip, 6- Station Road Lucknow	Golden Tulip	20
17	Chaudhary Charan Singh International Airport	Adani Group	152
18	SBI Local Head Office Hazratganj Lucknow	SBI local Head office	47
19	Bank Of Baroda Gomti Nagar Lucknow	BOB world	46
20	Piccadaly Holiday Resort Ltd Lucknow	Piccadaly Resort	25
21	Eldeco Eternia Madiyaon Sitapur Road, Lucknow		23
22	P.N. International Pvt. Ltd. Nadar Ganj Lucknow		46
23	UP Pustak Vyapar Mandal Sringer Nagar Lucknow		16
24	Dr. Ram Manohar Lohia Sichai Vibhag Raebareli Road Lucknow		67
25	ITI Aliganj Campus Lucknow		12
26	Bijli Pasi Quila Ashiyana Lucknow	Bhartiyajanta Party Yuva Janta Morcha	41
27	Ambakeshwar Group of Institution Baxi Katalab Lucknow		34
28	SGPGIMS Blood Bank, Lucknow	SGPGI Staff	7
29	Hotel Centrum Pocket-7, Sector-c, Sushant Golf City	Mahindra Finance	8
30	Northan Stadium Charbagh Lucknow	Gaytri Pariwar	12
31	Medhaj Techno Concept Pvt Ltd Ashiyana, Lucknow	Medhaj Techno	32
32	St. Joseph Cathedral Hazratganj, Lucknow	Indian Catholic Youth Movement	29
33	Gurudwara Ashiyana Lucknow	Gurudwara Ashiyana	28
34	IET Campus Sitapur Road Lucknow	IET Campus Sitapur	20
35	Health Centre, BBAU Lucknow	HDFC Bank	58
36	Ambalika institute Mangement & TECh Maurara Road Lucknow	HDFC Bank	76
37	HDFC Banbk 17/4 A Ground Floor Nikhilesh Palace Opp. Jawaher Bhawan	HDFC Bank	55
38	Unity Post Graduate College Lucknow	HDFC Bank	12
	Shiv P.G. College Sitapur Road Lucknow	HDFC Bank	20
	SGPGIMS Blood Bank, Lucknow	SGPGI Staff	21



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Transfusion Transmitted Infection Screening:

	2020	2021	2022
Marker			Prevalence
Anti HIV 1& 2	0.44	0.38	0.003
Anti HCV	0.88	0.26	0.20
HBsAg	1.07	1.03	0.9
VDRL	0.21	0.25	0.19

Immuno-Hematology Service

The diagnostic aid has been provided to various Immuno-hematology disorders, like autoimmune hemolytic anemia, PNH, cold agglutination disease, hemolytic disease of newborns etc.

	2020	2021	2022
Test	No of Test		
Direct Coomb's Test	896	1395	1331
Indirect Coomb's Test	697	1198	1305
Cold Agglutinins	20	09	-
Antibody titre	478	709	577
Antibody Screening	95	133	92
Transfusion Reaction Work up	22	8	8
PNH (Gel Cards)	30	38	20
Herpain /PF4 (HIT)	16	17	07
Blood Grouping	18854	19779	20079

Other Services

	2020	2021	2022
Therapeutic Plasma Exchange	-	130	111
Thromboelastography	-	34	139

Training

- Total nine (09) students were pursuing MD during year 2022. 2 students passed MD Exam. One student completed & passed PDCC..

Research completed during the year:

- Title: In vitro comparison of quality characteristics of Fresh vs Frozen platelets in 5% Dimethyl Sulfoxide. **Funding:** Departmental (PI- Dr Priti Elhence) **Short Note:** Frozen platelets were found to meet international criteria. Establishment of this technique would help us to store platelets for duration of 3 years in frozen form. Currently they can be stored only for 5 days at Room

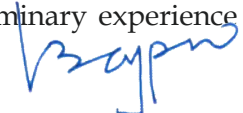
temperature. This will prevent wastage from expiry & also help to storage HLA & platelet antigen typed platelets.

Research in Progress

1. Establishment & Evaluation of the Technique for Investigating Drug Induced Auto Immune Hemolytic anemia. **Funding:** Intramural (**PI-** Dr Prashant agarwal, **Co-PI:** Dr Priti Elhence, Dr Atul Sonkar, Dr Dheeraj khetan)
2. Quality control of Fresh Frozen plasma using plasma sample taken from segment. Funding: Intramural (PI- Dr Dheeraj Khetan)
3. Retrospective analysis of quality of blood components being prepared at Department of Transfusion Medicine, SGPGIMS- 2022- 2023. **Funding:** Departmental (**PI-** Dr Dheeraj Khetan)
4. Retrospective Analysis Of The Double Volume Exchange Transfusions Performed In Infants At Sanjay Gandhi Post Graduate Institute Of Medical Sciences, Lucknow- 2022-2023 **Funding:** Departmental (**PI-** Dr Dheeraj Khetan)
5. Retrospective study to assess clinical efficacy of autologous Platelet Rich Plasma (PRP) therapy in treatment of androgenetic alopecia- 2022-2023 **Funding:** Departmental (**PI-** Dr Dheeraj Khetan)
6. Quality assessment of plasma components stored at 4°C for period of 5 days after thawing (Extended life plasma)- 2021-2023 **Funding:** Departmental (**PI-** Dr Dheeraj Khetan)
7. Effect of ABO incompatibility on aggregation response of platelet components-2021-2023 **Funding:** Departmental (**PI-** Dr Dheeraj Khetan)

Publications

1. Arjunan C, Khetan D, Singh V, Elhence P, Chaudhary RK, Kumar A. Demographics and appropriateness of cellular blood component Irradiation practices: Ambispective analysis from a tertiary care center. Transfusion and apheresis science <https://doi.org/10.1016/j.transci.2023.103651>
2. Balchandra AR, Ghatak T, Samanta S, Singh RK, Verma A, Mishra P, Chaudhary R, Nath A. Pattern of Conventional Coagulation and Thromboelastographic Parameters in Patients with COVID-19 Diseases and Association of COVID-Associated Coagulopathy with Mortality in Intensive Care Unit. Anesth Essays Res. 2022 Jan-Mar;16(1):65-70.
3. Bhadauria DS, Katiyar H, Goel A, Tiwari P, Kishore RVK, Aggarwal A, Verma A, Khetan D, Kaul A, Yachha M, Behera MR, Yadav B, Prasad N. Antibody Response to ChAdOx1 nCoV-19 (AZD1222) Vaccine in Kidney Transplant Recipients. Vaccines (Basel). 2022 Oct 11;10(10):1693. doi: 10.3390/vaccines10101693. PMID: 36298558; PMCID: PMC9610051.
4. Chaudhary R, Das SS. Application of flow cytometry in transfusion medicine. The SGPGI experience. Asian Journal of Transfusion Science 2022; 16:159-66.
5. Goel A, Verma A, Tiwari P, Katiyar H, Aggarwal A, Khetan D, Mayank, Kishore RVK, Kumar P, Singh TP, Sheikh S, Vaishnav M, Pathak P, Shalimar. Serological Immune Response Following ChAdOx1 nCoV-19 Vaccine (Covishield®) in Patients with Liver Cirrhosis. Vaccines (Basel). 2022 Oct 30;10(11):1837. doi: 10.3390/vaccines10111837. PMID: 36366346; PMCID: PMC9696004.
6. Khetan D, Chaudhary R K and Shukla JS. Molecular basis of RhD negative phenotype in North Indian blood donor population. Indian Journal of Medical Research . 2022;155: 286-292
7. Kumar V, Goel A, Khetan D, Chandra T, Raj V Bharti, Dandu H. A preliminary experience



- of plasma exchange in liver failure. AJTS. 2022; 16(2): 209-13 (https://doi.org/10.4103/ajts.ajts_115_21)
8. Shastry S, Chenna D, Basavarajegowda A, Das S, Chaudhary R. Red blood cell alloimmunization among recipients of blood transfusion in India: A systematic review and meta-analysis. Vox Sanguinis 2022; 117:1057-1069.
 9. Singh B, Chaudhary R, Katharia R. Reassessment of Critical Anti-D Antibody Titer in RhDAlloimmunized Antenatal Women. Lab Medicine, 2022 lmac149, <https://doi.org/10.1093/labmed/lmac149>. Online ahead of print
 10. Verma A, Goel A, Katiyar H, Tiwari P, Mayank, Sana A, Khetan D, Bhadauria DS, Raja A, Khokher N, Shalimar, Singh RK, Aggarwal A. Durability of ChAdOx1 nCoV-19 (Covishield®) Vaccine Induced Antibody Response in Health Care Workers. Vaccines (Basel). 2022 Dec 30;11(1):84. doi: 10.3390/vaccines11010084. PMID: 36679930; PMCID: PMC9863895.
 11. Yadav BK, Chaudhary R, Srivastava H, Elhence P. Prevalence of the Direct Antiglobulin Test and Its Clinical Impact on Multiply Transfused Thalassemia Patients: A Prospective Study Conducted at a Tertiary Care Centre in Northern India. Laboratory Medicine 2022;XX:e0-e0; <https://doi.org/10.1093/labmed/lmac140>. Online ahead of print
 12. Yadav BK, Srivastava H, Katharia R, Chaudhary R. Plateletpheresis donor deferral pattern: A retrospective 4-year data analysis at tertiary care center in India. Asian Journal of Transfusion Science 2022; 16:214-18.

Chapter(s) in Book(s): None

Books: None

Visiting Professors: None

Awards and Honours: None

Departmental Highlights (Annexure 1)

New Initiatives

1. Dr Priti Elhence- Established method of frozen pooled platelets
2. Dr Prashant Agarwal- In the capacity of nodal officer Established new 24 hrs lab at EMRTC & renewal of rate contract for main 24 hrs lab
3. Dr Dheeraj Khetan- Implementation of universal leucodepletion- previously selective leucodepletion was been done for patients with thalassemia.

Patents: None

Departmental Highlights (Annexure 1)

Department is providing NAT screened Leucofiltered whole blood and apheresis components to patients. Antigen negative blood components are provided to patients with antibodies. Another hall mark is providing specially processed blood components for Intrauterine Transfusion, neonatal patients, stem cell transplant patients. Department also immunohematological investigations for ABO incompatible Kidney Transplant patients. In therapeutics, Therapeutic plasma exchange is done for a variety of indications. Global hemastasis assessment by Thromboelastography is another exclusive investigation which aids in evidence based component therapy. Department also has facility for molecular blood grouping and Frozen preservation of platelets. Department is a leading center in the Country for Transfusion Medicine Teaching & Training.



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DEPARTMENT OF UROLOGY & RENAL TRANSPLANTATION

STAFF

Name of Faculty Members:

1. Dr. Aneesh Srivastava	Professor & Head (upto Sept. 2022)
2. Dr. M.S. Ansari	Professor & Head (from Oct. 2022 onwards)
3. Dr. Uday Pratap Singh	Additional Professor
4. Dr. Sanjoy Kumar Sureka	Associate Professor
5. Dr. Priyank Yadav	Assistant Professor
6. Dr. Naveen Kumar Gautam	Associate Professor (Basic Science)
7. Dr. Sanchit Rustagi	Assistant Professor (Contractual)
8. Sr. Resident (M.Ch.)	12
9. PDF	04 (01 in Renal Transplantation, 01 in Uro-oncology & 02 in Paediatric Urology)
10. Ph.D. student	02

Awards & Honour:

1. Dr. Aneesh Srivastava felicitated by the President of Mauritius during the Indi-Mauritius Urology Conclave for outstanding contribution in the field of Renal Transplantation and Robotics in Urology 2022.
2. Dr. Sanjoy Sureka conferred "Distinguished Young Urologist Award" during the annual conference of UAUCON in 2022.
3. Dr. Priyank awarded "Urology Care Foundation Research Scholar" by the American Urological Association for the project "Identification of Genome wide epigenetic changes and their influences on smooth muscle cell phenotype in Murine model of partial bladder outlet obstruction in 2022.
4. Dr. Zain Tamboli received Best Resident Award by the SGPGIMS during the Foundation Day of the institute.
5. Dr. Prabhu received 1st Prize for the Best Video Presentation during FESICON 2022 conference.

Editorial Board:

Dr. Aneesh Srivastava:

- Indian journal of Urology
- Section Editor, Indian Journal of Transplantation

Dr. M.S. Ansari:

- Associate Editor, Journal of Medical Case Report.
- Guest Editor, Indian Journal of Urology

Dr. Sanjoy Kumar Sureka

- Urovista - Urological Society of India - Online platform.



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Referee / Reviewer:

M.S.Ansari:

- Austin journal of urology
- International Scholarly Research Network (ISRN) Minimally Invasive
- Journal of Progress in Paediatric urology
- Indian Journal of Urology
- ARC Journal of Urology -Associate editor for “Journal of Medical Case Report”
- Guest editor “Indian Journal of Urology”

Dr. Sanjoy Kumar Sureka

- Indian Journal of Urology
- BMJ Case Report

Services- Annexure 1

Teaching & Training:

At present, there are 12 senior residents enrolled in the 03 year M.Ch Urology and Renal Transplantation program (04 candidates per year).

Number of students appeared in the final year examination (PG) : 4

Number of students who passed in final year examination (PG): 4

In addition, department offers Post Doctoral Fellowships (PDFs) in Pediatric Urology, Renal Transplantation and Uro -Oncology. 04 PDFs are trained each year (01 in Renal Transplantation, 01 in Uro-oncology & 02 in Paediatric Urology).

Ph.D. Urology program is actively running in the department with a present strength of 01 student.

Weekly resident training programme 8-9 AM

Monday	Case presentation Department statistics presentation Mortality and Morbidity meet (2 nd Monday) Uro-nuclear medicine meeting (last Monday)
Tuesday	Seminar
Wednesday	Uro-nephrology meeting
Thursday	Uro-radiology meeting (1 st & 3 rd Thursday) Meeting with basic science / Urodynamics (2 nd & 4 th Thursday)
Friday	Journal club Uro-pathology meeting (last Friday)
Saturday	CGR (institute) Departmental Grand Round



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Research Project:**Extramural:**

1. Investigation of pathogenic genetic variants in COL4A3, GABRRI, ABCG8, AGER, IL1 and MMP9 genes in susceptibility to diabetic nephropathy in North Indian population .
2. Study the molecular mechanism of nephrolithiasis and screening of potential therapeutics for disease using Drosophila model.

Intramural: Nil**Publications:**

1. Kaul A, Bhaduarua D, Yachha M, Behera MR, Kushwaha R, Prasad N, Patel MR, Srivastava A. Impact of kidney donation on pregnancy outcomes: A retrospective analysis. *Indian J Nephrol.* 2022 Sep-Oct;32(5):439-444.
2. Chandrashekhar P, Kaul A, Bhaduarua D, Prasad N, Behera M, Kushwaha R, Patel M, Yachha M, Srivastava A. Risk of tuberculosis among renal transplant recipients receiving rituximab therapy. *Transpl Infect Dis.* 2022 Dec;24(6).
3. Singh UP, Kakoti S, Sureka SK, Danish N, Kumar A, Tamboli Z, Anand M, Srivastava A. Percutaneous nephrostomy in Ureteropelvic junction obstruction with poorly functioning kidney: Is it still pertinent in adults? *Turk J Urol.* 2022 May;48(3):229-235.
4. Karunakaran P, Pathak A, Shandilya G, Kumar KM, Anand M, Yadav P, Srivastava A, Ansari MS. Safety and efficacy of retrograde intrarenal surgery in primary and residual renal calculi in children. *J Pediatr Urol.* 2022 Jun;18(3):312.e1-312.
5. Shanmugham S, Prasad N, Kaul A, Bhadauria D, Patel M, Yachha M, Kushwaha R, Behera M, Agrawal V, Srivastava A. Evanescent renal allograft cortical necrosis from living donor renal transplantation: A lesson learned over two decades. *Transpl Immunol.* 2022 Apr;71:101558.
6. Shandilya G, Karunakaran P, Pathak A, Yadav P, Srivastava A, Ansari MS. Noninvasive Evaluation of Bladder Bowel Dysfunction and its Extrapolation as Biofeedback Therapy to Train Pelvic Floor Muscles. *J Indian Assoc Pediatr Surg.* 2022 Jul-Aug;27(4):466-472.
7. Kumar N, Sureka SK, Singh UP, Kapoor R, Rustagi S, Yadav P, Srivastava A, Kapoor R. Vesicovaginal Fistula Repair by Transvaginal Route: Comparison of Resource Utilisation and Outcome with Literature Reported Population Matched Cohort of Patients Operated by Minimally Invasive Route. *J ObstetGynaecol India.* 2022 Oct;72(5):414-419.
8. Singh UP, Madhavan K, Yadav P, Soni R, Lal H, Sureka SK, Kapoor R, Srivastava A. A Computed Tomography Angiography (CTA): Based score (SGPGI score) to predict level of difficulty, operative, and postoperative outcomes for right-sided radical nephrectomy. *Urologia.* 2022 Aug;89(3):347-353.
9. Rani L, Saini S, Thakur RS, Pate DK, Chowdhuri DK, Gautam NK. Single and combined effect of Bisphenol A with high sucrose diet on the diabetic and renal tubular dysfunction phenotypes in *Drosophila Melanogaster*. *Environ ToxicolPharmacol.* 2022 Nov;96:103977.
10. Singh SK, Balendra V, Ahmad A, Esposto OJ, Maria A, Tikhonova, Gautam NK, Poeggeler B. Copper Mediated B-Amyloid toxicity and its chelation therapy in Alzheimer's disease. *Metallomics.* 2022 Jun;14(6):13.
11. Yadav P, Alsabban A, de Los Reyes T, Varghese A, Ming J, Milford K, Yang SS, et al. A systematic review of pediatric neurogenic lower urinary dysfunction guidelines using the appraisal of guidelines and research evaluation (AGREE) II instrument. *BJU Int.* 2022 Sep 26.

12. Yadav P, Erlich T, Zlotnik M, Khondker A, O’Kelly F, Traubici J, Chua ME, Koyle MA. Ultrasonographic features of perinatal testicular torsion: An assessment of interobserver variability among radiologists and pediatric urologists. *PediatrSurg Int.* 2022 Dec;38(12):2053-2058.
13. Yadav P, Rickard M, Kim JK, Richter J, Lolas M, Alshammari D, Chua ME, et al. Comparison of outcome of prenatal Vs postnatal presentation of posterior urethral valves: A systematic review and meta-analysis. *World J Urol.* 2022 Sep;40(9):2181-2194.
14. Yadav P, Rickard M, Weaver J, Chua ME, Kim JK, Khondker A, Milford K, et al. Pre Vs postnatal presentation of posterior urethral valves: A multi-institutional experience. *BJU Int.* 2022 Sep;130(3):350-356.

Case Report: Nil

Book Chapter & Citation: Nil

Conference/CME/Workshop organized: Pediatric Robotic Surgery Workshop. Nov. 2022.

Vision for the research lab in the department:

To get involve in new research and find new innovative surgical and non-surgical techniques for the management of patients with urological malignancies.

- To develop a dedicated Uro-oncology unit to take care the patients with urological cancers.
- Department is actively involved in upgrading state-of-the-art lab facilities in clinical as well as basic research in different areas of urology (Uro-oncology, Uro-lithiasis, Renal Transplantation, Infertility, Paediatric urology, etc). We are working towards establishing an animal cell culture lab for research involving urological tissues, with the ultimate aim of establishing the branch of regenerative urology at the institute. Recently we received approval from Director Sir for establishing *Drosophila* (alternate to animal model) research facility for modelling various urological diseases. *Drosophila* model is being used to understand the molecular mechanisms and development of potential therapeutic molecules of various urological diseases.

We have started translational research to develop diagnostics, prognostic tools, and identification of therapeutic molecules for better care of patients. Apart from Department is involved in developing human resources as it runs Ph.D. courses and lab training programs. Department has started the course “Model system for biomedical research” for Ph.D. coursework. Incoming 5 years, I wish the department will achieve a new height in the area of urological translational research.

ALUMNI DAY CELEBRATIONS

We had seen the back of covid pandemic so it was time for the alumni to visit their alma mater and to interact with their teachers and the young aspiring graduates and super specialists. Alumni wanted to relive the days gone by walk down the memory lane and share their struggles words of wisdom with the younger crowd. Everyone had their fill of academics, research and scientific discussions in the morning during the research day celebration and wanted to just relax, have fun and be carefree as they were decades ago.

After the formal welcome, Dean for the day Prof Shubha Phadke inaugurated the SGPGI Alumni Association and highlighted the need for such organisations, listing the aims and objectives of our association. Prof RK Dhiman the Director was the chief guest and shared his memories and his expectations from the association to further the cause of the institute. Then it was time to witness the creativity from young faculty Haseena and Soumya and students Pooja, Pragya and Anupam of Department of Medical Genetics. A beautifully written, enacted and directed skit on the nuances of prenatal and preimplantation diagnosis. The ethical issues and the dilemma of clinicians and not the least the wisdom of the gaonwali Soumya Srivastav. The wit, the humor and the conflict of advances in science and the ethics of it was brought out beautifully.

Haseena and Soumya made sure that all participated in the dumb charades where Prof Dhiman also showed his acting abilities. All in all, it was a fun filled evening which ended with all enjoying a sumptuous dinner with live music. Drs Aneesh Srivastav and Dharmendra Bhadauria entertained us with their soulful singing.

APEX TRAUMA CENTRE

STAFF

Name of Faculty Members:

1. Prof. Raj Kumar	Professor & Chief of Department
2. Dr. Rajesh Harsvardhan	DMS
3. Dr. Amit kumar Singh	Associate Professor-Trauma Surgery
4. Dr. Anurag Baghel	Associate Professor -Orthopaedics
5. Dr. Amit kumar	Associate Professor- Orthopaedics
6. Dr.KumarKeshav	Associate Professor- Orthopaedics
7. Dr. Pulak Sharma	Associate Professor- Orthopaedics
8. Dr. Kuldeep Vishwakarma	Associate Professor -Oral and maxillofacialsurgery
9. Dr. Siddharth Rai	Associate Professor-Physical medicine and rehabilitation
10. Dr. Awale Rupali Bhalchandra	Associate Professor -Laboratory Medicine
11. Dr. Sangram Singh Patel	Associate Professor-Microbiology
12. Dr. Ganpat Prasad	Associate Professor-Anaesthesia
13. Dr. Prateek Singh	Associate Professor- Anaesthesia
14. Dr. Rafat Shamim	Associate Professor- Anaesthesia
15. Dr. Suruchi	Associate Professor- Anaesthesia
16. Dr. Vansh Priya	Associate Professor- Anaesthesia
17. Dr. Kamlesh Singh Bhaisora	Associate Professor- Neurosurgery
18. Dr. Pawan kumarverma	Associate Professor-Neurosurgery
19. Dr. Ved Prakash Mourya	Associate Professor- Neurosurgery

Departmental Activities

The details of various awards and honours, along with various conferences attended is listed below.

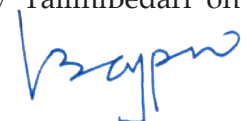
Prof. Raj Kumar

List of International Awards

- Certificate of Thanks & Appreciation by Echo Syria Academy for Culture, Love & Peace, Syria for efforts in enriching the literary and cultural arena and raising the banner of love and peace in 2022.

List of National Awards

- **NSSI Conference March 2022** judge in award paper session of NSSI conference on 5th March 2022 held at AIIMS Rishikesh, Uttara Khand.
- '**BahujanRatna Award**' by Naitonal Budhh Mahasammelan on 09/10/2022 at Manyawar Kashiram Sanskritik Raily Sthal, Ashiyana, Lucknow.
- **Bharat RatnaDr. A P J Abdul Kalam Honorary Award, 2022** given by TalimiBedari on 15/10/2022 at Lucknow.



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- **Alumina medal for excellence** at the foundation day celebration by Cardiothoracic & Neurosciences centre, AIIMS, New Delhi on 16/04/2023.
- **Chief editor** of 'Textbook of Traumatic brain Injury'. In: Kumar R, Maurya VP, Mahapatra AK. Mahi Publication, Ahmedabad. Third Edition, 2022. ISBN: 978-93-95581-19-6.

Dr. R. Harsvardhan

List of Awards

- Awarded the State Level Award for contribution on National Doctor's Day by the Health Minister Sri Jai Prakash Singh for best performance in AB – PMJAY
- Awarded the national Award, "Chandragupta Award: The Young Administrator Award" from Academy of Hospital Administration (AHA) in 2022
- Awarded the National Award, "Sewa Shikhar Sammaan" in 2023

Specialty wise faculty data

Trauma Surgery

Dr Amit Kumar Singh

Invited faculty:

- Moderator in ISTAC Annual Conference Nov 2022
- Guest Faculty in CCHN Programme Dec 2022

Member of society:

1. Association of Surgeons of INDIA
2. Indian Associations of Paediatric Surgeons

Member editorial committee/ Reviewer of Journal:

1. Urology Annals PubMed indexed international Journal of urology
2. Journal of Integrative Neuroscience

Executive of National/ International bodies: Nil

Publications in indexed journals (Articles): 03

Workshop/CME

1. Conducted Workshop on Advance Wound care program for Residents & Nursing Staff
2. Organized Walkathon Road Safety Awareness Dec 2022
3. Conducted Sensitization Workshop on Emergency Trauma Care ATC May 2022

Book chapters in Various Textbooks: Nil

Orthopaedics

Dr. Pulak Sharma

Conference Presentation: Nil

Member editorial committee/ Reviewer of Journal: Reviewer of Orthopaedic Journal of MP Chapter

Workshops and CME organized

1. CME Organised "Traumatic Musculo-skeletal injuries in Geriatric Patients: Concerns & Challenges". 30th April 2022. Apex Trauma Center Seminar Hall.



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- Organised a two day workshop on “Sensitization towards trauma” for the staff (residents , faculty nurses and paramedicals) of Apex Trauma Center . 27-28th May 2022, Seminar Hall , 5th Floor , Apex Trauma Center.

Orthopaedics Name of faculty- Dr Anurag Baghel

Awards And Honours- Awarded the prestigious fellowship by **Indian orthopaedic association -IOA YUVA mentor fellowship** for the year 2022.

Conference Presentation

1: National -2

Title	Conference name and date
Planning and Management of complex sever scoliosis	In AO SCILIOSIS WEEK 2022 AT amrita institute of medical sciences Kochi India.
Planning and management of osteoporotic fractures of spine	During the IOA YUVA mentor fellowship at Jaipur 2023.

Workshop and CME organized:

- Workshops** Organized a **Workshop on BASIC LIFE SUPPORT SKILL** on the occasion of Bone & Joint Day 4th August 2022 WITH Mission: SAVE ROAD ACCIDENT VICTIM.
- Organized **Walkathon and slogan & painting competition** on the theme ROAD TRAFFIC SAFETY on 17th December 2022.
- CME Organised on “ Traumatic Musculo-skeletal injuries in Geriatric Patients: Concerns & Challenges”. 30th April 2022. Apex Trauma Centre Seminar Hall.
- Organised a two-day workshop on “Sensitization towards trauma” for the staff (residents, faculty nurses and paramedical) of Apex Trauma Centre. 27-28May 2022, Seminar Hall, 5th Floor, Apex Trauma Centre.

Member of society-

- Indian orthopaedics association
- UP orthopaedic association
- International society for knowledge of hip and knee surgeon (ISKSSA)
- AO Spine

Member editorial committee/ Reviewer of Journal:

- Section editor of journal of bone and joint disease (JBJD), an official publication of UP orthopaedic association for knee section.


Publications in indexed journals (Articles)- 2

Orthopaedics

Dr. Amit Kumar

Invited faculty:

- Invited as **External examiner for MTech thesis** entitled “Computational design of human foot” by IIT Delhi.
- Invited as **Faculty & organizing Secretary** of Workshop on BASIC LIFE SUPPORT SKILL organised on BONE & JOINT Day on 4th August 2022at Apex Trauma Centre SGPGIMS


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Conference Presentation

- **1: National (1)**

Authors (please underline presenter's name)	Title	Conference name and date
Dr. Amit Kumar	A case of recurrent coxa vara in Giant cell Tumor of proximal femur	46 th Annual conference of UP orthopaedics Association / 28-30 April 2022

Member of society

1. Life member: Indian Orthopaedic Association LM 10868
2. Life member: UP Orthopaedic Association LM 1581
3. Life member: ASAMI India LM 496
4. Life Member : Association of spine surgeon of india LM 3367
5. Life Member : Bihar orthopaedics Association LM 609

Member editorial committee/ Reviewer of Journal:

1. **Reviewer** Journal of the Indian Academy of Geriatrics (official publication of the Indian Academic of Geriatrics)

Public Awareness programme /Workshops and CME organised:

1. As **Organising Secretary** organised a **Workshop on BASIC LIFE SUPPORT SKILL** on the occasion of Bone & Joint Day 4th August 2022 WITH Mission: SAVE ROAD ACCIDENT VICTIM
2. Organised **Walkathon and slogan & painting competition** on the theme ROAD TRAFFIC SAFETY on 17th December 2022.

Teaching and training

- Board of studies have been conducted for PDCC in "Pevis, Hip and Knee Injuries"

Orthopaedics

Dr. Kumar Keshav

Conference Presentations: nil

Awards And Honours

1. **Got second prize in the category in the conference- Podium-poster presentation** on "Ilizarov as a surgical modality in open fractures of proximal and distal tibia in acute setting: A prospective study of 13 cases" in ASAMICON (Association for the study of Application and Methodology of Ilizarov- India), New Delhi
2. **IOA (Indian Orthopaedic Association) Travelling Fellowship-** was selected for the IOA travelling fellowship, which is **the most prestigious fellowship of IOA under 40 years of age.** Have completed two weeks of the fellowship and two weeks are still left.

Member of society

1. SICOT (Société Internationale de Chirurgie Orthopédique et de Traumatologie/ The International Society of Orthopaedic Surgery and Traumatology), Belgium (Active for the year 2023)

2. AO Trauma (AO Member no.- 100128826)
3. Indian Orthopaedic Association (LM-10081)
4. Indian Arthroscopy Society (LM-3087)
5. ISKSAA (International Society for Knowledge for Surgeons on Arthroscopy and Arthroplasty (No. 745)
6. National Academy of Medical Sciences (India)
7. ASAMI-INDIA (Membership no.-634)
8. Uttar Pradesh Orthopaedic Association (LM- 1556)

Member editorial committee/ Reviewer of Journal:

1. **Assistant editor – Journal of Bone and Joint diseases** (Official journal of U.P. Orthopaedic Association)

Reviewer- Injury

1. **Journal of Bone and Joint diseases** (Official journal of U.P. Orthopaedic Association)

Workshops and CME organized-

Specialty: Oral & Maxillofacial Surgery **Name of faculty:** Dr. Kuldeep Vishwakarma

Invited faculty: Chairperson, Maxillofacial trauma gallery 2022, 1st Annual Conference organized on 12-13 May 2022 at KGMU, Lucknow.

Conference Presentation/ Workshop**National (1)**

Title	Conference/ workshop name and date
Hands-on course in microsurgery	Ganga Medical Center& Hospital, Coimbatore, India, 25-04-2022 to 29-04-2022.

Member of society:

1. Association of Oral & Maxillofacial Surgeons of India (Life member)
2. International Association of Oral & Maxillofacial Surgery
3. AOCMF

Member editorial committee/ Reviewer of Journal:

1. Reviewer (National Journal of Oral & Maxillofacial Surgery)

Workshops and CME organized:

1. Member of organizing committee of Maxillofacial trauma gallery 2022, 1st Annual conference organized on 12-13 May 2022 at KGMU, Lucknow.

Book chapters in Various Textbooks:

1. Keshav K, Shukla B, **Vishwakarma K.** Textbook of Traumatic Brain Injury. 3rd ed. Mahi Publication; 2022. Chapter 61, Evaluation of Musculoskeletal and Maxillofacial Injury in a Polytrauma Patient; p. 731-744.

Physical Medicine & Rehabilitation

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Dr Siddharth Rai

Invited faculty: Nil

Member of society

1. International Society of Physical and Rehabilitation Medicine
2. Indian Association of Physical Medicine & Rehabilitation
3. Awadh Association of Physical Medicine & Rehabilitation

Publications in indexed journals (Articles)- 3**Workshops and CME organised**

1. Walkathon on road traffic safety awareness on 17th December 2022
2. Slogan and poster making competition on 'road traffic safety' for students On 16th December 2022

Specialty- Laboratory Medicine

Name of faculty: Dr. Awale Rupali Bhalchandra

Invited faculty:

Conference Presentation

- 1: National (1)

Title	Conference name and date
Routine hematology parameters in COVID -19: as predictor of disease severity and mortality"	6 th Annual Conference of Eastern Hematology Group. Puri,Odisha.23 rd -24 th April 2022.

Workshops and CME organised

1. Walkathon on road traffic safety awareness on 17th December 2022
2. Slogan and poster making competition on 'road traffic safety' for students On 16th December 2022

Member of society

1. Association of Indian Journal of Pathology and Microbiology.
2. Indian Association of Laboratory Physicians
3. Indian Society of Hematology and Transfusion Medicine
4. Indian Academy of Cytologists
5. Indian Society for Trauma and Acute Care

Member editorial committee/ Reviewer of Journal:

1. British Medical Journal case reports
2. Transactions of The Royal Society of Tropical Medicine and Hygiene
3. Asian Journal of Transfusion Science

Publications in indexed journals (Articles)- 6

Note :The detailed report of faculty from Microbiology, Anaesthesia and Neurosurgery has been submitted in the Annual report of parent department. Herein the contributions in department of ATC are highlighted.

Specialty : Microbiology Name of faculty : Dr Sangram Singh Patel

Invited faculty:

1. External examiner at BHU Varanasi, Hind Institute of Medical Sciences, Barabanki for MBBS and BDS students
2. Lecture (longitudinal in-service training program) at apex trauma centre on 26/02/2022.

Conference Presentation: NIL

Member of society

1. Life member of Indian Association of Medical Microbiologist (IAMM)

Member editorial committee/ Reviewer of Journal:

1. Journal Medical Virology

Workshops and CME organized

1. Organized workshop on Hands on training on Leptospirosis, SGPGIMS-NCDC-CDC-2022 on 22/07/2022.

Teaching and training

1. Actively involved in MD, PhD and PDCC, CMT students teaching.
2. Organized workshop on Hands on training on Leptospirosis, SGPGIMS-NCDC-CDC-2022 on 22/07/2022.
3. Lecture (longitudinal in-service training program) at apex trauma centre on 26/02/2022.
4. Trained health care workers of SGPGI about PPE training and sample collection during COVID-19 pandemic.

Specialty: Neurosurgery

Name of faculty: Dr. Kamlesh Singh Bhaisora

Title	Conference name and date
Surgery for medial sphenoid wing meningioma	NSSICON 2022,04-05 March, 2022
Moderator, session on Skull base surgery	NSSICON, March, 20222
Extradural pretemporal approach to cavernous region	Midterm meeting, Skull base society of India, Indore, 2022
Iatrogenic aneurysms in Neurosurgery: our experience and management protocols	Neurovascon 2022, Raipur
Surgery for spinal AVF	NSSICON 2023, Hyderabad
Intraventricular Hemorrhage	Neurotrauma, 2022, Vishakhapatnam
Extradural clinoidectomy and clipping of superior hypophyseal aneurysm	Midterm meeting skull base society, Kochi 2023.
Iatrogenic aneurysms in Neurosurgery: our experience and management protocols	Asian Australasian congress of Neurological surgeons, Jerusalem, Israel 2022

Specialty: Neurosurgery



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Dr. Pawan Kumar Verma**Awards and honours:**

- Invited Faculty for award paper session NSSICON 2022, Rishikesh

Conference:

- Verma PK, Deep brain stimulation (DBS) for movement disorder: Establishing the protocol and our initial experience, STEREOCON- 2022
- Verma PK, Deep brain stimulation for Dystonia, IANCON- 2022
- Verma PK, Deep brain stimulation for Parkinson's disease: Initial experience, NSSICON- 2023

Workshops:

- Workshop on Intrinsic Anatomy of the Brain and White Matter Tract Dissection- 2023, MAHE, Manipal

Membership:

- Indian society for Stereotactic and Functional Neurosurgery
- Indian Society of Neuro-oncology

Specialty: Neurosurgery**Dr. Ved Prakash Maurya****Awards and Honours**

- Selected as Instructor/ Faculty for the Advanced Trauma Life Support (ATLS) for ATLS training at KGMU, Lucknow (India).
- Appointed as an external expert in the Interview board for the selection of Tutor, Assistant Professor and Associate Professor in Nursing College of Uttar Pradesh during 13th to 16th July 2022.
- Workshop faculty in Neurovascon 2022; 22nd Annual Conference of the Cerebrovascular Society of India; AIIMS Raipur. 23rd-25th September 2022.
- Second Best Poster Presentation Award (Corresponding Author) in 28th UP-UK NEUROCON 2022, BHU, Varanasi, 9th -10th October 2022.
- Invited faculty in Fourth congress of Asian Oceanian Society of Intraoperative Neurophysiology & fourth Annual Congress of Indian IONM Users Group; 14th- 16th October 2022.
- Chairperson in Cerebrovascular Session in 70th Annual Conference of Neurological Society of India; 7th-11th December 2022.
- Invited faculty in NSICON-2022, Agra. 7th-11th December 2022.
- Invited faculty in 33rd Annual Conference of Indian Society of Paediatric Neurosurgery (IndSPNCON 2023), Indore (M.P.) 3rd-5th February 2023.

Editorial board

- Selected as Section Editor in official Journal of NSI- Neurology India.
- Co-Editor of 'Textbook of Traumatic brain Injury'. In: Kumar R, Maurya VP, Mahapatra AK. Mahi Publication, Ahmedabad. Third Edition, 2022. ISBN: 978-93-95581-19-6.

Executive of National/ International bodies

- Member of Executive Committee in Young Neurosurgeons Forum in Neurological Society of India (YNFNSI).



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- Life member of Indian Society of Paediatric Neurosurgery (IndSPN)
- International Society for Paediatric Neurosurgery (ISPN)
- Life member of Neurological Surgeons' Society of India (NSSI)
- American Association of Neurological Surgeons (AANS)
- Congress of Neurological Surgeons (CNS)
- Skull Base Surgery Society of India (SBSS)
- Life member of Neurology India (NI)

Reviewer

- Indian Journal of Neurosurgery (IJNS)
- Neurology India (NI)
- Indian Journal of Neurotrauma (IJNT)
- Journal of Neurosciences in Rural Practice (JNRP)
- Journal of International Medical Research (JIMR)
- Journal of Paediatric Neurosciences (JPN)
- World Neurosurgery

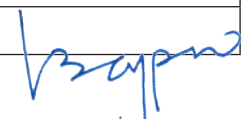
Conference Presentations

Title	Conference name and date
ATLS training for the Doctors	Workshop on acute trauma care for Doctors/ Staff/ Ambulance Drivers. SGPGIMS, Lucknow. 27 th -28 th May 2022.
Neurotrauma and Management	13 th SGPGI - Essential of Trauma Life Support Course (ETLS), SGPGIMS, Lucknow. 20 th August 2022.
Sylvian Fissure- Surgical techniques: Workshop for Cadaveric dissection	22 nd Annual Conference of the Cerebrovascular Society of India (NEUROVASCON 2022). AIIMS Raipur. 23 rd -25 th September 2022.
Cerebral ischemia secondary to atherosclerosis in intracranial aneurysms: An under rated entity	70 TH Annual Conference of Neurological Society of India (NSICON- 2022).7 th -11 th December 2022.
<ul style="list-style-type: none"> • Minor head injuries: Evaluation and management • Operative video presentation on Paediatrics craniopharyngioma 	33 rd Annual Conference of Indian Society Of Paediatric Neurosurgery (IndSPNCON-2023) 3 rd -5 th February 2023.

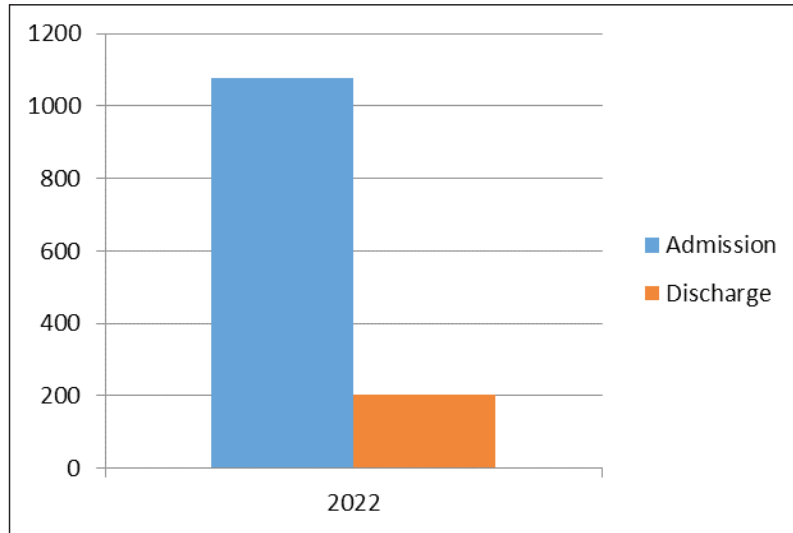
Services:

Emergency patient receiving area

YEAR	2022
Admission	1077
Discharge	203

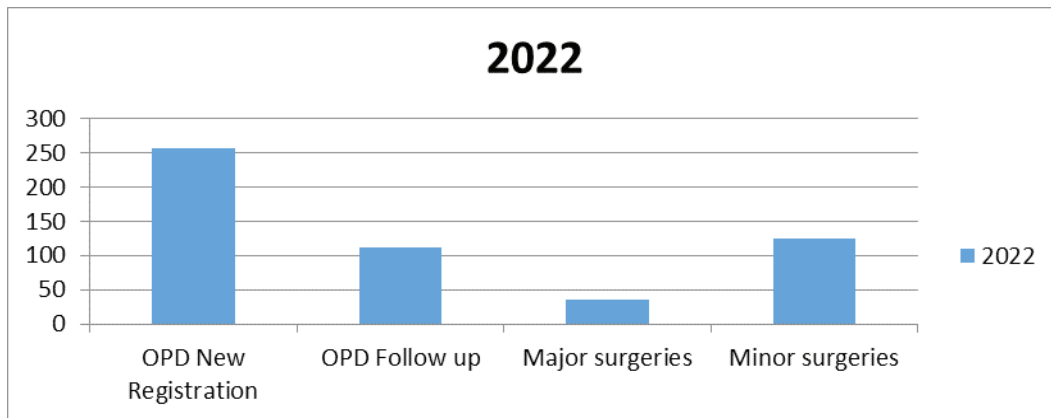


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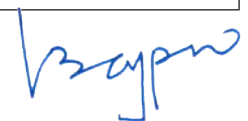
Trauma Surgery

OPD registrations		2022
	New registrations	256
	Follow up	112
Surgical procedures	Major surgeries	35
	Minor surgeries	124

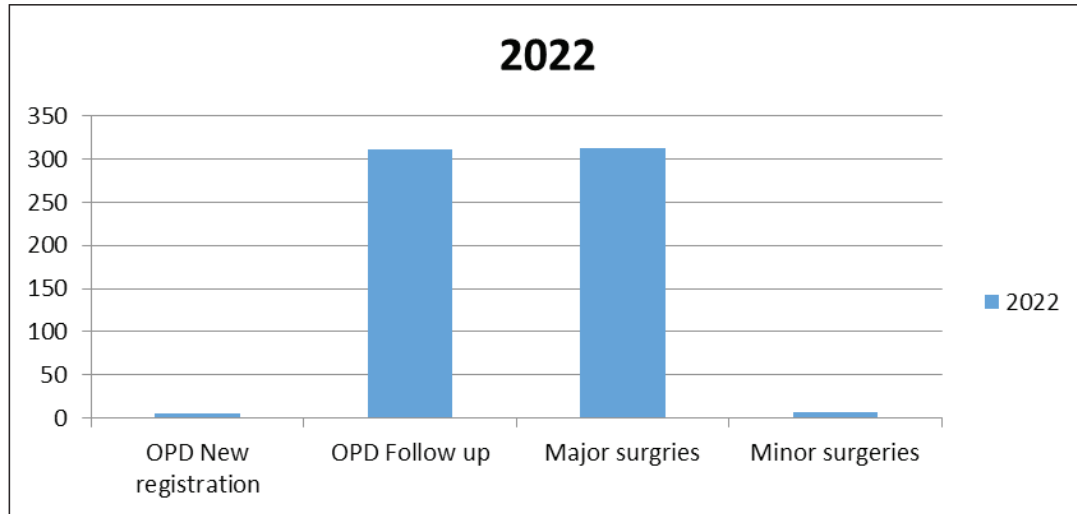


Neurosurgery

OPD registrations		2022
	New registrations	5
	Follow up	311
Surgical procedures	Major surgeries	313
	Minor surgeries	07

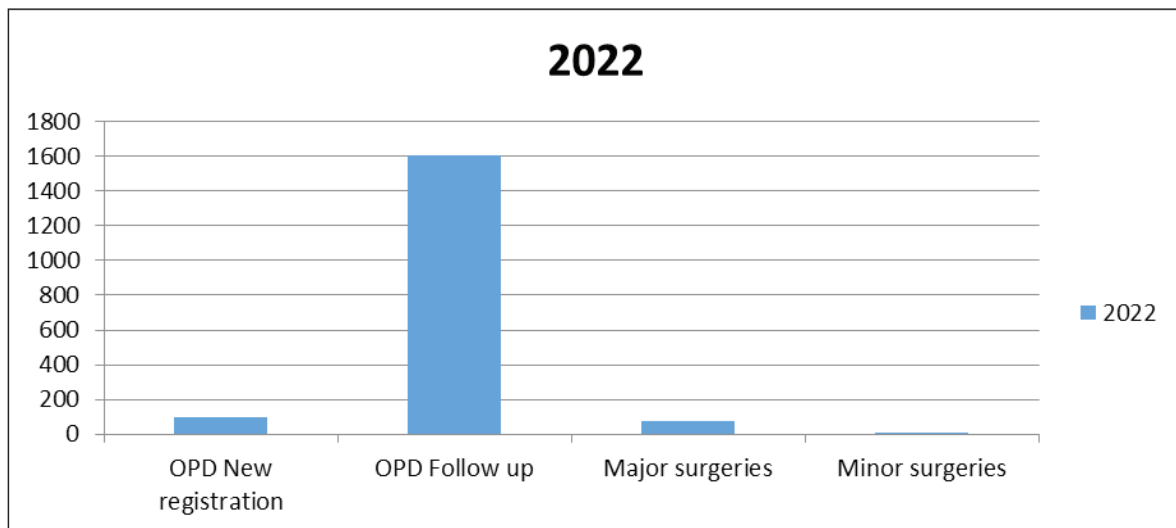


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Oral & Maxillofacial Surgery

OPD registrations		2022
	New registrations	98
	Follow up	1605
Surgical procedures	Major surgeries	78
	Minor surgeries	112

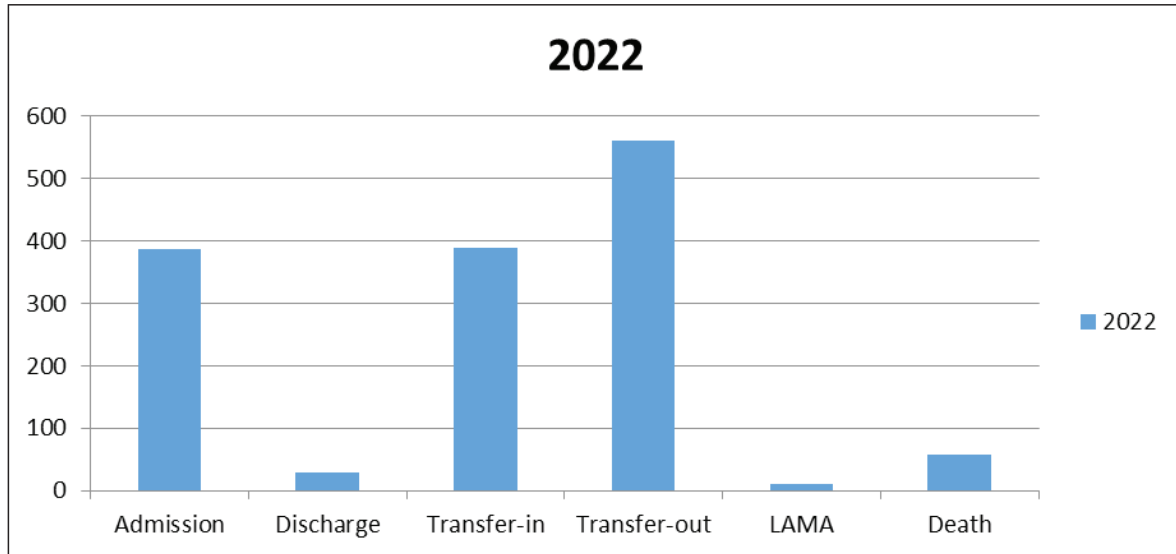


Intensive care unit -2022

Year	Admission	Discharge	Transfer-in	Transfer-out	LAMA	Death
2022	387	29	389	561	11	58

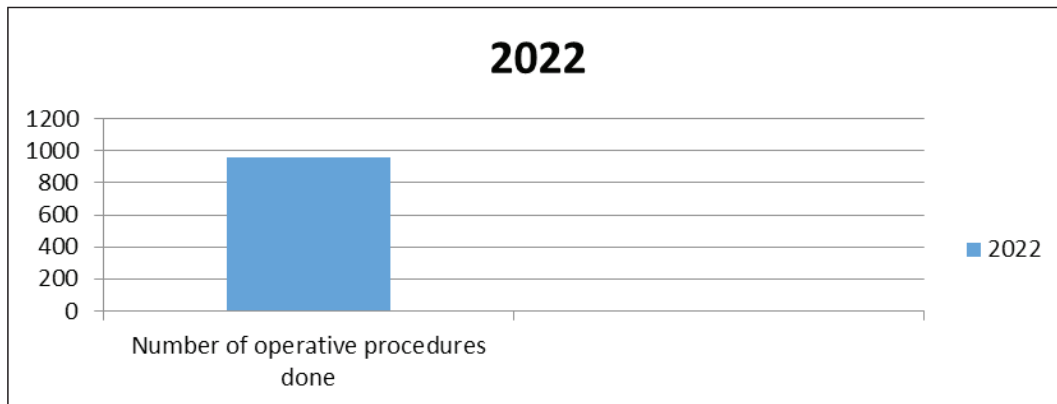


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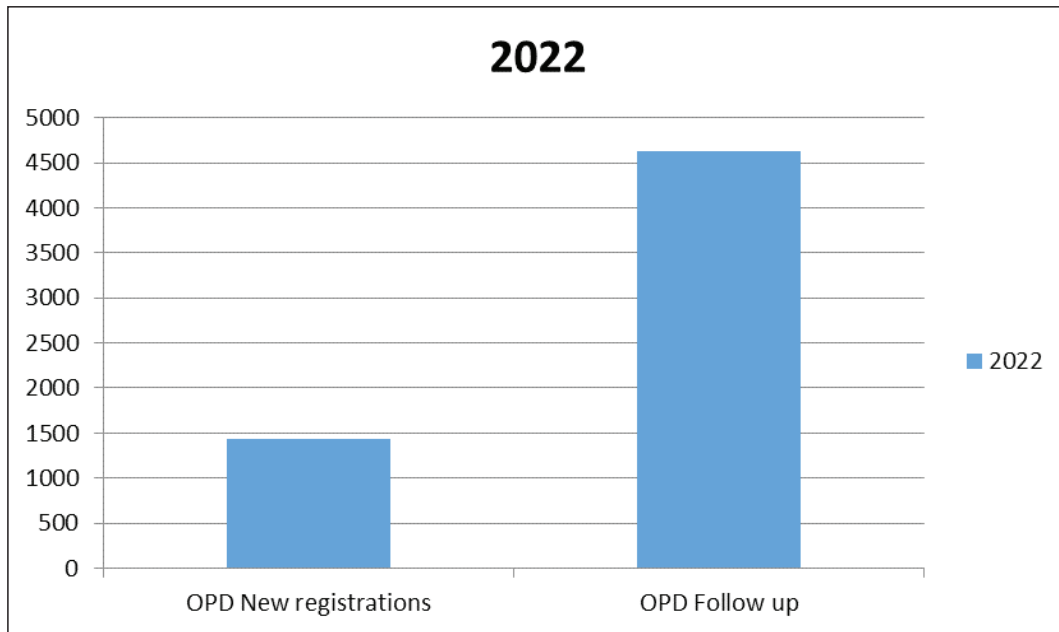
Operations done

Year	2022
Number of operative procedures done	958



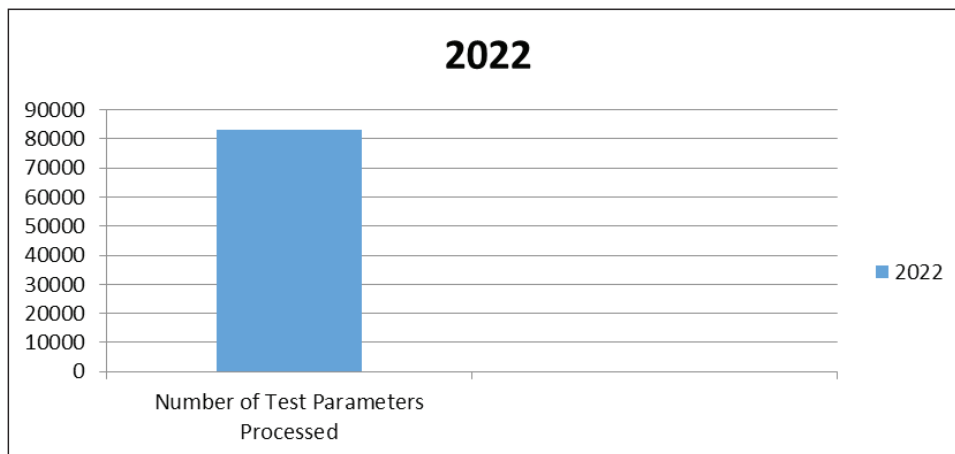
Physical Medicine & Rehabilitation

OPD registrations	Year	2022
	New registrations	1431
	Follow up	4627



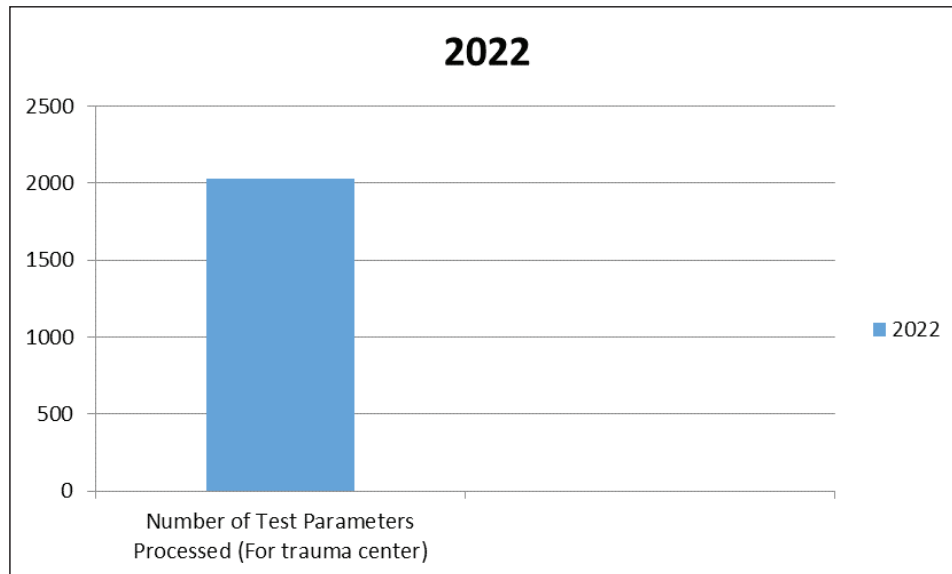
Laboratory Medicine

Year	2022
Number of Test Parameters Processed	83,262



Microbiology

Year	2022
Number of Test Parameters Processed (For trauma center)	2026



Orthopaedics

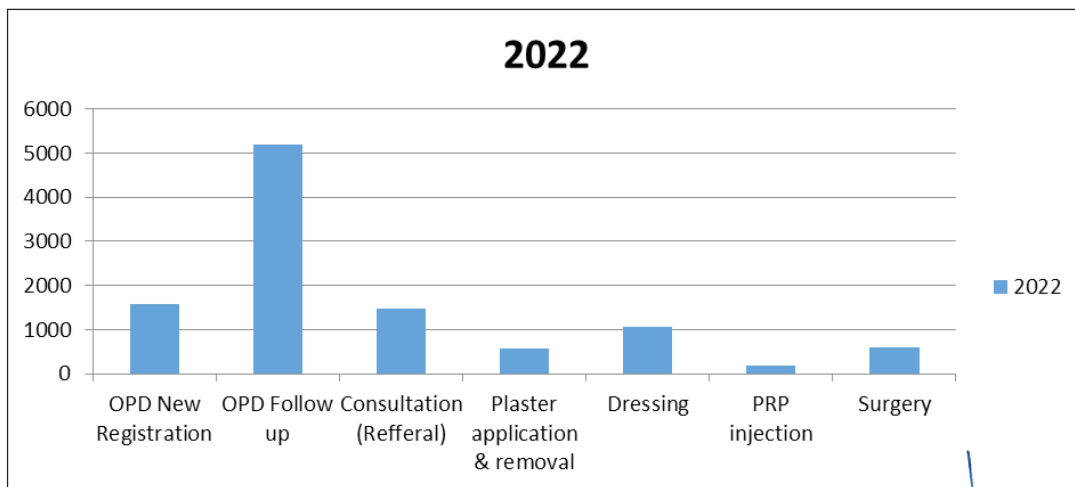
		2022
OPD registrations	New registrations	1573
	Follow up	5181
	Consultation (Referral)	1463
	Plaster application & removal	574
	Dressing	1069
	PRP injection	182
	Surgical procedures	Surgery

Name of the project	Duration	Name(s) of the teacher (s) working in the project receiving seed money	The amount of seed money provided (INR in lakhs)	Spon-soring agency	Year of receiving the seed money
IL 18, retinol binding Protein, Hepcidin, KEM1 NGAL: Diagnostic biomarkers for acute kidney injury in acute trauma patients	2 years	Dr. Amitkumar Singh	05 lakh	Intramural SGPGIMS	2023
Microparticles in peripheral blood in trauma patients	2 years	Dr. Awale Rupali B.	4,97,000	SGPGI	2022



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Seroprevalance and cross-reactivity of different neglected tropical diseases in blood culture negative febrile patients in a tertiary care center: A descriptive study" from Patients with Urinary Tract Infection	2 years	Dr Ujjala Ghoshal Dr Chinmoy Sahu Dr Mohan Gurjar	4.5 lakhs	SGPGI	2021-2023
Paired high-risk human papillomavirus (Hr-HPV) genotype testing in urine and self-collected versus physician collected cervical swabs in patients for cervical cancer screening: a pilot study	2 years	Dr Chinmoy Sahu Dr Anju Rani Dr Nilanchali Singh Dr Ujjala Ghoshal	30 lakhs	DBT	
MD thesis on topic " Bacterial profile of wound site infections and evaluation of risk factors for Sepsis among road traffic accident (RTA) patients from Apex Trauma Centre, Northern India.	2 years	Dr Chinmoy Sahu Dr Amit Singh	NA	SGPGI	NA
A randomized controlled study for clinical evaluation of the synergistic effect of oral bisphosphonate with platelet rich plasma in knee osteoarthritis (Principal Investigator)	3 years & 01/04/2023	Dr. Amit Kumar	2,89,000/-	Intramural (A-13-PGI/IMP/86/2022)	NA




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Teaching and Research

The Trauma Surgery Department prioritizes training and education. It offers specialized trauma surgery fellowship programs to train the next generation of trauma surgeons. The department also conducts regular educational sessions, case discussions, and journal clubs to keep the staff updated with the latest advancements in trauma surgery.

The department actively engages in research and innovation to advance trauma care services. The faculty participates in clinical trials, research projects, and academic collaborations to contribute to the development of new treatment protocols, surgical techniques, and trauma care guidelines. The department emphasizes continuous professional development for its staff. It provides ongoing training and educational opportunities to stay up-to-date with the latest advancements in laboratory medicine. This ensures that the department remains at the forefront of clinical and diagnostic techniques and contributes to improved patient care.

The faculty is engaged in groundbreaking research studies, contributing to the advancement of trauma care and treatment methodologies. Published numerous research papers in prestigious medical journals, sharing knowledge and insights with the medical community. Actively participated in national and international conferences, presenting findings and exchanging ideas with experts in the field.

Research completed during the year 2022-23 :Nil

Research in progress

Publications

Publications in indexed journals (Articles)

1. Sharma P, Baghel A, Keshav K, Kumar A. et al; Functional Outcomes of Anterior Cruciate Ligament Reconstruction Using Titanium Adjustable Loop Button and Poly-L-co-DL-Lactic Acid-Beta Tricalcium Phosphate (PLDLA-bTCP) Interference Screws: A Single-Center, Retrospective, Observational Study. *Cureus* 15(2): e34542. DOI 10.7759/cureus.34542.
2. Harsvardhan R, Mehrotra A, Agarwal A, Sharma P, Pandey G, Behari A. Assessment of Human Factors & Ergonomics effecting Patient Safety Culture in a Tertiary Healthcare setting of a South Asian country. *Journal of Patient Safety and Quality Improvement*. 2022;71-82. Doi: 10.22038/PSJ.2022.66344.1364.
3. Singh S, Sharma P. Neglected quadriceps tendon rupture: A case report. *J Bone Joint Dis* 2022;37:85-8.
4. Rawat SK, Vishwakarma K, Shukla B, Kumar R. Comprehensive facial injury (CFI) score as a predictor of surgical time, length of hospital stay, and head injury? Our experience at level I trauma center. *Natl J Maxillofac Surg*. 2022 Jan-Apr;13(1):32-38. (*corresponding author*)
5. Keshav K, Shukla B, Vishwakarma K. Textbook of Traumatic Brain Injury. 3rd ed. Mahi Publication; 2022. Chapter 61, Evaluation of Musculoskeletal and Maxillofacial Injury in a Polytrauma Patient; p. 731-744.
6. Rai, Siddharth et al. Early rehabilitation intervention is associated with significant positive functional outcomes in traumatic brain injury: A Retrospective analysis. *International journal of Advances in Medicine*.
7. Awale RB, Ghatak T, Samanta S, Singh RK, Verma A, Mishra P, Chaudhary R, Nath A. Pattern of Conventional Coagulation and Thromboelastographic Parameters in Patients with COVID-19

- Diseases and Association of COVID-Associated Coagulopathy with Mortality in Intensive Care Unit. *Anesth Essays Res.* 2022 Jan-Mar;16(1):65-70. doi: 10.4103/aer.aer_52_22. Epub 2022 Jun 27. PMID: 36249158; PMCID: PMC9558653.
8. Awale RB, Singh A, Mishra P, Bais PS, Vansh K, Shamim R, Ghatak T, Hashim Z, Gupta D, Nath A, Singh RK, Singh C, Pande S. Routine hematology parameters in COVID-19: A predictor of disease severity and mortality. *J Family Med Prim Care.* 2022 Jul;11(7):3423-3429. doi: 10.4103/jfmpc.jfmpc_2453_21. Epub 2022 Jul 22. PMID: 36387722; PMCID: PMC9648217.
 9. Gunjiganvi M, Rai S, Awale RB, Mishra P, Gurjar M, Gupta D, Singh R. Depression and Anxiety among COVID-19 Indian Intensive Care Unit Survivors: A Prospective Observational Study. *Indian J Crit Care Med.* 2022 Dec;26(12):1267-1274. doi: 10.5005/jp-journals-10071-24370. PMID: 36755631; PMCID: PMC9886014
 10. Dubey, A., Siddiqui, T., Kar, M., Sahu, C., & Singh Patel, S. (2022). A Rare Case Report of *Pseudomonas oryzihabitans* Bacteremia from North India in a Terminally Ill Patient. *Journal of Advances in Microbiology*, 22(5), 1-4.
 11. Siddiqui T, Patel SS, Dubey A, Kar M, Sahu C, Ghoshal U. Bacteriological profiles and antibiotic susceptibility of neonatal sepsis in a university hospital of Northern India. *J Family Med Prim Care* 2023; 12: 493-498.
 12. Kar M, Singh R, Dubey A, Sahu C, Patel SS. *Achromobacter xylosoxidans* subspecies *denitrificans* endocarditis in a patient with prosthetic aortic valve: A case report and review of literature. *Journal of Clinical and Diagnostic Research.* 2022 Sep, Vol-16(9): DD01-DD03.
 13. Singh R, Chaudhary R, Sahu C, Patel SS. A case of sepsis by a rare pathogen *Delftia acidovorans* in a patient undergoing chemotherapy. *J Clin Diagn Res* (Accepted).
 14. Sahu C, Singh S, Pathak A, Singh S, Patel SS, Ghoshal U et al. Bacterial coinfections in COVID: Prevalence, antibiotic sensitivity patterns and clinical outcomes from a tertiary institute of Northern India. *J Family Med Prim Care* 2022; 11 (8) : 4473-4478 doi: 10.4103/jfmpc.jfmpc_41_22S
 15. Kar M, Dubey A, Patel SS, Siddiqui T, Ghoshal U, Sahu C. Characteristics Of Bacterial Colonization And Urinary Tract Infection After Indwelling Of Double-J Ureteral Stent And Percutaneous Nephrostomy Tube. *J Global Infect Dis* 2022; 14(2): 75-80
 16. Kar M, Dubey A, Sahu C, Patel SS. *Pseudomonas mosselli*: A case series on its potential as a rare opportunistic pathogen in immunocompromised patients. *South Asian Journal of Research in Microbiology* 2022; 12(1): 50-54
 17. Sahu C, Singh S, Patel SS, Yaduvanshi N, Singh S, Ghoshal U. A study on susceptibility profiles, resistance mechanisms and follow-up of Fosfomycin and other Urinary antibiotics against multidrug resistant gram negative UTI isolates at a tertiary care centre of North India. *J Clin Diagn* 2022; 16(3): DC31-DC35
 18. Sahu C, Singh S, Pathak A, Singh S, Patel SS, Ghoshal U, Garg A. Bacterial coinfections in COVID: Prevalence, antibiotic sensitivity patterns and clinical outcomes from a tertiary institute of Northern India. *J Family Med Prim Care.* 2022 Aug;11(8):4473-4478. doi: 10.4103/jfmpc.jfmpc_41_22. Epub 2022 Aug 30. PMID: 36353034; PMCID: PMC9638600.
 19. Siddiqui T, Sahu C, Patel SS. Clinical and microbiological profile of patients with blood stream infections caused by *Burkholderia cepacia* complex (BCC). *J Lab Physicians* (accepted).
 20. Sharma P, Baghel A, Keshav K, Kumar A. et al; Functional Outcomes of Anterior Cruciate Ligament Reconstruction Using Titanium Adjustable Loop Button and Poly-L-co-DL-Lactic Acid-Beta Tricalcium Phosphate (PLDLA-bTCP) Interference Screws: A Single-Center, Retrospective, Observational Study. *Cureus* 15(2): e34542. DOI 10.7759/cureus.34542

Departmental Highlights

During the COVID pandemic the Apex Trauma Center was converted to Rajdhani Corona Hospital to take care of COVID-19 affected patients. After the end of the pandemic on 8th November 2021 it was converted back as Apex Trauma Center. Apex Trauma Center is a state-of-the-art medical facility that specializes in providing advanced trauma care to patients in need. The center is home to several specialized departments, each with a unique focus and mission. It is the first government run Apex Trauma Center in the country to have specialty of Physical medicine and rehabilitation. The department has a unique combination wherein it has the diagnostic and the clinical wings. It enables all the testing and treatment of patients under one roof. The department has been actively involved in Awareness programme, Workshop & CME as our out-reach step towards community in road safety, training paramedical staffs & updating the knowledge related to traumatic injuries..

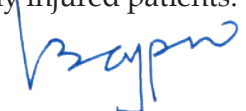
Trauma surgery: The Trauma Surgery Department at Apex Trauma Center is known for its rapid and efficient response to trauma cases. The department has implemented streamlined triage systems and protocols, ensuring that trauma patients receive immediate attention and timely interventions. It follows a multidisciplinary approach, collaborating closely with others such as emergency medicine, orthopedics, neurosurgery, and critical care. This collaborative effort ensures comprehensive and coordinated care for trauma patients, resulting in improved outcomes. It stays at the forefront of surgical advancements in trauma care. The surgeons utilize state-of-the-art surgical techniques, including minimally invasive procedures, laparoscopic surgeries, and image-guided surgeries. These advanced techniques minimize patient discomfort, shorten recovery times, and optimize surgical outcomes. Through meticulous surgical interventions, the department has significantly reduced mortality rates and improved the overall survival and recovery rates of trauma patients.

Neurosurgery : Successfully performed life-saving brain surgeries for over 400 patients, including intricate procedures such as tumor resections and complex spinal surgeries. Pioneered the use of innovative neuroimaging techniques, allowing for more accurate diagnosis and targeted treatment planning. Collaborated with research institutions to develop novel surgical approaches, resulting in improved outcomes for patients with traumatic brain injuries.

Orthopaedics : Successfully performed over 500 complex orthopedic surgeries, restoring mobility and improving quality of life for patients. Introduced advanced minimally invasive techniques, resulting in reduced postoperative pain, shorter hospital stays, and faster recovery times. Developed a multidisciplinary team approach, collaborating with physical therapists, pain management specialists, and rehabilitation experts to provide comprehensive care.

Oral and maxillofacial Surgery: The Oral and Maxillofacial Surgery Department at Apex Trauma Center specializes in the management of facial trauma. The department provides comprehensive care for patients with injuries to the face, jaw, and oral cavity resulting from accidents, assaults, or other traumatic incidents. The specialty collaborates closely with other departments within Apex Trauma Center to provide comprehensive care for trauma patients. This includes working in conjunction with plastic surgeons, neurosurgeons, ophthalmologists, and other specialists to address complex facial trauma cases that may involve multiple systems and structures.

Anaesthesia: The department uses advanced anaesthetic techniques to ensure patient safety and improve surgical outcomes. It is able to do so with the use of state of art equipment along with the expertise of the faculty. The department has dedicated pain management services which includes regional blocks, medical management to address pain issues. They play a pivotal role in the emergency response and trauma care by quickly assessing and stabilizing critically injured patients.



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Physical Medicine and rehabilitation: It the first government operated Apex Trauma center to have specialty of PMR .The specialty caters to OPD patients for Rehabilitation management and Pain management, as well as rehabilitation of trauma patients in Indoor in ATC. Offered comprehensive rehabilitation services, including physical therapy, occupational therapy, and psychological support, to aid in the recovery and rehabilitation of trauma patients.Achieved remarkable success in helping patients regain functionality and independence through personalized rehabilitation programs.Utilized cutting-edge assistive technologies, such as robotic exoskeletons, to enhance the rehabilitation process and improve patient outcomes. It has started following treatment plans in the said academic year. PRP and Prolotherapy treatment for conditions like Osteoarthritis, tendinopathies etc in collaboration with specialty of Lab medicine , Joint aspirations and injections, Visco-supplement injections in knee, Orthosis and Prosthesis check out clinic and Spinal Cord Injury Rehabilitation clinic .

Laboratory Medicine and Microbiology: During the COVID pandemic ATC was converted to Rajdhani Corona Hospital, SGPGIMS the required changes in the laboratory functioning and also train the manpower for processing samples of suspected /diagnosed COVID-19 infection were made.Samples were processed in various section -hematology, clinical chemistry, coagulation, immunology and urine and body fluid analysis. The laboratory is equipped with state-of-the-art laboratory facilities, including advanced diagnostic instruments and technologies. This enables accurate and timely analysis of patient samples, contributing to efficient and effective patient care. is known for its rapid turnaround time for laboratory test results. Through streamlined processes and efficient workflow management, the department ensures that test results are available promptly, enabling healthcare providers to make informed treatment decisions quickly. It maintains a rigorous quality assurance program to ensure the accuracy and reliability of laboratory test results. It adheres to national and international quality standards. It incorporates point-of-care testing capabilities, allowing for immediate testing at the patient's bedside or in the emergency department. Following the conversion of RCH to ATC the laboratory services for trauma patients and bedside phlebotomy services for trauma patients were restarted.

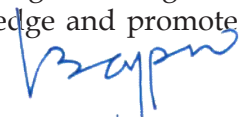
Future directions of the Department:

Research and Innovation: In order to foster a culture of research and innovation,collaborations with academic institutions and research organizations will be done. This may involve conducting clinical trials, exploring new treatment modalities, and participating in cutting-edge research projects.

Technology Integration: Embracing technological advancements can significantly enhance the quality of care provided by Apex Trauma Center. This will include the implementation of artificial intelligence algorithms for diagnostic assistance, telemedicine solutions for remote consultations, and the utilization of virtual reality in rehabilitation programs. Emphasizing the integration of electronic health records and data analytics can also optimize patient management and outcomes.

Multidisciplinary Approach: Adopting a multidisciplinary approach can further improve patient care at Apex Trauma Center. This involves strengthening collaboration and communication among different departments, such as trauma surgery, rehabilitation, psychology, and social work. Implementing regular multidisciplinary team meetings and developing shared care protocols can ensure comprehensive and coordinated treatment plans for patients.

Education and Training: Apex Trauma Center will invest in educational programs and training initiatives for healthcare professionals. This includes starting PDCC course, Postgraduatedegrees, fellowships, organizing workshops, seminars, and conferences to share knowledge and promote



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skill development. Additionally, the center can establish partnerships with medical schools and residency programs to provide clinical training opportunities for aspiring trauma care specialists.

Community Outreach and Prevention: Expanding community outreach programs will help Apex Trauma Center raise awareness about trauma prevention and safety measures. This can involve organizing public education campaigns, offering first aid and CPR training to the community, and collaborating with local organizations and schools to promote injury prevention initiatives.

Regional Collaboration: Apex Trauma Center plans to strengthen its collaboration with other trauma centers and hospitals in the region. This can involve sharing best practices, participating in regional trauma networks, and establishing referral systems to ensure seamless patient transfers when higher levels of care are required.

CAMPUS DEVELOPMENT ADVISORY COMMITTEE

- 1. Garbage disposal in residential area:** In order to achieve the aim of segregation into compostable and non compostable waste at household level, house to house pick up of segregated waste, composting arrangements within the campus with revenue sharing, daily removal of non compostable waste to outside the campus, etc, suitable alterations to the sanitation tender was suggested for the residential area.
- 2. Stray dogs:-** Letters to 'Pashu Chikitsa Adhikari-LMC' was issued to humanely catch and neuter the dogs and bring them back to the campus after healing from surgery.
- 3. Speed breakers, benches for senior citizens and signages:** Members of CDAC had identified the spots where relevant signages and benches are needed; engineering department was requested to start a file for executing this.
- 4. Community centre:** Regular checking of the shops were done to look for any tobacco products.
- 5. Miscellaneous:-** Cleaning of the water body and developing it for an angler's club was an idea mooted by members. Clearing of garden waste into a large composting pit to be maintained at various strategic areas of the campus was mooted, in order to decrease chances of burning of horticulture waste, resulting in fires and environmental pollution. In addition to fire emergency numbers (which are familiar to all citizens), water emergency numbers were thought to be shared with campus dwellers, so that overflowing / leaking water / garden taps can be reported immediately, to save water.

COLLEGE OF MEDICAL TECHNOLOGY & ALLIED HEALTH SCIENCES

Staff of CMT

Sl No.	Name of Staff	Designation
1	Prof. Sanjay Gambhir (Till September 2022)	Nodal Officer
2	Dr. Manish Dixit (Till September 2022)	Additional Nodal Officer
3	Dr. Ruchi Gupta (October 2022 onwards)	Nodal Officer
4	Dr. Siddhatha Rai (October 2022 onwards)	Additional Nodal Officer
5	Dr. Dinesh Chandra	Core working Committee, CMT
6	Dr. Anup Kumar	Core working Committee, CMT
7	Mr. K K Gupta	UDA
8	Mr. Ankur	MLT and Assistant Warden, Boys Hostel
9	Ms. Amrita Shree	MLT and Assistant Warden, Girls Hostel
10	Mr. Alok Srivastava	DEO(Contractual)
11	Ms. Shivani Pal	DEO(Contractual)
12	Mr. Vinay Yadav	DEO(Contractual)
13.	Mrs. Arti	DEO(Contractual)

Awards, Honours, and Recognitions - Nil.

Services

The College of Medical Technology, SGPGI, was established in July 2018 with the aim to training students of different paramedical courses. Currently, the College is running 17 courses, which include 9 B.Sc., 7 M.Sc. courses and 1 diploma course.

Training

The College of Medical Technology, SGPGI, was established in July 2018 with the aim to training students in different paramedical fields. Currently the College is running 17 courses, which include 9 B.Sc., 07 M.Sc. courses and 01 Diploma Course. Four new M.Sc. courses and 01 Diploma Course were approved in the year 2022, against which entrance examinations were conducted. Advertisement was floated for the entrance examination in the month of June 2022. The students are being provided a holistic approach and demonstrations are carried out in individual departments as well as in CMT to enhance the skills and knowledge of the students. A total of 151 students were enrolled in different courses till June 2022. Exit examination of the 1st year, 2nd year and 3rd year students have been carried out in the month of November 2022. The first batch of B.Sc. students started their internship in different courses. The first batch of B.Sc. students will be awarded their degrees in the 2023.

The admission of students in different courses is provided below (2022).

S.No.	B.Sc. Courses	Students enrolled
1	B.Sc. in Operation Theatre Technology	3
2	B.Sc. in Renal Dialysis Technology	1
3	B.Sc. In Anaesthesia Technology	1
4	B.Sc. in Radio-diagnosis and Imaging Technology	10
5	B.Sc. in Radiotherapy Technology	5
4	B.Sc. in Respiratory Care Technology	0
5	B.Sc. in Medical Laboratory Technology (Hematology)	9
6	B.Sc. in Perfusion Technology	4
7	Bachelor of B.P.T.	10
8	B.Sc. in Operation Theatre Technology	3
9	B.Sc. in Renal Dialysis Technology	1
M.Sc. Courses		
10	M.Sc. in Medical Biotechnology	3
11	M.Sc. in MLT (Transfusion Medicine)	0
12	M.Sc. in MLT (Medical Virology)	2
13	M.Sc. In Nuclear Medicine	7
14	M.Sc. Radio pharmacy and Molecular Imaging	3
15	M.Sc. Molecular Medicine and Medical Biotechnology	2
16	M.Sc. In Genetics Counselling	3

Research Completed: Nil.

Research in Progress: Nil.

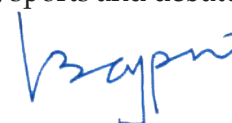
Publications: Nil.

Visiting Professors: None.

Awards and Honours: None.

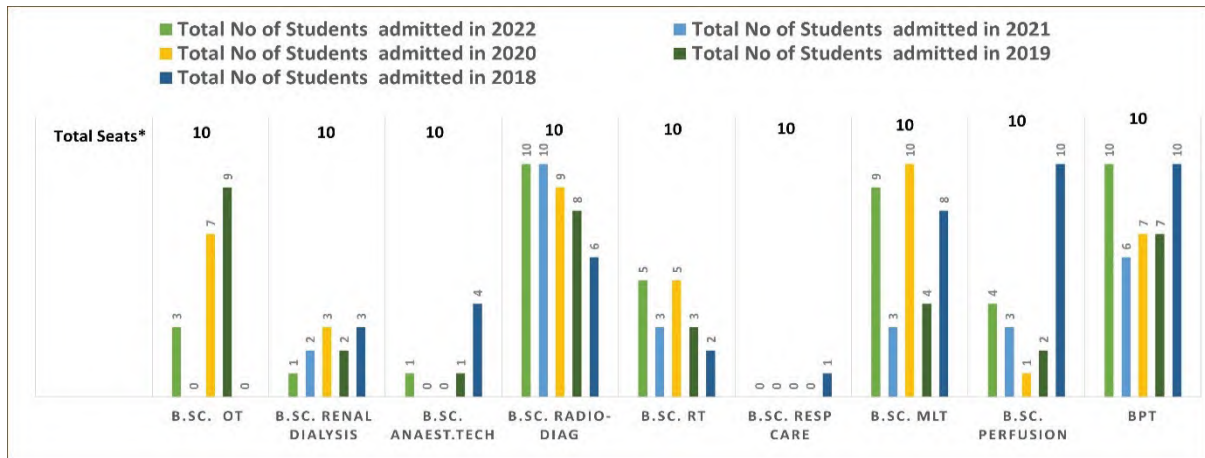
Departmental Highlights: The College of Medical Technology and Allied Health Sciences, is still in its infancy. The future plans of the college are listed below -

1. Restructure the BSc, MSc and Diploma Courses as per the recommendation of the National Commission of Allied Health Sciences into semesters.
2. Recruitment of manpower in CMT viz, Tutors and Lecturers, as per the sanctioned GO.
3. To create new faculty posts in the College for recruitment of the Principal, teaching and administrative staff to ensure smooth functioning of the College.
4. New laboratories have to be established in CMT to enhance the practical training of the students.
5. To enhance extracurricular skills of students by promoting different cultural, sports and debate activities which have been held back due to the Covid Pandemic.



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6. To propose and process the 'stipend' which should be paid to the students in their internship.
7. New Courses have to be started as per need of different departments - B.Sc. Transfusion Medicine and Diploma in Dialysis Therapy
8. Ensure good placement of the students passing out in these B.Sc. and M.Sc. courses.



The recruitment of students in the college in the different B.Sc. and M.Sc. courses since 2018 is depicted below -

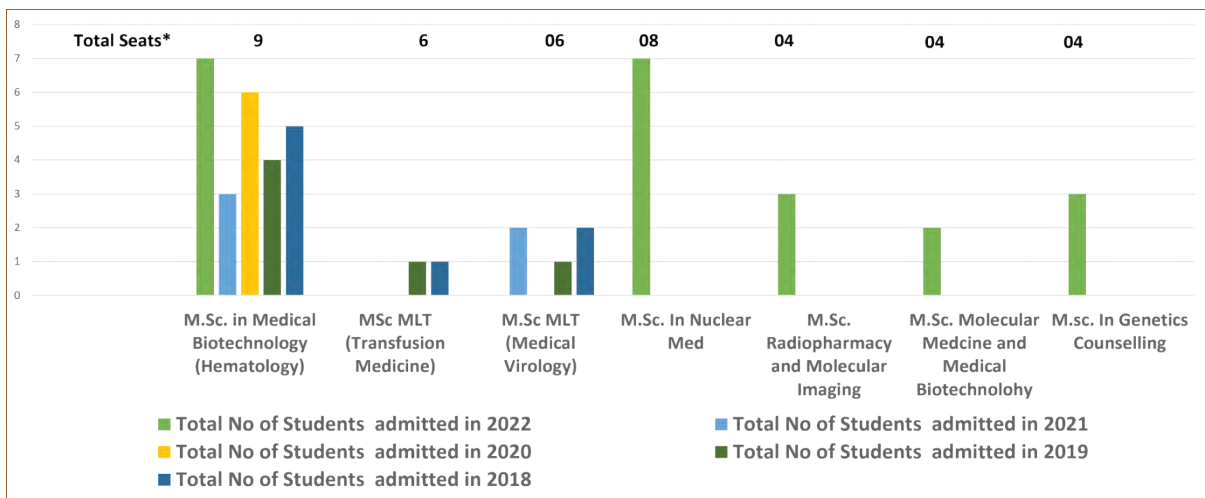


Figure 1 - Bar diagram depicting the B.Sc. students recruited in the CMT & AHSc since 2018.

Figure 2 - Bar diagram depicting the total number of students recruited in different M.Sc. courses since 20018. The last 04 M.Sc. courses on the right were started in 2022 itself.

New Initiatives:

1. There is a need to establish the Student Council in CMT for ensuring that student activities can be co-ordinated and they can be guided.
2. Expansion of Hostel facilities is urgently needed. A new 200 bedded hostel is under construction.

Patents: None

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COLLEGE OF NURSING

STAFF

Name of Faculty Members:

1. Dr. Radha K	Professor Cum Principal
2. Mrs. Shabana Khatun	Associate Professor
3. Mr. Yadidya	Associate Professor
4. Mrs. Anju Verma	Associate Professor
5. Ms. Alice Joseph	Tutor
6. Mrs. Pushpa Singh	Tutor
7. Mr. Ashutosh Kr. Chanchal	Tutor
8. Mr. Bhoopendra Singh Yadav	Tutor
9. Mr. Kamran	Tutor
10. Mr. Kuldeep Yadav	Tutor
11. Mrs. Pooja Yadav	Tutor
12. Mrs. Abha Verma	Tutor
13. Mr. Mata Deen	Tutor
14. Mr. Arun Kumar	Tutor
15. Dr.Suman Lata Dubey	Teaching Staff
16. Mrs. Bhumika Singh	Teaching Staff
17. Mrs. A.MerlinChimma	Teaching Staff
18. Mr.K.Halemani	Teaching Staff
19. Mr. Vinod Kumar Gupta	Teaching Staff
20. Mr. Auchitya Sharma	Teaching Staff

Activities

Awards and Recognitions

NA

Invited sessions and chairpersons/lectures for Conferences: 2022

Name of faculty and Session

Mrs. Shabana Khatun

- Chaired the scientific session on International Virtual Webinar on theme: "To judge in Forensic Nursing Workshop in the 4th International Conference of Forensic Odontology & Child Abuse in association with IAMLE held in 31st January 2022 which was organized by Forensic Ontology Unit , Department of Oral and Maxillofacial pathology and oral microbiology, Faculty of Dental Science, KGMU, Lucknow.
- International Webinar on the topic "Occupational Health of Nursing" on 11th May 2022 which was organized by Nursing Staffs, SGPGIMS, Lucknow.
- Chaired the scientific session on National workshop on: "Assessment & Education Strategies

in Modern Nursing Pedagogy” on 13th May 2022 which was organized by KGMU Institute of Nursing, Lucknow.

- Resource person for the live interview on 12th May 2022 on International Nurses Day with the theme: “Importance of Nursing as a profession” under the Channel “Sehat Apki” at Prasar Bharti Doordarshan , Lucknow.
- Delivered Lecture as Resource person on 5th Nov 2022 on 4th Conference on Cardio Vascular Surgeon Progressive Welfare Association which was organized by RMLMI, Lucknow.
- Poster Presentation on 3rd Research Day of SGPGIMS, Lucknow on 13.12.2022, the topic “ Assess the level of burden among the caregivers of patients with neurological disorders in various neurological setting of SGPGIMS, Lucknow.

Mr. Yadidya

Ms. Alic Joseph

Mrs. Pushpa Singh

Membership of Societies

Membership of professional bodies funded by Institute

- i. Dr. Radha K : TNAI, NRSI
- ii. Mrs. Shabana Khatun: TNAI,
- iii. Mr. Yadidya: TNAI
- iv. Mrs. Anju Rani: TNAI, SOMI
- v. Ms. Alice Joseph : TNAI
- vi. Mrs. Pushpa Singh: TNAI, SOMI
- vii. Dr. Suman Lata Dubey: TNAI
- viii. Mrs. Merlin Cheema: TNAI
- ix. Mrs. Bhumika Singh: TNAI, SOMI, NRSI, HISI
- x. Mr. Vinod Kumar Gupta: TNAI
- xi. Mr K Halemani : TNAI
- xii. Mr. Auchitya : TNAI
- xiii. Mr. Bhoopendra: TNAI
- xiv. Mr. Kamran: TNAI, SOMI
- xv. Mr. Ashutosh Kr Chanchal: TNAI
- xvi. Mr. Kuldeep Yadav: TNAI
- xvii. Mr. Pooja Yadav: TNAI
- xviii. Mr. Mata Dean : TNAI
- xix. Mrs. Abha Verma : TNAI
- xx. Mr. Arun Kumar: TNAI

Teaching Workshops/ CME's organized 2022/ FDP

1. Dr. Radha K: Continue nursing training program from 8th Oct to 21 Oct 2022 for nurses , BMHRC, Bhopal
2. Mrs. Shabana Khatun: FDP: Curriculum Development , CNE one day Blood Transfusion for Staff nurse and nursing students.

Service - NA**Training**

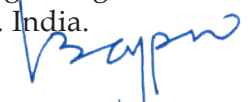
- Total 175 B.Sc. Nursing students.

Number of students appeared in the final year examination (B.Sc. Nursing) : 36 students**Number of students who passed in final year examination (B.Sc. Nursing): 32 students****Research projects (Without Funding)****Completed**

1. Mrs. Shabana Khatun "A study to assess the physical and psychosocial impact on staff nurses during COVID 19 duties at Rajdhani Corona Hospital, SGPGIMS, Lucknow, UP, India."
2. Mr. Yadidya :A study to assess knowledge on BMW among class-D employees at selected wards of SGPGIMS, Lucknow , U P.
3. Mrs. Bhumika Singh: . A Study to assess the knowledge level regarding the identification of high-risk pregnancies among the Midwives working in the selected hospitals, Lucknow."
4. Mr. K Halemani: A study to assess the anxiety and insomnia among the parents of children undergoing elective surgery at SGPGIMS, Lucknow, Uttar Pradesh, India.
5. Mr. Vinod Kr Gupta: A study to assess the knowledge regarding miscarriage among reproductive age women in selected communities of Mohanlalganj, Lucknow, U. P. India.
6. Mr. Auchitya Sharma: A study to assess the myth and taboos related to mental disorders among adults in selected communities of MOHANLALGANJ ,LUCKNOW ,UTTAR PRADESH

Research in progress**Mrs. Shabana Khatun**

- A study to assess the practice of incentive spirometry among post operative patients admitted in selected post operative wards of SGPGIMS, Lucknow, UP, India.
- Mr. Yadidya :A study to assess the existing practice of mothers of school going children regarding ear and nose piercing who are residing at selected area of Mohanlalganj, Lucknow U.P. with the view to prepare and distribute the SIM (self instructional module) on prevention of needle prick infection.
- Dr. Suman Lata Dubey: A study to assess the knowledge of early symptoms of diabetes mellitus among middle aged people (42-60 years) population of community in mohanlalganj lucknow U.P
- Mrs. Bhumika Singh: A study to assess the level of knowledge and attitude regarding organ donation among patients and their relatives attending OPD in SGPGIMS ,LUCKNOW.
- Mrs. Merlin Cheema: A study to assess the effectiveness of planned health teaching on the knowledge regarding childhood obesity among the parents of school going children in urban community ,lucknow.
- Mr. K Halemani: A study to assess the anxiety and stress among the parents of children undergoing elective surgery at SGPGIMS, Lucknow, Uttar Pradesh, India.
- Mr. Vinod Kr gupta: A study to assess the knowledge and attitude regarding covid 19 vaccination among people in rural areas of Mohanlalganj, Lucknow., U. P. India.



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- Mr. Aachitya Sharma: A descriptive study to assess the knowledge and practice among the primary caregivers of patients prone to pressure sore admitted in selected wards of SGPGIMS, LUCKNOW, UTTARPRADESH, INDIA.

Publications

Research publications

Dr. Radha K-Professor cum Principal

- Radha K. Prevalence of physical and psychological impacts of wearing PPE on health care providers during covid-19. Systematic review and meta analysis. Indian journal of occupational environ medicine. 2022; 26: 140-50.
- Radha K. Tele-health and telemedicine telenursing – 21st century progression towards health for all. Jour of health education and nursing research. 2022; 10(3): ISSN . 2380-5439.

Mr. K Helemani, Teaching Faculty

- **Halemani K**, Issac A, Dhiraaj S, Mishra P. Efficacy of body position on gastric residual in preterm infant: a systematic review and meta-analysis. Clin Exp Pediatr [Internet]. 2022 Nov 30; Available from: <https://pubmed.ncbi.nlm.nih.gov/36470278/>
- **Halemani K**, Issac A, Mishra P, Mathias E. The Impact of Exercise on Fatigue among Patients Undergoing Adjuvant Radiation Therapy: A Systematic Review and Meta-analysis. Vol. 11, Journal of Caring Sciences. 2022.
- **Halemani K**, Dhiraaj S, Latha T, Mishra P, Issac A. The prevalence of COVID vaccine acceptance among pregnant women: A systematic review and meta-analysis. Clin Epidemiol Glob Health [Internet]. 2022;17:101144. Available from: <https://www.sciencedirect.com/science/article/pii/S221339842200186>
- **Halemani K**, Issac A, Mishra P, Dhiraaj S, Mandelia A, Mathias E. Effectiveness of Preoperative Therapeutic Play on Anxiety Among Children Undergoing Invasive Procedure: a Systematic Review and Meta-analysis. Indian J Surg Oncol [Internet]. 2022; Available from: <https://pubmed.ncbi.nlm.nih.gov/36687245/>

Chapter(s) in Book(s) 2022:

- **Dr. Radha K**- Advanced nursing research : Literature survey and documentation . Vol 1. Scripown Publications. New Delhi. 2022. Pp-211-223. ISBN- 978-93-90833-56-6.

Visiting Professors: NA

Departmental Highlights

- College of Nursing is making rapid strides to improve upon its teaching & training infrastructure. Commencement of session has been aligned with the National Schedule for B.Sc.(N) program i.e. 1st Oct. every Year.
- Recruitment process for the **Post of Principal, 2 Post lecturers and 8 post of Tutor** is successfully completed this year which will strengthened the academic & research functionality.
- Indian Nursing Council and AICTE with joint collaboration selected College of Nursing, SGPGIMS, Lucknow to admit **08 students** Under Prime Minister Special Scholarship Scheme for J&K. Under this scheme, in the session 2022-2023, 06 students has already taken admission after allotment.



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- **New building for College of Nursing allotted** i.e. 1st floor of **Ophthalmic Block** to run the college and which is under process of construction.
- On the Occasion of **World Kidney Day i.e. 22 March 2022**, a poster competition was organized by Dep. of Nephrology in SGPGIMS on the topic of **“Bridge The Knowledge Gap To Better Kidney Care”** and in this College of Nursing Students participated and awarded cash prize 1st Prize (Ms. Harshita) 2nd Prize (Ms. Kavita) 3rd Prize (Ms. Mansi) and a Consolation Prize to Ms. Surbhi in the form of Cheque under category group 19 yr to 70 yr.
- On the Occasion of **International Nurse’s day i.e. 12 May 2022** Acting Principal of College of Nursing Mrs. Shabana Khatun was invited by the **Prasar Bharti Lucknow** for Durdarshan Uttar Pradesh to Participate as a Speaker in the Live Program between 2.30 PM to 5PM **“Sehat Aapki”**.
- A **Collage Making Competition on Partition of India** was organized at SGPGI on 14th Aug. 2022 and College of Nursing Students participated and awarded 1st (Ms. Mansi Yadav), 2nd (Ms. Harshita Yadav) & 3rd (Ms. Anjali Chhetry) Prize .College of Nursing Students also participated in **Silent Rally** on the same day to mourn the death of those who lost their lives in partition.
- **College of Nursing students (B.Sc. Nursing 4th & 2nd year)** have conducted school health camps, role play and health education on various health related topics especially **Mother and Child health, communicable and non communicable** disease during the month of December 2021 to March 2022. Students also had education visit to **Aastha hospice centre, Drug rehabilitation centre, Laprosy centre, Sub centre** to study the different roles and responsibilities of a **Community Health Nurse**.
- **Students of B.Sc. Nursing 4th year** had conducted role play on the occasion of **“ Azadi ka Amrit Mahotsav”** in **Queen Marry Hospital KGMU** on **14 August 2022** during their **OBG clinical posting**.
- 34 Pass out final year students list in year 2022 sent to SPMU, NHM for the placement for the post of contractual Community Health Officer, National Health Mission, Uttar Pradesh.

New Initiatives

- To enhance the B.Sc. Nursing seats from 40 to 60 in academic year 2022-23.
- To start M.Sc. nursing Program with 10 seats in academic year 2022-23.

ENGINEERING DEPARTMENT

The following construction works/projects were ongoing in year 2022

S. No	Name of Projects/Works	Cost approved by the Govt. (Rs. in lacs)
1	Emergency Medicine & Renal Transplant centre through loan from State Bank of India	33415.32
2	Research Student/Married residents hostel (100 Nos.)	2581.75+ GST
3	Construction of Advanced Ophthalmic Centre	6139.72
4	Upgradation of Air-conditioning in Main Hospital Buildings	5097.37
5	Construction of Modular O.T (03 Nos.) in old Library building	1025.04
6	Upgradation of fire fighting system of Main hospital	2911.12
7	Construction of 33/11 KV substation (02 Nos)	1035.05
8	Construction of type-III Nurses flats-80 Nos (G+10) storeyed.	2892.33 +GST
9.	Extension of VIP Patient guest house (PRA-I)	779.38+GST
10	Construciton of 200 beded hostel for C.M.T students	1215.21 +GST
11	Extension of Bronochoscopy lab at PMSSY Block.	306.75
12	Provision of R.O. Plant for Dialysis & Drinking water in Nephology department.	1710.24
13	Construction of 2 nd gate, road and parking at Lucknow Raibareli Road	1035.31
14	Construction of Advanced diabetes centre at 3 rd & 4 th floor of Ophthalmology centre	4091.38
15	Provision of winter heating in Central A.C system at New OPD block	53.29
16	Provision of Central A.C of record room, HRF and U.P.S room at basement of Trauma Centre block	54.61
17	Replacement of Transformers at various substations in residential area	967.08 (including GST)
18	Extension of 12 beds in CCM department	571.49 including GST

*The following works/projects were completed in year 2022 and are in use of the institute.

S. No	Name of Projects/Works(Ongoing)	Cost approved by the Govt. (Rs. in lacs)
1	Emergency Medicine & Renal Transplant centre through loan from State Bank of India	33415.32
2	Research Student/Married residents hostel (100 Nos.)	2581.75+ GST

3	Construction of Modular O.T (03 Nos.)in old Library building	1025.04
4	Construction of 33/11 KV substation (02 Nos)	1035.05
5	Construction of type-III Nurses flats-80 Nos (G+10) storeyed.	2892.33 +GST
6.	Extension of VIP Patient guest house (PRA-I)	779.38+GST
7	Extension of Bronchoscopy lab at PMSSY Block.	306.75
8	Provision of winter heating in Central A.C system at New OPD block	53.29
9	Provision of Central A.C of record room, HRF and U.P.S room at basement of Trauma Centre	54.61

(R.D. Sharma)

Executive Engineer (Civil)



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Executive Registrar
SGPGIMS, Lucknow

GENERAL HOSPITAL

STAFF

Name of Doctors:

1. Piyali Bhattacharya, MBBS, MD (Pediatrics)	SAG & Nodal Officer
2. Prerna Kapoor, MBBS, MD (Medicine)	SAG
3. Anju Kumari Rani, MBBS, MD (Obstetrics & Gynaecology)	SAG
4. Brajesh Singh, MBBS, MS (Surgery)	SAG
5. Ajit Kumar, MBBS, MD (Dermatology)	SAG

Activities

Awards & Recognitions

Dr Piyali Bhattacharya

- Appointed Member AEFI Committee, State of U.P.
- Appointed Zonal coordinator IAP ALS BLS 2022-23
- Appointed Executive Board Member, AHA Central Zone 2022-23
- Jt Secretary Indian Society of Perinatology and Reproductive Biology (ISOPARB)2022
- Appointed as Member Technical Expert Group U.P. on Maternal and Childhood Mortality 2022 by State of U.P.
- Co Organizing Chairperson IAP National PEDICON 2022, Noida

Dr Anju Kumari Rani

- Elected Executive member of Association of gynaecologic oncology society of India (AGOI) on 4-6th November 2022.

Invited sessions as speakers and chairpersons/lectures for Conferences: 2022

Dr Piyali Bhattacharya

- NUTRICON organized by Poshan Dhara Association on the occasion of National Nutrition Month
- UNICEF Program on Poshan Abhiyan

Dr Prerna Kapoor

- Patient Safety
- Myth Busters in Medicine
- TB and NTEP (National TB Elimination Program)
- Communication on social media
- Medication Safety
- Rabies: Prevention is the only cure

Dr Anju Kumari Rani

- 20th Annual conference of women cancer initiative - Tata Memorial Hospital on Gynecological cancers: Exploring the rare or controversial



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Dr Brajesh Singh

- Decoding the clinical impact of medical management of CVD adjuvant to Surgery, Lucknow.
- Open Hernia Surgery – a dying art, UPASICON Lucknow.

Conference Participation**Dr Piyali Bhattacharya**

- Webinar “Doctors and their self healing mantras” hosted by Help U Trust on the eve of Doctors Day
- Fempedicon at Nasik
- Asian Congress & 22nd Adolescon Kolkata, Workshop on Adolescent Resilience at Chittaranjan Shishu Sadan., Book release, “Kishore dot com”
- ISOPARB Lucknow
- Facilitator IAP Perinatology TOT at Bhilai
- State Urban consultative workshop on strengthening immunization.

Dr Prerna Kapoor

- WORLD TB DAY 2022, SGPGI
- State Task Force Meeting, NTEP at Bareilly 2022
- APCRICON 2022, Kolkata
- Poster at SGPGI Research day 2022

Dr Anju Kumari Rani

- 27th Asia and Oceania Federation of Obstetrics and Gynecology Congress (AOFOG 2022) ,Bali Indonesia.

Dr Brajesh Singh

- VAICON 2022, Mamallapuram.
- HERNIACON, Agra.
- UPASICON Lucknow.
- ISCP workshop in Lucknow

Dr Ajit Kumar

- 10th Mid-term Annual Conference of IADVL (Indian Association of Dermatologists, Venereologists and Leprologists)

Membership of Societies**Dr Piyali Bhattacharya: Life Member -**

- Indian Academy Pediatrics
- UP IAP
- Lucknow Academy of Pediatrics
- National Neonatology Forum (NNF)
- IMA
- Adolescent Health Academy AHA -IAP



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- Indian Society of Critical Care Medicine ISCCM
- Indian Child Abuse & Neglect Child Labour Group (ICANCL)
- Indian Association of Parental&Enteral Nutrition
- IAP Respiratory Chapter
- IAP Medicolegal chapter
- IAP Medicolegal gp (MLAG)
- IAP Environment& child health gp-ECHG

Dr Prerna Kapoor: Life Member -

- Association of Physicians of India
- Association of Physicians of India, Lucknow
- Indian Medical Association
- Association of Prevention and Control of Rabies in India

Dr Anju Rani: Life Member

- International Gynaecologic Society (IGCS)
- Federation of Obstetrics and gynecological society of India (FOGSI)
- Lucknow Obstetrics &Gynecological society (LOGS)
- Association of Gynaecologic Oncologist of India (AGOI)
- Asia Oceania Research of Genital Infection and Neoplasia (AOGIN)
- Indian Society of colposcopy and cervical pathology (ISCCP)
- Indian Association of Gynaecological Endoscopists (IAGE)
- Indian Menopausal Society (IMS)
- Indian medical association

Dr Brajesh Singh: Life Member

- Association of Surgeons of India (ASI)
- UP - ASI
- Venous Association of India (VAI)
- Indian Medical Association (IMA)
- Vascular Society of India (VSI)
- Surgical Education Foundation

Dr Ajit Kumar: Life Member

- Indian Association of Dermatologists, Venereologists and Leprologists (IADVL)
- Indian Society for Pediatric Dermatology (ISPD)
- Indian Association for Study of STD and AIDS (IASSTD\$AIDS)
- Contact and Occupational Diseases Federation of India (CODFI)
- Association of Cutaneous Surgeons of India (ACSI)
- AIDS Society of India (ASI)
- Indian Medical Association (IMA)

Conference/CME/Awareness sessions organized

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Dr Piyali Bhattacharya

- CPR week 2022:, Trained of pediatricians and post graduates in IAP CPR and Public awareness program at Marine drive Lucknow with ACP Shweta

Dr Prerna Kapoor

- World Rabies Day 2022
- World Immunization Day 2022
- World Zoonosis Day: One Health Approach 2022
- Nikshay Divas awareness programs 2022

Dr Anju Kumari Rani

- National Gynecology oncology conference (AGOICON).

Dr Brajesh Singh

- Awareness sessions on Akashvani on health of lower limbs.

Dr Ajit Kumar

- Resource person for Prasar Bharti (Akashvani) for awareness programmes on 'health and fitness'.

Services:

Total number of patients seen/ admitted/ operated are -

	Paediatrics	Medicine	Obs & Gynae	Surgery	Dermatology	Total
OPD	1051	8020	9499	5965	8846	33381
Ward Admission	5	42	198	313	0	558
Operation Major	-	-	180	252	-	432
Operation Minor	-	-	475	320	-	795
LSCS	-	-	10	-	-	10

DOTS:
Dr Prerna Kapoor

- Nodal Officer NTEP (National TB Elimination Program)

Total TB patients under treatment at SGPGI NTEP TU

Pulmonary	Extra Pulmonary	Total
102	73	185

Sputum test	AFB Positive
635	78

Vaccination:

Type of Vaccine	No. of recipients
PCV-13	18
PPSV-23	03
Influvac	53
Hep-B	27
HPV	56
Immunoglobulin AR	41
ARV	252
Others	611
Total	1061

Sample Collection

Type of Investigation	Total Number
Blood sample	13000
Pus sample	700
Urine R/M	4400
Stool	950
Pap smear	700
HPE	750
Blood C/S	810
Urine C/S	4200
Sputum	430
Mol. medicine	350

Training:

Dr Prerna Kapoor

- PDCC Microbiology Infectious Diseases Resident
- BPT (Bachelor of Physiotherapy) students
- 01 02 courses for SGPGI residents

Dr Anju Kumari Rani

- Accredited Trainer for the ISCCP colposcopy training course on 25th August 2022

Dr Brajesh Singh

- Academic Counsellor at Bridge Program for Certificate Course in Community Health for Nurses (BPCCHN-IGNOU)
- Guest Faculty at College of Medical Technology & Allied Health Science



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Research projects:**Dr Prerna Kapoor**

- “A Study to Determine the Adverse Drug Reaction Rate in Patients Administered First Line Anti-tubercular Treatment & to Augment Adverse Drug Reaction Reporting in a Tertiary Healthcare Teaching Institute in Northern India”

Publications:**Dr Prerna Kapoor**

- Kapoor P, Kapoor A. Unravelling the anatomico-vascular correlates of haemoptysis in children using CT angiography. Indian J Med Res 2022 Mar-Apr; 155(3-4): 333-334
- Singh K, Kumar R, Umam F, Kapoor P, Sinha S, Agarwal A. Distinct and shared B cell responses of tuberculosis patients and their household contacts. PLoS One. 2022; 17(10): e0276610. doi: 10.1371/journal.pone.0276610

HOSPITAL ACTIVITIES FROM THE OFFICE OF CMS

PART-A

The activities relating to personnel matters of the office of Chief Medical Superintendent are as under:-

1. During January, 2022, to December, 2022 the 117 officers/employees have been promoted in their respective cadres.
2. During the above said period, financial up-gradations under MACPS have been granted to the 15 officers/employees in their respective cadres.
3. During the above said period, 60 officers/employees of various cadres have been superannuated.
4. During the above said period, 103 JMLT/MLT, 34 Technician (Radiology) and 196 Nursing officers have been recruited.

PART-B

Sl. no.	Date	Activities /Events during January 2022 to December 2022
1	14-02-2022	A workshop on "Communication skills" organized.
2	08-03-2022	On the occasion of International Women Day, Department of Cardiology organized Seminar on brittle health issues in women.
3	10-03-2022	MOU signed between SGPGI and IIM Lucknow to collaborate in research and development in the field of mutual interest.
4		Liver transplant was done successfully again after a gap of three years at SGPGI
5	12-03-2022	A workshop on inspiring leadership conducted for senior faculty and senior officers of the institute with the objective to inspire and stimulate them to deliver to the best of their potentials and lead their departments to greater heights.
6	23-03-2022	World Head Injury Awareness Day celebrated at Apex Trauma Centre
7		A CME cum TB adoption & nutrition program for children was organized to commemorate World TB day.
8	19-05-2022	Emergency Medicine and Renal Transplant Centre launched.
9	31-05-2022	A Walkathon organized to spread awareness about the ill-effects of tobacco consumption on 'No Tobacco Day'.
10	03-06-2022	MOU signed between SGPGI Lucknow and PGICH, Noida to share intent in teaching, training, skill building and research in the area of Bio Medical Research and Basic Science.
11	06-07-2022	The newly constructed Clinical Neuro Physiology Lab and 1000 LPM (liter per minute) capacity oxygen PSA Plant inaugurated.
12	18-07-2022	Academic session 2022 organized for Ph.D/D.M/M.ch/M.D/PDF/PDCC and academic courses running under College of Medical Technology and collage of Nursing for the first time since its inception.



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13	21-07-2022 22-07-2022	workshop was organised by the department of Endocrine Surgery to train the postgraduates and young endocrine surgeons on "How to perform a safe thyroid surgery using modern technological tools-intra-operative neuro monitoring for identifying the nerve of voice and Indocyanine green angiography" for identifying the parathyroid glands which was transmitted to the audience in 3D.
14	28-07-2022	An awareness program was jointly organized celebrate World Hepatitis Day" by Department of Hepatology and Department of Hospital Administration, SGPGI, in collaboration with Department of Gastroenterology ,King George's Medical University, Lucknow with a theme "Bringing hepatitis care closure to you".
15	04-08-2022	National Bone and Joint day was celebrated by the Specialty of Orthopaedics, Apex Trauma Centre. A workshop on Basic life support skills was organised to commemorate the day.
16	14-08-2022	The College of Nursing, SGPGI hosted the celebrations on the Remembrance Day of Partition of India. On this occasion, College of Nursing conducted a Collage competition on the theme of "VibhajanVibhishika smriti Divas" which was followed by silent Rally.
17	23-09-2022	The department of Critical Care Medicine celebrated its 20th Foundation day.
18	28-09-2022	To celebrate National Nutrition Month 2022, Department of Nephrology, Society of Renal Nutrition and Metabolism and Department of Dietetics, SGPGIMS, in collaboration with Faculty club, organized a Walkathon to create awareness about healthy eating habits.
19	08-10-2022	To strengthen the services of Paramedical services and to improve the quality of Nursing Education, Mission Niramaya was formally inaugurated by the Hon'ble Chief Minister, UP at SGPGI.
20	13-10-2022	Institute celebrated 27th Convocation Day with utmost zeal and fervour.
21	16-10-2022	On the occasion of best cancer awareness month was a conducted with the theme of pinkwork to disseminate information about breast health by breast and cervical cancer awareness and early detection program team.
22	29-10-2022	World's Stroke Day was celebrated by the department of neurology to raise awareness about the early detection and its management.
23	15-11-2022	Fire Mock drill was organized by the fire department of SGPGI in coordination with up fire services.
24	28-11-2022	A Walkathon was organized by the department of Neonatology to raise awareness about preterm births as well as disabilities due to prematurities.
25	01-12-2022	An awareness program was organized by the department of Hospital Administration (Hospital infection Control committee) to mark the World AIDS Day.
26	09-12-2022/ 10-12-2022	Department of Medical Genetics organised 7th Annual Conference of Society of Indian Academy of medical genetics (SIAMGCCON 22) with the aim to impart exhaustive expert training in data handling in this field

27	13-12-2022	Institute celebrated its third Research day to promote the research among faculty members and students
28	14-12-2022	SGPGI's 39th foundation day was celebrated to acknowledge the milestones achieved so far in the field of teaching training and research.
29	27-12-2022	A Walkathon was organized by the faculty and staff of Apex Trauma Centre from a centre to spread awareness regarding road traffic safety.

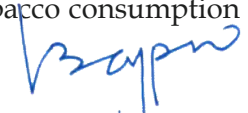
PART-C

Details of number of new patient registration, follow-up patients and inpatient admissions etc. are given as under:

From January 2022 to December 2022	
New Registration	109916
Follow-up	566774
IPD	49420
Death	1562
Birth	387
Investigation	3509657
Surgery	11147
Open Heart Surgery	478
Renal Transplant	92

Activities / Events of the Institute: 2022

1. A workshop on "Communication skills" was organized on 14th February to inculcate good communications skills in the staff of the institute.
2. On the occasion of International Women Day on 8th March, Department of Cardiology organized Seminar on brittle health issues in women.
3. A Memo of Understanding was signed between SGPGI and IIM Lucknow on 10th March 2022 to collaborate in research and development in the field of mutual interest.
4. Liver transplant was done successfully again after a gap of three years at SGPGI.
5. A workshop on inspiring leadership was conducted on 12th March 2022 for senior faculty and senior officers of the institute with the objective to inspire and stimulate them to deliver to the best of their potentials and lead their departments to greater heights.
6. World Head Injury Awareness Day (20th March) was celebrated on 23rd March at Apex Trauma Centre.
7. A CME cum TB adoption & nutrition program for children was organized to commemorate World TB day. Padmashree Dr.DigamberBehra, former Dean and HOD, Pulmonary Medicine, PGIMER, Chandigarh was the Guest of Honor.
8. Emergency Medicine and Renal Transplant Centre started functioning on 19th May2022.
9. A Walkathon was organized to spread awareness about the ill-effects of tobacco consumption on 'No Tobacco Day' on 31st May 2022.



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10. A Memo of Understanding was signed between SGPGI Lucknow and PGICH, Noida to share intent in teaching, training, skill building and research in the area of Bio Medical Research and Basic Science on 3rd June 2022.
11. The newly constructed Clinical Neuro Physiology Lab and 1000 LPM (liter per minute) capacity oxygen PSA Plant was formally inaugurated on 6th July 2022.
12. The institute organized the inauguration of Academic session 2022 on 18th July 2022 for Ph.D/D.M/M.ch/M.D/PDF/PDCC and academic courses running under Collage of Medical Technology and collage of Nursing for the first time since its inception.
13. A live workshop was organised by the department of Endocrine Surgery on 21st and 22nd July 2022 to train the postgraduates and young endocrine surgeons on “How to perform a safe thyroid surgery using modern technological tools-intra-operative neuro monitoring for identifying the nerve of voice and Indocyanine green angiography” for identifying the parathyroid glands which was transmitted to the audience in 3D.
14. An awareness program was jointly organized on 28th July 2022 to celebrate World Hepatitis Day” by Department of Hepatology and Department of Hospital Administration, SGPGI, in collaboration with Department of Gastroenterology, King George’s Medical University, Lucknow with a theme “Bringing hepatitis care closure to you”.
15. National Bone and Joint day was celebrated by the Speciality of Orthopedics, Apex Trauma Centre on 4th August 2022. A workshop on Basic life support skills was organised to commemorate the day.
16. The College of Nursing, SGPGI hosted the celebrations on the Remembrance Day of Partition of India on August 14th. On this occasion, College of Nursing conducted a Collage competition on the theme of “VibhajanVibhishika smriti Divas” which was followed by silent Rally.
17. The department of Critical Care Medicine celebrated its 20th Foundation day on 23rd September 2022.
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19. To strengthen the services of Paramedical services and to improve the quality of Nursing Education, Mission Niramaya was formally inaugurated on 8th October by the Hon’ble Chief Minister, UP at SGPGI.
20. Institute celebrated it’s 27th Convocation Day on 13th October with utmost zeal and fervour.
21. On the occasion of best cancer awareness month was a conducted on 16th October with the theme of pinkwork to disseminate information about breast health by breast and cervical cancer awareness and early detection program team.
22. World’s Stroke Day was celebrated on 29th October by the department of neurology to raise awareness about the early detection and its management.
23. Fire Mock drill was organised by the fire department of SGPGI in coordination with up fire services on 15 November.
24. A Walkathon was organised by the department of Neonatology on 28th November to raise awareness about preterm births as well as disabilities due to prematurities.
25. An awareness program was organised by the department of Hospital Administration (Hospital infection Control committee) on 1st December to mark the World AIDS Day.



26. Department of Medical Genetics organised 7th Annual Conference of Society of Indian Academy of medical genetics(SIAMGCON 22) on 9th and 10th December with the aim to impart exhaustive expert training in data handling in this field.
27. Institute celebrated its third Research day on 13th December to promote the research among faculty members and students.
28. SGPGI's 39th foundation day was celebrated on 14 December to acknowledge the milestones achieved so far in the field of teaching training and rresearch.
29. A Walkathon was organised by the faculty and staff of Apex Trauma Centre from a centre on 27 December to spread awareness regarding road traffic safety.



HOSPITAL REVOLVING FUND (HRF)

Inception & Moto

HRF was created in 1997. Before HRF came into existence, patients coming to SGPGIMS had to procure drugs, surgical consumables and all other prescribed items from the open market. However, issues of cost, quality, timely availability and availability of uncommon items that were being increasingly used, as sophistication and complexity of procedures performed increased, caused great stress to patients and attendants.

The Unique system of Supply Chain Management of Drugs and Surgical Consumables for Institute patients has grown in phases :OT/ICU>Procedudrel Labs> OPD etc and as on date HRF has stood to its test in fulfilling its moto of “**Mission Supply All**” on the self sustainable system. The Drugs & Surgical Consumables system is totally based on Hospital Information System (HIS),depends on a pre-condition of maintaining positive patient’s fund balance .

Approximately 10000+ drug molecule and 5000 types of surgical consumables is being managed by HRF through its 30 Peripheral Unit outlets situated across the hospital area including EMRCT newly developed centre for Emergency and Renal Transplant .

HRF Procurement Cell ensures timely availability of items already approved under HRF Rate Contract, as result of tendering process, by issuing the Supply Order. Research molecules and/or recently introduced items

The entire inventory being managed by HRF today is on HIS (Hospital Information System) based and has beendivided in to two major parts namely Unit items and miscellaneous items.

Cost realization from the patients is at a level that just ensures economic viability of the system and makes it self-sustainable. The HRF has a robust system of checks and counter-checks round the year, audited by a Chartered Accountant and AG audit.

Definitions

1. Unit items are used for patient care and are paid for by the patient fully (single-use) or fractionally (multi-use) per unit used.
2. Miscellaneous items are a set of items used for patient care that are required urgently, round the clock, in variable quantities and are paid for by the patient as a consolidated daily charge (high-level/ medium-level/ low-level consumption).

Call to decide Unit or Miscellaneous: The nominated members of HRF Management Committee takes a call with input from concerned user department and decides about which item is to be declared as unit or miscellaneous,

In the Academic year 2021 HRF has initiated the following prominent activities:

1. HRF has started 04 Peripherals Unit Stores at Emergency Medicine and Renal Transplant Building for bed to bed drug distribution through Hospital Information System (HIS) at HRF named as under:-
2. Emergency Medicine Unit Stores situated at Ground Floor.
3. Renal Transplant ward HRF Unit Store situated at 3rd Floor
4. Renal Transplant OT HRF Unit Store situated at 2nd Floor
5. Dialysis Unit Stores situated at 3rd Floor.
6. HRF has finalized the Rate Contract for Hospital Disinfectants.

The Financial Turnover during the financial year 2022 ended with Rs. 196.00 Crores

INVESTIGATION REVOLVING FUND (IRF)

“IRF was established in the year 2003 and making strong and outstanding contribution in improvement of Laboratory services of the Institute since its inception by providing uninterrupted supplies of all lab consumables on the “Principle of Self- sustainability”. It has changed the views and opinions of all stakeholders over a period of time. IRF has successfully finalized a contract towards the creation & establishment of 24 hrs lab in Main OPD area of the Institute for routine tests & investigations throughout the year irrespective of weekends & holidays. This lab has been made functional in the year December 2015. The services of 24 hrs. Lab have also been extended to the Apex Trauma Centre which is functional from 30th July 2018.

Recently, with the outbreak of Covid-19 in the month of March 2020, the extended 24hrs lab at Apex Trauma Centre is successfully carrying out all the routine investigations of Covid-19 patients admitted at Apex Trauma Centre which was converted & renamed as “Rajdhani Corona Hospital-1 (RCH-1).”

Similarly, 24hrs lab (Main OPD) is also carrying out all the routine investigations of Covid-19 patient admitted in newly Created “Rajdhani Corona Hospital-2” (RCH-2), situated at main Hospital building (old main OPD Complex).

IRF is catering the need of all the kits, reagents & lab consumables to all the investigation department & their labs, on the basis of Rate Contract finalized in the month of November 2021 and May 2022 respectively.

Recently IRF has also expedited the new Contract/work order for 24 hrs lab facility in the last week of April 2022 which is effective from 26.05.2022.

KAMDHENU ATI NIRDHAN CHIKITSA SAHAYATA SOCIETY

Kamdhenu Ati Nirdhan Chikitsa Sahayata Society is an autonomous registered society (Registered under U.P. Societies Registration Act 1860, Registration No. 1268) was established on 24th August, 1999 with the objective to provide financial assistance to the poor / needy patients who are attending the SGPGIMS for treatment, some of whom would otherwise not able to continue the treatment.

Kamdhenu Ati Nirdhan Chikitsa Sahayata Society has provided financial assistance of Rs.6135000/- to 521 patients in financial year 2020-21.

PUBLIC RELATIONS DEPARTMENT

STAFF

Name of Staff Members:

1. KusumYadav	Public Relations Officer
2. Meena Johari	Asst Public Relations Officer
3. Shamola A Singh	Asst Public Relations Officer
4. Ajay P Ojha	Asst Public Relations Officer
Junior Reception Officer	9
Receptionist	4

Public Relations department in any hospital serves as an effective tool for communication between its stakeholders. The patients who reach hospital are physically, mentally and financially exhausted. They need to be received with proper care and empathy. Here, the role of PR personnel comes in. Public relations department deals with both internal and external communication.

The year 2020 started with the breakout of Covid 19 pandemic and the entire Public Relations activities steered towards the implementation of guidelines and covid 19 protocols.

Departmental Activities

Due to Covid pandemic, the need to protect entire patient care services from being shut down due to spread of infection was felt. Screening counters were started at the main entrance of the old OPD to screen patients and their attendants for fever and cough. The Public relations counter was converted to Screening II counter, where second screening was done by Senior Resident and subsequently patients' admission was planned in holding area.

Screening Counter was opened to screen the patients who were planned for dialysis/chemotherapy and for blood donors.

A Help Desk was also made functional at the very entrance of old OPD, where relatives of very sick patient could directly approach for help and guidance. Help Desk also catered to all the enquiries of patients and their relatives.

Another Help Desk was created round the clock for facilitating registration and admission of Covid Positive patients.

A VIP cell has activated in New OPD Block to take special care of Honourable ministers, present and ex MLAs, senior government officials and their families and others as per the protocol.

Planned positive coverage of the facilities of the institute was carried out in the interest of patient care. Extensive media and press coverage of the various conferences and workshops organized virtually due to Corona pandemic was also done which include:

“Defeat Covid 19 – Poster Competition” organized for children of the employees of the institute.

A series of lectures were organized on “Medical Ethics”.



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Program on “Rights and Safety of the women at work place” to celebrate women Empowerment Week.

Extensive media coverage of Institute’s Foundation Day and Convocation Day was ensured in spite of the Pandemic.

Compilation and editing of In-House journal of SGPGI Newsletter published quarterly which showcases various activities taken place in the institute and has been well received by the staff.

RESEARCH CELL

CME/Workshops Programme List - 2022

S. No.	Title	Name of Organizing Secretary/ Chairman	Department	Date	State/ National/ International
1	2 nd Technologist CME	Prof. Anil Agarwal	Anaesthesiology	26 th Feb, 2022	National
2	Biennial meeting of Indian Motility and functional Diseases Association	Prof. U C Ghoshal	Gastroenterology	05.03.2022 to 06.03.2022	National
3	4 th D. K.Chabbra& Prof. V. K. Jain Oration and Neurosurgery Update	Prof. Raj Kumar	Neurosurgery	29.01.2022 to 30.01.2022	International
4	SPARC-2022	Prof. S. P. Ambesh	Anaesthesiology	21 st March - 27 th March, 2022	National
5	TB adoption and nutrition program for children	Prof. AlokNath	Pulmonary Med	March, 2022	National
6	The Registration of Birth & Death Act: Principles & Practices	Dr. R. Harsvardhan	Hospital Administration	26.03.2022	State
7	CME Program on COVID-19	Prof. UjjalaGhoshal	Microbiology	26.03.2022	State
8	Pharmacovigilance in SGPGIS: Need of the Hour	Dr. R. Harsvardhan	Hospital Administration	02.04.2022	State
9	RTI Act, 2005 in Health care settings: Issues, Challenges & Possible Solutions	Dr. R. Harsvardhan	Hospital Administration	09.04.2022	State
10	Fundamental Critical Care Support (FCCS) Course of Society of Critical Care Medicine	Dr. Sandeep Sahu	Anaesthesiology	24.04.2022 to 25.04.2022	National
11	Legal Aspects of Medical & Managerial Practice (LAMP)	Dr. R. Harsvardhan	Hospital Administration	01 st May, 2022	National
12	5 th Annual Congress of the Indian Motility & Functional Diseases Association	Prof. Uday C. Ghoshal	Gastroenterology	6 th May, 2022	International

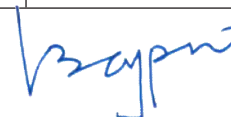


13	Clinics in Gastroenterology	Prof. Uday C. Ghoshal	Gastroenterology	07.05.2022 to 08.05.2022	International
14	Foundation day	Dr. Kirti M. Naranje	Neonatology	8 th May, 2022	State
15	Innovative Approaches in Breast Oncology	Dr. Punita Lal	Radiotherapy	12 th May, 2022	National
16	SGPGI Robotic Thyroidectomy Workshop	Prof. Amit Agarwal	Endocrine Surgery	22 nd - 23 rd July, 2022	National
17	Updates on Clinical Parasitology	Prof. Ujjala Ghoshal	Microbiology	05.08.2022	National
18	Foundation Day	Prof. Uday C. Ghoshal	Gastroenterology	6 th August, 2022	National
19	UP-UK Chapter of IAPS	Dr. Basant Kumar	Ped. Surg. Superspecl.	12.08.2022 to 14.08.2022	National
20	Diagnostic Update and Molecular Advances in Endocrine Organ Lesions	Prof. Vinita Agarwal	Pathology	16.08.2022 to 17.08.2022	International
21	Entrepreneurship in Radiation Oncology: Achievements and Challenges	Prof. Punita Lal	Radiotherapy	17.08.2022	National
22	“XIV National Autoantibody Workshop”	Prof. Amita Aggarwal	Clinical Immunology	1 st - 4 th September, 2022	National
23	Diagnostic Update and Molecular Advances in Endocrine Organ Lesions	Prof. Vinita Agarwal	Pathology	16 th - 17 th September, 2022	International
24	Seventh Annual Conference of Society for Indian Academic for Medical Genetics	Prof. Shubha R. Phadke	Medical Genetics	9 th - 10 th December, 2022	National
25	Recent Advances in Neuro-Trauma	Dr. Pawan Kumar Verma	Neurosurgery	17.12.2022	National
26	Foundation Day	Dr. Indulata	MRH	17.12.2022	State
27	Foundation Day	Prof. Swasti Tiwari	MMB	17.12.2022	State
28	32 nd Foundation Day	Dr. Prabhakar Mishra	BHI	21.12.2022	State

List of Visiting Professor/Visiting Scientist/Departmental Guest (2022)

	Name	Department	Address	Duration	
1.	Dr. Ravi Kanojia,	Dept. of Pediatric Surgery	Dept. of Pediatric Surgery, PGIMER, Chandigarh	17 th - 18 th February, 2022	National / International

2.	S. No.	B.H.I.	Dept. of Mathematics and Statistics, Concordia University, Montreal, Quebec, Canada	2 nd week of April, 2022	International
3.	Dr.Navi-taSomaiah	Radiodiagnosis	Team Leader, Translation Breast Radiobiology, Division of Radiotherapy and Imaging Institute of Cancer Research & Honorary Consultant Clinical Oncologist, The Royal Marsden	11 th – 13 th May, 2022	International
4.	Dr. Margaret Rosemary Zacharin,	Endocrinology	Dept. of Endocrinology and Diabetes, Royal Children's Hospital, Victoria, Australia	2 nd May – 7 th May, 2022	International
5.	Dr. Karen Venable's	Radiotherapy	Radiotherapy Physics, Mount Vernon Hospital, Rickmansworth Road, Northwood, Middlesex, HA6 2RN	11 th – 13 th May, 2022	International
6.	Prof.Akshilesh Pandey,	Medical Genetics	Founder and Director of the Institute of Bioinformatics (IOB)	5 th to 6 th July, 2022	National
7.	Prof. Sanjeev Sethi	Nephrology	Professor of Laboratory Medicine and Pathology, Mayo Clinic, College of Medicine, USA	20 th - 21 st July, 2022	International
8.	Dr. Ajay Kumar Sharma	Urology	Consultant Surgeon, Royal Liverpool, University Hospital Liverpool	24 th – 25 th July, 2022	International
9.	Dr.Soumya-Jagannath	Gastroenterology	Mahapatra, Assistant Professor, Dept. of Gastroenterology, AIIMS, New Delhi	August/September, 2022	National
10.	Dr.Natesan-Ramamoorthy	Nuclear Medicine	Senior Technical Advisor to Chairman, AEC, Department of Atomic Energy, Ex-Scientist, IAEA, Vienna, Consultant Radioisotope, Radiation Technology & Their application in Medicine, Industry research and regulatory aspects, Post President Society of Nuclear Medicine, India)	10 th to 11 th September, 2022	International



11.	Dr. P. S. Soni, Ex-Professor & HOD	Nuclear Medicine	Department of Nuclear Medicine, Baba Farid University of Health Science, Ex-Head, Cyclotron, Faculty BARC DAE, Professor Chairman SNM India)	10 th to 11 th September, 2022	National
12.	Prof. Margaret Rosemary Zacharin	Endocrinology	(MBBS, FRACP), Dept. of Endocrinology and Diabetes, Royal Children's Hospital, Parkville, Victoria	18 th - 24 th October, 2022	International
13	Dr.SaurabhMukewar	Gastroenterology	Midas Hospital Nagpur	25 th November, 2022	National
14.	Dr.Viadehi R Chowdhary	Clinical Immunology	Dept. of Internal Medicine, Clinical Educator Track, Section of Rheumatology, Allergy & Immunology, Yale School of Medicine	28 th - 29 th November, 2022	International
15.	Dr. Stephanie Bielas	Medical Genetics	3703 Medical Science II Ann Arbor, MI 48109 Sbielas, U.S.A	3 rd to 18 th December, 2022	International
16.	Prof. Christian Scott	Clinical Immunology	Head of Division Paediatric Rheumatology, University of Capetown	11 th to 13 th December, 2022	International

SGPGIMS - Clinical Trial Approval Chart - 2022

S. No.	Title of Trial	Name of PI & Deptt.	IEC Clearance Date	Effective Date of CTA	Insurance Company	Name of Sponser
1	A 2year Randomized, 3arm, double-blind..... Open-label Extension	Prof. J. Kalita, Neurology	17.07.21	05.01.2022	MAGMA HDI General Insurance Company Ltd.	Novartis HelathcarePvt. Ltd.
2	An Indian Multi centric IV study to assess the safety of crizalizinab with or without hydroxyurea therapy in sickle cell disease patients with Vaso-Occlusive crises	Dr. Sanjeev, Hematology	17.07.2021	11.03.2022	MAGMA HDI General Insurance Company Ltd.	Novartis HelathcarePvt. Ltd.



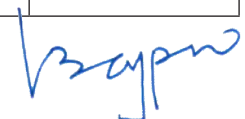
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3	Randomized phase II trial testing efficacy of intra-tumoural hydrogen peroxide as a radiation sensitizer in patients with locally advanced/recurrent breast cancer	Dr.Punita Radiotherapy	29.03.2022	29.11.2022	ICICI Lombard	Royal Cancer Hospital, London UK
4	A prospective, Open-label, Multicentre, Interventional, Single-arm, Phase IV study to evaluate the safety and Efficacy of Agalsidasealfa (rDNA origin) (Replagal™) in Indian Children and Adults with Fabry Disease	Dr.Kausik Mandal Medical Genetics	22.01.2022	26.12.2022	Bajaj Allianz General Insurance Company Ltd.	Takeda Pharmaceuticals India Pvt. Ltd.

List of Intramural project - 2022

Sl. No.	Title of the project	Name of PI & Department	Duration	Sanctioned amount
1	Detection of Campylobacter spp. Using rapid antigen test and a multiplex PCR among children and adolescents less than 18 years from stool samples with acute diarrhoeal disease in a tertiary care hospital	Prof. Ujjala Ghoshal Microbiology	01.01.2022 to 31.12.2023	5,00,000
2	Gut microbiota dysbiosis and small intestinal bacterial overgrowth in obese subjects vs lean subjects in relation to functional gastrointestinal disorders and other components of metabolic disorders: a case-control study	Prof. U.C. Ghoshal Gastroenterology	01.01.2022 to 31.12.2023	5,00,000
3	Antimicrobial susceptibility testing and molecular characterization of Minocycline and Omadacycline resistance	Dr. Chinmoy Sahu Microbiology	01.01.2022 to 31.12.2023	5,00,000
4	Evaluating direct microbial identification and antimicrobial susceptibility testing for early diagnosis of blood stream infections: a step towards diagnostic stewardship	Prof. Ujjala Ghoshal Microbiology	01.01.2022 to 31.12.2023	5,00,000

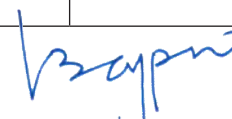
5	Standardization of Real-time PCR on Blood and BAL for Improving the Diagnosis of Invasive Pulmonary Aspergillosis	Dr. Zia Hashim Pulmonary Medicine	01.03.2022 to 28.02.2024	5,00,000
6	Efficacy of Covid Vaccination among CKD non Dialysis Dependant Patients (eGFR 15-60ml/1.73m ²)	Dr. Anupama Kaul Nephrology	01.03.2022 to 28.02.2024	5,00,000
7	Analysis of causative erythrocyte membrane protein and correlation with disease severity in hereditary spherocytosis	Dr. Jalaj Gupta SCRC Dept. of Hematology	01.03.2022 to 28.02.2024	5,00,000
8	Expression of mismatch repair (MMR) protein in Glioma	Dr. Sushila Jaiswal Pathology	01.03.2022 to 28.02.2024	5,00,000
9	Incidence and etiology of diarrhea in critically ill adult patients-an observational study	Prof. Banani Poddar Critical Care Medicine	01.03.2022 to 28.02.2024	2,95,663
10	Establishment & evaluation of the technique for investigating drug induced auto immune hemolytic Anemia	Dr. Prashant Agarwal Transfusion Medicine	01.03.2022 to 28.02.2024	4,20,000
11	24 hours glucose profile and beta cell function in women with early gestational diabetes mellitus	Prof. Preeti Dabadghao Endocrinology	01.07.2022 to 30.06.2024	5,00,000
12	Production of 68-Gallium with medical Cyclotron via Solid targetry methodology and its usage to labeled clinical usable peptides for imaging	Dr. Manish Dixit Nuclear Medicine	01.07.2022 to 30.06.2024	5,00,000
13	Can we improve detection of occult neurological changes in patients with hepatic Wilson disease?	Dr. Moinak Sen Sarma Pediatric Gastroenterology	01.07.2022 to 30.06.2024	5,00,000
14	Pneumococcal vaccination in SLE: comparison of single dose versus sequential vaccine (Immunogenicity and impact on disease)	Prof. Amita Aggarwal Clinical Immunology & Rheumatology	01.07.2022 to 30.06.2024	4,75,000
15	Randomized control trial of open versus closed endotracheal tube suctioning systems use in neonates on physiological outcomes	Dr. Anita Singh Neonatology	01.12.2022 to 30.11.2024	1,35,000
16	A pilot study on the prevalence of cardiac sarcoidosis among the patients of systemic sarcoidosis by speckled tracing echocardiography, cardiac MRI and FDG-PET CT	Prof. Alok Nath Pulmonary Medicine	01.12.2022 to 30.11.2024	4,72,500



17	Evaluation of techniques and outcome of Celiac Plexus Neurolysis by fluoroscopy, CT and Robot assisted CT guidance: Prospective Randomized comparative, parallel trial	Dr. ChetnaShamsheryAnaesthesiology	01.12.2022 to 30.11.2024	3,32,500
18	New Xpert MTB/XDR assay: a prospective single centre pilot study	Prof. Richa Mishra Microbiology	01.12.2022 to 30.11.2024	5,00,000
			Total	81,30,663

List of Extramural projects - 2022

S. No.	Title of the project	Name of PI & Department	Funding agency	Sanctioned year	Duration	Sanctioned amount
1	Infection Prevention Control (IPC)-Capacity Building-Orientation Training for COVID-19 Preparedness and IPC for healthcare Facilities	Prof. UjjalaGhoshal Microbiology	ICMR	2022	2022-2024	4,00,000
2	Diagnostic and therapeutic application of the ⁶⁴ CuCl ₂ an Auger electron emitting PET agent in high-grade brain tumors: A randomized control trial	Prof. Sanjay Gambhir Nuclear Medicine	ICMR	2022	2022-2024	79, 04,030
3	Development and evaluate of anti-epileptic based radiotracers for imaging epileptic lesions in Refractory Epilepsy	Dr. Manish Dixit Nuclear Medicine	ICMR	2022	2022-2025	49,77,520
4	Phase II/III clinical trials of an indigenously-developed hepatitis E vaccine and evaluating its immune correlates	Prof. Amita Aggarwal Clinical Immunology & Rheumatology	BIRAC, DBT	2022	2022-2025	17,34,000
5	ICMR's Network of Pulmonary Fibrosis	Prof. AlokNath Pulmonary Medicine	ICMR	2022	2022-2025	9,90,796
6	Elucidating the Molecular Mechanism of Histone Demethylase KDM5A Mediated Leukemogenesis	Dr. C.P. Chaturvedi SCRC, Hematology	SERB-DST	2022	2022-2025	56,25,560
7	CMV reactivation in mechanically ventilated patients & its impact on clinical outcome	Dr. Atul Garg Microbiology	SERB-DST	2022	2022-2025	40,27,600



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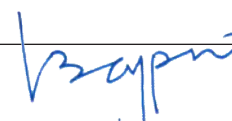
8	Dashboarding of COVID-19 Data in R	Dr. Anup Kumar Biostatistics & Health Informat- ics	ICMR	2022	2022	5,64,197
9	Role of human umbilical cord mesenchymal stromal cells (hucMSCs) derived exosomes in CNS drug delivery molecules for the modulation of chronic neuroinflammation, pain-related behavior and motor function in young injured brain	Dr. Alok Kumar Molecular Med- icine & Biotech- nology	ICMR	2022	2022-2025	85,83,668
10	Harnessing genome se- quencing and engineering (CRISPR/Cas9) technologies for identification of shared genetic and molecular etiolo- gy in pediatric and adult cardiomyopathies	Dr. Anshika Srivastava Medical Genetics	DBT	2022	2022-2025	86,60,988
11	Determination and establish- ment of key molecular thera- peutic approach for remodel- ing of pericardial heart valve of Tetralogy of Fallot	Dr. Alok Kumar Molecular Medicine & Bio- technology/Dr. Shantanu Pande, CVTS	DBT	2022	2022-2025	66,50,240
12	Mission Program on Pediat- ric Rare Genetic Disorders	Dr. AmitaMoi- rangthem Med- ical Genetics	DBT	2022	2022-2027	1,05,80,800
13	Role of Emerging SARS- CoV-2 variants in reshaping of serological responses of COVID-19 recovered patients and in vaccinated individ- uals:Study in North Indian Population	Dr. Santosh Ku- mar Verma Molecular Med- icine &Biotech- nology	DST	2022	2022-2025	66,81,312
14	Digoxin in patients with rheumatic heart disease-a randomized-placebo con- trolled trial	Prof. Sudeep Ku- mar Cardiology	ICMR	2022	2022-2026	2,76,658
15	Study the molecular mecha- nism of nephrolithiasis and screening of potential thera- peutics for disease by using Drosophila model	Dr. Naveen Ku- mar Gautam Urology & Renal Transplantation	UPCST	2022	2022-2025	11,94,000



16	Molecular Taxonomy to define severity and prognosis of Head Injury	Dr. Pawan Kumar Verma Neurosurgery	UPCST	2022	2022-2025	10,64,000
17	A study of neurologic Wilson disease with special reference to cognitive and neuropsychiatric abnormality	Prof. Jayantee Kalita Neurology	UPCST	2022	2022-2025	11,44,000
18	Pathological classification and clinical outcomes of Silent (Non-functioning) Pituitary Adenomas	Prof. Preeti Dabadghao Endocrinology	UPCST	2022	2022-2025	13,44,000
19	Reduced duration of Eight versus Twelve weeks of SOfosbuvir-VeLpasvir in treatment naïve non-cirrhotic patients with chronic hepatitis C Virus infection: A Multicentric, open labeled, Randomized, Non-inferiority trial (RESOLVE)“	Dr. Amit Goel Gastroenterology	ICMR	2022	2022-2025	84,69,457
					Total	8,08,72,826

List of Ph.D. students with enrolment numbers-2022

S. N	Enrolment Number	Name of Student	Date of Joining	Name of Guide & Department	Fellowship status UGC/CSIR/ICMR/DBT/ Institute
1	PGI/Ph.D./Med. Gen./01/2022	Mr. Amit Kumar Tiwari	04.02.2022	Dr. Deepti Saxena Medical Genetics	Project
2	PGI/Ph.D./MM&B/02/2022	Ms. Medha Srivastava	05.02.2022	Prof. Swasti Tiwari Molecular Medicine & Biotechnology	Project
3	PGI/Ph.D./Med. Gen./ 03 /2022	Mr. Rajesh Kumar Maurya	05.02.2022	Prof. Shubha R Phadke Medical Genetics	Project
4	PGI/Ph.D./Micro/04/2022	Ms. Ankita Pandey	07.02.2022	Prof. Ujjala Ghoshal Microbiology	Project
5	PGI/Ph.D./Micro/05/2022	Ms. Aaksha Sinha	07.02.2022	Prof. Ujjala Ghoshal Microbiology	Project
6	PGI/Ph.D./U&RT/06/2022	Ms. Neha Shukla	03.02.2022	Dr. Naveen Kumar Gautam Urology & Renal Transplantation	Project



7	PGI/Ph.D./Med. Gen./07/2022	Ms. Pooja	09.02.2022	Dr. Anshika Srivastava Medical Genetics	DST-INSPIRE
8	PGI/Ph.D./Med. Gen./08/2022	Mr. Sa- rabhVaish	09.02.2022	Dr. Anshika Srivastava Medical Genetics	Project
9	PGI/Ph.D./ B&HI/09/2022	Mr. Syed Ammar Sajjad	06.06.2022	Dr. Anup Kumar Biosta- tistics & Health Infor- matics	UGC-NET
10	PGI/Ph.D./Med. Gen./10/2022	Ms. Akan- sha Pandey	06.06.2022	Dr. Anshika Srivastava Medical Genetics	Project
11	PGI/Ph.D./Neu- rol/11/2022	Mr. Sand- eep Kumar Gupta	01.06.2022	Prof. JayanteeKalita Neurology	Project
12	PGI/Ph.D./Mi- cro/12/2022	Ms. Ur- vashi Goyal	11.06.2022	Prof. UjjalaGhoshal Mi- crobiology	Project
13	PGI/Ph.D./Mi- cro/13/2022	Mr. Bud- dhajyoti Ghosh	10.06.2022	Prof. UjjalaGhoshal Mi- crobiology	Project
14	PGI/Ph.D./Gas- tro/14/2022	Mr. Ambu- jShahi	02.06.2022	Prof. U.C. Ghoshal Gas- troenterology	CSIR-UGC
15	PGI/Ph.D./Immu- no/15/2022	Ms. Fare- haUmam	28.06.2022	Prof. Amita Aggarwal Clinical Immunology & Rheumatology	Project
16	PGI/Ph.D./Hema- to/16/2022	Mr. Prank- rishnaKa- kati	28.06.2022	Dr. Kulwant Singh SCRC Hematology	Project
17	PGI/Ph.D./Hema- to/17/2022	Ms. Rajal Bansal	28.06.2022	Dr. Jalaj Gupta SCRC Hematology	Project
18	PGI/Ph.D./Hema- to/18/2022	Ms. Aditi Chauhan	29.06.2022	Dr. Kulwant Singh SCRC Hematology	Project
19	PGI/Ph.D./ MM&B/19/2022	Lt. Col. Parijat Das	15.07.2022	Prof. Swasti Tiwari Molecular Medicine & Biotechnology	Govt.

SCHOOL OF TELEMEDICINE AND BIOINFORMATICS

Faculty Name:

1. Prof. Prasanta Kumar Pradhan (Nuclear Medicine) Nodal Officer, Telemedicine

Members of STMBI Committee

Sr. No.	Name	Department	
1.	Prof. R K Dhiman	Director SGPGIMS	Chairman
2.	Prof. S P Ambesh	Dean SGPGIMS	Member
3.	Prof. S K Mishra	Advisor, SGPGI Telemedicine Prog Comm.	Member
4.	Prof. U C Ghoshal	FIR (Research)	Member
5.	Prof. N Krishnani	Pathology	Member
6.	Prof. Archana Gupta	Radiodiagnosis	Member
7.	Prof. R K Singh	Emergency Medicine	Member
8.	Prof. M S Ansari	Urology	Member
9.	Prof. Anjali Mishra	Endocrine Surgery	Member
10	Prof. P K Pradhan	Nuclear Medicine	Member-Secretary

Honor and Award:

- Presidential Oration of Telemedicine Society of India in 18th International Conference of Telemedicine Society of India on 10-12th Nov.2022,AIMS,Cochin

Research Project including both:

Intramural Project: Nil

Extramural Research Grants:

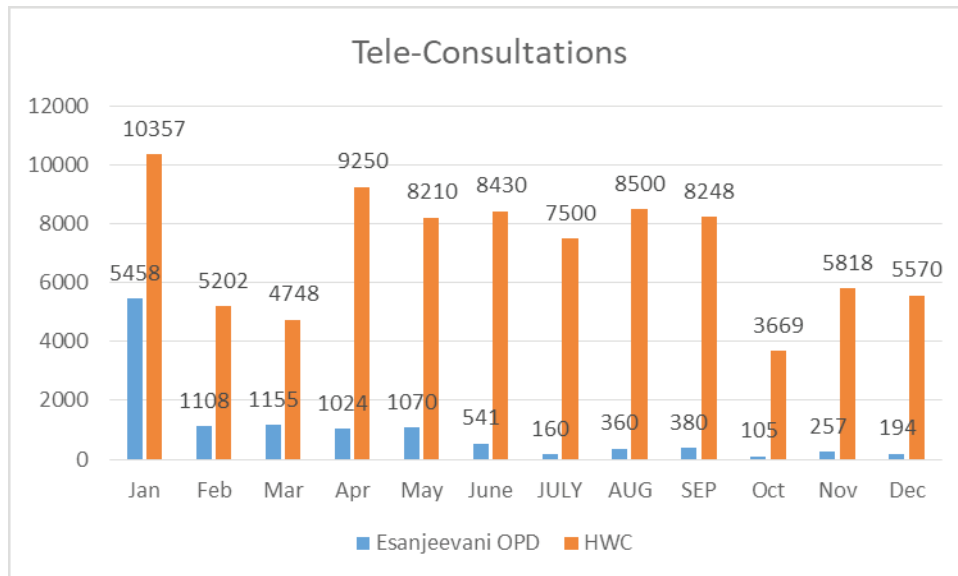
1. National college Medical Network. PI: P K Pradhan. Funding Agency: MoHFW Govt. of India. Grant Amount: 2.5 Crore Approx
2. NTPC. PI: P K Pradhan. Funding Agency: NTPC. Grant Amount: 1 Crore Approx
3. Smart City health ATM. PI: P K Pradhan. Funding Agency: Smart City LTD Lucknow. Grant Amount: 3.5 Crore Approx
4. Mobile tele oncology/primary care Outreach project. PI: P K Pradhan. Funding Agency: K L Garg Memorial Foundation. Grant Amount: 14/Lakh Per Annum
5. Establishment of Telemedicine HUB at SGPGI under Ayushman Bharat-Health & Wellness Center Project. PI: P K Pradhan. Funding Agency: National Health Mission, Govt. of U.P. Grant Amount: 44 Lakh Approx

Services

- Tele-consultations under Ayushman Bharat-Health & Wellness Center (AB-HWC) funded by State NHM, Govt. of Uttar Pradesh



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- Total 97,314 Tele-Consultation Session conducted by STBMI, SGPGIMS, Lucknow
- Total 2,953 Tele-education Sessions conducted by STBMI SGPGIMS, Lucknow and under medical colleges. Overall 17,841 sessions were conducted by all Medical Colleges
- Total 4,150 videos edited and uploaded in the National Medical College Network Website since 2019. 1523 edited videos were uploaded.
- Mobile Telemedicine System (MTS) which had been developed in collaboration with Dr. K.L. Garg Memorial Charitable Trust, Lucknow” to carry out out-reach activities of rural areas. This bus is equipped with all the basic health check-up/screening facilities along with Telemedicine connectivity. Free medicine distribution is also being done for the poor patient supported by Trust. Field operation started in the year 2013 from MahaKumbhMela held at Prayagraj, U.P. A total of 1033patient benefitted in FY 2022-23.
- National Thermal Power Corporation (NTPC), North Region Head Quarter (NRHQ), Lucknow signed a MOU between STBMI, SGPGI, Lucknow for establishing Telemedicine center at NTPC Unit Hospitals covered under NRHQ in phase wise manner. In first phase two hospitals vizMeja, Prayagraj&Rihand, Sonbhadra selected by NTPC and directed us to implement this project there. Team of STBMI, SGPGI started execution of the project immediate after receiving of fund. Telemedicine Centers at both places are fully operational and activities are being carried out. No. of the patient benefitted in FY 2022-23
- Public Health / Community Outreach Programme at STBMI, SGPGI is being undertaken with joint collaboration of NGOs / CSR funds of public sector organizations, State Govt.’s and Govt. of India so that the people at large benefits from Telemedicine Technology and it can reach to underserved population across the states and country as whole. As we are delivering public health services under the Ayushman Bharat-Health & Wellness Centre (AB-HWC), Govt. of U.P. where 104 HWCs are allocated to Telemedicine HUB, SGPGI. General Duty Medical Officers and specialists are providing services to the public of Uttar Pradesh. On the same pattern, Smart Health Services has been approved by the Institute to support Lucknow Smart City Limited (LSCL), Govt. of U.Pproject.Lucknow Smart City Limited (LSCL) intended to develop smart healthcare delivery infrastructure at the perimeter of Lucknow city to give access to the smart health facilities in terms of health check-ups, diagnostics and doctors consultation availability at nearby location of each citizen of the Lucknow. More than one hundred Smart Health ATM center is to be opened across the city of Lucknow under Smart City.

Publications

1. Amrit Gupta, Sangeeta Yadav, MalathySeduchidambaram, Neeta Singh, Prasanta K Pradhan, Mandakini Pradhan, Triage of antenatal care through telehealth during COVID-19 pandemic in a tertiary care center of North India; J Famil Med Prim Care.2022 Mar;11(3):1055-58.

Conference Presentations:

(a) National

Workshop/Conferences Organized:

Outstanding Features/Summary:

Covid related highlights (if any) would be welcome:

1. Total 97,314 Tele-Consultation Session conducted by STBMI, SGPGIMS, Lucknow
2. Total 2,953 Tele-education Sessions conducted by STBMI SGPGIMS, Lucknow and under medical colleges. Overall 17,841 sessions were conducted by all Medical Colleges
3. Total 4,150 videos edited and uploaded in the National Medical College Network Website since 2019. 1523 edited videos were uploaded.

Future Plans

1. Patient Care : Teleconsultations and follow up for primary care by different projects like smart city Health ATM project,HWC/Ayusman Bharat e-Sanjeevani care are implemented recently and its expected to improve further slowly and steadily in this post pandemic era.
2. **Education** :Tele-education is continuing with NMCN as lectures,e-video and online portal i.e'Saksham' with e-content for reinforcement of learning at any time anywhere for medical community.Ourendeavor to strengthen further in this direction. Diploma in telemedicine course for technical staff will begin soon as planned and approved in 2021.
3. **Research** :The role of telemedicine programme is to carry out research development and pilot deployment which assist State health /Mission in implementing telehealth programme which are partially addressed.However,this requires core faculty with domain expertise from IT background for driving the research pertaining to artificial intelligence,augmented and virtual reality and robotics, which is expected to enhance and strengthen telehealth research.

